S/QPL/FG/WRQ/HRA22/03

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

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BCL CONSULTANT HYDROGEOLOGISTS' EXPERIENCE & QUALIFICATIONS

BCL is an independent consultancy specialising in all aspects of hydrogeology and hydrology as they relate to minerals extraction, waste disposal, water supply and related industries.

Peter Simpson (the author of this report) holds an honours degree (B.Sc. Environmental Science) conferred by The University of Birmingham in 2005 and a Masters Degree (M.Sc. Hydrogeology), also conferred by The University of Birmingham, in 2011.

BCL has provided specialist services, advice and reporting to the extractive, waste and related industries since 1990. During this time a collective 100+ years of experienced has been earned from involvement with wide variety of assignments. BCL's work has included:

- Installation and management of information collection systems;
- Data interpretation;
- Conceptualisation of hydrogeological systems;
- Identification of potential impacts;
- Formulation of mitigation measures;
- Management and undertaking of operational impact monitoring and impact assessment;
- Review and auditing of contingency mitigation schemes;

1 INTRODUCTION

1.1 Background

1.1.1 Wrotham Quarry, Addington, Kent (the Site) is operated by the Ferns Group (FG) for the extraction of Folkestone Sands, which are processed on-site to produce materials for the general civil engineering and specialist silica sand markets.

1.1.2 Operations at the Site are governed by the conditions of several permissions, recently including mineral permission ref. TM/14/4075, dated 11/09/15 (the 2015 Permission) authorising a satellite extension located to the north-east of the main quarry void, this extension to be restored by use of imported inert materials[1].

1.1.3 In March 2020, a planning application (the Planning Application) was submitted to Kent County Council (KCC), seeking permission for the buttressing of the western and north-western faces of mineral extraction within the main quarry void (this being discrete from the satellite extension) using indigenous material supplemented with imported inert material (The Recovery Operation).

1.1.4 Planning Permission for the Recovery Operation was granted by KCC in November 2020, ref: KCC/TM/0073/2020 (The Permission). Realisation of the Recovery Operation however additionally requires a consenting Environmental Permit (Waste Recovery Activity).

1.1.5 BCL Consultant Hydrogeologists Limited (BCL) have thus been appointed by Quarryplan Limited, agents of FG, to undertake a Hydrogeological Risk Assessment (HRA) to support Environmental Permit (EP) Application (The Application) in this regard.

1.2 Aim of HRA

1.2.1 The HRA draws upon the findings of previous hydrological and hydrogeological baseline studies undertaken at the Site, this including the 2020 Hydrogeological and Hydrological Impact Assessment (The 2020 H&HIA[2]) as supporting the Planning Application, and its associated Site-Specific Flood Risk Assessment report (The 2020 FRA).

1.2.2 These baseline studies have informed quantitative assessment of the potential impacts of the Recovery Operation upon the water environment.

1.3 HRA Approach and Outcomes

1.1 The collection and interpretation of baseline data, which has drawn upon the findings of previous assessment, has facilitated the formulation of a Conceptual Hydrogeological Model of the Site and its environs (the CHM).

1.2 The CHM describes the nature of, and interactions between, the groundwater and surface water systems operating at and around the Site.

1 As authorised by extant Environment Agency Permit no. EPR/FB3003MP, determined 11th December 2017.

2 BCL, Planning Application for Buttressing of Quarry Faces Using Indigenous and Imported Inert Materials', Wrotham Quarry', 2020, QPL.FERNS.WROTHAM.H&HIA20.02

1.3 The CHM has been combined with the design of the Recovery Operation in the development of a Conceptual Site Model (CSM).

1.4 The CSM has been applied within a detailed quantitative HRA to assess the impact of the Recovery Operation upon the water environment.

1.5 The primary tool used to inform HRA with regards to the Recovery Operation has been Golder Associates' Landsim modelling software.

1.6 The results of HRA have informed the development of a groundwater monitoring programme to run concurrent with, and following completion of, the Recovery Operation.

1.7 The monitoring programme has been designed to:

- Determine the effectiveness of measures adopted for the protection of the water environment, and;
- Inform modification of those measures over time as appropriate.

1.8 This has included the derivation of groundwater quality Control Levels and Compliance Limits for incorporation into the Permit where required.

1.4 National Planning Policy & Technical Guidance

1.4.1 Where appropriate, the design of the Recovery Operation, methodology and scope of site-specific data-collection, formulation of the Conceptual Model, approach to impact assessment and selection of calculation methodologies have been informed by prevailing national guidance and industry standard procedures, including:

- "National Planning Policy Framework" (NPPF), Department for Communities and Local Government (DCLG), February 2019.
- " Planning Practice Guidance to the National Planning Policy Framework" (PPG: DCLG, March 2014.
- "Flood Risk and Coastal Change, Planning Practice Guidance" (NPPG), DCLG / Department for the Environment Food and Rural Affairs (DEFRA), 6th March 2014.
- "Development and Flood Risk: A Practice Guide Companion to PPS25" (PPS25pg), DCLG, February 2009.
- "Groundwater Protection Position Statements", EA, March 2018.
- Landfill Developments: Groundwater Risk Assessment for Leachate (https://www.gov.uk/guidance/landfill-developments-groundwater-risk-assessment-for-leachate).
- "Additional guidance for hydrogeological risk assessments for landfills and the derivation of groundwater control levels and compliance limits", EA Horizontal Guidance Note H1 – Annex J3, Version 2.1, December 2011[3].

3 Now withdrawn; referenced for specific technical guidance only.

- "Hydrogeological Risk Assessments for Landfills and the Derivation of Groundwater Control and Trigger Levels" (LFTGN01), EA, March 2003[4].
- "Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water" (LFTGN02), EA, February 2003[4].
- "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

1.5 Data Sources

1.5.1 Published and site-specific data sources, together with assessment and calculation methodologies referenced by HRA are listed at *appendix 1*.

1.6 Report Structure

1.6.1 Baseline characterisation of the topography, geology, hydrology and hydrogeology of the Site area, is presented at *section 2*, concluding with a CHM of the extant water environment, as presented at *section 3*.

1.6.2 An account of the Recovery Operation design, including working methods, depths, and elevations to apply during infilling, is given at *section 4*.

1.6.3 The Conceptual Site Model (CSM), derived in accordance with the Source, Pathway, Receptor (SPR) risk assessment methodology for the Recovery Operation is presented at *section 5*.

1.6.4 Parameter selection, numerical assessment results and sensitivity analysis are described and discussed for the Recovery Operation at *section 6*.

1.6.5 Control and compliance values are discussed and derived at *section 7*, together with specifications for frequency and scope of groundwater quality monitoring and contingency actions to apply concurrent with the operation and restoration of the Recovery Operation.

1.6.6 Report conclusions are presented at *section 8*.

4 No longer referenced by current guidance. Referred to here for details of specific technical methodologies where current guidance provides no alternatives.

2 THE SITE

2.1 Site Location

2.1.1 The Site location is shown at *figure 1*.

2.1.2 The National Grid Reference (NGR) for the approximate centre of the Site is [5]6491, [1]5932, as situated c.1.3 kilometres (km) north-east of the village of Wrotham Heath, between the village of Addington to the south west and Trottiscliffe to the north.

2.1.3 The southern boundary of the main quarry void immediately abuts the M20 Motorway close to its junction with the M26.

2.2 Land Use and Topography

2.2.1 The district is semi-rural, with numerous small towns and villages in close proximity set within a broader landscape of pastoral and arable agriculture.

2.2.2 Areas of woodland are also present which are occasionally extensive, such as Mereworth Woods to the south of the Site.

2.2.3 The Site is situated within a west to east oriented valley, drained locally by the Addington Brook and regionally by the River Medway.

2.2.4 Ground elevations across the region generally fall from the Chalk escarpment present to the north west, to a west to east oriented valley, drained locally by the Addington Brook and regionally by the River Medway, to the south east.

2.2.5 The Site is located on the northern flanks of this valley, adjacent ground levels falling from some 69maOD on its north western boundary, to some 48maOD on its south eastern boundary (areas of mineral extraction being excavated to lower elevation).

2.3 Site Layout and Composition

2.3.1 The Site comprises 3 no. principal areas, as at *figure 1*:

- The Southern Quarry: An area of mineral extraction amounting to c.14.2 hectares (ha) situated to the south of the M20 Motorway, linked by a tunnel beneath the motorway to;
- The Main Quarry: An former mineral extraction void (restored at western extent) used for processing, stockpiling and off-site sale, maintenance, office and welfare facilities; amounting to c.35ha situated between the M20 Motorway and Addington Lane, to be linked by tunnel to;
- The North-Eastern Extension: Recently permitted for mineral extraction and restoration by infilling with imported inert waste materials and occupying a consented area of c.7.3ha.

2.3.2 The Recovery Operation is to focus upon the north western limit of the Main Quarry.

2.4 Ecological Designations

2.4.1 Statutorily Protected Sites of Ecological Importance

2.4.1.1 The locations of statutorily protected sites local to the Site are shown at *figure 2,* outline details for which are given below at *table 1*.

Table 1 Statutorily Protected Sites			
Site Name	Distance* from Proposed Development (km)	Designation	Summary Description
Trottiscliffe Meadows SSSI	20m north	SSSI	Unimproved Meadows
Halling to Trottiscliffe Escarpment SSSI	1.5km north-west	SSSI	Chalk Grassland and Beech Woodland
*-at shortest distance from the Recovery Operation			

2.4.1.2 The Site is additionally located within the Kent Downs Area of Outstanding Natural Beauty (AONB).

2.4.2 Non-Designated Sites of Ecological Importance

2.4.2.1 The 2020 H&HIA identified 2 no. Local Wildlife Sites (LWS) in relative proximity to the Site, this including the Orchards Woods Pasture Trottiscliffe LWS (as abutting the western boundary of the Main Quarry), and the Ryarsh Woods LWS (as present in relative proximity to the north eastern boundary of the North-Eastern Extension). These features comprise pasteur and woodland habitats.

2.5 Geological Setting

2.5.1 Background

2.5.1.1 Information concerning the geology of the Site and its surroundings has been obtained from:

- BGS publications.
- Geological & Hydrogeological reports made in support of planning applications within and in the vicinity of the Site.
- Site Mineral evaluation / piezometer installation drilling and trial pit logs (*appendix 2*).

2.5.2 Regional Geology

Stratigraphy

2.5.2.1 The geology of the region is illustrated at *figures 3* (Solid) and *4* (drift).

2.5.2.2 The geology of the region comprises a variety of thin superficial drift deposits overlying solid geological strata of chalk, greensands and clays.

2.5.2.3 The stratigraphy of the region presented below at *table 2*.

Table 2 Stratigraphic Sequence			
Age	Group	Formation	Lithology
Pleistocene and Recent	Alluvium		River Derived Alluvium
	Terrace Deposits		Sands and Gravels
	Head		Miscellaneous
	Clay with Flints		Clay and Flints
Upper Cretaceous	Upper Chalk		White chalk with flint beds, nodular chalks, marl beds and hard grounds
	Middle Chalk		White pure chalk with some flint seams and very shelly beds
	Lower Chalk		Grey marly chalk without flints
	Upper Greensand		Sand and sandstone, fine grained, silt, glauconitic, shelly
	Gault		Pale to dark blue or blue grey clay or mudstone, glauconitic in parts, with
Lower Cretaceous	Lower Greensand Group	Folkestone Beds	Medium and coarse-grained, well-sorted cross bedded sands and weakly
		Sandgate Beds	Fine sands, silts and silty clays, commonly glauconitic, some sands
		Hythe Beds	Alternating sandy limestones (ragstone) and glauconitic sandy
		Atherfield Clay	Massive yellowish brown to pale gray sandy mudstone. With pebble beds,
	Wealden Group	Weald Clay	Dark grey thinly-bedded mudstones (shales) and mudstones with

Drift Geology

2.5.2.4 The drift geology of the region mainly comprises head deposits discontinuously overlying the Hythe Beds.

2.5.2.5 Narrow ribbons of Alluvium have been deposited by riverine processes, and are present in association with local surface watercourses.

2.5.2.6 Clay with Flints, generally associated with outcrops of the Chalk sequence, are present within the north of the region; this superficial cover is not present in the valley to the south of the ridgeline, and thus absent in the vicinity of the Site.

2.5.2.7 Extensive drift deposits of clay are present overlying the Chalk sequence in the north of the district at the ridge and to the north of the Kent Downs.

2.5.2.8 Head deposits are present within the valley, and are mainly associated with outcrop of the Hythe Beds (Lower Greensand Group), but are of limited extent and distribution.

2.5.2.9 Further head deposits are seen to occur overlying the Folkestone Beds to the east of the Site, but do not infringe on the Site itself.

Solid Geology

2.5.2.10 The local solid strata form part of the northwards dipping southern outcrop belt of the London Basin; the dipping sequence continuing for many kilometres northwards and north-westwards at depth beneath the Capital.

2.5.2.11 The northward dip of the strata produces an outcrop sequence that becomes older in a notional traverse from north to south across the area.

2.5.2.12 The youngest strata of the region are the Upper, Middle and Lower Chalks which are present at outcrop to the north of the Site where they form the pronounced and west to east oriented escarpment of the Kent Downs.

2.5.2.13 As part of the London Basin, the dipping Chalk sequence becomes progressively then completely buried northwards away from the Site, eventually outcropping again many tens of kilometres to the north where it forms the core of the Chiltern Hills.

2.5.2.14 The Chalk is underlain by the Gault Clay (GC), the local southern outcrop limit of which borders the northern Site boundary (the clay having been stripped as part of historical works to facilitate quarrying of the underlying economic mineral).

2.5.2.15 The GC thickens northwards with its downward dip to attain c.68m to c.100m at its full vertical extent; to the north of the Site the clay becomes entirely concealed beneath overlying Lower Greensand and Chalk Group strata.

2.5.2.16 The GC comprises pale to dark grey or blue-grey clay or mudstone which is glauconitic in part and with a sandy base.

2.5.2.17 The GC is directly underlain by the Folkestone Beds (FB) which comprises medium and coarse-grained, well-sorted cross-bedded unconsolidated sands and weakly cemented sandstones which constitute the economic mineral quarried at the Site.

2.5.2.18 In accord with the regional structure the FB in vicinity of the Site dips northwards at approximately $11^{o,}$ presenting as a narrow east to west oriented outcrop belt that gives way at outcrop northwards to progressively younger strata.

2.5.2.19 The FB thins out to the south of the Site, giving way at outcrop to fine sands, silts and clays (commonly glauconitic with some limonitic or calcareous sands and some soft sandstones) of the underlying Sandgate Beds (SB) which ranges in thickness from c.0.5m to c.6m within the region.

2.5.2.20 The relatively thin SB separates the FB from the underlying Hythe Beds (HB) which are present at outcrop for a considerable distance to the south of the Site.

2.5.2.21 The HB comprises c.60m of interbedded sandy limestone (known as Ragstone), and sandy mudstones (Hassock).

2.5.2.22 The base of the HB (and thus of the Lower Greensand Group), is marked by the underlying Atherfield Clay (AC), which attains a local thickness of c.9m to c.15m and separates the Lower Greensand from the underlying Weald Clay (up to c.335m thick) which extends some distance to the south of the area.

2.5.2.23 The geological maps do not indicate the presence of significant faulting in the vicinity of the Site.

2.5.3 Local Geology

2.5.3.1 Site specific and third-party drilling logs have been combined to allow description of the geology of the Site.

2.5.3.2 The Site features 0-2m of topsoil overlying theGC, this locally forming a stiff grey clay. Thickness ranges from some 30m to 2.3m where not fully removed by historic mineral extraction, this thinning to the south and east in line with the regional sequence (*figure 5*). The base of the GC ranges from some 50.2maOD to some 4.4maOD, and is generally expected to fall from south east to north west, though is locally more variable, partly due to the influence of historic mineral extraction, as at *figure 6*.

2.5.3.3 The GC is underlain by the FB, this locally comprising orange / brown medium to fine sands, ranging in thickness from some 58m to 30m, generally thinning to the south and east, and being thinnest across the Site centre (*figure 7*). The base of the FB ranges from some 30maOD to some 2.3maOD, falling to the north and east, in line with the expected geological sequence (*figure 8*).

2.5.3.4 The FB is underlain by the SB, locally in the form of 4m – 0.8m (thinning to the north and east as at *figure 9*) of clays. The base of the SB again falls from south east to north west, ranging from some 24.24maOD to some 1.54maOD, as at *figure 10*.

2.5.3.5 The SB are in turn underlain by the sandy limestones and sandy mudstones of the HB, this ranging from some 16 to 18m thickness as at *figure 11*, thinning to the south east. The base of the HB again falls from north west to south east, at some -16.6maOD – 8.6maOD, as at *figure 12*.

2.5.3.6 The HB are underlain by the stiff clays of the AC, the full thickness of which has not been locally proven (expected thickness of some 10m).

2.6 Hydrological Setting

2.6.1 Background

2.6.1.1 Information concerning the hydrology of the Study Area has been obtained from:

- OS digital mapping.
- EA digital mapping.
- FEH data-sets.
- Water Features Surveying undertaken by BCL.

2.6.2 Catchments

2.6.2.1 The Site locality is entirely within the catchment of the River Medway, the Site itself falling within the Addington Brook sub-catchment, this draining to the River Medway via its tributary, the Leybourne Stream (also locally referred to as the Addington brook).

2.6.3 Surface Watercourses

2.6.3.1 The surface watercourses of the region are illustrated at *figure 1*.

Major Surface Watercourses

2.6.3.2 The River Medway forms and EA designated ‘Main River’, this rising in East Sussex, before generally flowing northwards and eastwards, then discharging to the North Sea via the Thames Estuary.

Minor Surface Watercourses

2.6.3.3 The Leybourne Stream forms an Ordinary Watercourse (OWC), this rising some 2km to the south and east of the Site at Park Farm, before flowing eastwards, passing 0.8km to the south of the Recovery Operation, before meeting the Medway at Snodland.

2.6.3.4 The Addington Brook also forms an OWC, this rising 0.8km to the north of the Site to the east of Trottiscliffe, before flowing southwards, passing between the Main Quarry and North Eastern Extension, and flowing to the Leybourne Stream some 0.3km to the south east of the Southern Site.

2.6.3.5 The Addington Brook features a western branch, this rising to the south and west of Trottiscliffe, before flowing southwards and eastwards, passing to the immediate north of the Main Quarry (around which it has historically been diverted), then joining the main Addington Brook channel between the Main Quarry and North-Eastern Extension.

2.6.3.6 The upper reaches of the Addington Brook are perched upon GC outcrop, likely being fed by springflow from the base of the Chalk escarpment to the north. The lower reaches of this watercourse, and of the Leybourne Stream, are located upon Greensand outcrop, with which a degree of hydraulic continuity is anticipated.

2.6.4 Surface Waterbodies

2.6.4.1 The local area features a number of surface waterbodies. Those to the north and west of the Site are typically perched upon GC, with those to the south and east typically being present in association with local watercourses.

2.6.4.2 The closest such feature to the Site (excluding water features forming part of the Site water management system) is a circa 24,000m^2 lined reservoir present to the immediate west of the Main Quarry (The Trosley Resevoir).

2.6.5 Flooding

2.6.5.1 Consultation of flood risk mapping for the Site location[5] confirms the Site to be entirely located within Flood Risk Zone 1 (FRZ1), the lowest risk class of FRZ, with a fluvial flood risk of 1 in 1,000 or less frequent in any given year. Areas of greater risk (FRZ2/3) are seen to be present upon the course of the Leybourne Stream.

2.7 Meteorological Setting

2.7.1 Background

2.7.1.1 Information concerning the meteorology of the Study Area has been obtained from:

- Published and third party historic data sources.

5 Gov.UK Flood Map For Planning (WWW), 2022.

2.7.2 Long Term Area Averages

2.7.2.1 The Standard Average Annual Rainfall (SAAR 1961 to 1990) reported by the FEH[6] is 711mm. Long-term average monthly rainfall data[7] are given below at *table 3*.

Table 3 Area Long Term Average Monthly Rainfall and Potential Transpiration													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tot
Area Average Rainfall	65	50	46	45	52	48	58	66	62	67	81	70	711
Potential Evaporation	1	9	33	56	81	100	98	79	50	20	5	0	532

2.7.3 Effective Rainfall

2.7.3.1 The available rainfall data has been utilised to derive estimates for monthly effective rainfall for vegetated surfaces, bare ground and open water, using the methods of Grindley[8] and EA R&D Handbook W6-043/HBRef.13[9] as presented below at *table 4*.

2.7.3.2 Effective rainfall is estimated at 286.1mm/a for bare ground, 214.4mm/a for permanent grassland and 85.5mm/a for open water.

Table 4 Derivation of Effective Rainfall for Differing Surfaces													
Bare Earth (rc = 0mm)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rf	65	50	46	45	52	48	58	66	62	67	81	70	711
Pe	1	9	33	56	81	100	98	79	50	20	5	0	532
rf-Pe	64.4	41.1	13.0	-11.1	-28.9	-52.0	-39.8	-12.6	12.3	47.4	75.7	69.5	179.0
dPsmd	0.0	0.0	0.0	11.1	28.9	52.0	39.8	12.6	-12.3	-25.7	0.0	0.0	
dAsmd	0.0	0.0	0.0	11.1	20.9	7.0	0.5	-1.5	-13.0	-25.0	0.0	0.0	
Asmd	0.0	0.0	0.0	11.1	40.0	84.0	78.8	52.1	25.7	0.0	0.0	0.0	291.7
Psmd	0.0	0.0	0.0	11.1	32.0	39.0	39.5	38.0	25.0	0.0	0.0	0.0	184.6
Ae	1.0	9.0	33.0	56.0	73.0	55.0	58.7	64.9	49.3	20.0	5.0	0.0	424.9
ERF	64.4	41.1	13.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	75.7	69.5	**286.1**
Permanent Grassland (rc = 75mm)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rf	65	50	46	45	52	48	58	66	62	67	81	70	711
Pe	1	9	33	56	81	100	98	79	50	20	5	0	532
rf-Pe	64.4	41.1	13.0	-11.1	-28.9	-52.0	-39.8	-12.6	12.3	47.4	75.7	69.5	179.0
dPsmd	0.0	0.0	0.0	11.1	28.9	52.0	39.8	12.6	-12.3	-47.4	-49.3	0.0	
dAsmd	0.0	0.0	0.0	11.1	28.9	52.0	19.0	-2.0	-12.3	-47.4	-49.3	0.0	
Asmd	0.0	0.0	0.0	11.1	40.0	92.0	131.8	123.6	96.7	49.3	0.0	0.0	544.5
Psmd	0.0	0.0	0.0	11.1	40.0	92.0	111.0	109.0	96.7	49.3	0.0	0.0	509.1
Ae	1.0	9.0	33.0	56.0	81.0	100.0	77.2	64.4	50.0	20.0	5.0	0.0	496.6
ERF	64.4	41.1	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.4	69.5	**214.4**
Open Water													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Correction Constants	1.4	1.1	0.9	1.0	0.9	1.0	1.2	1.4	1.5	2.0	2.3	2.0	
Ae	1.4	10.3	30.4	53.2	73.7	102.0	121.5	108.2	73.5	39.8	11.5	0.0	625.5
ERF	64.0	39.8	15.6	-8.3	-21.6	-54.0	-63.3	-41.8	-11.2	27.6	69.3	69.5	**85.5**

6 "Flood Estimation Handbook CD-ROM, Version 3.0 ", Centre for Ecology & Hydrology (CEH; formerly the Institute of Hydrology), 2009 and successor web-service.

7 "Climate & Drainage", Technical Bulletin No. 34, Ministry of Agriculture Fisheries & Food (MAFF), September 1976.

8 "The Calculation of Actual Evaporation and Soil Moisture Deficit over Specified Catchment Areas", Grindley J, November 1969, Hydrological Memorandum 38, Meteorological Office, Bracknell, UK.

9 "Estimation of Open Water Evaporation, Guidance for Environment Agency Practitioners", R&D Handbook W6-043/HB, Finch JW and Hall RL, October 2001.

rc: Root Constant, Rf: Rainfall, Pe: Potential Evaporation, Psmd: Potential Soil Moisture Deficit. Asmd: Actual Soil Moisture Deficit, Ae: Actual Evaporation, ERF: Effective Rainfall. All units other than correction constants are millimetres.
Note: Estimates of effective rainfall for bare earth and grassland cover are identical due to the preponderance of rainfall over evapotranspiratton in the area which militates against the development of significant SMD during average climatic years.

2.8 Hydrogeological Setting

2.8.1 Background

2.8.1.1 The hydrogeological regime of the Site and surrounding area has been elucidated on the basis of:

- Review of published geological and hydrogeological data.
- Review of hydrogeological study reports prepared in support of planning applications for quarrying and water resource developments in the area.
- Groundwater level measurements made within observation piezometers at the Site and within the surrounding area operated by Ferns.
- Groundwater quality data for Site piezometers.
- Experience of similar hydrogeological terrains elsewhere within England.

2.8.2 Aquifer Classification

2.8.2.1 The GC is classified as 'Unproductive Strata', defined as layers with negligible aquifer properties, primarily functioning as aquicludes (barriers to groundwater movement / infiltration).

2.8.2.2 The FB and HB are classified as 'Principal Aquifers', defined as higher permeability layers of strategic importance for water supply / surface water baseflow.

2.8.2.3 The SB are classified as a 'Secondary A Aquifer', these being units that feature minor aquifer properties of importance at the local scale only.

2.8.3 Groundwater Flow Mechanism

2.8.3.1 Where present, the GC forms an aquiclude, this forming a barrier to groundwater flow and infiltration at the regional scale.

2.8.3.2 The FB and underlying HB Aquifers (the Lower Greensand Aquifer, LGA) comprise a largely homogenous classical granular aquifer in which groundwater flow is assumed to approximate to that described by Darcy[10] (*i.e.* intergranular non turbulent flow). Where the overlying GC is absent, recharge to the LGA is assumed to be rapid, vertical, and autogenic (derived within its own distribution). The LGA is locally unconfined, though is expected to become confined by the GC to the north and east of the Site.

2.8.3.3 Vertical anisotropy is present within the LGA, both due to the differing geology of its constituent units, and the presence of the clays of the SB, as intervening between the FB and HB. The SB are expected to function as an aquitard, though due to its limited thickness and variable properties, this is expected to be leaky (thus offering partial sub-

10 "Les Fontaines Publiques de la Ville de Dijon" (The Public Fountains of the City of Dijon), Darcy H, Dalmont, Paris, 1856.

division of the LGA into upper and lower aquifer units, forming the FB Aquifer and HB Aquifer respectively). This function is evidenced as:

- The Hythe Beds and Folkestone Beds rarely share the same piezometric surface; suggesting hydraulic separation.
- The groundwater contained within the Hythe Beds and Folkestone Beds have distinct chemical characteristics, often markedly-so, again pointing to some degree of hydraulic separation.
- Latter-day public water supply borehole drilling has preferentially targeted the deeper Hythe Beds (by casing-out the overlying Folkestone Beds). It is presumed that the significant additional expenditure incurred is justified by informed expectation of advantageous groundwater conditions at depth (*i.e.* that the Sandgate Beds provide a barrier to the downward migration of potential surface pollutants); again suggesting hydraulic separation.

2.8.3.4 The AC is expected to form a further regional aquiclude, hydraulically isolating the LGA from underlying strata.

2.8.4 Aquifer Boundaries

Aquifer Vertical Boundaries

2.8.4.1 The LGA is locally unconfined, its upper boundary being formed by ground surface.

2.8.4.2 The base of the LGA is formed by the AC aquiclude.

Aquifer Lateral Boundaries

2.8.4.3 The LGA are laterally continuous across the region, and are thus considered of effectively unlimited extent at the scale of interest.

Aquifer Internal Boundaries

2.8.4.4 The SB form an internal subdivision of the LGA, thus forming a partial internal boundary to vertical groundwater movement and separating the FB Aquifer and HB Aquifer.

2.8.5 Groundwater Occurrence and Levels

The Available Data

2.8.5.1 Information regarding groundwater levels within the LGA in the vicinity of the Site have been taken from:

- Groundwater level data for piezometers installed within the LGA at the Site (construction details included at *appendix 2*).
- Previous hydrogeological assessment of the Site.

2.8.5.2 Details of available data sources are presented at *table 5* below, with locations as at *figure 13*.

Table 5 Groundwater Level Data Sources			
Designation	Series	Data Record	Note
P3C	Original Series (date unknown)	2016-2018	Inactive, construction unknown, recorded elevations do not indicate recording of FB Aquifer saturated zone (assumed blocked / insufficient completion depth).
PZ5	2011 Series Piezometer	2011-2021	Active. Partially penetrating FB Aquifer.
PZ6			
PZ7			
PZ8			
PZ1-21	2021 Series Piezometers	2021	Active. Completed to base of FB Aquifer.
PZ2-21			
PZ3-21			Active. Partially penetrating FB Aquifer.
PZ4-21			Active. Completed to base of FB Aquifer.

Temporal Groundwater Level Variation

2.8.5.3 The available data is presented as a hydrograph at *figure 14*.

2.8.5.4 The historic data for the 2011 series piezometers demonstrates a subdued response to intra-annual change and negligible response to individual rainfall events, a slow but sustained inter-annual response of limited magnitude is observed. This is considered typical of regionally distributed and relatively permeable aquifers as present at the Site.

2.8.5.5 Though of more limited duration, data for the 2021 piezometers, as located in and around the Recovery Operation, agrees well with the wider data set, and is considered representative of FB Aquifer conditions observed more widely over the past several years. The 2011 dataset however implies that minimum heads recorded at the 2021 piezometers may not be representative of the groundwater system over longer duration.

Estimated Groundwater Elevations

2.8.5.6 The available data (excluding P3C) has been used to create interpolated contour plots estimating groundwater elevations across the Site under minimum, maximum and average observed conditions, as at *figures 15*, *16* and *17* respectively.

2.8.5.7 Under minimum conditions, groundwater elevations across the Site are seen to fall generally to the north and east in line with the dip of the regional geological sequence (and thus expected trend), though with a radial flow component to both the north east and north west, this being in line with the fall of the base of the FB, as at *figure 8*. A hydraulic gradient of some 0.006 is observed across the Recovery Operation, with a north easterly flow vector prevailing, heads ranging from some 36.7maOD to 34.2maOD.

2.8.5.8 Under maximum conditions, a similar head distribution and thus flow direction is observed, this with a comparable hydraulic gradient across the Recovery Operation, heads ranging from some 36.9maOD to 34.7maOD.

2.8.5.9 Under average conditions, a similar head distribution and thus flow direction is again observed, this with also at comparable hydraulic gradient across the Recovery Operation, heads ranging from some 36.8maOD to 34.4maOD.

2.8.5.10 These findings update and largely corroborate the findings of the 2020 H&HIA, which further details the wider regional context, groundwaters within the LGA flowing down dip towards the centre of the London Basin.

2.8.5.11 The continuous nature and extensive duration of monitoring data for the Site means that any influence on groundwater levels induced by nearby third-party abstraction is already reflected within the data. This is expected to feature to some degree in association with the Trosley public water supply abstraction present to the west o the Recovery Operation.

Unsaturated Thickness

2.8.5.12 Ground elevation data has been combined with groundwater elevation data to produce interpolated contour plots estimating unsaturated thickness within the FB Aquifer, under minimum and maximum groundwater elevations (as at *figures 18* and *19* respectively).

2.8.5.13 Under minimum groundwater levels, unsaturated thickness is seen to range from some 1.3m to 64m (1.3m to 25m within the extent of the Recovery Operation). The observed distribution is heavily influenced by historic mineral extraction, unsaturated thicknesses being reduced accordingly within the Main Quarry.

2.8.5.14 Under maximum groundwater levels, a similar distribution is observed, with unsaturated thickness ranging from some 1m to 44m (1m to 24m within the extent of the Recovery Operation).

Saturated Thickness

2.8.5.15 Data regrading the base of the FB (*figure 8*) has been combined with groundwater elevation data to produce interpolated contour plots estimating saturated thickness within the FB Aquifer, under minimum and maximum groundwater elevations (as at *figures 20* and *21* respectively).

2.8.5.16 Under minimum groundwater levels, saturated thickness is seen to range from some 6m to 19.5m (7.5m to 18.3m, falling westwards within the extent of the Recovery Operation). A similar distribution is observed under maximum groundwater elevations, ranging from some 7.5m to 20.5m (8m to 19m within the extent of the Recovery Operation).

2.8.6 Aquifer Parameters

2.8.6.1 Aquifer parameters describe the rate at which groundwater may be transmitted through a rock body (hydraulic conductivity / transmissivity) and the water storage potential of the system (storage).

2.8.6.2 These parameters are generally established from field-testing, by way of pumped abstraction from a borehole or boreholes and the concurrent measurement of groundwater response to that pumping in adjacent or nearby observation boreholes.

2.8.6.3 Published[11] results of pumping test analysis and laboratory from 40-no. aquifer test pumping locations within the LGA of southeast England have been reviewed; as many boreholes penetrate and draw supply from both the Hythe and Folkestone formations, the majority of available information is presented for the Lower Greensand as a whole.

2.8.6.4 Reported transmissivity values for the LGA range from 33m^2/d to 3,400m^2/d with a mean of 270m^2/d and 25th and 75th percentiles of 140m^2/d and 500m^2/d respectively; the data shows a mean transmissivity of 260m^2/d where attributed to the Folkestone Beds and 310m^2/d where attributed to the Hythe Beds.

2.8.6.5 Hydraulic Conductivity (K) of the LGA is reported within the range of 1x10^{-4}m/d to 10m/d, with a mean value of 0.46m/d and reported storage coefficient values for the range between 1x10^{-5} and 0.08 with a mean of 6x10^{-4}.

2.9 Water Resources Setting

2.9.1 Water Abstractions

Licenced Abstractions

2.9.1.1 Data has been obtained from the EA summarising licensed abstractions situated within a 6km radius of the Site; in addition, SEW have provided locational information for their public water supply abstractions, together with the locations of key monitoring piezometers employed for drought indication.

2.9.1.2 The data that has been made available is tabulated at *table 6*, with locations as at *figure 22*.

Table 6 Licenced Abstractions

Ref (*figure 22*)	Easting	Northing	Licence No.	Holder	Source	Use
A	564025	159571	9/40/02/0220/G	South East Water Ltd	GW	Potable Water Supply - Direct
B	564019	159557				
C	564000	159172				
D	564137	159456				
E	563768	159106				
F	563824	159296				
G	563992	159663				
H	563085	159659				
I	566631	160668				
J	566494	161134				
K	561375	157960				
L	561467	157946				
M	568392	162126				
N	566699	160440	9/40/02/0257/G			
O	562486	158641				
P	560676	162895	9/40/01/0146/GR			
Q	565200	159370	01/117	Ferns Group	GW	Mineral Washing
R	566000	159400	9/40/02/0214/S		SW	

11 "Baseline Report Series: 9: The Lower Greensand of Southern England", BGS & EA, Technical Report NC/99/74/9, P Shand, J Cobbing, R Tyler-Whittle, A F Tooth & A Lancaster, 2003.

S	566000	159400	9/40/02/0020/SR			General Washing/Process Washing
T	570300	161200	9/40/02/0110/GR	Townsend Hook Ltd	GW	Process Water
U	569610	160330			GW	
V	560340	159030	9/40/03/0333/GR	St. Clere Estate	GW	Spray Irrigation - Direct
W	559320	157020	9/40/03/0582/G	Mr SH Chesson	GW	Spray Irrigation - Direct
X	564960	153700	02/116	Mr PHF Wooldridge	SW	General Farming & Domestic
Y	564960	153700	02/120			Spray Irrigation - Storage
Z	570590	157900	9/40/02/0001/SR	Mr Nigel Osborne	SW	Spray Irrigation - Direct
AA	569300	159620	9/40/02/0117/SR	Smurfit UK Ltd	SW	General Use Relating to Secondary Category (Low Loss)
AB	569420	160100				
AC	560610	155530	9/40/03/0056/SR	Mr PJ Fermor	SW	Spray Irrigation - Direct
AD	562320	153860	9/40/03/0058/SR	Fairlawne Estate	SW	Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household
AE	561210	155040	9/40/03/0224/SR	FE Whitehead & Son	SW	Spray Irrigation – Direct
GW: Groundwater, SW: Surface Water						

2.9.1.3 Abstractions A to H constitute SEW's Trosley groundwater sources: geological logs for abstractions C, D and E show borehole depths ranging from c.74m to c.100m, with well-screens being present through the Folkestone Beds and Hythe Beds, whilst abstraction F is shallower at c.53m and is atypical for this group in that the well-screen is located solely in the Hythe Beds.

2.9.1.4 Abstractions I, J and N constitute SEW's Ryarsh groundwater sources; geological logs for abstractions I and J indicate borehole depths of c.90m and c.73m respectively, with well-screens being present through the Folkestone Beds and Hythe Beds.

2.9.1.5 Abstraction Q, made from an unlined groundwater pond, is operated by FG, being situated within the plant site of the Main Quarry Area.

De-regulated Abstractions

2.9.1.6 A request was made to Kent County Council for details of deregulated (unlicensed) abstractions with the area of the Site who have reported that they do not maintain such a data-base. None of the property owners contacted during water features surveying volunteered the existence of a deregulated private supply.

2.9.2 Source Protection Zones

2.9.2.1 Source Protection Zones (SPZs) local to the Site are presented at *figure 23*, with definitions as below:

- SPZ1 (Inner Zone) is defined as the 50 day travel time from any point below the water table to the protected abstraction source (*e.g.* public water supply well) and has a minimum radius of 50 metres.
- SPZ1c (Inner zone: Subsurface Activity Only) extends SPZ1 where the aquifer is confined and may be impacted by activities such as deep drilling, mining or quarrying.

- SPZ2 (Outer Zone) is defined by a 400-day travel time from a point below the water table to the protected abstraction source and has a minimum radius of 250 or 500 metres around the source, depending on the size of the abstraction.
- SPZ2c (Outer zone: Subsurface Activity Only) extends SPZ2 where the aquifer is confined and may be impacted by activities such as deep drilling, mining or quarrying.
- SPZ3 (Total Catchment) is defined as the area around a protected abstraction source within which all groundwater recharge is presumed to be discharged at the source.
- SPZ4 (Special Interest) is defined as areas where local conditions require additional protection.

2.9.2.2 The footprint of the Recovery Operation spans areas mapped by the EA as SPZ1, SPZ1c, SPZ2, SPZ3 and SPZ4. These designations are considered to relate to SEW's public water supply abstractions A to H, *table 6*. This is with the exception of SPZ3, this being applied across much of the LGA outcrop area, and thus representing multiple local abstractions.

2.9.2.3 In reality, due to the stripping of Gault Clay as part of quarrying of Folkestone Sands at the Site, the entirety of the Recovery Operation that is mapped by the EA as SPZ1c should actually be viewed as SPZ1.

2.10 Hydrochemical Setting

2.10.1 Background

2.10.1.1 Information concerning the water quality of the Study Area has been obtained from:

- Published and third-party data sources.
- Site monitoring data.

2.10.2 Groundwater Quality

Groundwater Vulnerability

2.10.2.1 Groundwater vulnerability mapping confirms GC outcrop areas to be of 'Unproductive' vulnerability, due to the protection offered from ground surface by the GC Aquitard.

2.10.2.2 Areas of LGA outcrop, as is the case for the Site due to the removal of GC cover during mineral extraction, is considered at 'High' vulnerability (due to the presence of outcropping Principle Aquifers).

Water Framework Directive Groundwater Body Chemical Status

2.10.2.3 With respect to the Water Framework Directive (WFD), the Site falls within the Thames River Basin District, Thames Groundwater Management Catchment, Kent Greensand Middle Western Operational Catchment, Kent Greensand Middle Water Body.

2.10.2.4 This waterbody has an overall status of 'Poor', with a quantitative status of 'Poor' (attributable to dependent water body status and water balance) and a chemical status of 'Poor' (attributable to drinking water protected areas and general chemical tests).

Groundwater Quality Data

Background

2.10.2.5 Detailed assessment of groundwater quality within the area of the Site was undertaken within the 2020 H&HIA, which drew upon the following data sources:

- Laboratory analysis undertaken upon water samples collected by bailed purging made over 17-no. sampling rounds undertaken within Site piezometers between June 2015 and May 2017 (piezometers PZ5, PZ6, PZ7 & PZ8).
- Laboratory analysis of samples taken from SEW sources at Trosley and Ryarsh.
- Published groundwater quality data[12].

2.10.2.6 Assessment concluded that groundwater quality observed within the South-Eastern Extension notably exceeded that characteristic of the local area with regards to Ammoniacal Nitrogen, Nickel, Lead, Arsenic, Chromium and Vanadium.

2.10.2.7 This was considered likely attributable to interception within the South-Eastern Extension of a down hydraulic gradient (north eastwards) contaminant plume associated with an adjacent historic household waste landfill site (Pearsons Pit Landfill, further detail at *section 2.10.3*).

2.10.2.8 Groundwater quality data collection at the Site has since been expanded to accommodate the requirements of this assessment, the findings of which are considered below.

The Collected Data

2.10.2.9 Bailed purging and subsequent laboratory analysis of samples has been undertaken targeting piezometers PZ1-21, PZ2-21 and PZ3-21, as adjacent the Recovery Operation, providing a data record at monthly resolution over the period April 2021 to April 2022 (covering one full calendar year).

2.10.2.10 Data collection at PZ1-21 has been hampered to date due to clogging of sampling equipment with sludge from the piezometer base resulting in retrieval of insufficient volumes for sample analysis.

2.10.2.11 The available data is presented at *appendix 3*, with laboratory certificates presented at *appendix 4*. Summary statistics for the available data are presented at *table 7* below. This includes presentation of the Limit Of Detection (LOD) applying to analysed samples, and relevant Environmental Quality Standards[13] (EQS).

12 "Baseline Report Series: 9: The Lower Greensand of Southern England", BGS & EA, Technical Report NC/99/74/9, P Shand, J Cobbing, R Tyler-Whittle, A F Tooth & A Lancaster, 2003.

13 Water Supply (Water Quality) Reg's 2000 (Drinking Water Standards), supplemented by Groundwater Regulations 1998, Surface Water (Abstraction for Drinking Water) Regs 1996, EU Groundwater Directive, EU Dangerous Substances Directive, and World Health Organisation guidelines for drinking water quality.

Table 7 Groundwater Quality Data, PZ2-21 and PZ3-21					
Determinand	LOD*	EQS**	Minimum Concentration	Maximum Concentration	Average Concentration
PAHs	0.00016	0.0001	0.00016	0.00017	0.00016
PCBs	0.00001	NA	0.00001	0.00002	0.00001
Phenols	0.02	0.0005	0.02	0.35	0.0472
TPH	5	0.3	0.005	0.007	0.0051
pH	NA	6 to 9	6	7.6	6.9
Ammoniacal Nitrogen	0.01	0.5	0.01	6.9	0.39
Antimony	0.001	0.005	0.001	0.001	0.001
Arsenic	0.001	0.01	0.001	0.001	0.001
Barium	NA	0.1	0.03	0.11	0.05
Cadmium	0.00002	0.005	0.00002	0.0001	0.00004
Chloride	NA	250	43	436	114.69
Chromium	0.001	0.05	0.001	0.001	0.001
Copper	0.001	2	0.001	0.003	0.0011
Dissolved Organic Carbon	NA	NA	0.79	3.1	1.97
Fluoride	0.1	1.5	0.1	1.1	0.16
Lead	0.001	0.01	0.001	0.001	0.001
Mercury	0.00003	0.001	0.00003	0.00005	0.00003
Molybdenum	0.001	0.07	0.001	0.001	0.001
Nickel	0.002	0.02	0.001	0.109	0.03
Selenium	0.001	0.01	0.001	0.001	0.001
Sulphate	NA	250	113	201	149.31
Total Organic Carbon	NA	NA	0.8	3.1	1.82
Zinc	NA	5	0.003	0.116	0.037
*LOD: Limit Of Detection, EQS: Environmental Quality Standards All units in mg/l					

Discussion

2.10.2.12 The collected data demonstrates concentrations of Phenols, Antimony, Arsenic, Chromium, Lead, Molybendenum and Selenium to be uniformly recorded at the LOD.

2.10.2.13 All species are recorded within the relevant EQS with the exception of PAHs, PCBs, Phenols, Ammoniacal Nitrogen, Barium, Chloride and Nickel.

2.10.2.14 In the case of PAHs, PCBs and Phenols, EQS exceedance is largely attributable to the LOD of analysis exceeding EQS limits. Concentrations are otherwise at or near the LOD, which is seen to be exceeded on one occasion only for PCBs (potentially sample contamination) and across the winter of 2022 in the case of PAHs.

2.10.2.15 Though typically below the EQS, Ammonical Nitrogen concentrations have exceeded EQS limits on one occasion at both PZ2-21 and PZ3-21 (though on separate sampling rounds), potentially being indicative of episodic concentration increases relative to background trace concentrations.

2.10.2.16 Barium EQS exceedances have been recorded at PZ2-21 only. This is potentially attributable to the use of bentonite clays in piezometer construction.

2.10.2.17 Chloride concentrations are uniformly elevated, notably at PZ2-21, though have exceeded EQS limits on one occasion only, this being in August 2021 at PZ3-21. A similar pattern is observed with regards to Nickel, though EQS exceedances are more regularly observed.

2.10.2.18 Comparison has been undertaken between the available data, and background concentrations established within the 2020 H&HIA, as at *table 8* below. This has been undertaken for key species identified within the 2020 H&HIA as potentially being associated with Pearsons Pit Landfill, as well as common indicators of landfill derived contamination.

Table 8 Groundwater Quality Data, PZ2-21 and PZ3-21

Determinand	Main Quarry Maximum	Trosley Average*	FB Aquifer Average*	PZ5, South Eastern Extension Maximum*	Main Quarry Relative to Trosley (%)	Main Quarry Relative to FB Aquifer (%)	Main Quarry Relative to PZ5, South Eastern Extension (%)
Ammoniacal Nitrogen	6.9	0.018	0.03	1.1	99.74	99.57	84.06
Arsenic	0.001	0.00036	0.0065	0.013	64.00	-550.00	-1200.00
Chloride	436	39	20	68	91.06	95.41	84.40
Chromium	0.001	0.00023	0.00115	0.008	77.00	-15.00	-700.00
Lead	0.001	0.00038	0.0004	0.046	62.00	60.00	-4500.00
Nickel	0.099	0.00254	0.005	0.101	97.67	95.41	7.34
Sulphate	201	66	48	32	67.16	76.12	84.08
Total Organic Carbon	2.6	0.869	1.2	5.2	71.97	61.29	-67.74

*: Established from 2020 H&HIA
All units in mg/l

2.10.2.19 Assessment indicates that data collected within the Main Quarry in association with baseline data gathering for the Recovery Operation exceeds background concentrations reported for SEW's Trosley source for all determinands assessed. Background concentrations for the FB Aquifer are also seen to be exceeded excepting Arsenic and Chromium.

2.10.2.20 The collected data is seen to record significantly lower concentrations of Arsenic, Chromium, Lead and Total Organic Carbon that has been recorded at PZ5 (indicated to have intercepted contaminant plume from Pearsons Pit Landfill). PZ5 concentrations are however exceeded with regards to Ammonical Nitrogen, Chloride, and Sulphate.

2.10.2.21 Assessment thus indicates that water quality within the Main Quarry, as recorded at PZ2-21 and PZ3-21, falls somewhere between that attributable to the Aquifer as a whole, and that present to the northeast, where identified existing contaminant sources persist. With reference to *figure 17* and *section 2.10.3*, this may be in part due to the influence of Pearsons Pit Landfill, which is partially up-hydraulic gradient from PZ3-21.

2.10.3 Potential Sources of Pre-existing contamination

2.10.3.1 Summary details of operational and known historical landfills local to the Site, as taken from the EA's Public Register, are tabulated below at *table 9*, with their locations and extents illustrated at *figure 24*.

2.10.3.2 Such features of note include 1 no. permitted landfill within the Site boundary in the form of Wrotham Quarry Landfill, this extending through the North-Eastern Extension area (inert infill placement) and Main Quarry (storage and processing).

2.10.3.3 The North-Eastern extension is directly abutted to the north by the permitted inert landfill of Addington Quarry.

2.10.3.4 To the north of the Site, on lands intervening between the Main Quarry and North Eastern Extension, 1 no. historic landfill is seen to be present in the form of Pearsons Pit Landfill, this having received potentially putrescible wastes.

2.10.3.5 The location of this landfill with respect to nearby SPZ's (as at *section 2.9.2*), agrees well with the designation of local areas of SPZ4. This landfill is considered an acknowledged pre-existing source of groundwater contamination within the LGA.

Table 9 Summary Detail for Landfill in the Vicinity of the Site

Identification	Distance (km)*	Operator	Status	Class	Note
Wrotham Quarry	0	Ferns Group	Active	I	FB Outcrop
Addington Quarry	0	Pearsons Ballast Limited	Active	NB	FB Outcrop
Workhouse Quarry	1.4	Gallagher Aggregates Ltd	Active	I	FB Outcrop
Harpwood Residential	1.6	Mr & Mrs Hazeldene	Active	NB	FB Outcrop
Offham Landfill	1.9	Waste Recycling Group	Active	HH, C&I	HB Outcrop
Borough Green Sand Pit Landfill	2.8	Borough Green Sand Pits	Active	I	FB / GC Outcrop
Pearsons Pit	0.03	Biffa Ltd	Historic	I, C&I, HH	FB Outcrop
Hernewell Farm	1	Unknown	Historic	I	HB Outcrop
Gatehouse Wood	1.3	Unknown	Historic	I	FB Outcrop
Ryarsh Brick	1.6	Unknown	Historic	I	FB Outcrop
Offham Quarry	1.8	Waste Recycling Group	Historic	I	HB Outcrop
Platt Industrial	2.5	Unknown	Historic	I	FB Outcrop
Joco Pit	3.2	Unknown	Historic	I	FB Outcrop

*= At shortest distance from Recovery Operation.
I = Inert, NB = Non-Biodegradable, HH = Household, C&I = Commercial and Industrial

3 CONCEPTUAL HYDROGEOLOGICAL MODEL

3.1 The Lower Greensands constituting the economic mineral of the Site forms a regional aquifer (The LGA) which is of importance as a source of both large and small scale water supply.

3.2 At the scale of interest, the LGA is interpreted to be of effectively unlimited extent to the west, north and east of the Site.

3.3 The lower boundary of the LGA is represented by the occurrence of the AC to the south of the Site, whilst an upper recharge boundary is formed where the GC aquiclude overlies the aquifer to the north.

3.4 The LGA is divided into upper and lower units; the upper comprising the poorly consolidated sands of the Folkestone Beds (The FB Aquifer) and the lower comprising the sandy limestones and mudstones of the Hythe Beds (The HB Aquifer), the two units being separated at a regional scale by the clays and silts of the Sandgate Beds, which functions as a (leaky) aquitard.

3.5 Recharge within the aquifer is largely diffuse, but in areas is concentrated by the presence of streams draining the allogenic catchment underlain by GC, to the north of the Site which drains southwards to recharge the LGA.

3.6 Groundwater flow within the LGA is chiefly intergranular and diffuse; the upper Folkestone Beds unit comprising a largely homogenous aquifer, with anisotropy being of relatively greater importance within the underlying Hythe Beds.

3.7 The prevailing regional groundwater flow direction is to the north and north east, with a component of north-westerly flow being indicated by local piezometry to exist at the Site.

3.8 The LGA supports public water supply abstraction, locally at SEW's Trosley source. Associated SPZ's extend within the Site boundary. Such abstraction is expected to have artificially depressed groundwater elevations in its immediate vicinity to some extent..

3.9 The Site abuts a historic third-party landfill that has received putrescible wastes, and is considered to form a source of existing groundwater contamination within the LGA.

4 THE RECOVERY OPERATION

4.1 Overview

4.1.1 The Recovery Operation details the buttressing of the existing northern and north-western extraction faces of the Main Quarry void at the Site using indigenous material and imported inert waste material, this being place entirely above the elevation of groundwaters within the LGA Aquifer.

4.1.2 The works are required to safeguard the integrity of lands adjoining these quarry faces, including the Trosley Reservoir to the west of the Main Quarry void which is elevated c.30m above the quarry floor.

4.1.3 The need for the buttressing works was identified by a geotechnical assessment report produced in April 2019[14].

4.1.4 It is estimated that c.190,000 cubic metres (m^3) of material will be required in order to safeguard the stability of the quarry faces at risk and to subsequently achieve restoration closely conforming to that approved for the Site.

4.1.5 Approximately c.38,000m^3 of suitable indigenous material has been identified at the Site, leaving an importation requirement of c.152,000m^3 (c.229,000 tonnes) of inert materials

4.1.6 Based upon this volume requirement, and an anticipated importation rate of c.40,000 tonnes per annum, infilling will require a period of 5 years for completion.

4.1.7 Infill material would be delivered to site via HGV and temporarily stored in the raised stock area (eastern limit of Recovery Operation) before being hauled to the face via dump truck where it would be placed using hydraulic excavator and tracked dozer (placement works limited to the west of the Recovery Operation only).

4.1.8 The design of the Recovery Operation is presented at *figure 25*.

4.2 Lining System

4.2.1 The Recovery Operation is to partially penetrate the unsaturated zone of The FB Aquifer. No in-situ geological barrier will thus be present upon the base of workings.

4.2.2 EA guidance for the deposit of inert wastes onto land[15] details requirement for provision of an artificial Engineered Barrier System (EBS) under such circumstances, this being of equivalent attenuating effect to a 1m thick liner of permeability $1*10^{-7}$m/s (the Design Standard).

4.2.1.1 It is thus proposed that the Recovery Operation be equipped with an EBS extending upon the base and sidewalls of the placed materials. The buttressing works are to be sloped forming a stable profile to the Main Quarry void. The placed materials will thus only be in constant contact with in-situ FB Aquifer material upon the base and northern / western side-slopes. The EBS will thus be extended to form a raised foot upon the

14 "Wrotham Quarry, Annual Report for Western Slope Monitoring, April 2019", QuarryDesign Limited,24th May 2019

15 Environment Agency, 'Environmental Permitting Regulations: Inert Waste Guidance, Standards and Measures for the Deposit of Inert Waste Onto Land'

southern and eastern side-slopes (estimated 1.5m height), ensuring full EBS containment of the placed materials on all boundaries.

4.2.1.2 The EBS is to be formed using Site won materials where possible, with imported inert infill materials otherwise being selected from the infill stream for this purpose. Such materials will be selected to meet Design Standard EBS requirements.

4.3 Capping

4.3.1 Other than emplacement of soil cover and its subsequent planting, no engineered capping system has been specified or will be required for the Recovery Operation.

4.4 Extent, Depth and Elevation of Infilling

4.4.1 As at *figure 25*, buttressing works are proposed over an area of some 3.9ha within the 7.4ha application area, being focused upon the faces and bases of the northern and western banks of the Main Quarry void.

4.4.2 The lower elevation of infill is to accord with current ground elevations, thus ranging from 36maOD to 65maOD, being lowest at the base of the Main Quarry faces, as at *figure 26*.

4.4.3 The upper elevation of the infill is to accord with development designs, thus ranging from 37maOD to 66maOD, being highest at the base of the Main Quarry faces, as at *figure 27*.

4.4.4 This pattern of placement results in infill material thicknesses ranging from approximately 1 to 17m, being thickest at the base of the Main Quarry faces, and thinnest at the margins of infill placement, as at *figure 28*.

4.5 Waste Types

4.5.1 The site will be permitted to accept inert wastes only. Inert wastes are defined by the Landfill Directive (1999/31/EC), article 2(e) as: '*waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and / or groundwater*'.

4.5.2 Section 2.1.1 of the 2002 Council Decision (The Council Decision), *'Establishing Criteria and Procedures for the Acceptance of Waste at Landfills Pursuant to Article 16 of and Annex II to Directive 1999/31/EC' (the Landfill Directive)*, lists a number of waste types that are considered inert without need for testing (subject to being single stream of a single waste type or combination of types).

4.5.3 Other waste types are also classified as inert provided that they meet the leaching limit values (determined by testing) outlined at section 2.1.2.1 of the Council Decision.

4.5.4 It is proposed that all such wastes will meet with the above criteria, and any accepted wastes that are not listed at Section 2.1.1 of the Council decision will be tested to ensure compliance with section 2.1.2.1 of that decision (where necessary).

4.6 Leachate Management

4.6.1 Assuming full implementation of control and compliance procedures, the imported wastes will be inert and therefore incapable of producing potentially contaminating leachate. Leachate management will thus not be required.

5 CONCEPTUAL SITE MODEL

5.1 Background

5.1.1.1 The principal elements of the Recovery Operation and its hydrogeological setting, which together comprise the Source-Pathway-Receptor model to be quantified at HRA, are described below.

5.1.1.2 A simplified visual representation of the CSM is presented at *figure 29,* with cross sections being provided at *figure 30*.

5.2 Source

5.2.1 The source of potential contamination for the purposes of HRA is the full extent of the Recovery Operation, as illustrated at *figure 25*.

5.2.2 Potential leachate is represented at HRA by chemical species selected from the EA's 18-no. (leaching test specific[16]) determinand Waste Acceptance Criteria (WAC) schedule for inert wastes[17] with the addition of Ammoniacal Nitrogen.

5.2.3 Given the inert nature of infill to be deposited, Ammoniacal Nitrogen would not be expected to be generated at HRA, as reflected by its absence with the EA's schedule of inert WAC limits. It has however been included as this species is commonly expected to be included at HRA by the EA.

5.2.4 In lieu of sufficient leaching test data for inert material streams specific to the Recovery Operation, for all chemical species excepting Ammoniacal Nitrogen, lower limit concentrations for the selected species have been defined by reference to WAC results of materials tested as part of proposals for excavation to landfill associated with the re-development of the former Battersea power station[18] (*appendix 5*).

5.2.5 In view of the industrial history of the Battersea Site, selection of these reference WAC results to represent lower-limit leachate concentrations within the Recovery Operation represents a conservative (*i.e.* tending toward worst-case) approach to HRA.

5.2.6 Upper limit concentrations for the source term species selected for HRA have been ascribed by reference to their statutory maximum WAC limits and thus implicitly represents a worst-case approach to assessment.

5.2.7 No relevant ammoniacal nitrogen leaching data are available; neither is there a WAC limit set for this species.

5.2.8 In lieu of this information, the EA have previously advised that the source term concentrations for ammoniacal nitrogen should be based upon prevailing worst-case values derived from the groundwater quality data-set for the Site; upper and lower source term values for ammoniacal nitrogen have thus been based upon the

16 BS EN 12457.

17 As transposed from Council Decision annex 2003/33/EC).

18 "Site Investigation Report, Battersea Power Station", Concept Site Investigations for Battersea Project Land Company, report reference 13/25/25-FR02, dated 13/08/13. Investigations comprised 40-no. 2-part batch leaching tests (performed in accordance with BSEN 12457/3) upon samples obtained from 4-no. site investigation boreholes and 23-no. trial pits as part of proposed excavations and presumed deposit to landfill. Summary data is included here at *appendix 5*.

groundwater quality data established in the vicinity of the Recovery Operation as at *section 2.10.2*.

5.2.9 The screening and selection of determinands representing the inert source at HRA is presented at *table 10*. This has been undertaken to ensure that modelled determinands include those suitable for accurate characterisation at HRA, and for subsequent derivation of control / compliance measures. Determinands not meeting these requirements, though considered necessary for inclusion as key determinands, or to provide a representative spread of potential contaminants, have also been selected.

Table 10 HRA Determinand Screening and Selection, Recovery Operation

Determinand	Note	Selection (Yes / No)
PAHs	Absent in reference dataset. Baseline LOD exceeds EQS. Baseline data exceeds EQS.	No
PCBs	Absent in reference dataset. Baseline LOD exceeds EQS. Baseline data exceeds EQS.	No
Phenols	Baseline LOD exceeds EQS. Baseline data exceeds EQS.	No
TPH	Absent in reference dataset. Baseline LOD exceeds EQS.	No
Ammoniacal Nitrogen*	Absent in reference dataset. Baseline data exceeds EQS. Considered key determinand.	Yes
Antimony	Reference dataset exceeds WAC limits.	No
Arsenic	Meets criteria for assessment.	Yes
Barium	Baseline data exceeds EQS.	No
Cadmium	Meets criteria for assessment.	Yes
Chloride	Baseline data exceeds EQS. Considered key determinand.	Yes
Chromium	Reference dataset exceeds WAC limits.	No
Copper	Meets criteria for assessment.	Yes
Dissolved Organic Carbon	Nonspecific parameter.	No.
Fluoride	Reference dataset exceeds WAC limits.	
Lead	Meets criteria for assessment.	Yes
Mercury	Meets criteria for assessment.	Yes
Molybdenum	Reference dataset exceeds WAC limits.	No
Nickel	Baseline data exceeds EQS.	No
Selenium	Reference dataset exceeds WAC limits.	No
Sulphate	Reference dataset exceeds WAC limits. Considered key determinand.	Yes
Zinc	Meets criteria for assessment.	Yes

*Not included in WAC schedule.
LOD = Limit of Detection. EQS = Environmental Quality Standards

5.2.10 Adopted upper and lower source term concentrations for the selected determinands are presented below at *table 11*.

Table 11 Lower and Upper Source Term Concentrations Adopted by HRA					
Chemical	Lower Leachate Concentration*	Upper Leachate Concentration**	Chemical	Lower Leachate Concentration*	Upper Leachate Concentration**
Ammoniacal Nitrogen	0.01	0.19	Lead	0.004	0.05
Arsenic	0.0056	0.05	Mercury	0.00007	0.001
Cadmium	0.00011	0.004	Sulphate***	50	100
Chloride	6.47	80	Zinc	0.018	0.4
Copper	0.014	0.2			

All units are mg/l.
*: For all determinands excepting ammoniacal nitrogen, these concentrations have been enumerated with the average WAC testing results established for the Battersea re-development site investigations. For ammoniacal nitrogen, the concentration has been set at the lowest recorded value reported by the available baseline groundwater chemistry data.
**: For all determinands excepting ammoniacal nitrogen, these concentrations have been set at the maximum WAC limits permissible for inert waste as specified by regulation. For ammoniacal nitrogen, the concentration has been set at the highest recorded value reported by the available baseline groundwater chemistry data excepting exceedance of EQS.
***: The average leachate concentration for sulphate established from the Battersea redevelopment data-set exceeds the upper leachate concentration based upon WAC limits and is therefore discounted from analysis. Sulphate has thus been ascribed a lower leachate concentration at 50% of the 'Upper' WAC limit.
Note 1: the WAC testing data and maximum permissible concentrations specified by regulation are stated in units of mg/kg for solid phase samples obtained using a 10:1 liquid to solid ratio, in an eluate of 10l, as specified by BSEN 12457/3. HRA leachate concentrations have therefore been established in units of mg/l by dividing the WAC concentrations by a factor of 10.
Note 2: To further the conservative approach to HRA, where laboratory concentrations were determined below the LOD, the LOD has been assumed.

5.3 Pathway

5.3.1 The potential pathway for leachate to enter the water environment and processes occurring within that pathway are constituted by several elements, each of which is described in-turn below.

5.3.2 Migration Pathway

5.3.2.1 The potential leachate migration pathway simulated by HRA is as follows:

- Vertically downwards through the base of the infill material and EBS.
- Vertically downwards through the FB Aquifer unsaturated zone to the watertable.
- Horizontally down the hydraulic gradient (north-eastwards) within the saturated zone of the FB Aquifer.

5.3.3 Chemical Retardation (Kd Values)

5.3.3.1 Retardation is assumed to occur in the EBS (where applied), and within both the unsaturated and saturated zones of the Aquifer.

5.3.3.2 Lower and upper values for partition coefficients (Kd values) of individual chemical species have been based upon those presented within the LandSim Manual[19] (the "Manual Value").

19 Golder Associates, 'The Landsim Manual', Environment Agency R&D Publication 120, including 2004 and 2007 addendums.

5.3.3.3 Lower Kd values within the HRA are set at the minimum Manual Value, whilst upper values have been specified at 25% of the maximum Manual Value[20] and thus represent a conservative approach to HRA.

5.3.3.4 The Kd value ranges thus adopted by HRA are shown below at *table 12*.

Table 12 Lower and Upper Partition Coefficients (Kd Values) Adopted by HRA

Chemical	Lower Kd	Upper Kd	Chemical	Lower Kd	Upper Kd
Ammoniacal Nitrogen	0.5	2	Lead	27	2.7E5
Arsenic	25	62.5	Mercury	450	959
Cadmium	1.6	375	Sulphate*	1E-09	
Chloride*	1E-09		Zinc	1	150
Copper	40	6,875			

All units are l/kg.
*Conservative species, thus no effective retardation assumed.

5.4 Receptors

5.4.1 The controlled waters receptor being assessed is groundwater present within the Aquifer directly adjacent to the Recovery Operation, and the water resource it represents.

5.4.2 In order to assess potential impacts upon this receptor, a Point of Compliance (POC) has been identified immediately down hydraulic gradient from the Recovery Operation, representing PZ3-21, *figure 13*.

20 Excepting Kd values for Ammoniacal Nitrogen, which, due to the very limited range advised by the LandSim documentation, are set at the maximum Manual Values.

6 HRA RISK ASSESSMENT MODEL

6.1 HRA Tier Selection

6.1.1 Although the Recovery Operation will receive only inert wastes, initial screening has indicated a requirement for detailed quantitative HRA for the following reasons:

- The Principal Aquifer status of the FB Aquifer underlying the Recovery Operation.
- The location of the Recovery Operation, as situated within a designated SPZ.

6.1.2 Detailed quantitative HRA has thus been undertaken using LandSim, a computer-based stochastic risk modelling programme developed by Golder Associates in conjunction with the EA.

6.2 Background

6.2.1 Development of the HRA model has included the following steps:

- Definition of, and results from, initial assessment scenario (iHRA) and modelled input parameters.
- Description and results of sensitivity analysis of iHRA model (sHRA).
- Assessment of potential impact of rogue loads on iHRA model results (rHRA).
- Assessment of model results relative to baseline groundwater quality (bHRA).

6.3 Initial Assessment Scenario (iHRA)

6.3.1 The initial model ('iHRA') includes a range of hypothetical conservative input values intended, from the outset, to provide a conservative simulation of potential risk posed to controlled waters by the Recovery Operation.

6.3.2 IHRA includes an operational stage of the Recovery Operation simulated over the 5-years of proposed infilling operations.

6.3.3 The Recovery Operation is represented as a single phase, closely reflecting the proposed completion of the Site.

6.3.4 The model simulates a post-closure stage extending 20,000 years. As the wastes to be infilled will be inert, the model does not simulate leachate management.

6.3.5 Representation of the Proposed Development within the modelled LandSim domain (which is rotated 75˚ clockwise from National-Grid in order to orient the axes of the Site parallel with the prevailing groundwater flow direction) is shown at *figure 31*.

6.3.2 iHRA Model Parameterisation

6.3.2.1 Input parameter values and structural assumptions adopted at iHRA, together with justifications for their selection are given at *tables 13* to *19* below.

Table 13 iHRA Model Parameterisation: Layout		
Parameter (units)	Value	Justification
Location x (m)	800	Representative area to encompass Site and potential receptors.
Location y (m)	1,100	
Length x (m)	78	Model dimensions set as representative of designs (3.9ha area).
Length y (m)	500	
Duration of Management Control (yrs)	5	From planning and permit application documents.

Table 14 iHRA Model Parameterisation: Infiltration		
Parameter (units)	Value	Justification
Infiltration to Open Waste (mm/yr)	85.5	Exposed infill will form closed depression of lower permeability than underlying Aquifer material. Rainfall runoff to temporarily pond on surface prior to infiltration. Set as 100% of Effective Rainfall calculated for open water (*table 4*).
Post Infilling Infiltration mm/yr)	51.9	Effective Rainfall for grassland (*table 4*), plus 10% allowance for climate change, less 78% runoff (see NCB nomogram at *appendix 6*; ground slope from development designs: 0.28, restoration to cultivated land / short grass). 214.4mm x 1.1 x 0.22 = 51.9mm.
End of Infilling (years from commencement of waste disposal)	5	From Planning & Permit Application Documents.

Table 15 iHRA Model Parameterisation: Cell Geometry		
Parameter (units)	Value	Justification
Length x at base (m)	30	Model dimensions & phasing set as representative of designs.
Length y at base (m)	279	
Number of Cells	1	
Basal Area (ha)	0.96	
Crest Area (ha)	1.4	
Final Waste Thickness (m)	T: 1, 7.05,17	
Waste Porosity (fraction)	T: 0.1, 0.2, 0.3	Nominal values taken from literature review.
Waste Dry Density (kg/l)	T: 1.4, 1.5, 1.8	
Waste Field capacity (fraction)	T: 0.1, 0.2, 0.3	
Head of Leachate for Surface Water Breakout (m)	1.5	Model dimensions set as representative of designs.
T: X, Y, Z: Triangular parameter distribution assumed; X, Y, Z representing bounding lower, mid and upper model values.		

Table 16 iHRA Model Parameterisation: Leachate Inventory		
Parameter	**Value**	**Justification**
Ammoniacal Nitrogen	LT: 0.01, 0.1, 0.19	Conservative values ascribed (i.e. tending towards worst-case model prediction. See *section 5.2* for further detail).
Arsenic	LT: 0.0056, 0.028, 0.05	
Cadmium	LT: 0.00011, 0.0021, 0.004	
Chloride*	LT: 6.47, 43.24, 80	
Copper	LT: 0.014, 0.11, 0.2	
Lead	LT: 0.004, 0.027, 0.05	
Mercury	LT: 0.00007, 0.00054, 0.001	
Sulphate*	LT: 50, 75, 100	
Zinc	LT: 0.018, 0.209, 0.4	
All units are mg/l. LT: X, Y, Z: Log-Triangular parameter distribution assumed; X ,Y, Z representing bounding lower, mid and upper model values. Kappa value constants (C & m values) used in derivation of declining source terms for all chemical species set at LandSim default values.		

Table 17 iHRA Model Parameterisation: EBS Pathway		
Parameter (units)	**Value**	**Justification**
Design Thickness (m)	1	Design standard EBS.
Moisture Content (fraction)	LT: 0.1, 0.15, 0.2	Nominal values taken from literature review.
Hydraulic Conductivity (m/s)	1E-7	Design standard EBS.
Longitudinal Dispersivity (m/s)	0.1	Manual Value (10% of pathway length).
LT: X, Y, Z: Log-Triangular parameter distribution assumed; X, Y, Z representing bounding lower, mid and upper model values. Partition coefficients (Kd) used in retardation calculation determined as described at *section 5.3.3*.		

Table 18 iHRA Model Parameterisation: Unsaturated Pathway		
Parameter (units)	**Value**	**Justification**
Geological Unit	Folkestone Beds	From CHM, informed by piezometer monitoring data and Site design.
Pathway Length (m)	U: 1, 25	
Flow Model	Porous Medium	
Moisture Content (fraction)	LT: 0.002, 0.005, 0.007	Nominal values taken from literature review undertaken as part of formulation of CHM.
Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	From FB Aquifer thickness (*section 2.5*) and Transmissivity range for LGA (*section 2.8*).
Longitudinal Dispersivity (m/s)	U: 0.1, 2.5	Manual Value (10% of pathway length).
LT: X, Y, Z: Log-Triangular parameter distribution assumed; X, Y, Z representing bounding lower, mid and upper model values. U: X,Y: Uniform parameter distribution along a range with minima ad maxima described by X & Y. Partition coefficients (Kd) used in retardation calculation determined as described at *section 5.3.3*.		

Table 19 iHRA Model Parameterisation: Saturated Pathway		
Parameter (units)	**Value**	**Justification**
Geological Unit	Folkestone Beds	From CHM.
Pathway Length (m)	U: 61, 139	Fixed by LandSim.
Pathway Width (m)	500	From CHM, informed by piezometer monitoring data and Site design.
Aquifer Thickness (m)	U: 32.5, 47.6	FB Aquifer thickness as at *figure 7*.

Relative Vertical Dispersivity (dimensionless)	U: 0.7, 1.4	Range set at between 1% and 2% of Pathway Length to Locatable Compliance Point (LandSim Helpdesk Pers. Comm., November 2016).
Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	From FB Aquifer thickness (*figure 7*) and Transmissivity range for LGA (*section 2.8*).
Regional Gradient (dimensionless)	0.006	From CHM, informed by piezometer monitoring data (gradient consistent across full range of observed heads).
Pathway Porosity (fraction)	0.28	Nominal values taken from literature review undertaken as part of formulation of CHM.
Longitudinal Dispersivity (m)	7	Manual Value. 10% of Pathway Length to Locatable Compliance Point.
Transverse Dispersivity (m)	2.1	Manual Value. 30% of value used for Longitudinal Dispersivity.
U: X, Y: Uniform parameter distribution along a range with minima ad maxima described by X & Y. LT: X, Y, Z: Log-Triangular parameter distribution assumed; X, Y, Z representing bounding lower, mid and upper model values. Partition coefficients (Kd) used in retardation calculation determined as described at *section 5.3.3*.		

6.3.3 iHRA Model Results

Head on Engineered Barrier System (EBS)

6.3.3.1 The iHRA model predicts that infiltration rates through the base of infill (as at *appendix 7*), both during infilling and following closure, exceed recharge rates, precluding generation of significant heads, with no indicated risk of surface breakout.

Simulated Leakage Through Engineered Barrier System

6.3.3.2 The iHRA model predicts leakage rates through the base of infill (as at *appendix 7*) as follows:

- For the operational phase of the Recovery Operation, leakage is determined at 3.28m^3/d at all confidence intervals.
- For the post closure phase of the Recovery Operation, leakage is determined at 1.99m^3/d at all confidence intervals.

6.3.3.3 The reduction in leakage occurs at the 5th year of the model simulation, representing the decline in infiltration anticipated following restoration of the Recovery Operation's surface to agriculture, thus facilitating increased runoff from the restored site.

6.3.3.4 Review of modelling output confirms that, given the ascribed parameterisation, the model correctly simulates the volume of leachate generation and leakage throughout the modelled period.

Leachate Source Concentration

6.3.3.5 Predicted declining leachate source concentrations of the 9-no. chemical species included within the numerical model are illustrated at *appendix 7*.

6.3.3.6 Simulated peak and final (20,000-years) source concentrations, together with their relevant EQS, are presented below at *table 20* in summary.

Table 20 iHRA Simulated Source Concentration Within Recovery Operation							
Species	EQS (mg/l)	90th Percentile			95th Percentile		
		Peak (mg/l)	Final (mg/l)	Years to <EQS	Peak (mg/l)	Final (mg/l)	Years to <EQS
Ammoniacal Nitrogen	0.5	8.72E-02	0	0	9.34E-02	0	0
Arsenic	0.01	2.65E-02	6.10E-13	624	2.78E-02	1.08E-11	689
Cadmium	0.005	2.48E-03	1.64E-29	0	2.81E-03	2.56E-20	0
Chloride	250	4.03E+01	0	0	4.24E+01	0	0
Copper	2	9.68E-02	0	0	1.02E-01	0	0
Lead	0.01	2.49E-02	0	172	2.63E-02	0	190
Mercury	0.001	6.66E-04	1.92E-11	0	7.61E-04	1.85E-05	0
Sulphate	250	7.79E+01	0	0	7.92E+01	0	0
Zinc	5	1.79E-01	0	0	1.92E-01	0	0

6.3.3.7 At the 90th percentile confidence interval:

- All modelled source concentrations excepting Arsenic and Lead are immediately below their respective EQS values.
- Source concentrations for Arsenic and Lead decline below their respective EQS values at 624yrs and 172yrs respectively.
- Excepting Arsenic, Cadmium and Mercury, all chemical species are diminished to an effective zero-concentration within the modelled timescale of 20,000-years; with the majority attaining this within a substantially shorter time-period.

6.3.3.8 At the 95th percentile confidence interval:

- All modelled source concentrations excepting Arsenic and Lead are immediately below their respective EQS values.
- Source concentrations for Arsenic and Lead decline below their respective EQS values at 689yrs and 190yrs respectively.
- Excepting Arsenic, Cadmium and Mercury, all chemical species are diminished to an effective zero-concentration within the modelled timescale of 20,000-years; with the majority attaining this within a substantially shorter time-period.

6.3.3.9 These model simulations indicate the likely undiluted and unretarded source term concentrations within the infill itself.

6.3.3.10 The values are not subject to any assessment of environmental acceptability, but instead are given to provide context for the presentation of later modelled simulations illustrating individual chemical species concentrations within leachate draining from the infill.

Concentration in Groundwater

6.3.3.11 Simulated concentrations over time in groundwater immediately downstream of the Recovery Operation, for all chemical species under assessment at iHRA are illustrated *appendix 7*.

6.3.3.12 Simulated peak and final (20,000-years) concentrations in groundwater, together with relevant EQS, are presented below at *table 21* in summary.

Table 21 iHRA Simulated Concentrations in Groundwater, Recovery Operation							
Species	EQS (mg/l)	90th Percentile			95th Percentile		
		Peak (mg/l)	Final (mg/l)	Years to <EQS	Peak (mg/l)	Final (mg/l)	Years to <EQS
Ammoniacal Nitrogen	0.5	9.89E-05	2.74E-18	0	1.37E-04	4.49E-18	0
Arsenic	0.01	6.41E-06	4.52E-10	0	1.07E-05	1.77E-09	0
Cadmium	0.005	7.41E-19	7.41E-19	0	4.85E-10	1.25E-11	0
Chloride	250	2.24E-01	2.38E-15	0	2.84E-01	4.22E-15	0
Copper	2	0	0	0	0	0	0
Lead	0.01	0	0	0	0	0	0
Mercury	0.001	0	0	0	0	0	0
Sulphate	250	5.25E-01	8.84E-15	0	6.64E-01	1.49E-14	0
Zinc	5	3.55E-16	1.14E-16	0	4.35E-08	1.32E-14	0

6.3.3.13 At both the 90th and 95th percentile confidence intervals, none of the modelled chemical species are predicted to exceed EQS in groundwater immediately adjacent the Recovery Operation.

6.4 Sensitivity Analysis (sHRA)

6.4.1 Landsim allows stochastic modelling, thus accounting for variability in modelled parameters, as ascribed at iHRA in *tables 13* to *19*.

6.4.2 Further sensitivity analysis has been undertaken to examine those parameters with greatest influence upon model simulation, and to account for uncertainty within model parameters where this persists.

6.4.2 sHRA Model Parameterisation

6.4.2.1 The variables subject to sensitivity analysis are detailed below at *table 22*. Within each sHRA model run, all variables other than those assigned for sensitivity analysis have been maintained at the values described at *section 6.3.2* for iHRA.

Table 22 sHRA Model Parameterisation				
Parameter (units)	iHRA Value	sHRA Value	Model Name	Justification
EBS Hydraulic Conductivity (m/s)	1.00E-07	1.00E-6	s1HRA	Investigation of sensitivity to liner permeability (reduction).
EBS Hydraulic Conductivity (m/s)	1.00E-07	1.00E-8	s2HRA	Investigation of sensitivity to liner permeability (increase).
Unsaturated Pathway Length (m)	U: 1, 25	U: 2.95, 26.95	s3HRA	Unsaturated FB Aquifer thickness based on limited data record from 21 Series piezometers. Longer record for 2011 Series piezometers implies historically greater unsaturated thickness (greater range by 1.95m). Adjustment by equivalent amount to investigate implications.
Unsaturated Longitudinal Dispersivity (m/s)	U: 0.1, 2.5	U: 0.295, 2.695		
Saturated Pathway Aquifer Thickness (m)	U: 32.5, 47.6	U:49.5, 64.6	s4HRA	Adjustment to consider LGA function as a single aquifer unit, ignoring separation of HB Aquifer from FB Aquifer offered by Sandgate Beds. HB Aquifer thickness for Recovery Operation estimated at 17m as at *figure 11*.
Saturated Pathway Regional Gradient (dimensionless)	0.006	0.043	s5HRA	Baseline data shows constant hydraulic gradient throughout data record. This however varies spatially and could be influenced by drawdown effect from nearby public water supply abstraction. Adjustment to steepest locally observed to investigate implications.
Unsaturated Pathway Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	1.09E-5	s6HRA	Investigation of sensitivity to FB Aquifer permeability (fixed to lower bound estimate)
Saturated Pathway Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	1.09E-5		
Unsaturated Pathway Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	0.0011	s7HRA	Investigation of sensitivity to FB Aquifer permeability (fixed to upper bound estimate)
Unsaturated Pathway Hydraulic Conductivity (m/s)	LT: 1.09E-5, 8.6E-5, 0.0011	0.0011		

6.4.3 sHRA Model Results

6.4.3.1 Simulated concentrations over time in groundwater immediately downstream of the Recovery Operation, for all chemical species under assessment at sHRA are illustrated *appendix 7*.

6.4.3.2 The degree of change in simulated concentrations at sHRA from that predicted at iHRA are presented below at *table 23* in summary.

Table 23 sHRA Change in Simulated Concentrations in Groundwater Adjacent the Recovery Operation

Model Name	Species	90th Percentile			95th Percentile		
		Change in Peak (mg/l)	Change in Peak (%)	Years to <EQS	Change in Peak (mg/l)	Change in Peak (%)	Years to <EQS
s1HRA	Ammoniacal Nitrogen	0	0.00	0	-1.40E-08	-0.01	0
	Arsenic	4.82E-05	752.44	0	7.33E-05	685.61	0
	Cadmium	2.30E-11	3.11E+09	0	1.10E-08	2.27E+03	0
	Chloride	2.02E-03	0.90	0	1.67E-03	0.59	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	8.84E-10	NA	0	2.82E-08	NA	0
	Sulphate	4.37E-03	0.83	0	1.22E-02	1.84	0
	Zinc	1.73E-12	4.86E+05	0	4.57E-08	105.17	0
s2HRA	Ammoniacal Nitrogen	5.18E-05	52.43	0	7.75E-05	56.73	0
	Arsenic	6.00E-05	936.15	0	8.31E-05	777.93	0
	Cadmium	1.18E-08	1.60E+12	0	7.39E-08	1.52E+04	0
	Chloride	6.97E-03	3.11	0	1.11E-02	3.90	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	3.52E-12	NA	0	1.11E-09	NA	0
	Sulphate	1.01E-02	1.92	0	2.54E-02	3.82	0
	Zinc	1.20E-06	3.39E+11	0	4.91E-06	1.13E+04	0
s3HRA	Ammoniacal Nitrogen	-3.69E-06	-3.73	0	-3.14E-06	-2.30	0
	Arsenic	4.54E-05	708.87	0	7.14E-05	668.08	0
	Cadmium	2.40E-11	3.24E+09	0	1.01E-08	2.09E+03	0
	Chloride	3.74E-03	1.67	0	4.68E-03	1.65	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	4.80E-10	NA	0	2.31E-08	NA	0
	Sulphate	6.55E-03	1.25	0	1.65E-02	2.48	0
	Zinc	2.34E-12	6.59E+05	0	6.59E-08	151.69	0
s4HRA	Ammoniacal Nitrogen	-2.92E-05	-29.48	0	-4.23E-05	-30.96	0
	Arsenic	-1.95E-06	-30.43	0	-3.13E-06	-29.29	0
	Cadmium	-1.34E-19	-18.02	0	-1.58E-10	-32.54	0
	Chloride	-6.65E-02	-29.72	0	-8.08E-02	-28.41	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	0	0	0	0	0	0
	Sulphate	-1.52E-01	-28.97	0	-1.92E-01	-28.97	0
	Zinc	-1.58E-16	-44.48	0	-1.42E-08	-32.67	0
s5HRA	Ammoniacal Nitrogen	-8.39E-05	-84.86	0	-1.16E-04	-84.76	0
	Arsenic	-5.47E-06	-85.29	0	-9.01E-06	-84.31	0
	Cadmium	-6.30E-19	-85.00	0	-4.10E-10	-84.51	0
	Chloride	-1.86E-01	-83.21	0	-2.34E-01	-82.26	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	0	0	0	0	0	0
	Sulphate	-4.40E-01	-83.71	0	-5.47E-01	-82.38	0
	Zinc	-3.16E-16	-89.05	0	-3.66E-08	-84.33	0
s6HRA	Ammoniacal Nitrogen	3.71E-04	374.71	0	4.19E-04	306.79	0
	Arsenic	2.95E-04	4.60E+03	0	3.62E-04	3.39E+03	0
	Cadmium	1.01E-08	1.36E+12	0	1.23E-07	2.53E+04	0
	Chloride	4.26E-01	190.52	0	4.24E-01	149.12	0
	Copper	0	0	0	0	0	0

	Lead	0	0	0	0	0	0
	Mercury	1.01E-10	NA	0	4.55E-08	NA	0
	Sulphate	8.77E-01	167.09	0	7.92E-01	119.14	0
	Zinc	2.81E-11	7.92E+06	0	8.19E-07	1.88E+03	0
s7HRA	Ammoniacal Nitrogen	-9.31E-05	-94.11	0	-1.30E-04	-94.88	0
	Arsenic	-1.76E-06	-27.39	0	-4.47E-06	-41.83	0
	Cadmium	2.90E-11	3.92E+09	0	1.03E-09	211.98	0
	Chloride	-2.14E-01	-95.64	0	-2.74E-01	-96.28	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	2.64E-10	NA	0	4.72E-09	NA	0
	Sulphate	-5.05E-01	-96.11	0	-6.43E-01	-96.83	0
	Zinc	7.34E-15	2.07E+03	0	-3.49E-08	-80.39	0
NA: Not Applicable, iHRA concentration at 0, % cannot be calculated.							

6.4.4 sHRA Discussion

6.4.4.1 Outline findings of the sensitivity analysis are described below at *table 24*.

Table 24 sHRA Model Findings

Parameter (units)	Model Name	Discussion	Sensitivity
Reduction to EBS Hydraulic Conductivity (m/s)	s1HRA	Widely resulted in concentration increases in groundwater, to substantial degree, notably for Arsenic, Cadmium and Zinc, likely due to reduced dilution.	Very High
Increase to EBS Hydraulic Conductivity (m/s)	s2HRA	Widely resulted in concentration increases in groundwater, to substantial degree, notably for Arsenic, Cadmium and Zinc, this to significantly greater extent than at s1HRA, due to the reduced attenuating effect of the EBS.	Very High
Increase Unsaturated Pathway Length (m)	s3HRA	Widely resulted in concentration increases in groundwater, to substantial degree, notably for Arsenic, Cadmium and Zinc, likely due to reduced dilution.	Very High
Increase Unsaturated Longitudinal Dispersivity (m/s)			
Increase Saturated Pathway Aquifer Thickness (m)	s4HRA	Widely resulted in concentration decreases in groundwater to moderate extent, due to the increased dilution offered by greater aquifer saturated thickness.	Moderate
Increase Saturated Pathway Regional Gradient (dimensionless)	s5HRA	Widely resulted in concentration decreases in groundwater to significant extent, due to the increased dilution offered by greater aquifer flow rates.	High
Reduce Unsaturated Pathway Hydraulic Conductivity (m/s)	s6HRA	Widely resulted in concentration increases in groundwater to substantial extent, due to the reduced dilution offered by greater aquifer flow rates.	Very High
Reduce Saturated Pathway Hydraulic Conductivity (m/s)			
Increase Unsaturated Pathway Hydraulic Conductivity (m/s)	s7HRA	Widely resulted in concentration decreases in groundwater to substantial extent, due to the increased dilution offered by greater aquifer flow rates.	Very High
Increase Unsaturated Pathway Hydraulic Conductivity (m/s)			

6.4.4.2 Sensitivity analysis has identified varying degrees of sensitivity to modelled parameters. It is considered that, through application of a range of parameters at iHRA, and further

exploration at sHRA, the influence of this sensitivity has been adequately accounted for in model parameterisation.

6.4.4.3 It should be noted that, as for iHRA, all sHRA model runs, regardless of sensitivity to varied parameters, returned species concentrations in groundwater immediately down hydraulic gradient of the Recovery Operation remained within EQS limits.

6.5 Rogue Load Assessment (rHRA)

6.5.1 An assessment of the potential for impact on the Aquifer that could result from the deposition of materials exceeding the WAC limits applicable to the Site (Rogue Loads) has been undertaken.

6.5.2 The iHRA model has been repeated for a hypothetical scenario wherein all wastes deposited contain species concentrations set in line with C_0 percolation test values as defined within the Council Decision.

6.5.3 C_0 percolation test values for inert materials are representative of the initial flush of contaminants following their placement. As the full waste mass will not be deposited simultaneously, and C_0 values would not be expected to persist for sustained duration, application of such source term concentrations across the full infill mass for the full model duration represents significant exceedance of WAC limits, presenting a conservative approach for the estimation of the potential impacts of rogue load deposition.

6.5.2 rHRA Model Parameterisation

6.5.2.1 The variables subject to rogue load assessment are detailed below at *table 25*. All variables other than those assigned for such analysis have been maintained at the values described at *section 6.3.2* for iHRA.

Table 25 rHRA Model Paramaterisation: Source Term Concentrations

Chemical	Source Concentration (% change from iHRA Upper Value)	Chemical	Source Concentration (% change from iHRA Upper Value)
Ammoniacal Nitrogen*	0.285	Lead	0.15
Arsenic	0.06	Mercury	0.002
Cadmium	0.02	Sulphate	1,500
Chloride	460	Zinc	1.2
Copper	0.6		

All units are mg/l.
*: Ammoniacal Nitrogen concentrations have been derived from Site monitoring data and are increased by 50% for the purposes of Rogue Load assessment in lieu of their inclusion within the Council Decision.
All source term concentrations ascribed as single value.

6.5.3 rHRA Model Results

6.5.3.1 Simulated concentrations over time in groundwater immediately downstream of the Recovery Operation, for all chemical species under assessment at rHRA are provided at *appendix 7*.

6.5.3.2 The degree of change in simulated concentrations at rHRA from that predicted at iHRA are presented below at *table 26* in summary.

Table 26 rHRA Change in Simulated Concentrations in Groundwater Adjacent the Recovery Operation							
Model Name	Species	90th Percentile			95th Percentile		
		Change in Peak (mg/l)	Change in Peak (%)	Years to <EQS	Change in Peak (mg/l)	Change in Peak (%)	Years to <EQS
rHRA	Ammoniacal Nitrogen	3.96E-04	400.68	0	5.42E-04	397.15	0
	Arsenic	1.57E-05	244.15	0	3.00E-05	280.64	0
	Cadmium	-1.20E-19	-16.14	0	-4.85E-10	-100.00	0
	Chloride	3.25E+00	1455.23	0	4.06E+00	1426.97	0
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	0	0	0	0	0	0
	Sulphate	1.10E+01	2097.88	0	1.40E+01	2111.03	0
	Zinc	1.13E-15	318.31	0	-2.88E-08	-66.36	0

6.5.4 rHRA Discussion

6.5.4.1 The rHRA results provide an assessment of continued and sustained Rogue-Load deposition (in effect all imported material falling significantly outside the inert waste criteria required for acceptance to the Site).

6.5.4.2 The Rogue Load assessment is considered to represent an extreme failure of management and protocol for operation of the Site.

6.5.4.3 Although this is not expected to be reflective of the actual infill operation, it should be noted that all determinands assessed at rHRA remain within the relevant EQS as at iHRA and sHRA.

6.5.4.4 The Rogue Load assessment indicates the chemical species to which model results are most sensitive in terms of source concentrations are Chloride, Sulphate (showing a percentage change from iHRA at the 95th percentile of 1,426%, and 2,111% respectively).

6.6 Baseline Water Quality Assessment (bHRA)

6.6.1 Further assessment of the iHRA model has been undertaken via introduction of baseline groundwater quality data as characterised at *section 2.10.2*. This allows consideration of the combined effect of potential contaminant release from the Recovery Operation and baseline groundwater quality relative to EQS.

6.6.2 bHRA Model Parameterisation

6.6.2.1 The variables subject to baseline water quality assessment are detailed below at *table 27*. All variables other than those assigned for such analysis have been maintained at the values described at *section 6.3.2* for iHRA.

Table 27 bHRA Model Parameterisation: Background Groundwater Quality			
Chemical	Background Concentration	Chemical	Background Concentration
Ammoniacal Nitrogen	LT: 0.01, 0.62, 6.9	Lead	S: 0.001
Arsenic	S: 0.001	Mercury	LT: 3E-5, 3.1E-5, 5E-5
Cadmium	LT: 2E-5, 4.7E-5, 1E-4	Sulphate	LT: 113, 151.69, 201
Chloride	LT: 58, 124.44, 436	Zinc	LT: 0.003, 0.028, 0.116
Copper	S: 0.001		
All units are mg/l. LT: X, Y, Z: Log-Triangular parameter distribution assumed; X, Y, Z representing bounding minimum, average and maximum recorded baseline concentrations across the full available data set for PZ2-21 and PZ3-21. S: Single value ascribed where concentrations are consistent. Baseline data applied collected prior to November 2021.			

6.6.3 bHRA Model Results

6.6.3.1 Simulated concentrations over time in groundwater immediately downstream of the Recovery Operation, for all chemical species under assessment at bHRA are illustrated *appendix 7*.

6.6.3.2 The degree of change in simulated concentrations at bHRA relative to maximum baseline concentrations characterised at *section 7* are presented below at *table 28* in summary.

Table 28 bHRA Change in Simulated Concentrations in Groundwater Adjacent the Recovery Operation							
Model Name	Species	90th Percentile			95th Percentile		
		Change from Baseline Peak (mg/l)	Change from Baseline Peak (%)	Years to <EQS	Change from Baseline Peak (mg/l)	Change from Baseline Peak (%)	Years to <EQS
bHRA	Ammoniacal Nitrogen	-5.19E+00	-75.17	NA	-4.39E+00	-63.62	NA
	Arsenic	5.92E-05	5.92	0	9.09E-05	9.09	0
	Cadmium	-3.01E-05	-30.14	0	-2.19E-05	-21.88	0
	Chloride	-1.80E+02	-41.32	NA	-1.34E+02	-30.80	NA
	Copper	0	0	0	0	0	0
	Lead	0	0	0	0	0	0
	Mercury	-7.72E-06	-15.44	0	-4.76E-06	-9.52	0
	Sulphate	-2.22E+01	-11.03	0	-1.62E+01	-8.07	0
	Zinc	-5.96E-02	-51.42	0	-4.97E-02	-42.87	0
NA: Not Applicable, Exceeds EQS throughout model duration due to baseline data EQS exceedance.							

6.6.4 bHRA Discussion

6.6.1 Adaptation of the iHRA model to account for baseline groundwater quality results in a significant and universal increase in species concentrations in groundwater relative to iHRA. It should be noted that model results show immediate and permanent exceedance of EQS for Ammoniacal Nitrogen and Chloride. This is due to peak background concentrations in groundwater for these chemical species exceeding their associated EQS.

6.6.2 Examination of model output relative to background concentrations however results in a reduction in modelled concentrations in groundwater immediately down hydraulic

gradient from the Recovery Operation, for the majority of modelled chemical species, of between 0% and 75%.

6.6.3 This effect is a result of the low species concentrations predicted to be generated by the Recovery Operation relative to background groundwater quality, dilution of which results in a net reduction in species concentrations across the modelled domain.

6.6.4 In the case of Arsenic, minor increases in concentrations relative to baseline are predicted, though these remain below 10% and below the EQS.

6.6.5 Assessment thus indicates that the Recovery Operation will not have a significant detrimental impact on prevailing groundwater quality.

6.6.6 It should be noted that this conclusion is based upon a limited groundwater quality data set. Whilst additional data collection may detect a greater range in baseline concentrations, the above described effect of the Recovery Operation is not anticipated to be altered, due to predicted contaminant concentrations being typically below those of groundwater, upon which a diluting effect is generally indicated.

6.7 Model Conservatism

6.7.1 The Landsim model developed at HRA is considered to be conservative (*i.e.* it produces simulations that tend toward over-estimation of likely concentrations); the principal conservative influences being summarised below at *table 29*.

Table 29 Principal Conservative Factors Adopted by Quantitative HRA

Modelled Parameters	Model Representation	Comment
Leachate Source Concentrations	Minimum Values: Individual chemical species ascribed values set at averages established from results of 40-no. WAC leaching tests undertaken as part of an investigation associated with a proposed redevelopment involving excavation of materials to be sent to an inert waste disposal site. Maximum Values: Set at maximum WAC limits for inert waste.	The leaching test data used to set minimum source term concentrations for individual chemical species were obtained from tests undertaken upon samples from a site with long and intensive industrial history and are therefore considered likely to describe concentrations that are substantially elevated above the norm for the waste stream that is anticipated to supply the Recovery Operation. Adoption of the upper WAC for inert waste to establish maximum leachate source concentrations will inevitably over-state the total chemical loading within the modelled infill. This is because, in reality, the actual species concentrations within waste accepted at the Recovery Operation will almost always be lower than the WAC limits.
Innate Species Retardation	Minimum partition coefficients (Kd values) for individual chemical species have been set at the lower Manual Values. Maximum Kd values are set at 25% of the upper Manual Values.	On balance, when considering all chemical species assessed by the model, the adoption of a range of Kd values within the lowest 25th percentile of the Manual Values is considered likely to underestimate the degree of attenuation that will occur in reality.

7 CONTROL AND COMPLIANCE MONITORING

7.1 Background

7.1.1 Groundwater Control Levels are site-specific assessment criteria used to determine whether the Recovery Operation is performing as designed and intended, and to draw attention to the development of adverse trends in the monitoring data.

7.1.2 Groundwater Control Levels should be regarded as an early warning system and breaches should lead to appropriate investigation or implementation of corrective measures.

7.1.3 Breaches of Groundwater Control Levels should not, however, ordinarily be interpreted as an indication that groundwater pollution has occurred.

7.1.4 In more detail, the purpose of Groundwater Control Levels is to:

- Highlight variations between the conceptual model (including the results of quantitative risk assessment) and observed conditions.
- Identify unambiguous adverse trends which are indicative of leachate impacts.
- Allow for variation in natural water quality from baseline conditions.
- Give sufficient time to take corrective or remedial action before Compliance Limits are breached.

7.1.5 EA guidance[21] requires that Groundwater Compliance Limits for potentially polluting substances be set at the point where pollution can be said to have occurred and can be detected by monitoring.

7.1.6 A change in groundwater quality to a concentration below the compliance limits would be acceptable, but a concentration at or above the compliance limit would be unacceptable.

7.2 Selection of Monitoring Points

7.2.1 A review has been undertaken of the groundwater quality monitoring data (*section 2.10.2*) and the location of Site piezometers relative to the Recovery Operation and groundwater flow direction (*figure 13*).

7.2.2 Review indicates that piezometer PZ3-21 constitutes the most appropriate monitoring point for down-gradient Groundwater Control Level and Compliance Limit surveillance to be undertaken during and following operation of the HRA / HRA2 Recovery Operation.

7.3 Derivation of Control Levels and Compliance Limits

7.3.1 Derivation of Control Levels and Compliance Limits has involved a two-stage process including:

- Selection of appropriate chemical species.

21 "Additional guidance for hydrogeological risk assessments for landfills and the derivation of groundwater control levels and compliance limits", EA Horizontal Guidance Note H1 – Annex J3, Version 2.1, December 2011.

- Justification and enumeration of level and limit values.

7.3.2 Enumeration of level and limit values being based upon:

- Characteristic statistics calculated from background water quality data-sets compiled for the Aquifer.
- Where necessary, upon the results of HRA numerical model simulations.

7.3.2 Initial Screening

7.3.2.1 Groundwater quality monitoring, as presented at *appendix 3*, with sample locations as presented at *figure 13*, has been consulted to allow initial screening of the available data in order to assess its suitability for the derivation of control levels / compliance limits. This has included assessment of its suitability for derivation of such levels / limits via statistical analysis, as below at *section 7.3.3*.

7.3.2.2 This initial screening is presented below at *table 30*.

Table 30 Initial Screening of Baseline Groundwater Quality Data, HRA Simulated Determinands

Species	Discussion	Suitability for Control Levels / Compliance Limits	Suitability for Statistical Analysis
Ammoniacal Nitrogen	Baseline data exceeds EQS	Unsuitable	Unsuitable
Arsenic	Baseline data recorded at LOD. Within EQS.	Suitable	Unsuitable
Cadmium	Within EQS, part of dataset at LOD.	Suitable	Suitable
Chloride	Baseline data exceeds EQS	Unsuitable	Unsuitable
Copper	Within EQS, majority of dataset at LOD.	Suitable	Unsuitable
Lead	Within EQS, majority of dataset at LOD.	Suitable	Unsuitable
Mercury	Within EQS, majority of dataset at LOD.	Suitable	Unsuitable
Sulphate	Within EQS	Suitable	Suitable
Zinc	Within EQS	Suitable	Suitable
LOD: Limit of Detection			

7.3.3 Statistical Analysis of Background Data

7.3.3.1 In accordance with EA guidance[22], statistical techniques are to be applied to assess the suitability of the background groundwater quality data compiled for Site piezometers with respect to setting groundwater Control Levels and Compliance Limits.

7.3.3.2 This involves the computation of D'Agostino's Test[30] to determine the distribution characteristics of the time-series data for the relevant determinands detailed above, which requires assessment of:

- The characteristic statistical distribution for each chemical species.
- The mean of this data plus 2 and 3 standard deviations ($\mu + x\sigma$).
- Whether these values have been exceeded by the maximum recorded background concentration (bqMAX).

22" Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

- Whether these values exceed RWQS.

7.3.3.3 It is generally accepted that derivation of Control Level and Compliance Limit values as a function of the statistical characteristics of a groundwater quality data-set is valid when:

- That data-set is either normally or log-normally distributed.
- Both the μ + 2σ and μ + 3σ exceed bqMAX.
- Both the μ + 2σ and μ + 3σ are below RWQS.

7.3.3.4 Where such conditions are met, the general expectation is that Control Levels and Compliance Limits may be appropriately defined at the μ + 2σ and μ + 3σ values respectively[23].

7.3.3.5 Analysis has been conducted only upon determinands identified to be potentially suitable for derivation of control levels / compliance limits via such means by initial screening (as at *table 30*).

7.3.3.6 Analysis has been conducted focusing upon both down hydraulic gradient piezometers (Piezometer PZ3-21, *figure 13*) and up hydraulic gradient piezometers (Piezometer PZ2-21, *figure 13*) to ensure the full range in background concentrations is accounted for. The results of this analysis are presented at *appendix 8*, with summary detail at *table 31* below.

Table 31 Characteristic Statistics of Selected Background Quality Data

Chemical	bqMAX*	Distribution	μ + 2σ	μ + 3σ	EQS
Down Gradient					
Cadmium	0.0001	ND / LND	*0.00011 / 0.00014*	*0.00014 / 0.00026*	0.005
Sulphate	201	ND / LND	*214 / 223.5*	*238* / 261.7	250
Zinc	0.099	LND	*0.133*	*0.418*	5
Up Gradient					
Cadmium	0.0001	ND / LND	*0.00011 / 0.00012*	*0.00014 / 0.00018*	0.005
Sulphate	163	NA	NA	NA	250
Zinc	0.116	ND / LND	*0.126 / 0.313*	*0.165 / 1.020*	5

EQS: Environmental Quality Standards
bqMAX: Maximum recorded background concentration.
ND: Normally distributed, LND: Log-normally distributed, NA - Neither normal or log-normally distributed.
[1]: Exceeded by bqMAX
[2]: Exceeds RWQS
Italic: Suitable for application in derivation of Control Level / Compliance Limit
*Specific to POC (Piezometer 11)
All units in mg/

7.4 Enumerated Control Levels and Compliance Limits

7.4.1.1 Enumeration of Control Levels and Compliance Limits has been undertaken on a tiered approach, as follows:

23 μ + 2σ (two-standard deviations around the mean) = 95.45% around the mean = 97.725th percentile*.
μ + 3σ (three-standard deviations around the mean) = 99.73% around the mean = 99.865th percentile*.
(* - percentiles being the notation most widely used for reporting of model simulations by LandSim).

- Applied only to determinands identified to be suitable as at *table 30*.
- Defined by statistical analysis as at *section 7.3.3* for down gradient piezometers.
- Defined by statistical analysis as at *section 7.3.3* for up gradient piezometers where down gradient results are unsuitable (improper statistical distribution, results below baseline maxima, results above RWQS).
- Defined by iHRA modelled results where statistical analysis results are unsuitable (improper statistical distribution, results below baseline maxima, results above RWQS).
- Compliance Limits set at baseline maxima + 50% of the difference between baseline maxima and RWQS, Control Levels set at baseline maxima + 50% of the difference between baseline maxima and Compliance Limits, where model results unsuitable (below baseline maxima).

7.4.1.2 The resulting Control Levels and Compliance Limits, applicable to the Recovery Operation are presented at *table 32*, and are presented graphically at *figure 32*.

Table 32 Control Levels and Compliance Limits

Chemical	Control Level	Derivation	Compliance Limit	Derivation
Arsenic	0.00106	bHRA model results	0.00119	bHRA model results
Cadmium	0.00014	Statistical analysis, down gradient, log normal distribution.	0.00026	Statistical analysis, down gradient, log normal distribution.
Copper	0.50225	Baseline data	1.002	Baseline data
Lead	0.00325	Baseline data	0.0055	Baseline data
Mercury	0.000288	Baseline data	0.000525	Baseline data
Sulphate	223.5	Statistical analysis, down gradient, log normal distribution.	238	Statistical analysis, down gradient, normal distribution.
Zinc	0.133	Statistical analysis, down gradient, log normal distribution.	0.418	Statistical analysis, down gradient, log normal distribution.

All units in mg/l

7.5 Monitoring / Reporting Requirements

7.5.1 Monitoring Requirements

7.5.1.1 The groundwater monitoring recommended to be undertaken in association with the Recovery Operation is detailed at *table 33*, with monitoring locations being presented at *figure 13*.

Table 33 Recommended Monitoring			
Location (*figure 13*)	Purpose	Monitoring Requirements	Frequency
PZ3-21*	Control and compliance monitoring. Surveillance monitoring, down hydraulic gradient groundwater.	Field Determinands: Water Elevation, pH, temperature, Electrical Conductivity, Redox potential. Laboratory Determinands: Arsenic, Cadmium, Copper, Lead, Mercury, Sulphate, Zinc.	Quarterly
		Additional Laboratory Determinands: PAHs, PCBs, Phenols, Antimony, Barium, Chloride, Chromium, Dissolved Organic Carbon, Fluoride, Mercury, Molybedenum, Nickel, Selenium, Sulphate, Total Organic Carbon	Annually
PZ2-21	Surveillance monitoring	As for PZ3-21	Quarterly
		As for PZ3-21	Annually
PZ4-21	Surveillance monitoring	As for PZ3-21	Quarterly
		As for PZ3-21	Annually
*Control and Compliance monitoring point subject to associated limits described at *table 34*.			

7.5.2 Routine Quarterly Assessment

7.5.2.1 Immediately upon receipt of laboratory data, results for Piezometer PZ3-21 should be compared with the prescribed groundwater Control Levels and Compliance Limits (*table 32)*.

7.5.2.2 In the event that either Control Levels or Compliance Limits are found to have been breached during routine quarterly assessment, the monitoring frequency shall be increased to monthly.

7.5.2.3 Monitoring shall return to a quarterly frequency only following 2-no. consecutive monthly monitoring rounds undertaken without breach of Control Levels and / or 3-no. consecutive monitoring rounds undertaken without breach of Compliance Limits.

7.5.2.4 In the event that Control Levels are breached for 3-no. successive monthly monitoring rounds, or Compliance Limits breached for 2-no. successive monthly monitoring rounds, then the relevant Contingency Actions described at *table 34* below shall be implemented.

Table 34 Contingency Actions		
Contingency Action	Control Level Breach	Compliance Limit Breach
Advise Site management	✓	✓
Advise the environmental manager of the operating company	✓	✓
Advise the Environment Agency		✓
Confirm by repeat sampling and analysis	✓	✓
Review existing monitoring information	✓	✓
Review site management and operations, and implement actions to prevent future failure of a compliance limit	✓	
Review the assumptions incorporated into the site conceptual model		✓
Review existing hydrogeological risk assessment, control levels and compliance limits*		✓
If risks are unacceptable set in place procedures for implementing corrective measures in consultation with or required by the Environment Agency		✓
* This should include a re-evaluation of whether the baseline conditions have changed since the last risk assessment.		

8 SUMMARY AND CONCLUSIONS

8.1 BCL have undertaken a hydrological and hydrogeological baseline study and quantitative Hydrogeological Risk Assessment (HRA) of a planned Waste Recovery Operation using imported inert materials at Wrotham Quarry, Addington, Kent. This is to facilitate the buttressing of unstable faces within an existing mineral extraction void.

8.2 Assessment has commenced with the compilation and assessment of publicly available and Site-specific data sources, allowing baseline conditions to be characterised.

8.3 This has been followed by description of the design and working methods of the Recovery Operation under both scenarios.

8.4 The above have been combined in development of a Conceptual Hydrogeological Model (CHM) and Conceptual Site Model (CSM) for each scenario, using a source, pathway, receptor methodology.

8.5 The CSM for each scenario has been separately subjected to appropriate quantitative risk assessment. The resultant risk assessment models have been subject to sensitivity analysis to identify modelled parameters that have the strongest control on model results and to account for variability in input parameters where expected. The risk assessment models have further been applied to assess the potential impact of the deposition of Rogue Loads within the Recovery Operation.

8.6 For all chemical species assessed, under all assessment scenarios, simulation indicates that those chemicals already present below relevant regulatory water quality standards will remain under those standards when accounting for the simulated contribution of leachate from the Recovery Operation.

8.7 Numerical risk assessment has thus demonstrated that the recovery of inert waste at the Site will not introduce significant risk to the groundwater quality at the Site.

8.8 Model predictions additionally show that the Recovery Operation will operate without generation of a head of leachate in excess of the available freeboard within the liner (i.e. [potential] leakage will significantly exceed infiltration).

8.9 It is concluded that there is no requirement for any additional control or management measures beyond the waste acceptance quality control procedures (generic to inert infill materials) that will attend the Recovery Permit.

8.10 It is however necessary to establish a programme for monitoring of water quality, against which any impacts resulting from the Recovery Operation can be assessed against Control Levels and Compliance Limits.

8.11 Analysis of baseline groundwater chemistry data has thus been undertaken, from which such Control Levels and Compliance Limits have been derived, with appropriate monitoring and reporting also having been specified.

8.12 It is therefore concluded that, based on currently available information, the Recovery Operation can be undertaken in full compliance with relevant water resource regulations. There are considered to be no over-riding hydrogeologically or hydrologically based reasons why the proposal should not receive an EP in this regard.

This conclusion assumes completion and operation of the Site as described herein, and that any such permit, if granted, should be conditioned by implementation and adherence to any relevant recommendations advanced within this report and other such EP conditions that may be reasonably imposed by the Environment Agency.

Peter Simpson, BSc, MSc,FGS
Principal Hydrogeologist

BCL Consultant Hydrogeologists Limited
16th June 2022

S/QPL/FG/WRQ/HRA22/03

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Figures

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BCL Consultant Hydrogeologists Limited

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Registered in England & Wales. Company Registration Number: 4043373

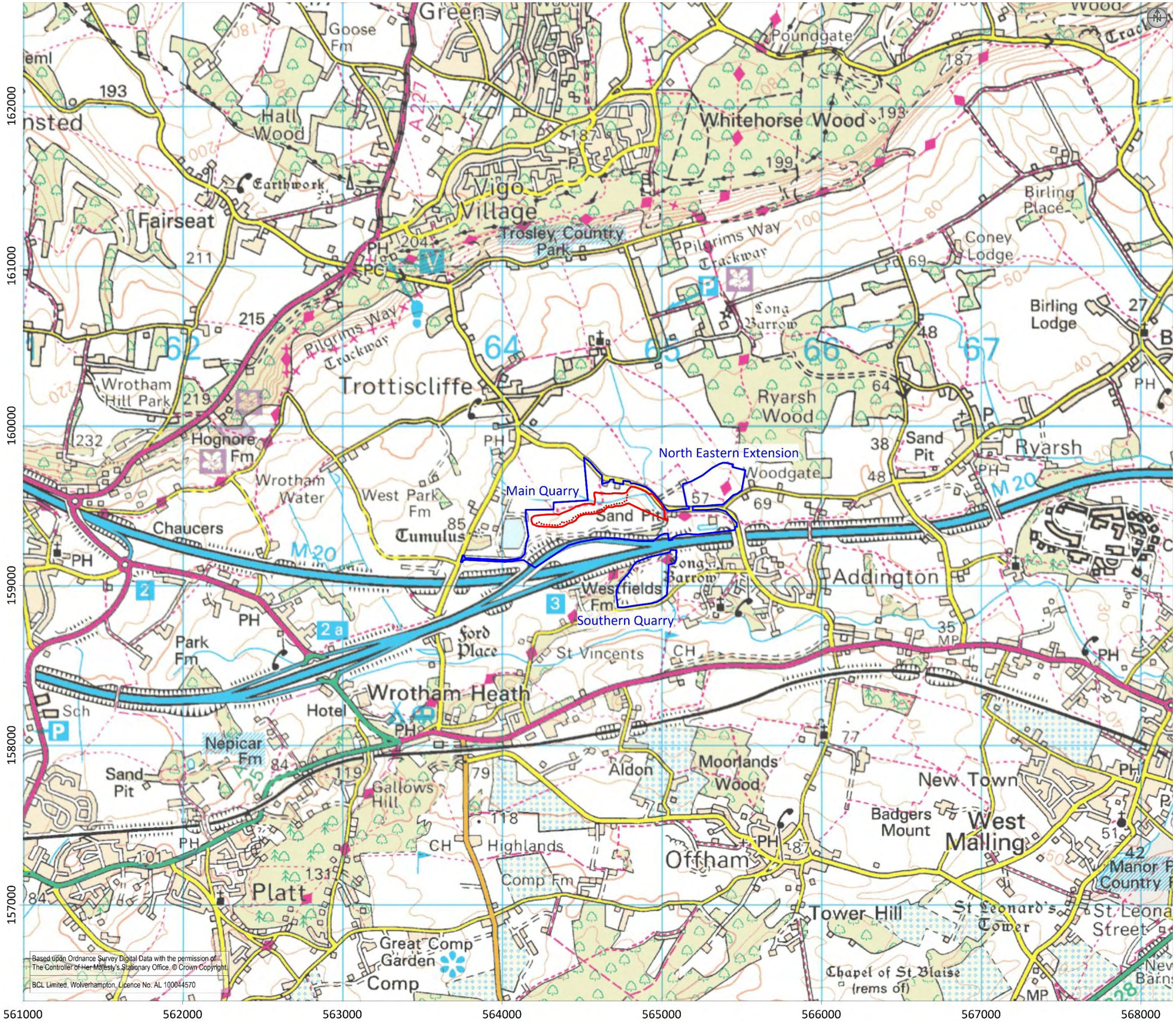

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Figure 1 Site Location and Setting

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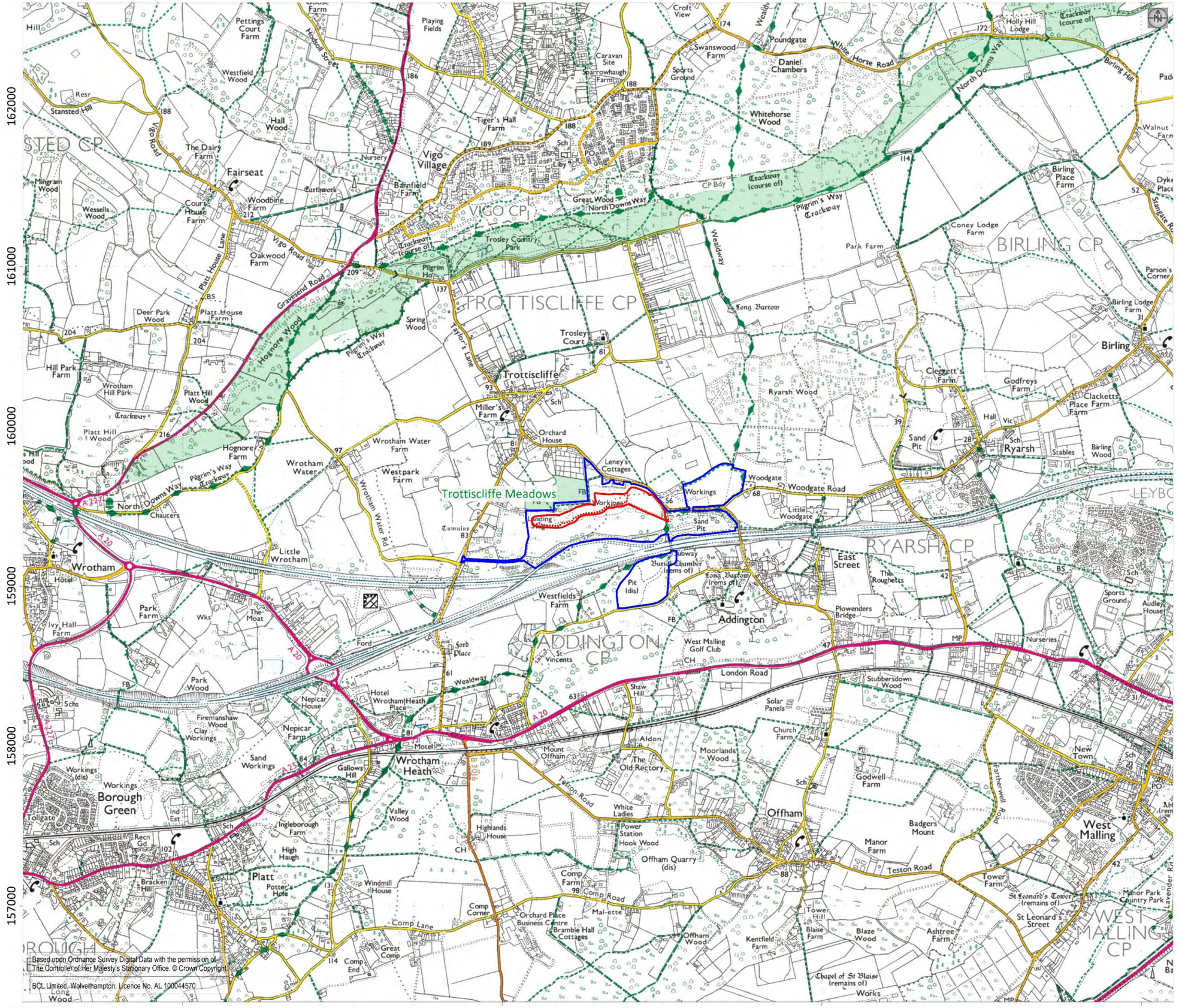

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Figure 2 Ecological Sites

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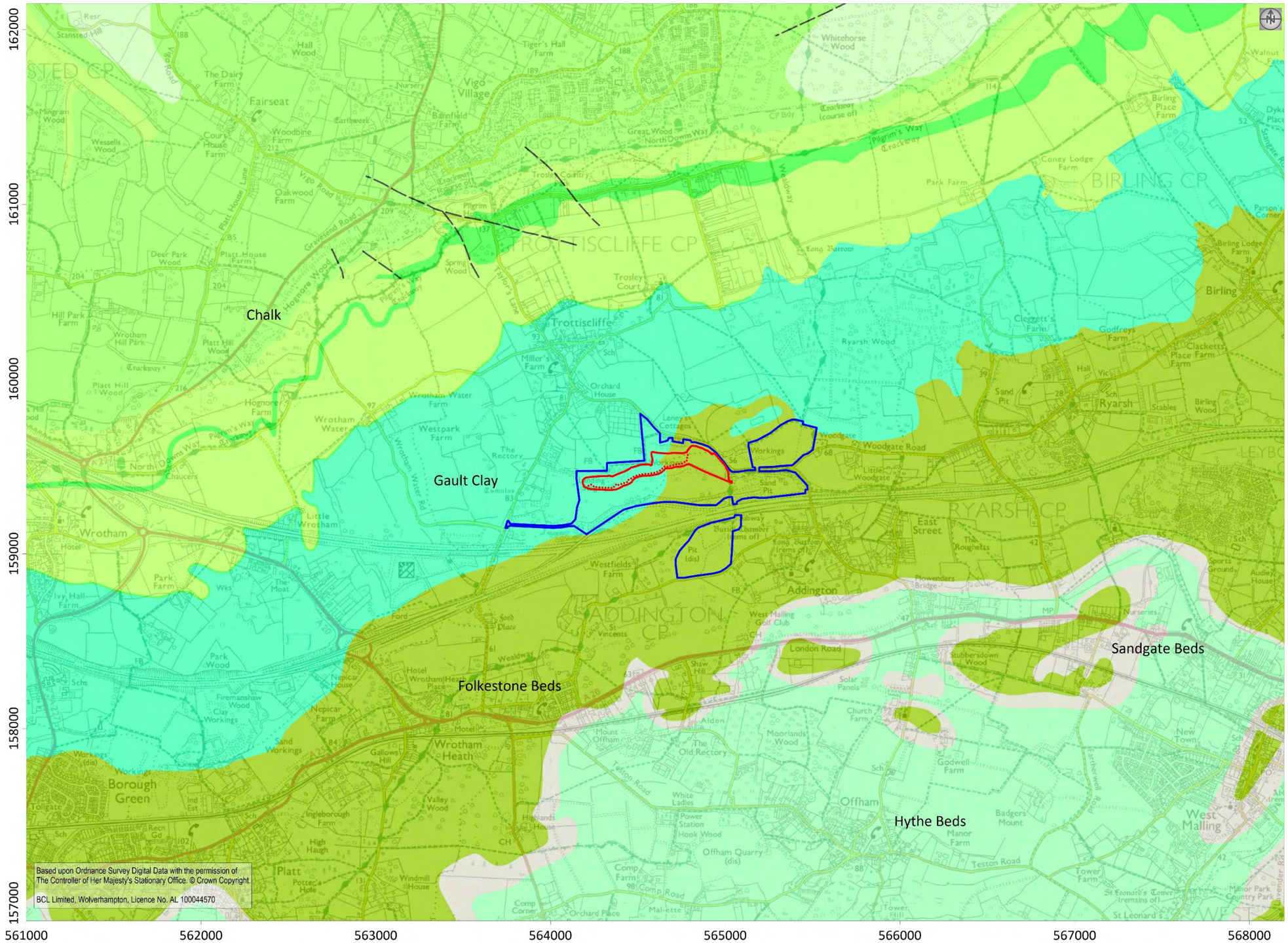

Limit of Infill Placement

Site Boundary

Recovery Operation

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Figure 3 Solid Geology

Drawn By: PS	Scale: 1:23,000
Date: 16/06/22	Format: A3L

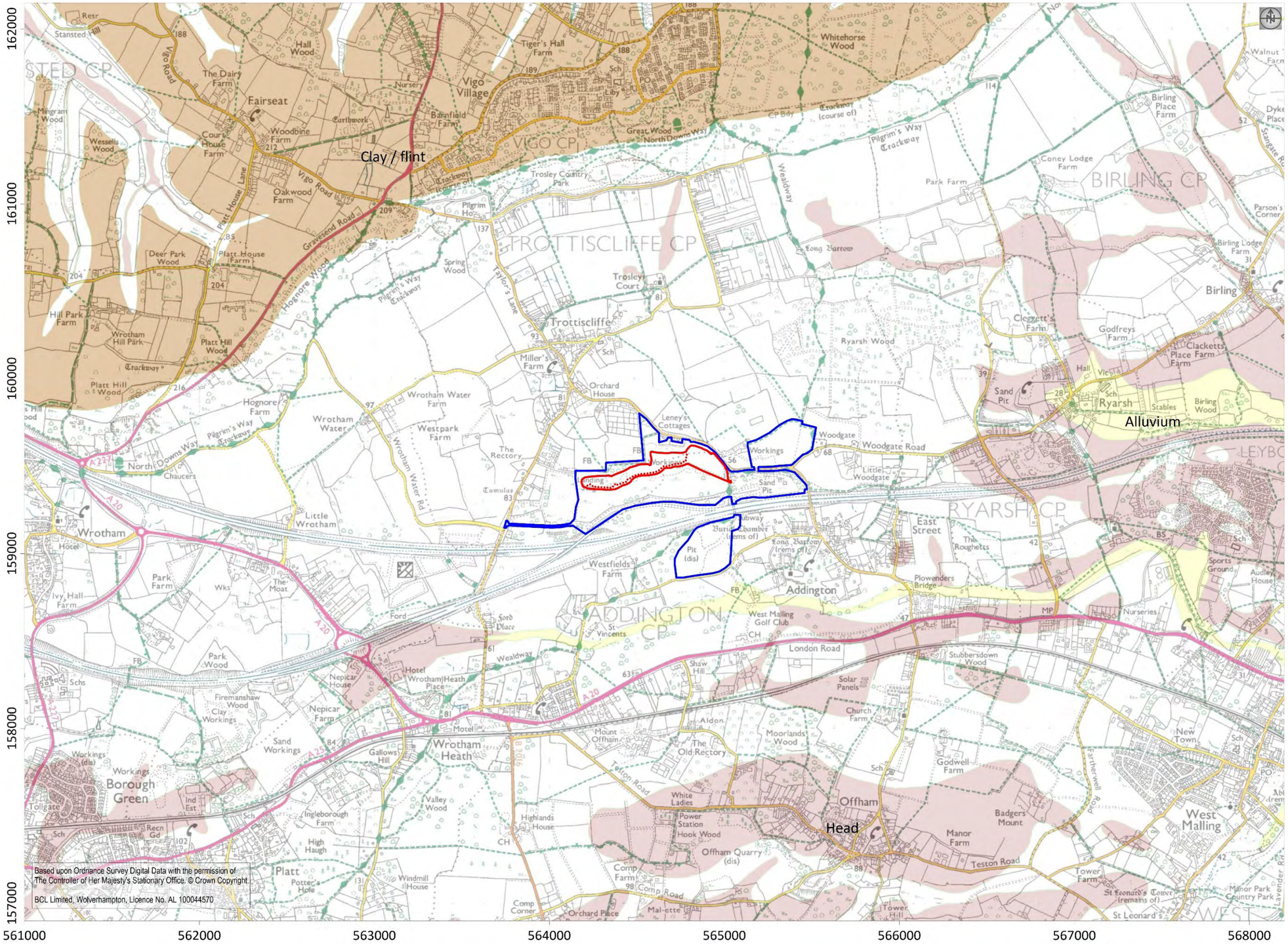

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Figure 4 Drift Geology

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Date: 16/06/22	Format: A3L

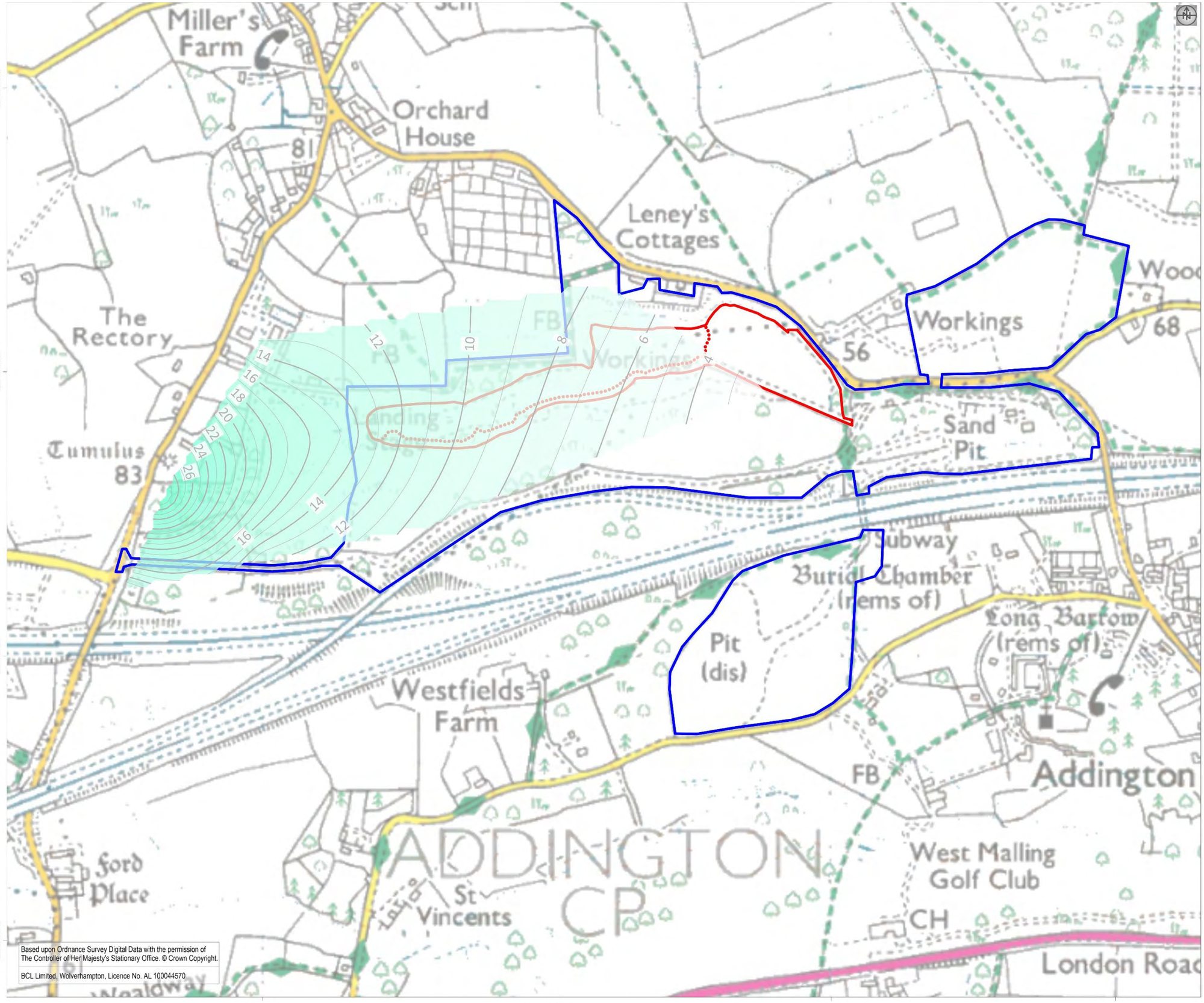

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Figure 5 Thickness of Gault Clay

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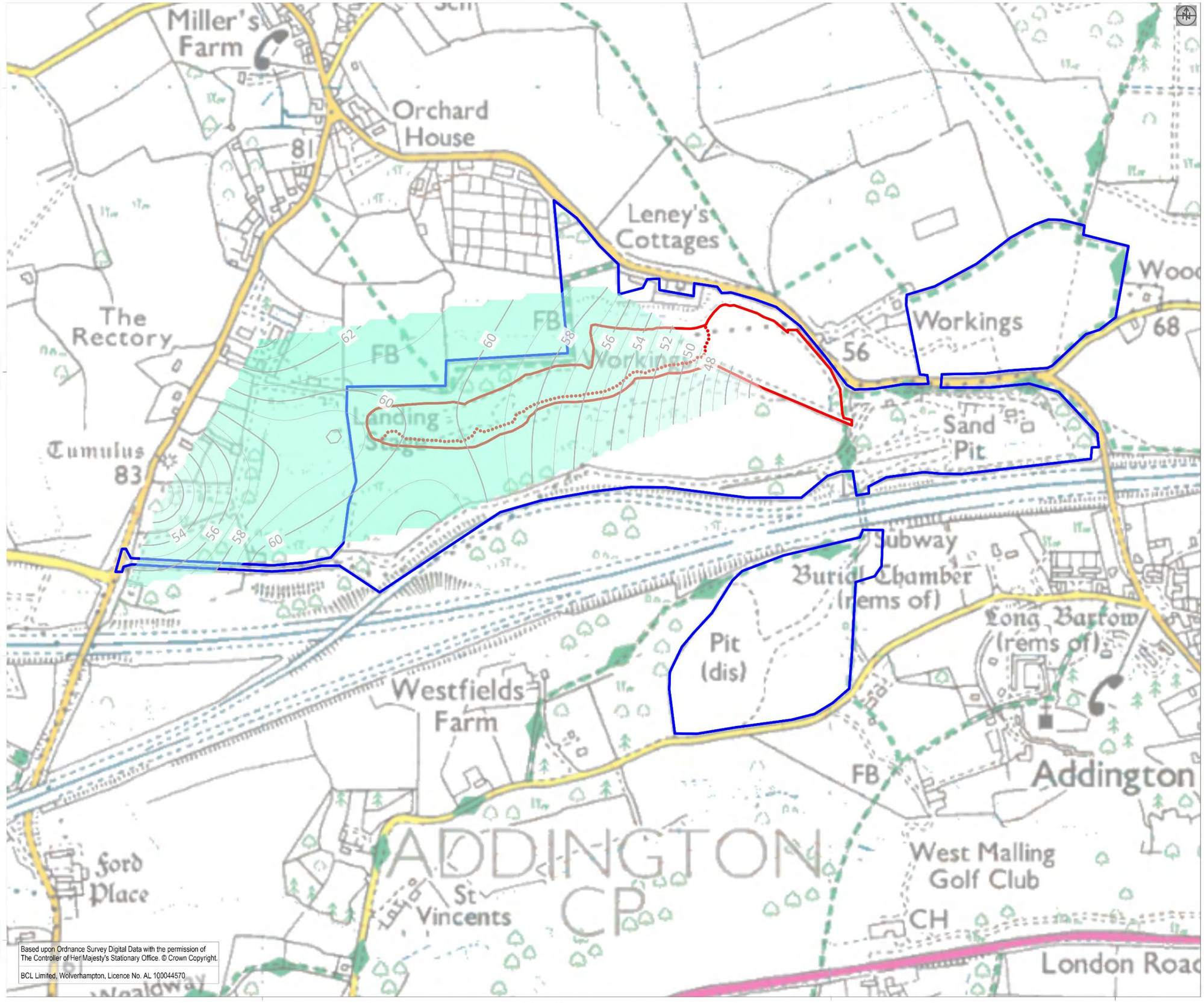

Limit of Infill Placement

Site Boundary

Recovery Operation

Base GC (maOD)

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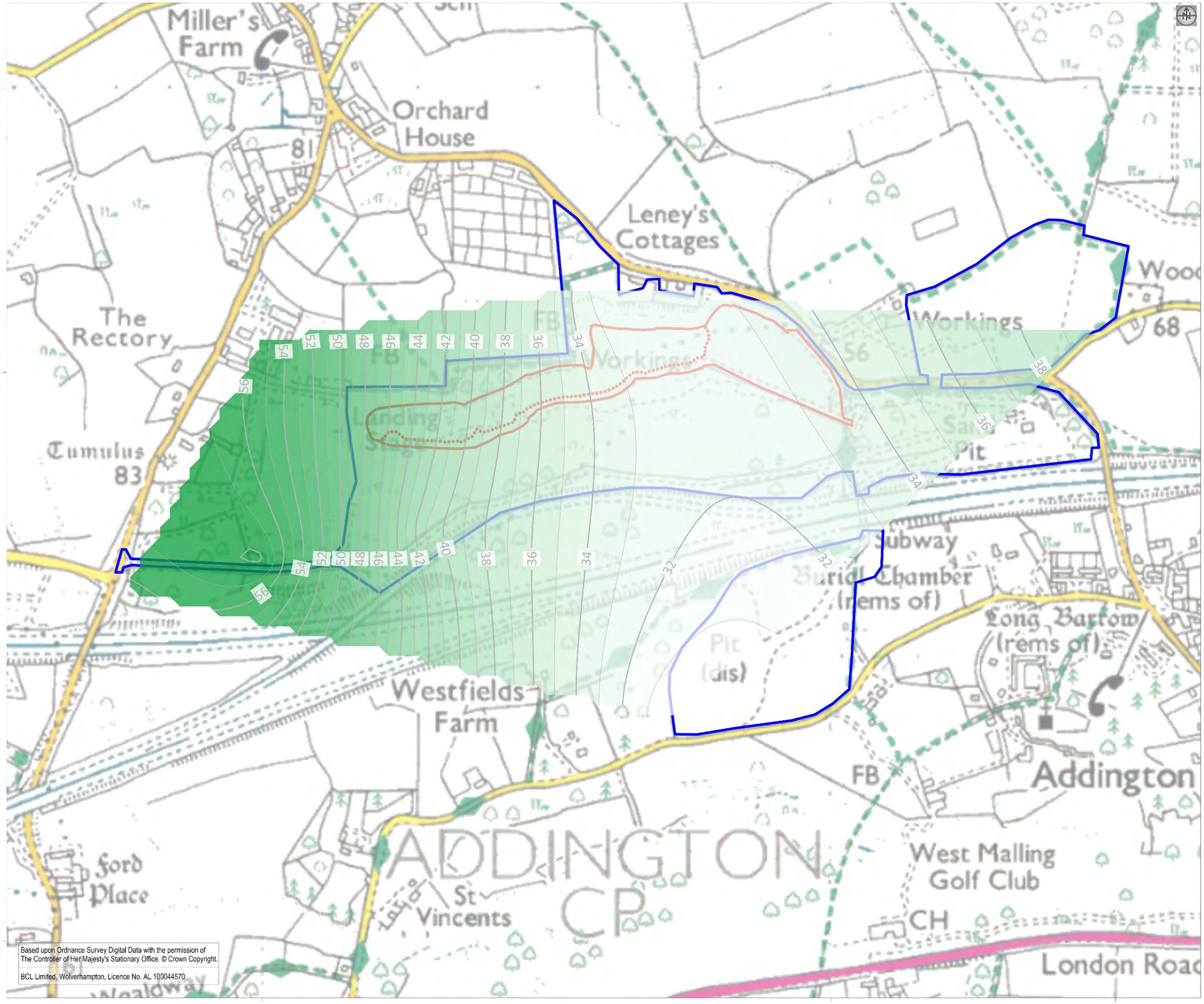
Figure 6 Base of Gault Clay

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Thickness FB (m)

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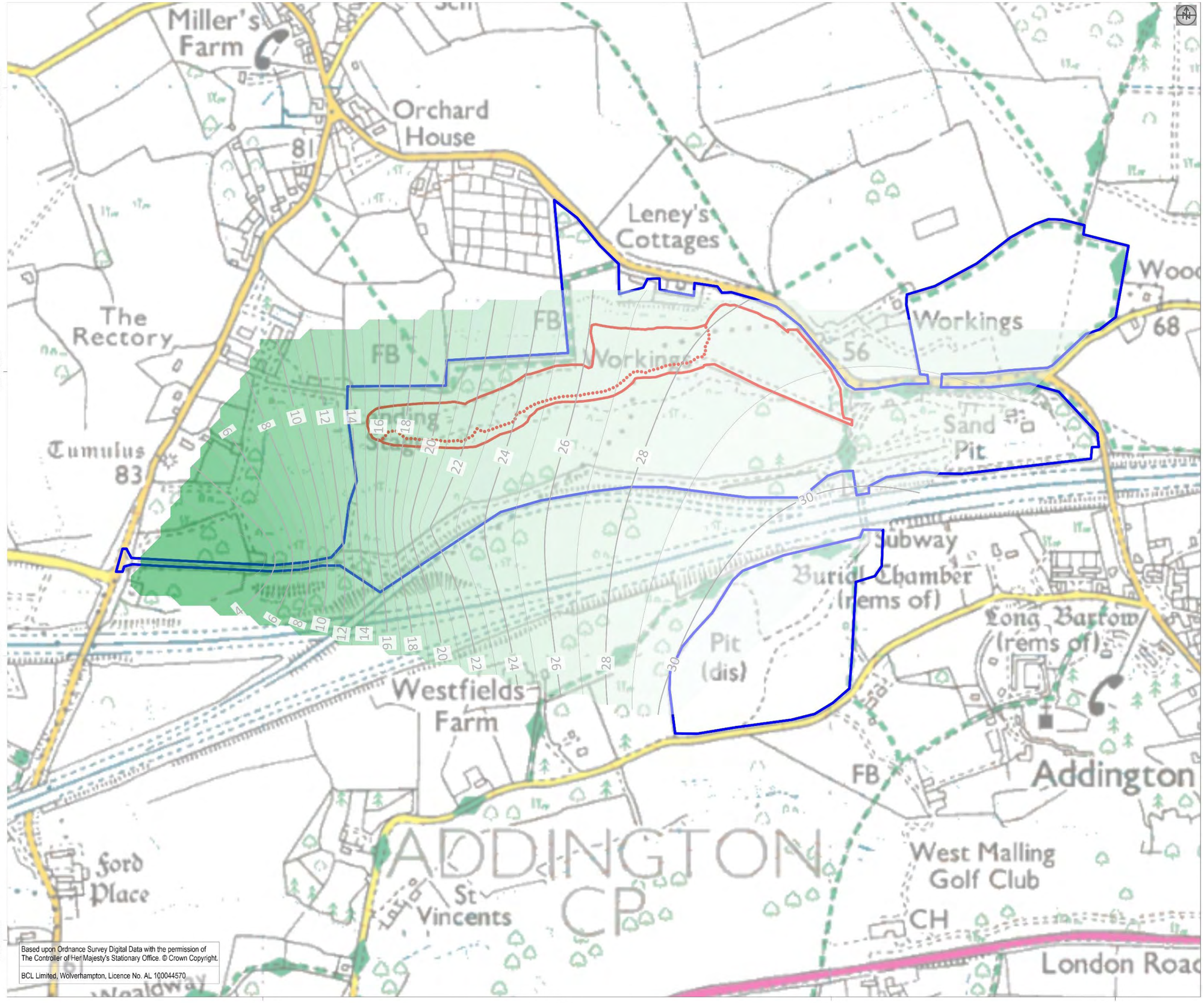
Figure 7 Thickness of Folkestone Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Base FB (maOD)

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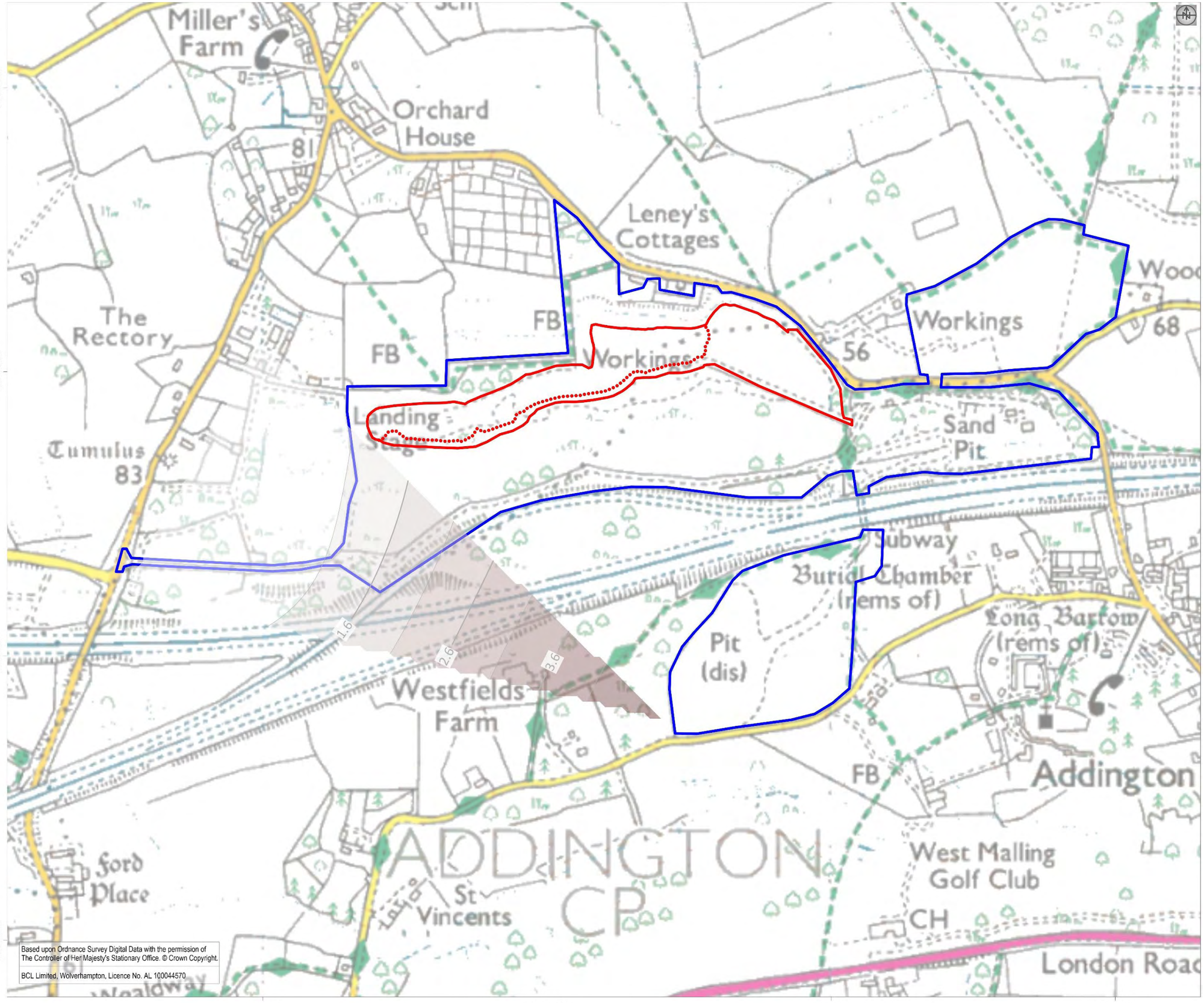
Figure 8 Base of Folkstone Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Thickness SB (m)

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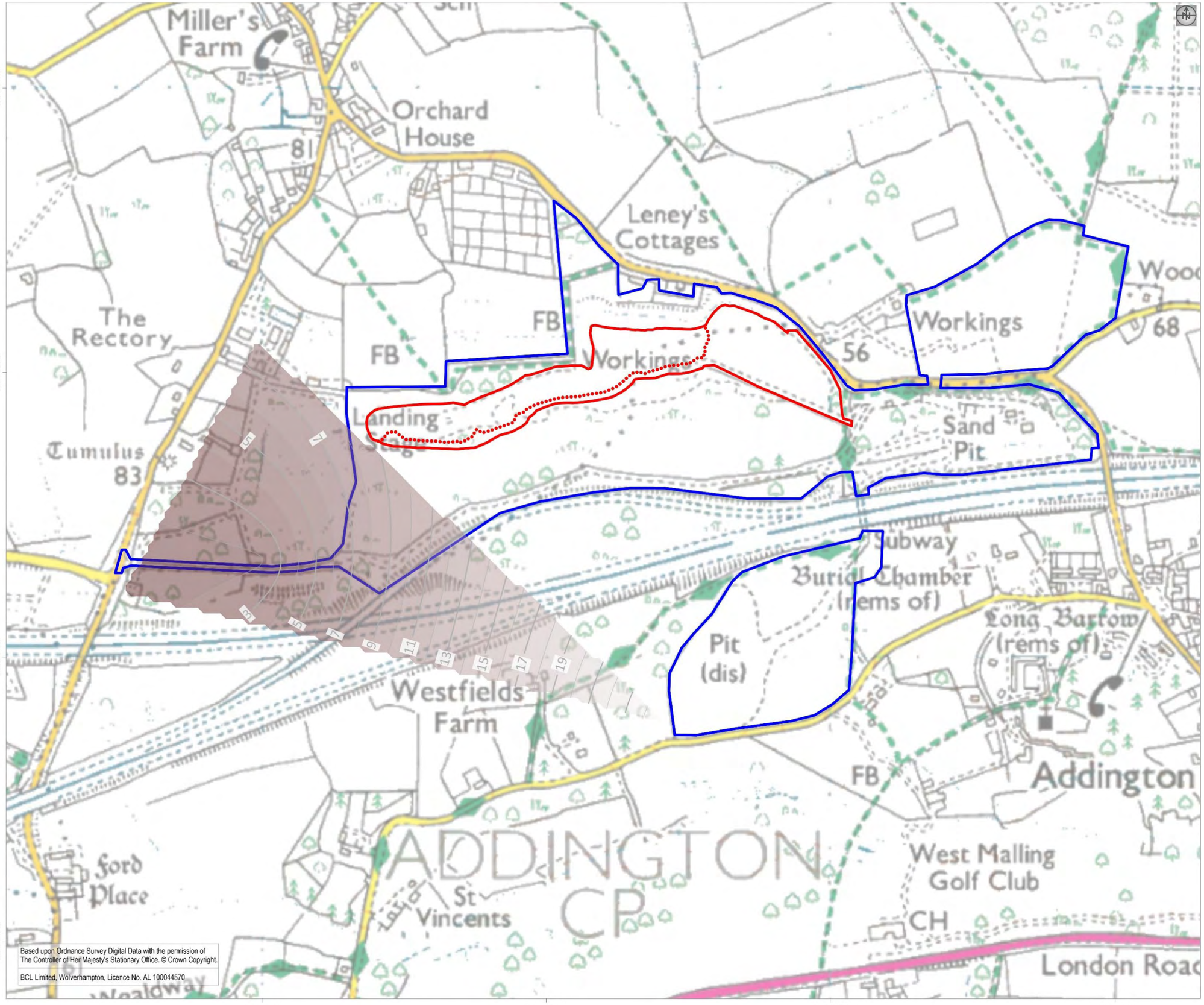
Figure 9 Thickness of Sandgate Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Base SB (maOD)

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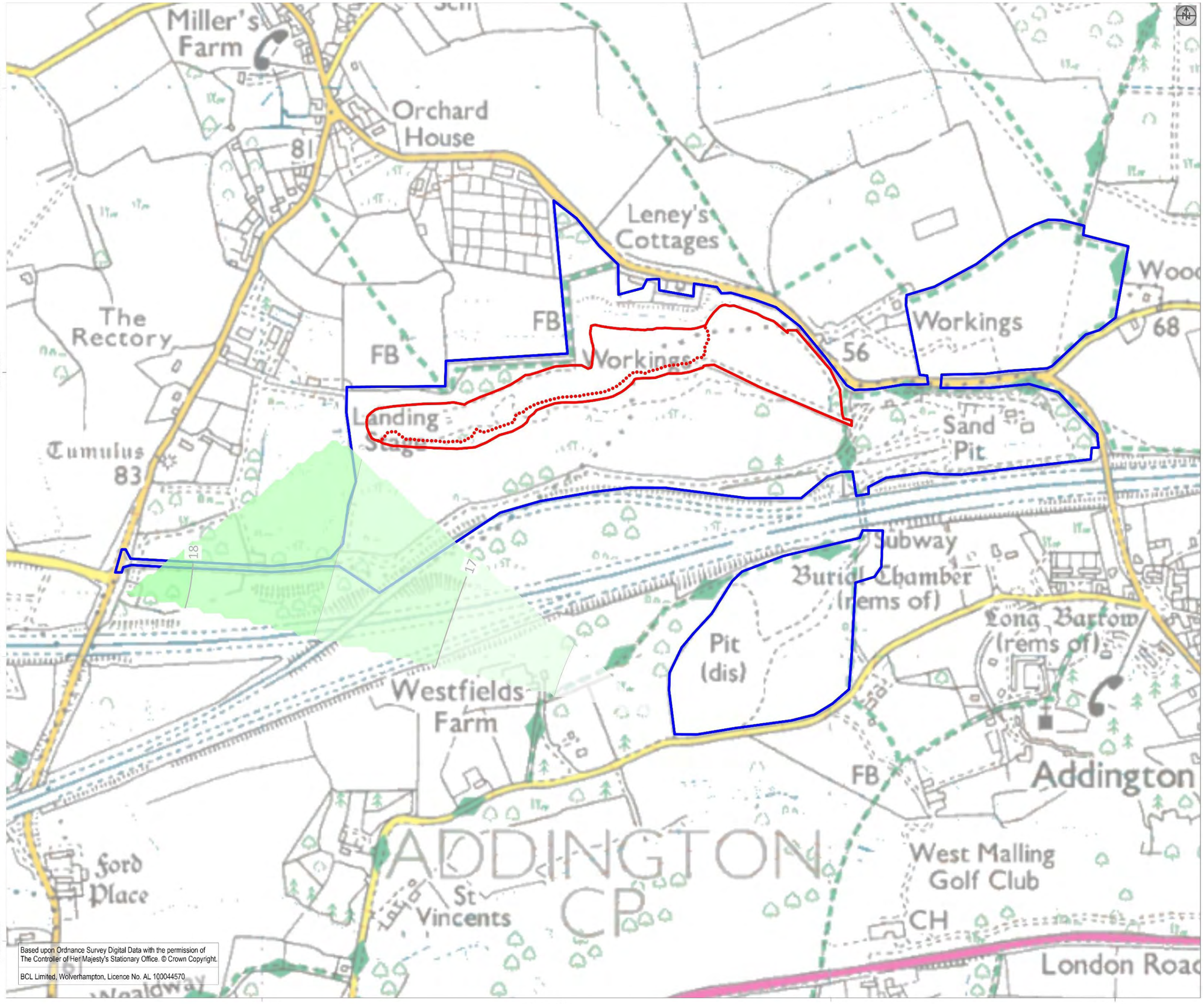
Figure 10 Base of Sandgate Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Thickness HB (m)

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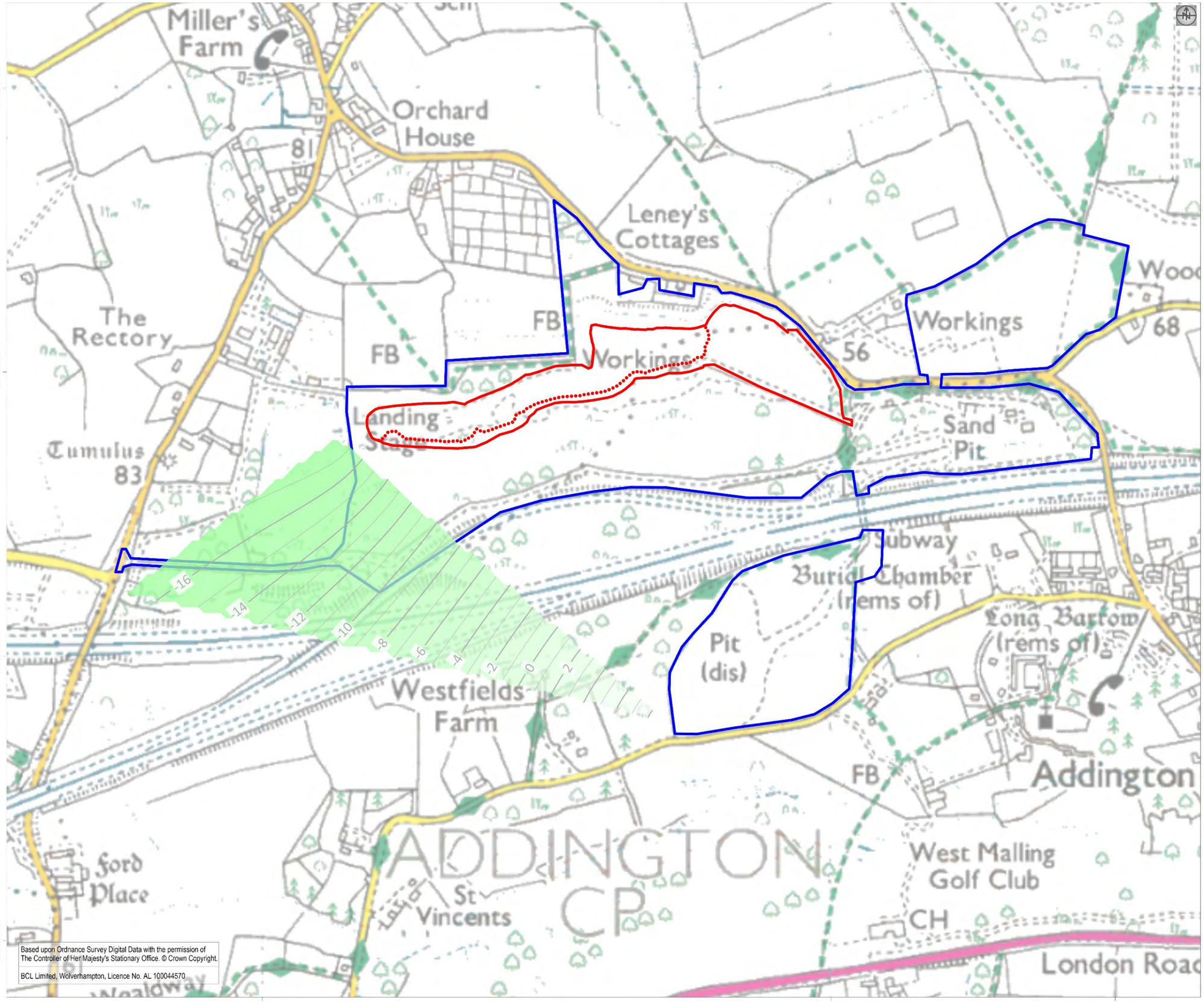
Figure 11 Thickness of Hythe Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Base HB (maOD)

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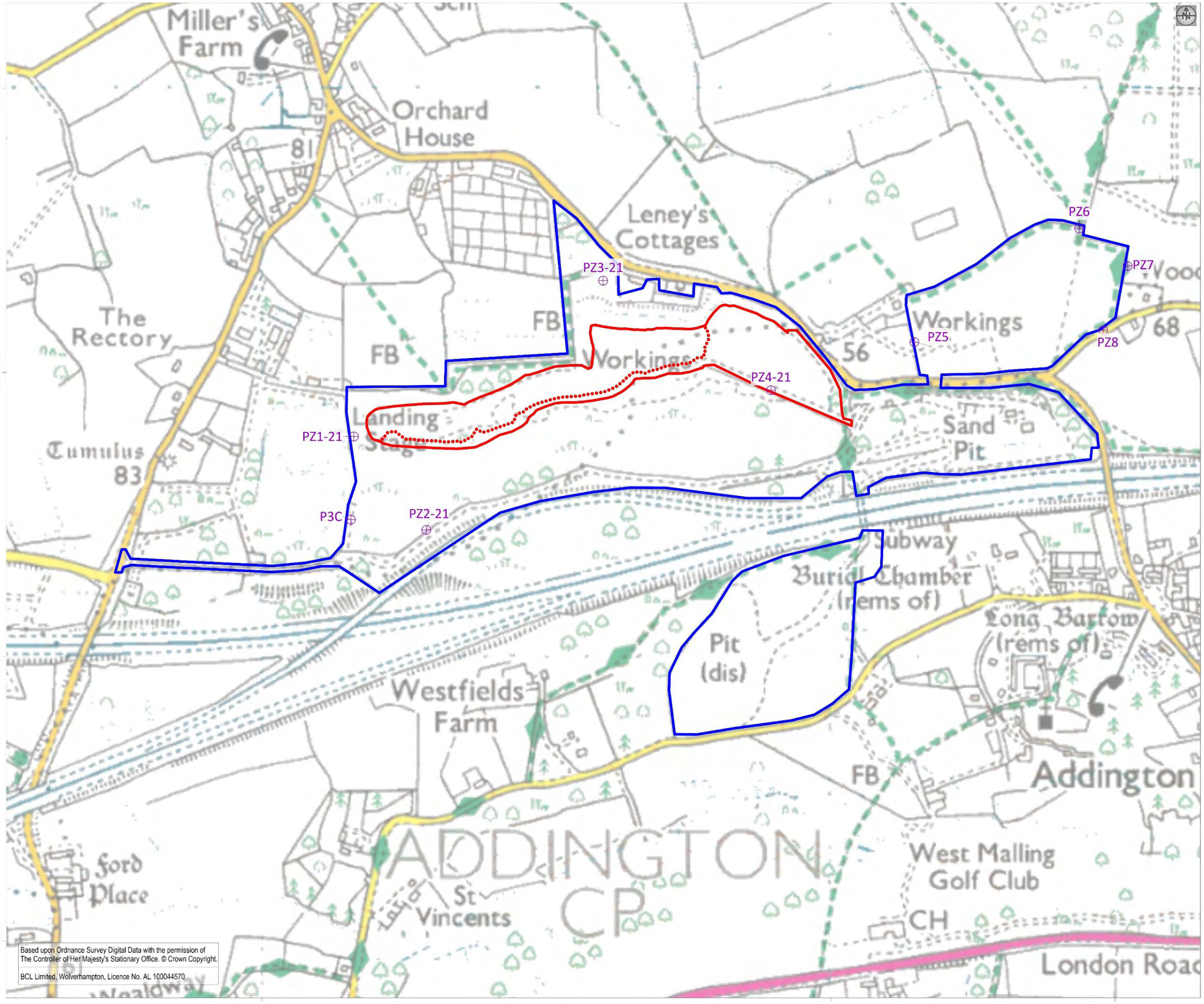
Figure 12 Base of Hythe Beds

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Piezometer

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Figure 13 Piezometers

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L

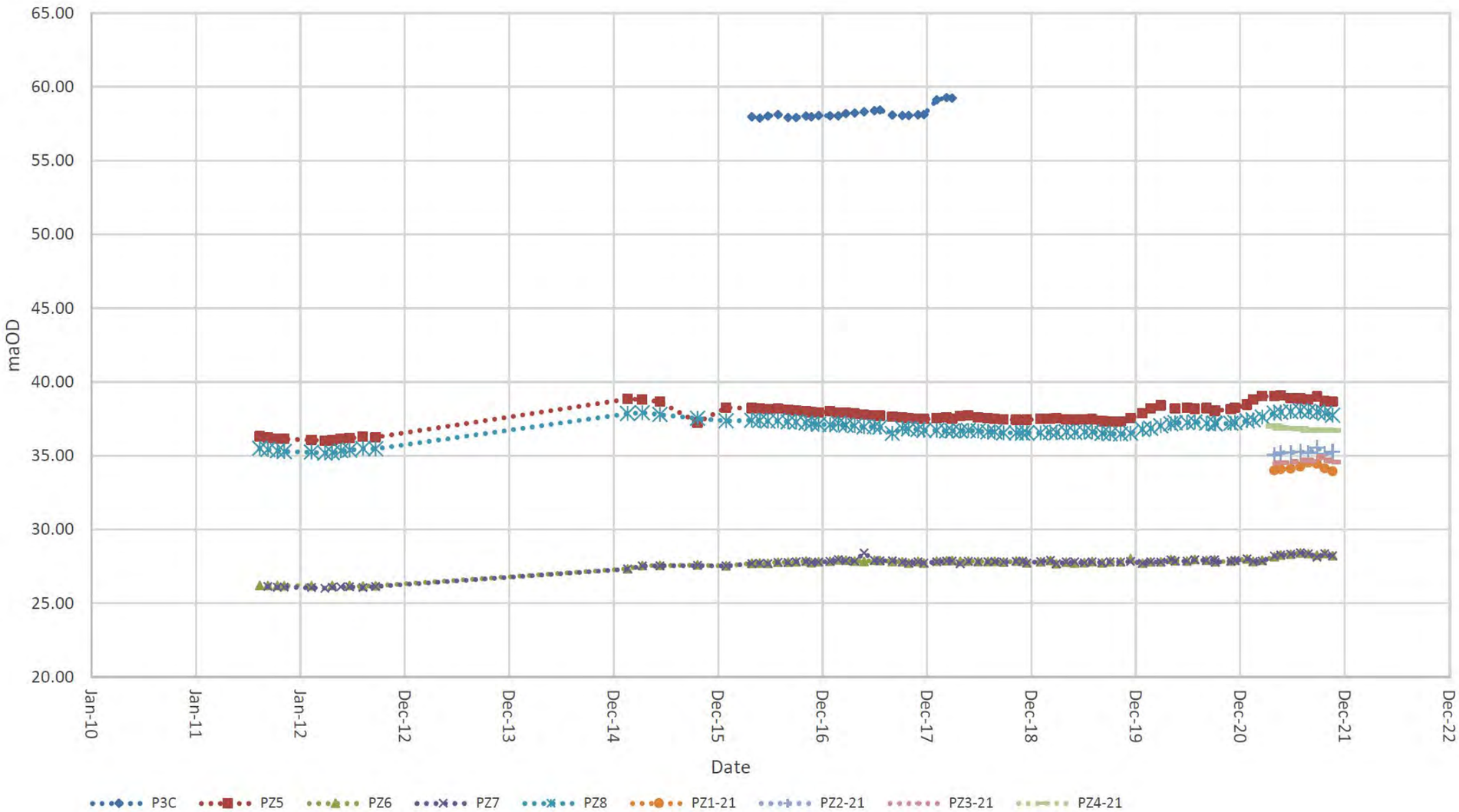

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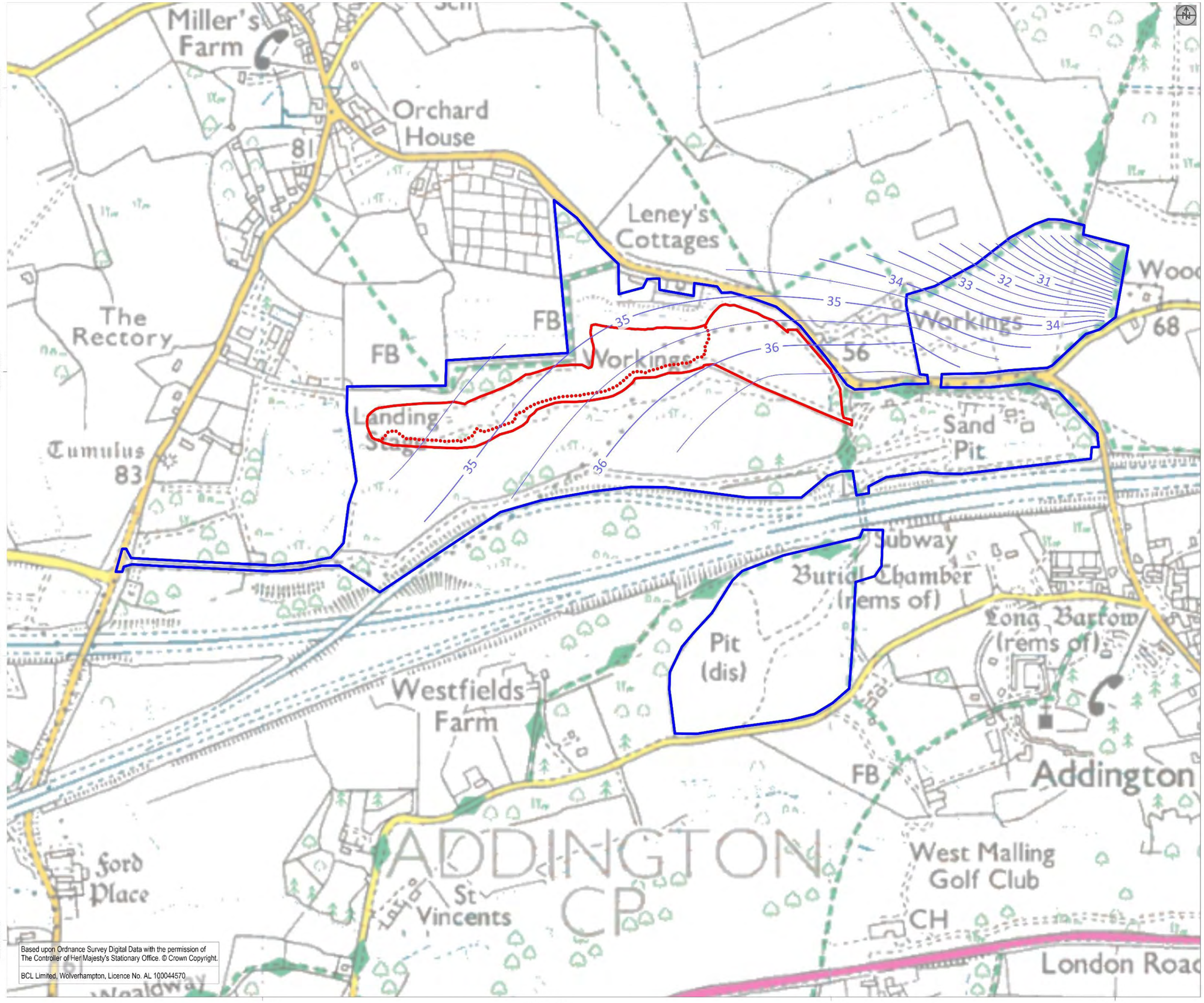
Figure 14 Groundwater Hydrograph

Drawn By: PS	Scale: maOD
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Groundwater Level (maOD)

S/QPL/FG/WRQ/HRA22/03

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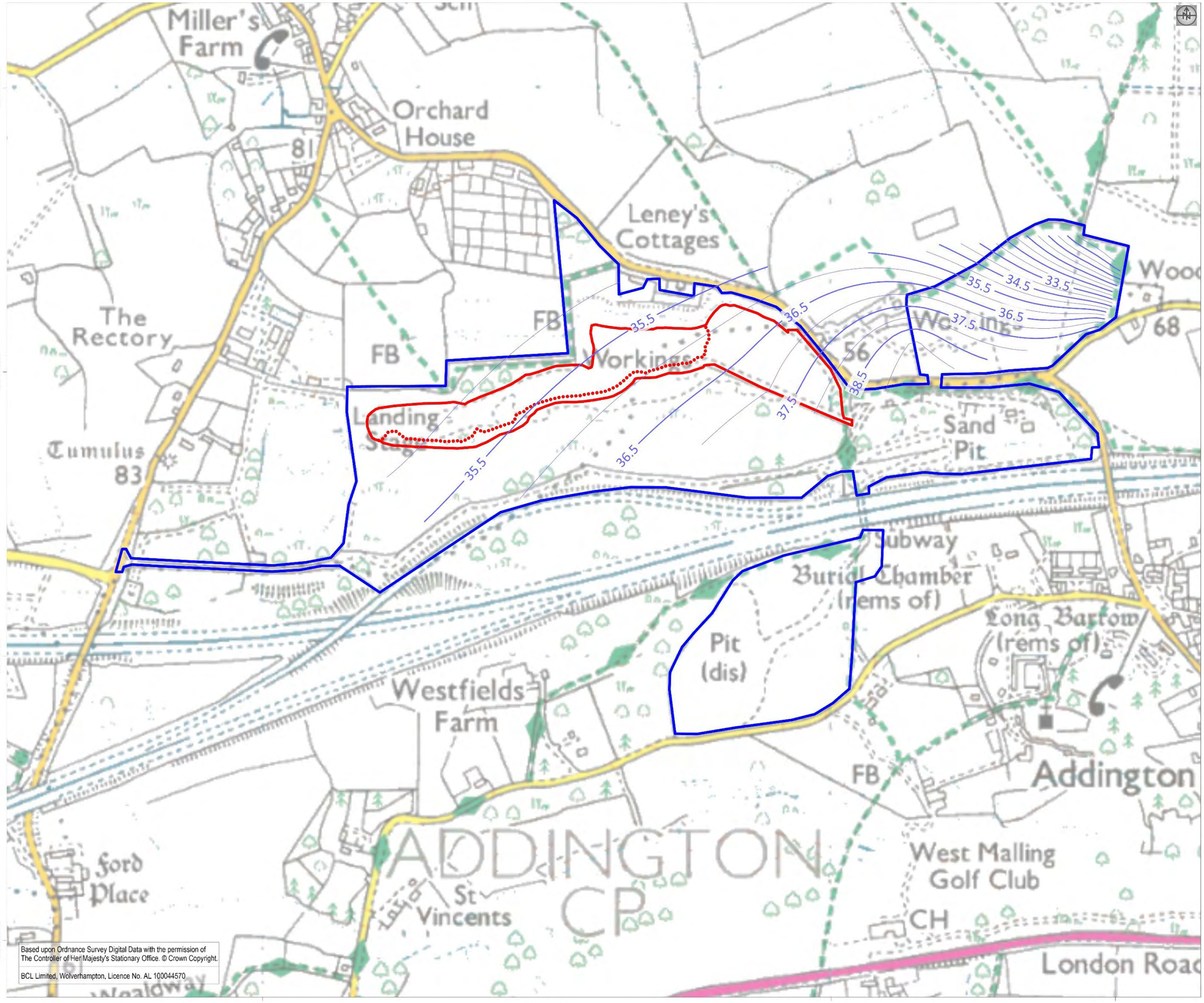
Figure 15 Minimum Groundwater Elevation Contours

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Groundwater Level (maOD)

S/QPL/FG/WRQ/HRA22/03

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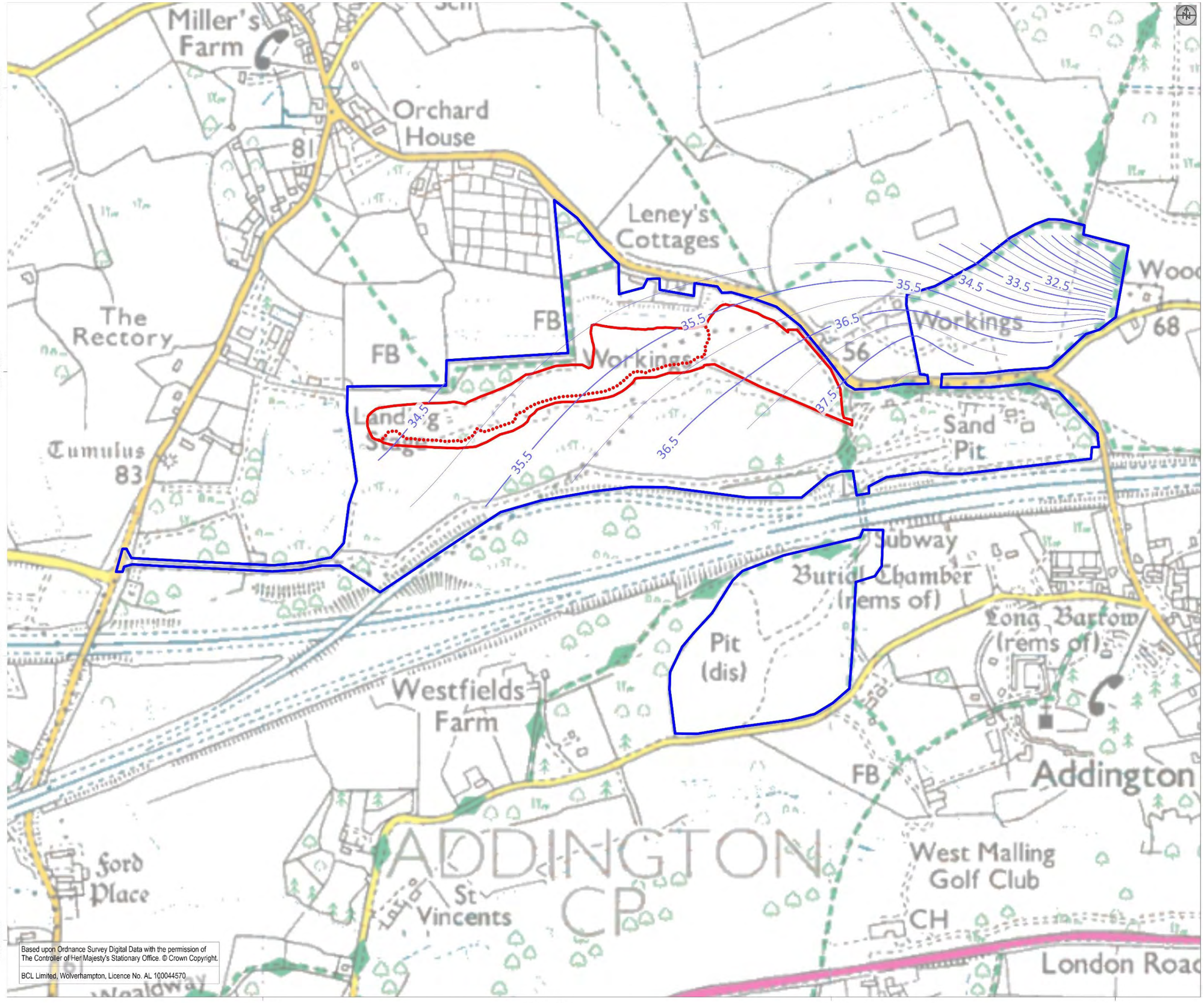
Figure 16 Maximum Groundwater Elevation Contours

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Groundwater Level (maOD)

S/QPL/FG/WRQ/HRA22/03

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Figure 17 Average Groundwater Elevation Contours

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L

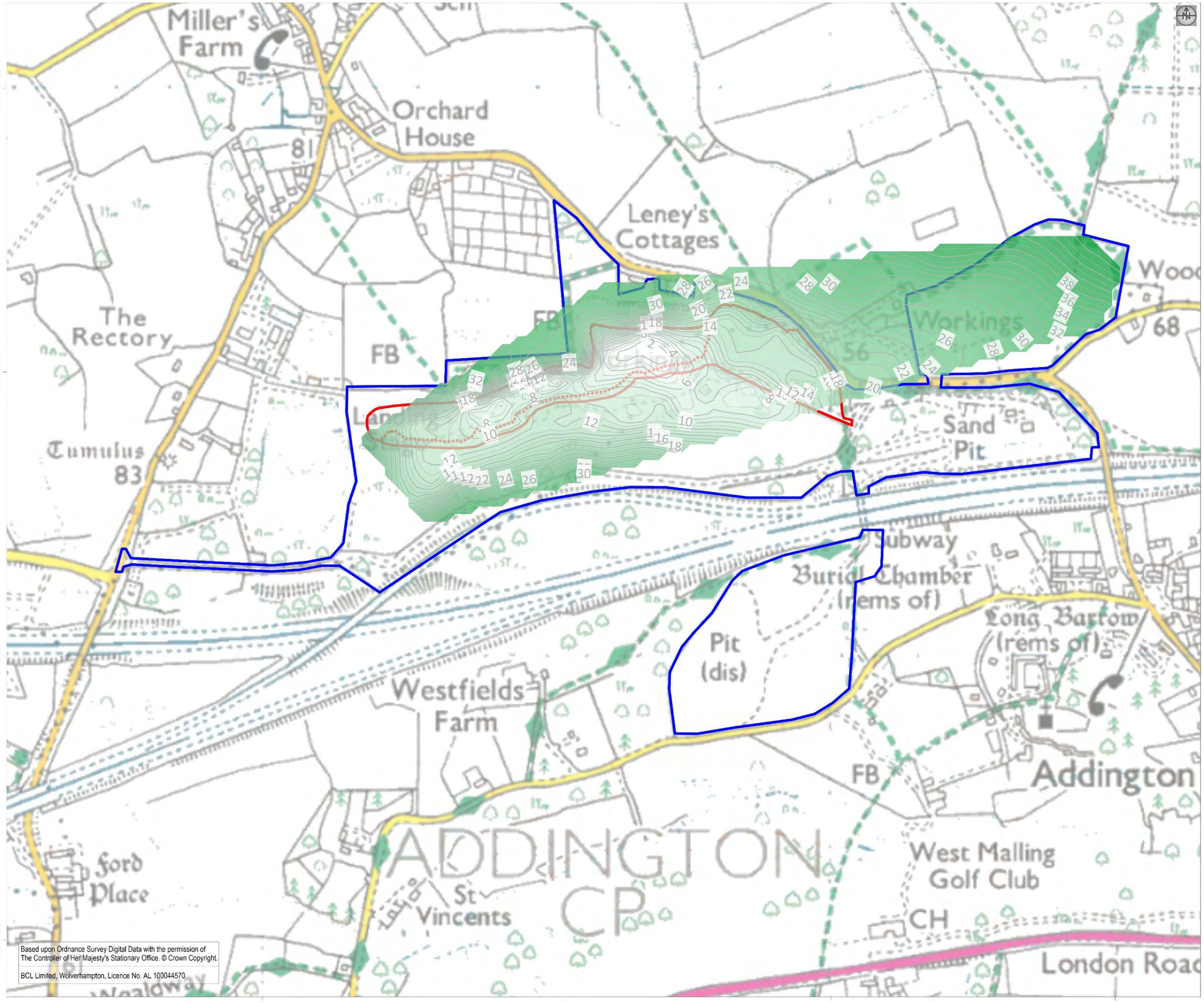

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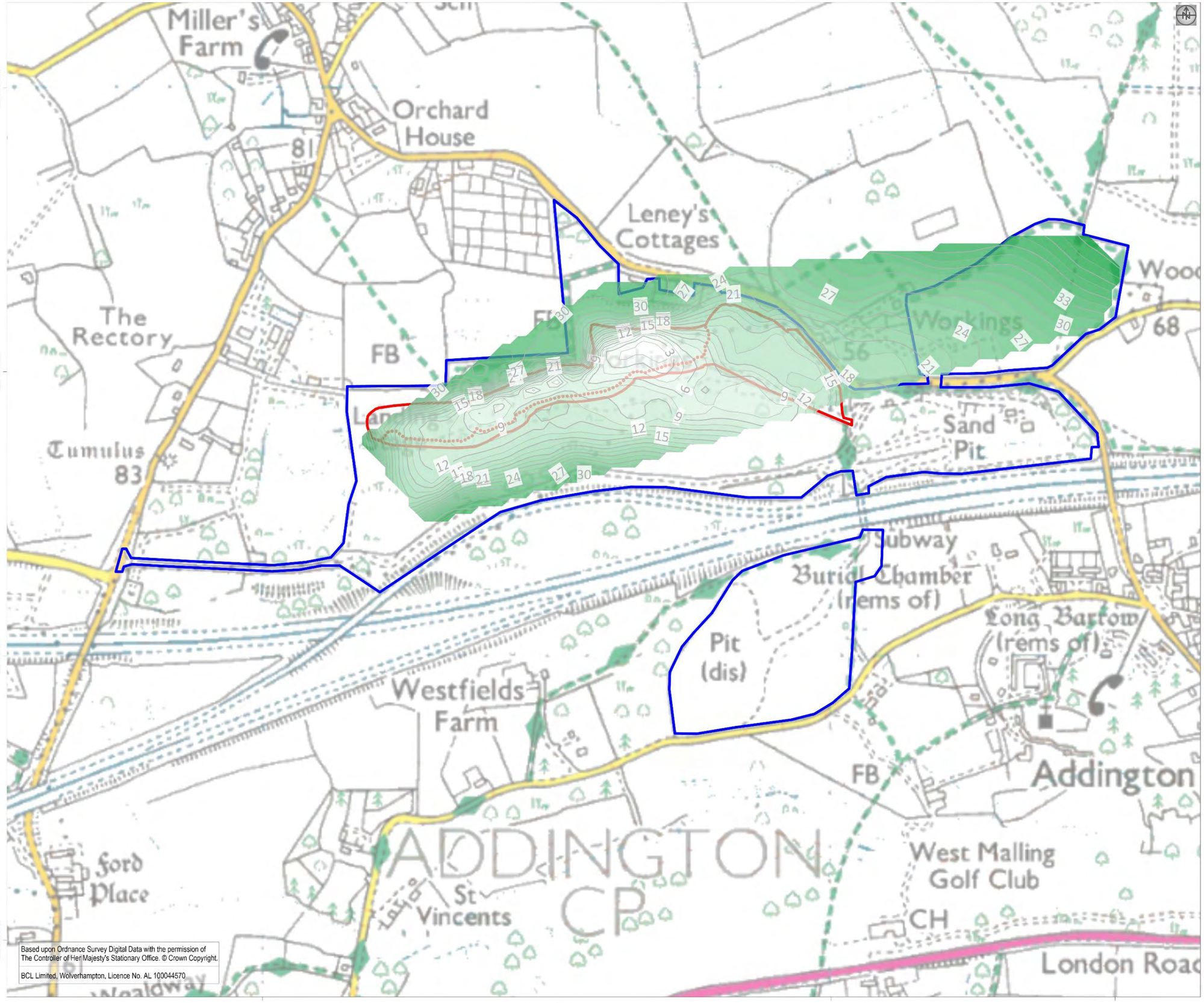
Figure 18 Unsaturated Thickness, Minimum Groundwater Levels

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



S/QPL/FG/WRQ/HRA22/03

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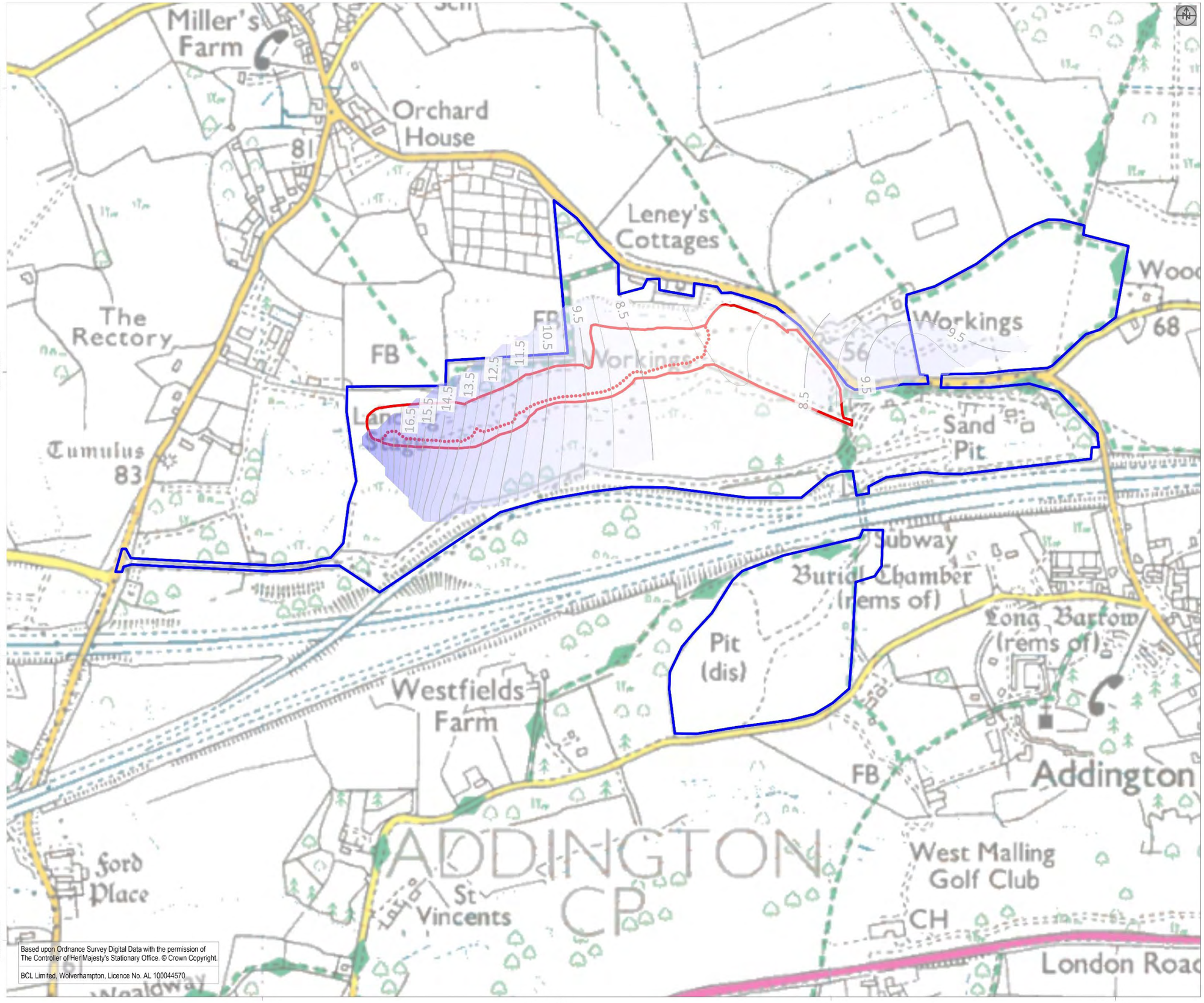
Hydrogeological Risk Assessment

Version 3

Figure 19 Unsaturated Thickness, Maximum Groundwater Levels

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Saturated Thickness (m)

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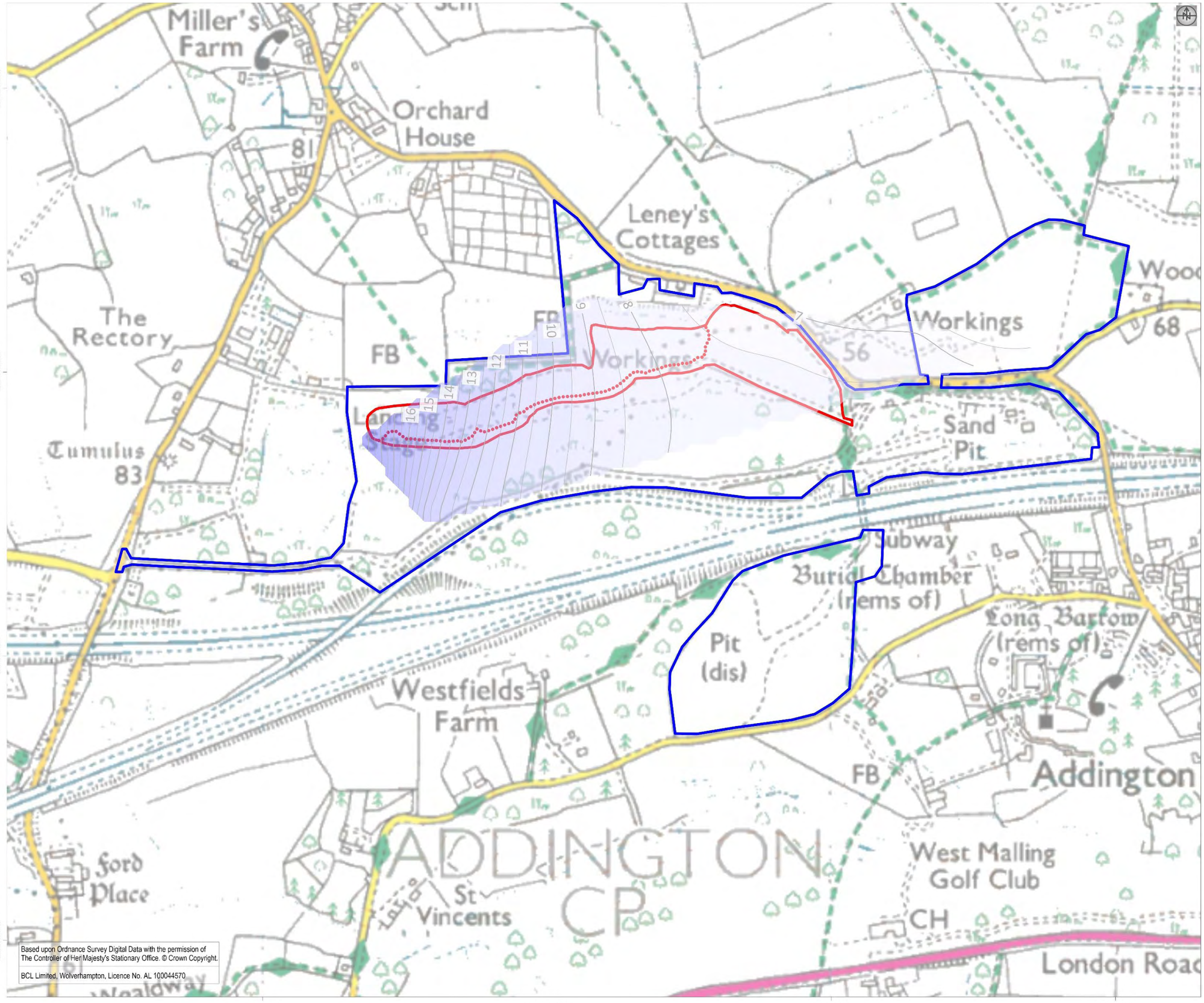
Figure 20 Saturated Thickness, Minimum Groundwater Levels

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Saturated Thickness (m)

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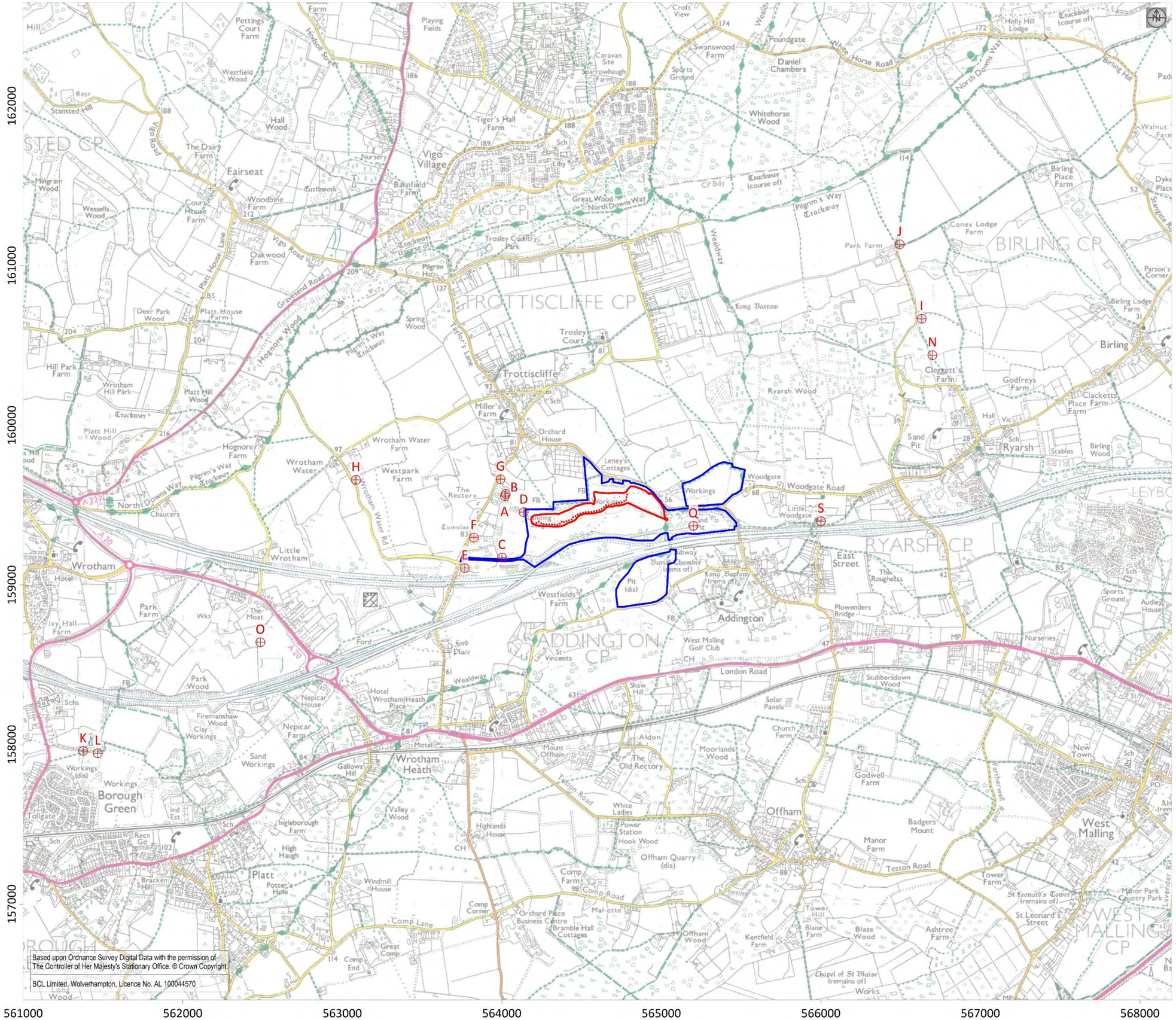
Figure 21 Unsaturated Thickness, Maximum Groundwater Levels

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Abstraction

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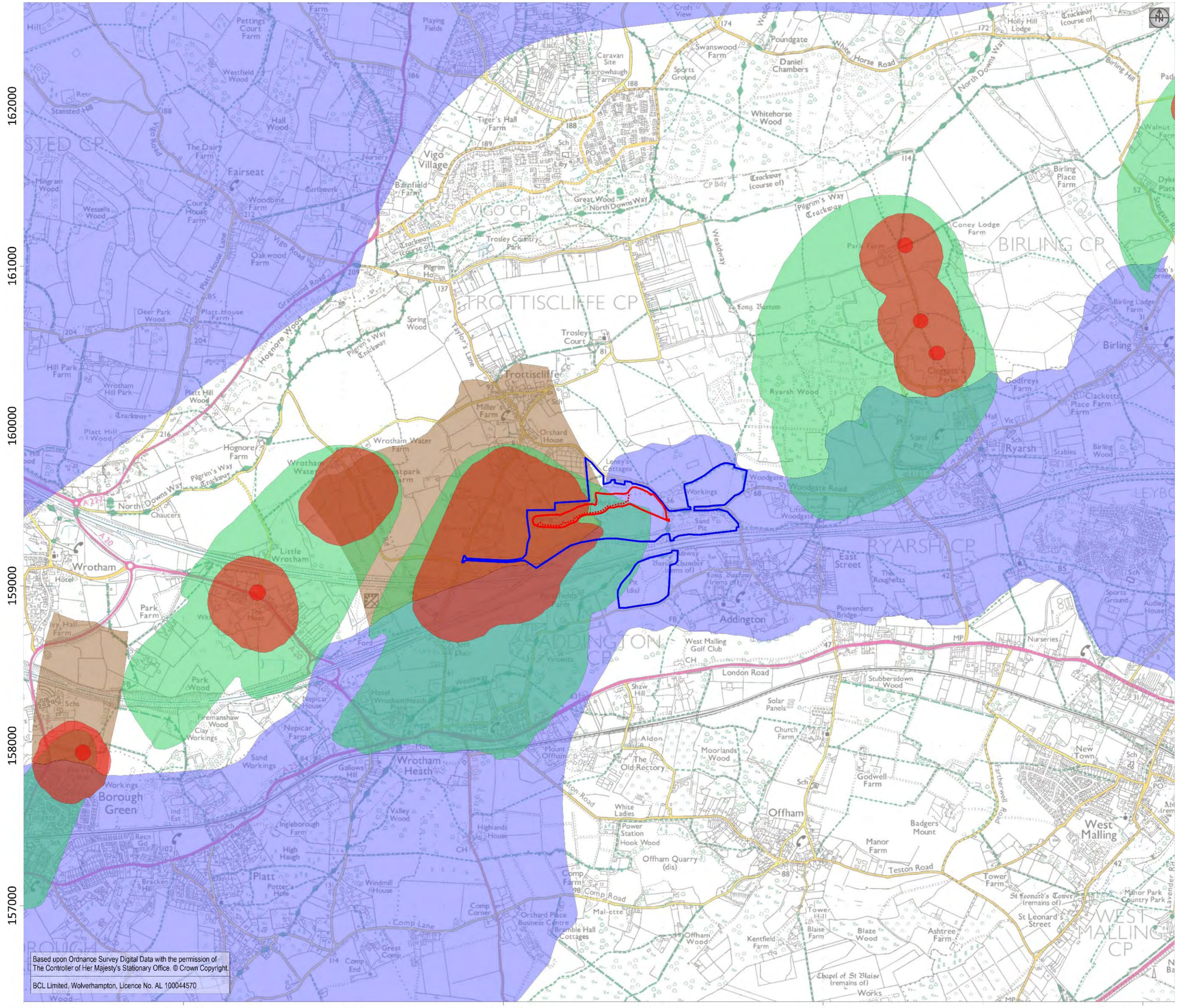
Figure 22 Abstractions

Drawn By: PS	Scale: 1:23,000
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

SPZ1

SPZ2

SPZ3

SPZ4

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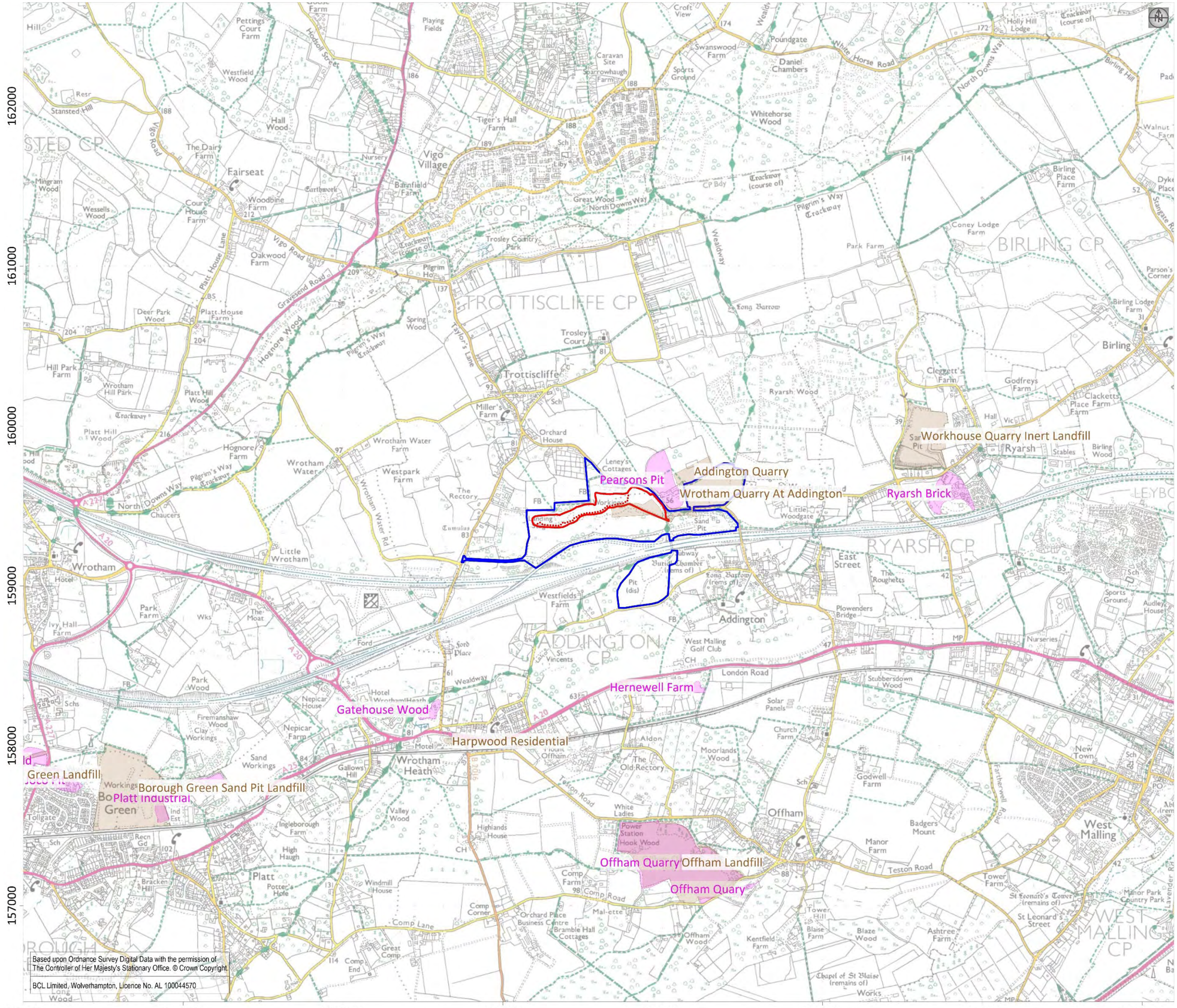
Figure 23 Source Protection Zones

Drawn By: PS	Scale: 1:23,000
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Historic Landfill

Active Landfill

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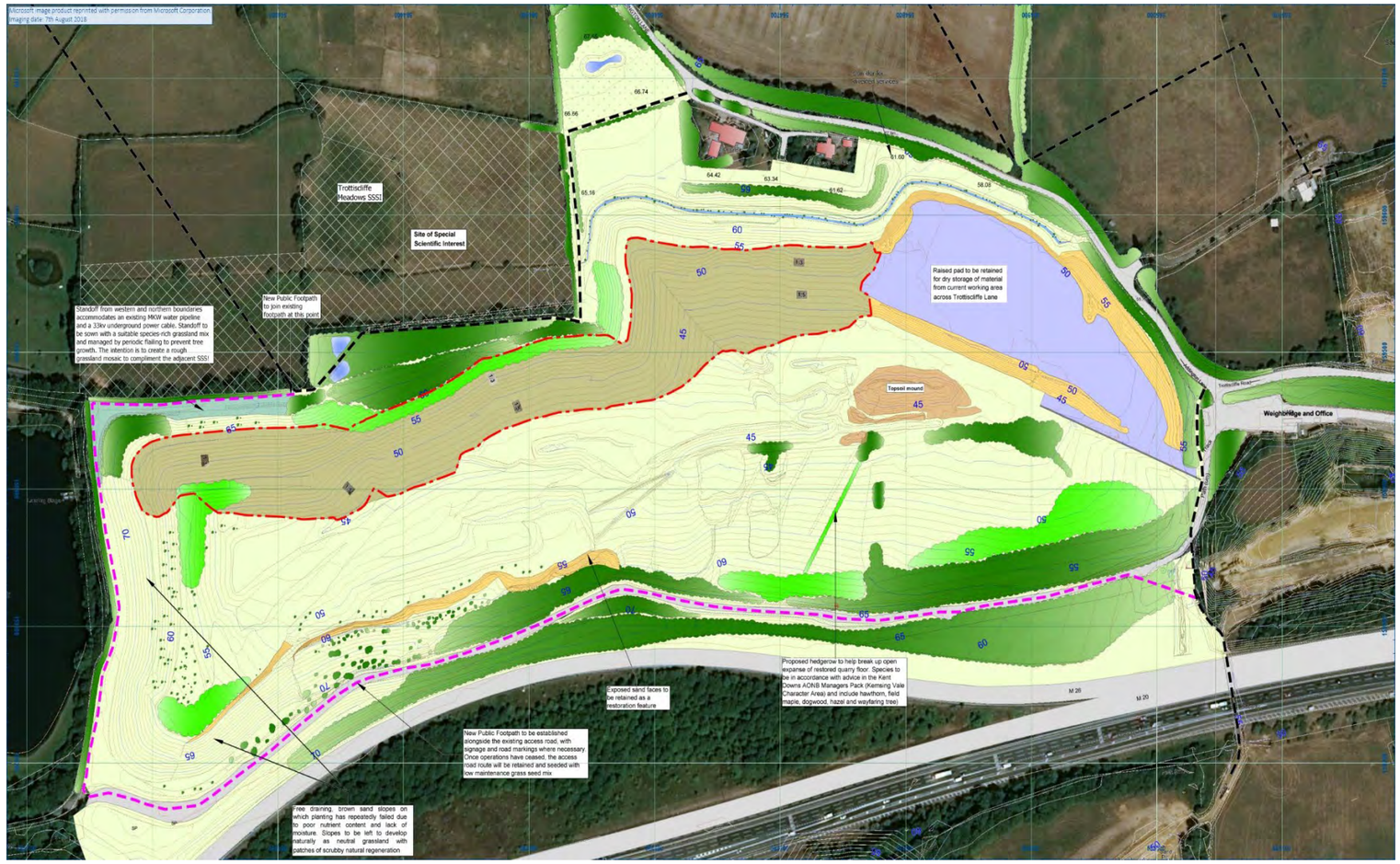
Figure 24 Landfill

Drawn By: PS	Scale: 1:23,000
Date: 16/06/22	Format: A3L



APPLICATION BOUNDARY

INFINM RESTORATION CONTOURS (@ 1m INTERVALS)

EXISTING WOODLAND AND HEDGEROWS

PROPOSED TREE/SHRUB PLANTING

EXISTING SCRUBBY VEGETATION NATURALLY REGENERATED ON BROWN SAND SLOPES

EXISTING NEUTRAL GRASSLAND

PROPOSED NEUTRAL GRASSLAND

SPECIES RICH GRASSLAND

EXISTING RAISED PAD TO BE RETAINED FOR OPERATIONAL PURPOSES

ADJACENT SITE OF SPECIAL SCIENTIFIC INTEREST

EXISTING PUBLIC FOOTPATH

PROPOSED NEW FOOTPATH ROUTE

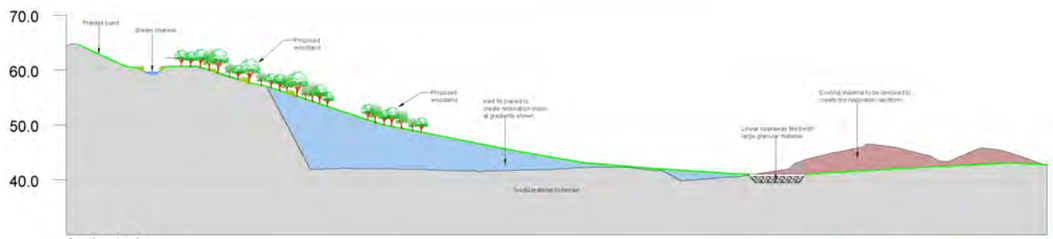
BOUNDARY OF AREA SUBJECT TO PROPOSED SUITRESS STABILISATION WORKS

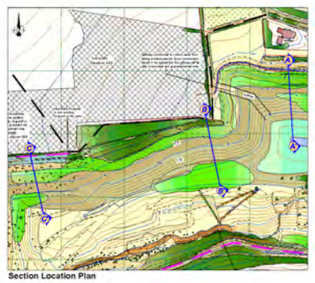
AREAS TO BE FILLED WITH RESTORATION MATERIAL AND SOIL TO ACHIEVE RESTORATION LEVELS

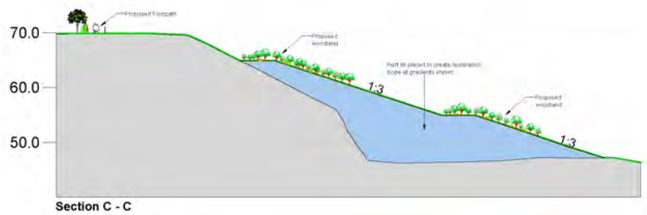
EXISTING LAND TO BE REMOVED TO ACHIEVE RESTORATION LEVELS

EXISTING WOODLAND VEGETATION

PROPOSED WOODLAND VEGETATION




Section Location Plan



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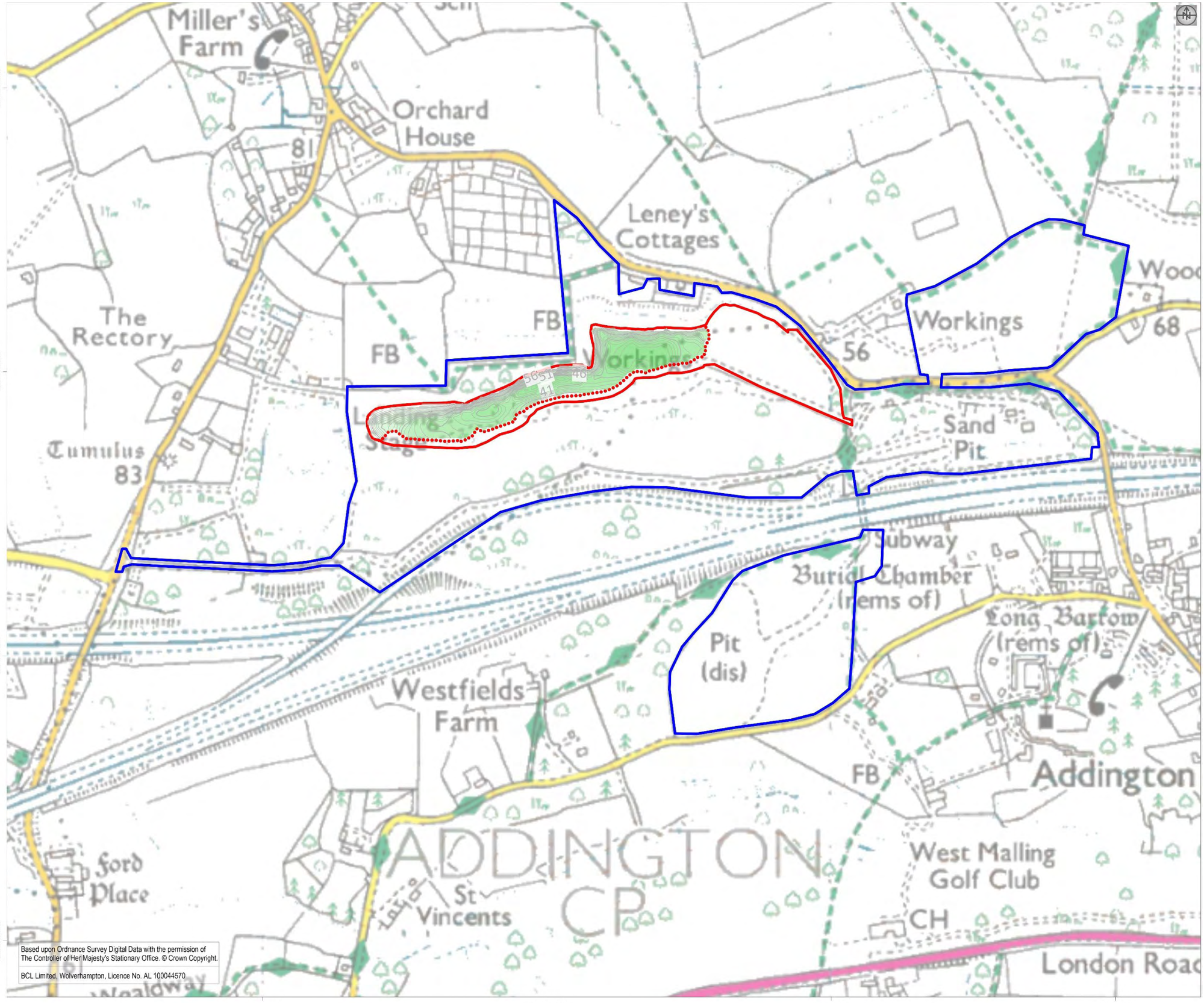
Wrotham Quarry, Addington, Kent

Hydrogeological Risk Assessment

Version 3

Figure 25 Recovery Operation

Drawn By: PS	Scale: N/A
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Base of Recovery Operation (maOD)

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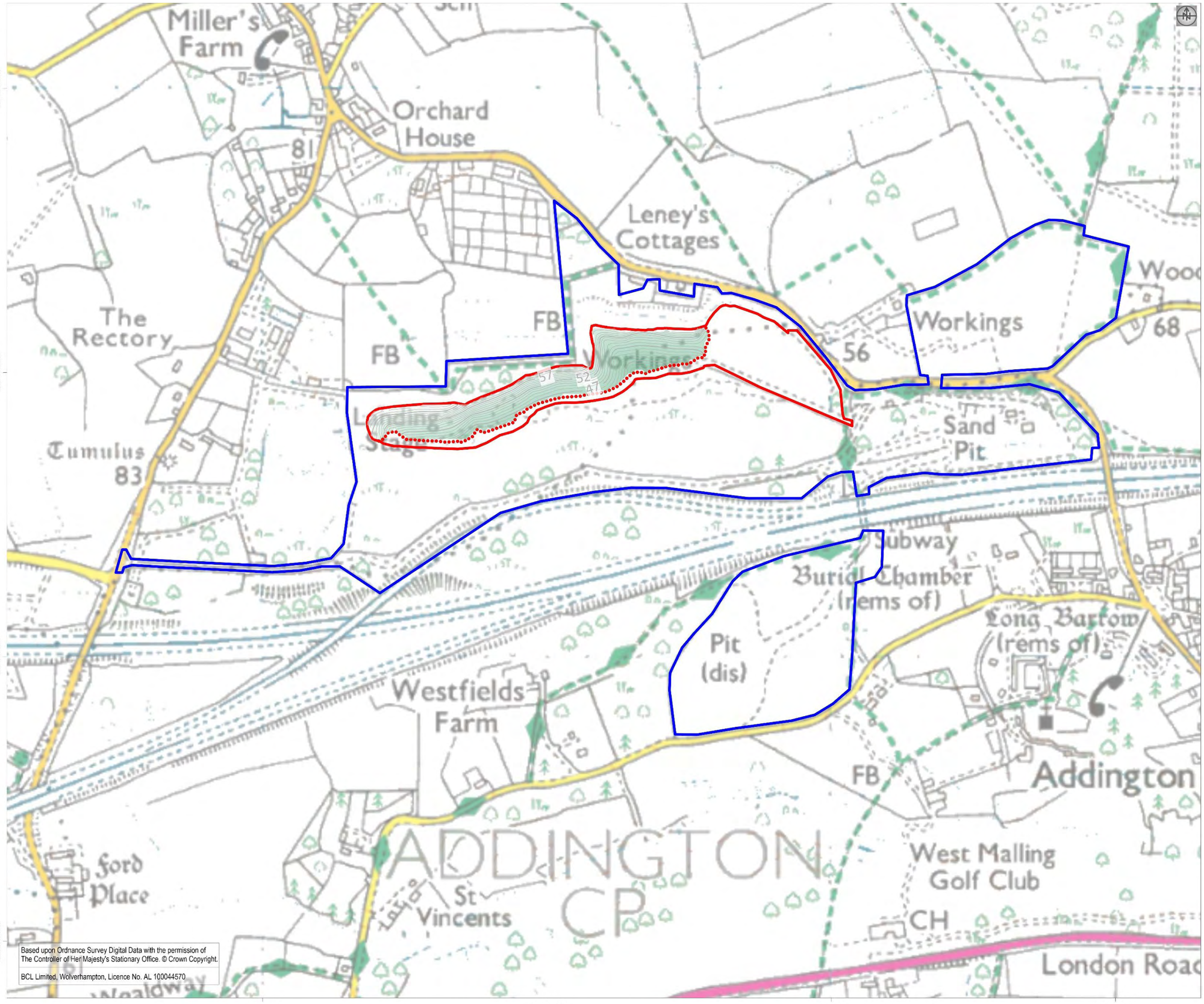
Wrotham Quarry, Addington, Kent

Hydrogeological Risk Assessment

Version 3

Figure 26 Base of Recovery Operation

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Surface of Recovery Operation (maOD)

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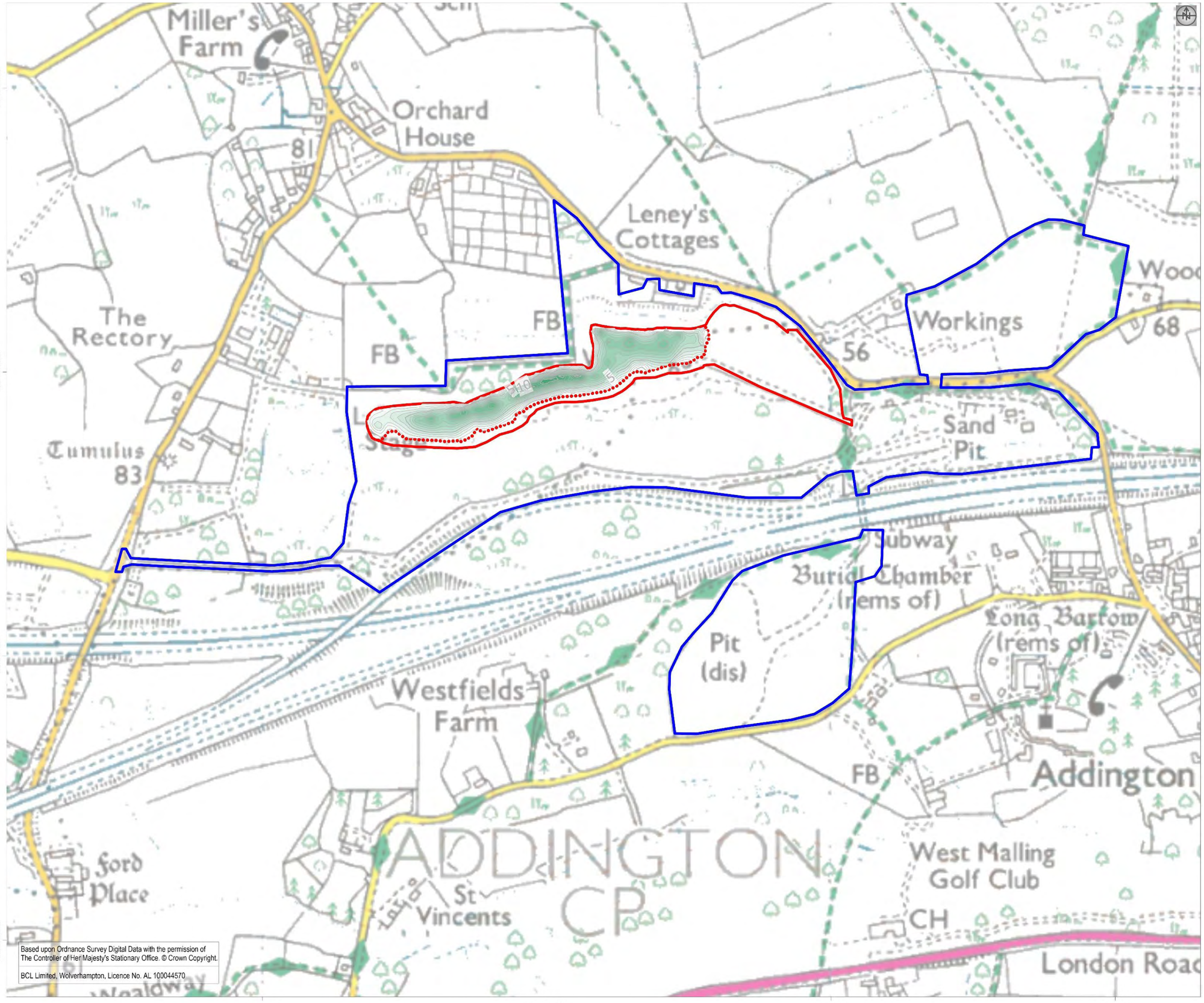
Wrotham Quarry, Addington, Kent

Hydrogeological Risk Assessment

Version 3

Figure 27 Surface of Recovery Operation

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Limit of Infill Placement

Site Boundary

Recovery Operation

Thickness of Recovery Operation (m)

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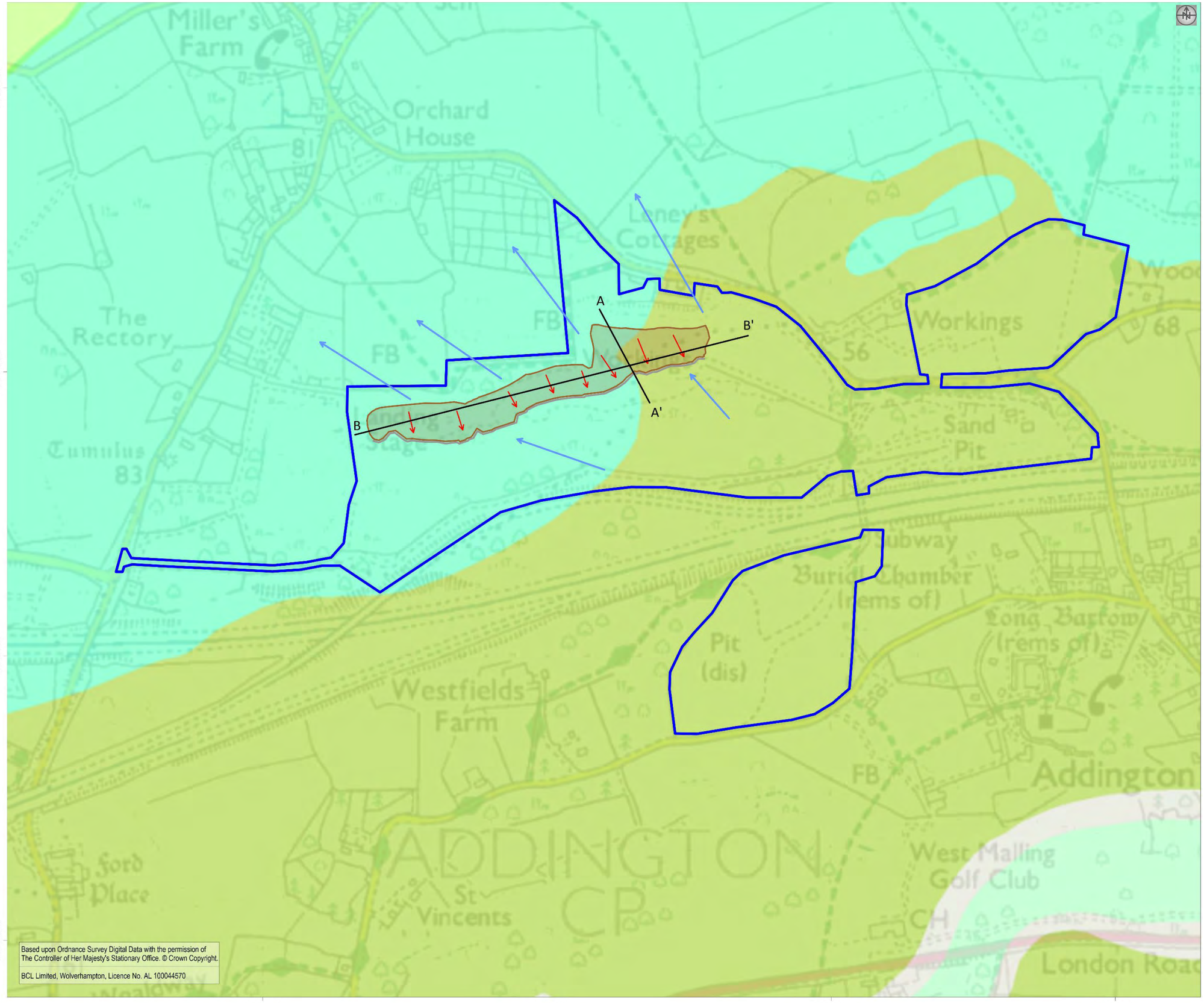
Wrotham Quarry, Addington, Kent

Hydrogeological Risk Assessment

Version 3

Figure 28 Thickness of Recovery Operation

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L



Site Boundary

Gault Clay

Folkestone Beds

Placed Inert Material

EBS

Soakaway

Surface Runoff

Groundwater Flow

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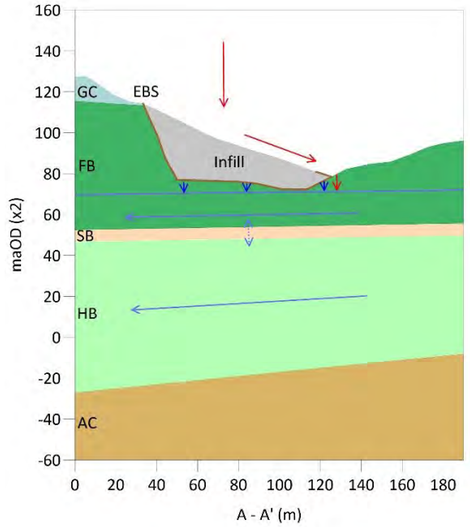
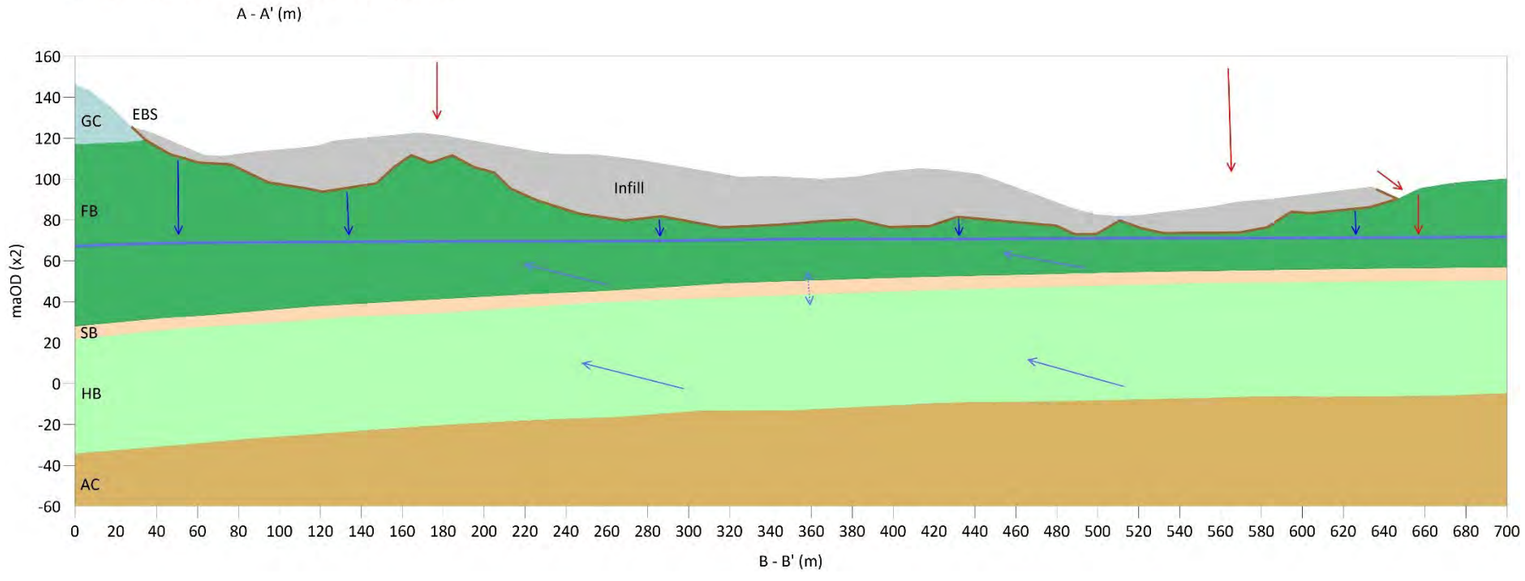
Version 3

Figure 29 Conceptual Site Model

Drawn By: PS	Scale: 1:6,500
Date: 16/06/22	Format: A3L





Rainfall / Recharge / Infiltration

Unsaturated Flow

Groundwater Flow

Aquitard Leakage

Groundwater Elevation

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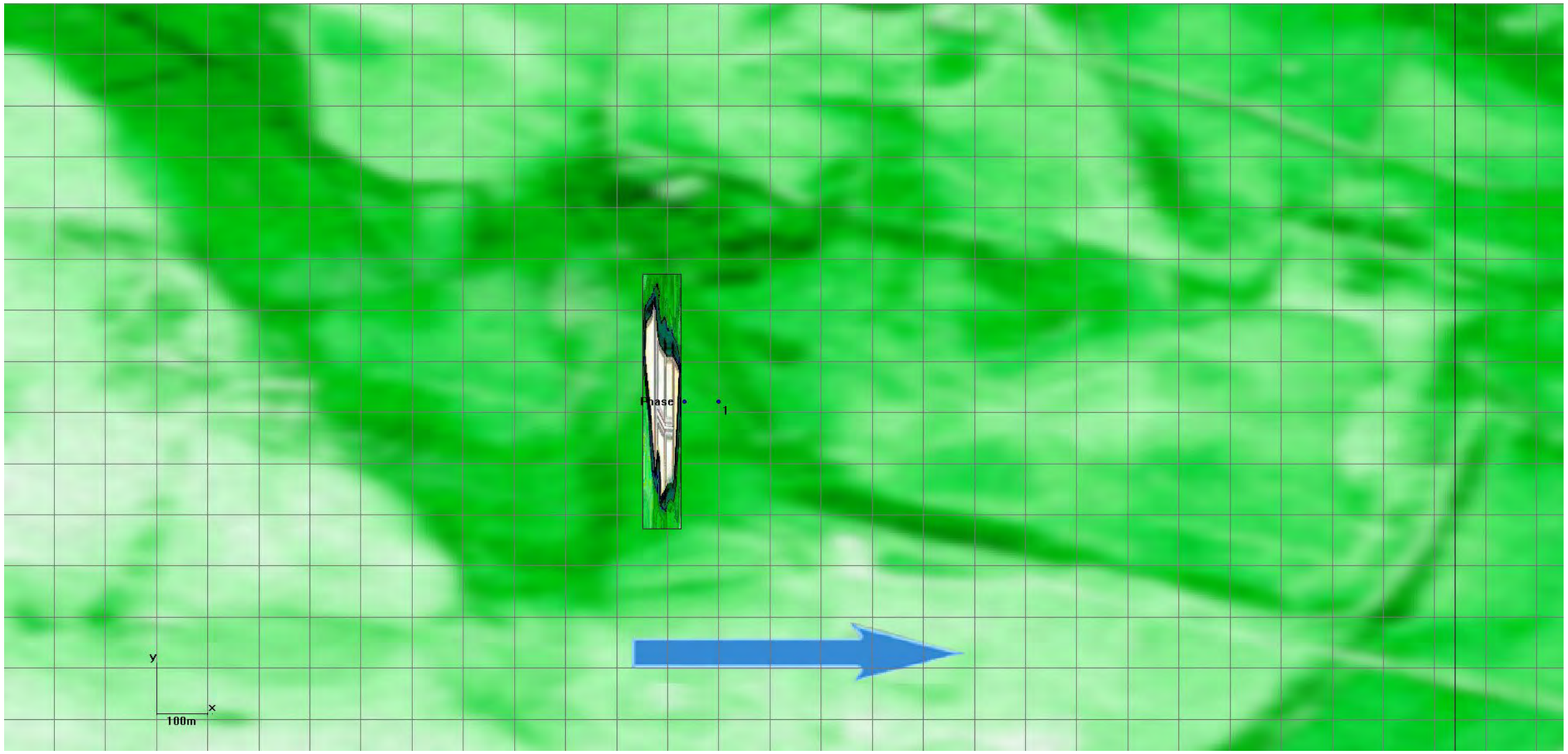
Hydrogeological Risk Assessment

Version 3

Figure 30 Cross Sections

Drawn By: PS	Scale: 1:3,000
Date: 16/06/22	Format: A3L



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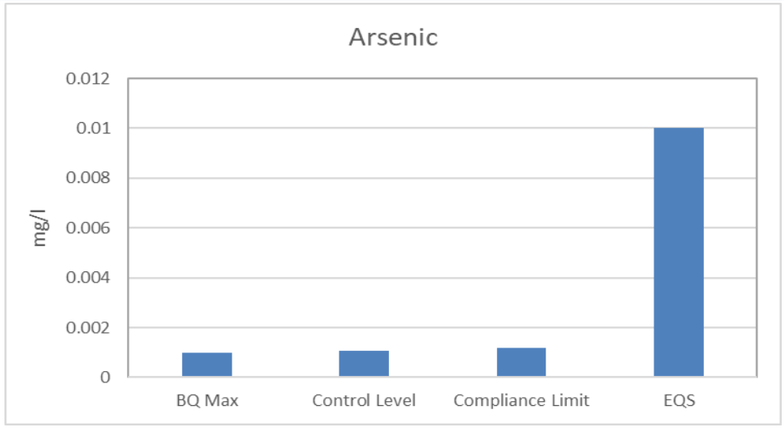
Wrotham Quarry, Addington, Kent

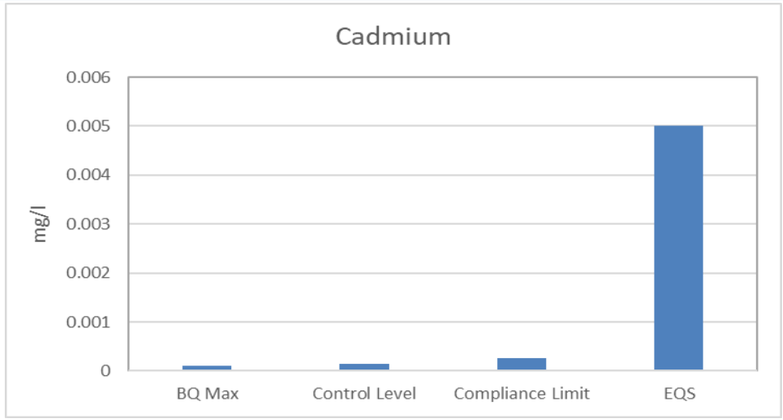
Hydrogeological Risk Assessment

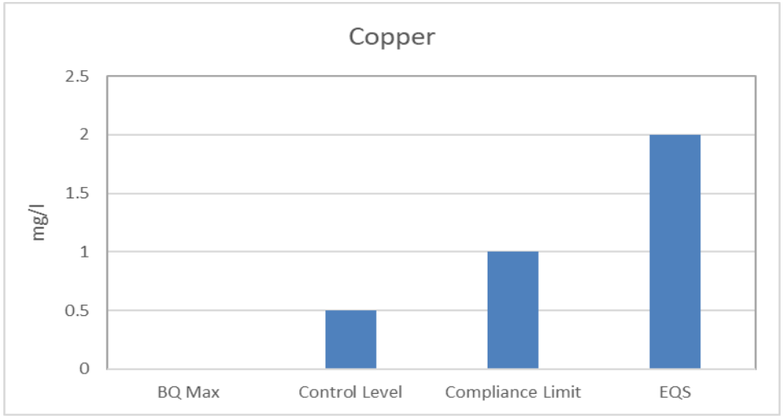
Version 3

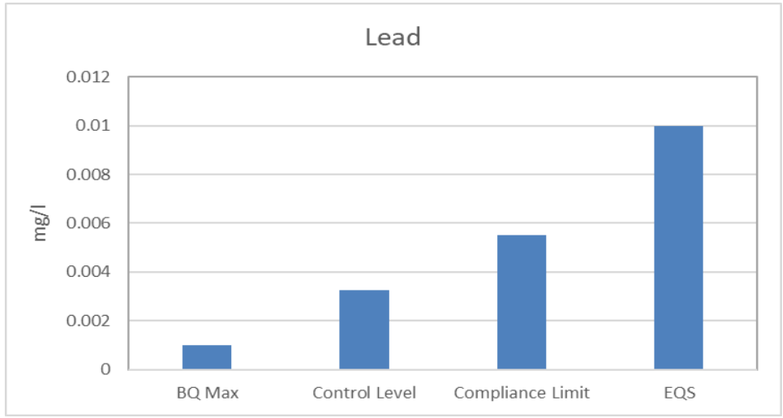
Figure 31 Model Domain

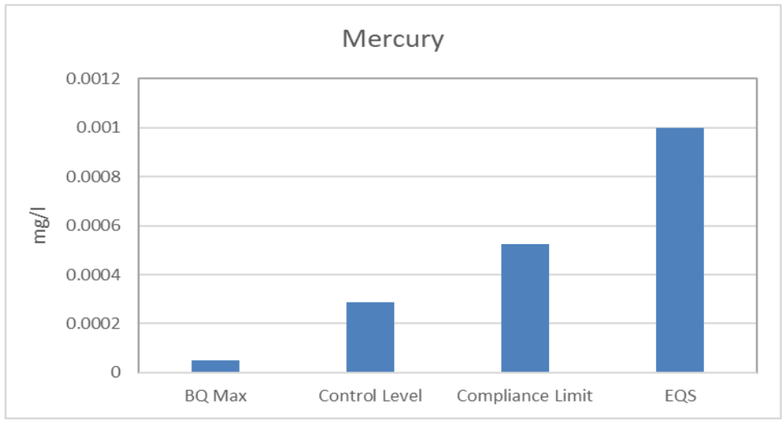
Drawn By: PS	Scale: NTS
Date: 16/06/22	Format: A3L

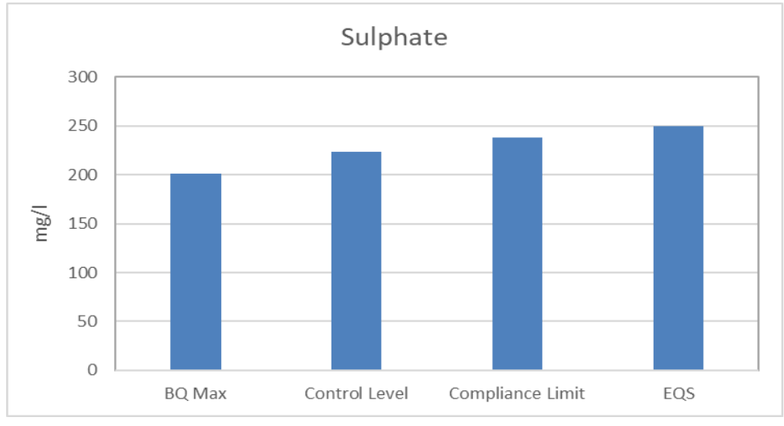












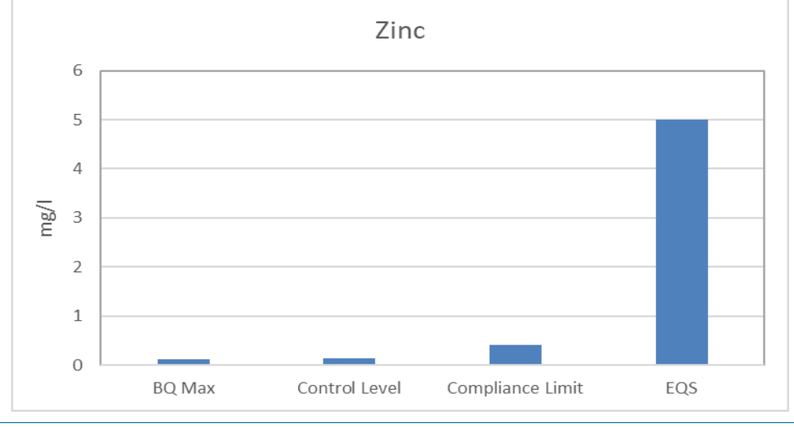


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Figure 32 Control and Compliance

Drawn By: PS	Scale: NTS
Date: 16/06/22	Format: A3L

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Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 1 Data Sources

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373

Regulatory & Industry Standard Guidance, Methodologies & Literature References

Published Data Sources

- “Additional guidance for hydrogeological risk assessments for landfills and the derivation of groundwater control levels and compliance limits”, EA Horizontal Guidance Note H1 – Annex J3, Version 2.1, December 2011.
- "Climate & Drainage", Technical Bulletin No. 34, Ministry of Agriculture Fisheries & Food (MAFF), September 1976.
- "Development and Flood Risk: A Practice Guide Companion to PPS25" (PPS25pg), DCLG, February 2009.
- "Flood Risk and Coastal Change, Planning Practice Guidance" (NPPG), DCLG / Department for the Environment Food and Rural Affairs (DEFRA), 6th March 2014.
- "Greenfield Runoff Estimation for Sites", HR Wallingford (HRW), on-line calculation tool, UK Sustainable Drainage, Guidance & Tools.
- "Groundwater Hydrology”, Todd D.K, 1980.
- "Groundwater Protection Position Statements", EA, March 2018.
- "Hydrogeological Risk Assessments for Landfills and the Derivation of Groundwater Control and Trigger Levels” (LFTGN01), EA, March 2003.
- "National Planning Policy Framework" (NPPF), Department for Communities and Local Government (DCLG), March 2012.
- "Rainfall Runoff Management for Developments”, joint DEFRA / Environment Agency (EA) Flood and Coastal Erosion Risk Management R&D Programme, Report SC030219, Kellagher R, October 2013.
- "Technical Guidance to the National Planning Policy Framework" (tgNPPF), DCLG, March 2012.
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- ‘Effects of Contaminant Concentration on Potential for Natural Attenuation’, R&D Technical Report P2-228/TR:EA:2002.
- “Estimation of Open Water Evaporation, Guidance for Environment Agency Practitioners”, R&D Handbook W6-043/HB, Finch JW and Hall RL, October 2001.
- “Flood Estimation for Small Catchments (IH 124)”, Institute of Hydrology, Report No.124, Marshall DCW & Bayliss AC, June 1994.
- “Flood Estimation Handbook CD-ROM, Version 3.0 (FEH CD-ROM No.3)”, Centre for Ecology and Hydrology (CEH; formerly the Institute of Hydrology), 2009 and successor web-service.
- “Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water” (LFTGN02), EA, February 2003.
- “Kinematic wave nomogram for times of concentration”, American Society of Civil Engineers, Journal of the Hydraulics Division, Ragan RM, & Duru JO, 1972.
- “National Planning Policy Framework” (NPPF: Ministry of Housing, Communities and Local Government, February 2019).

- “Site Investigation Report, Battersea Power Station”, Concept Site Investigations for Battersea Project Land Company, report reference 13/25/25-FR02, dated 13/08/13.
- “Technical Management of Water in the Coal Mining Industry”, National Coal Board (NCB), 1982.
- “Techniques for the Interpretation of Landfill Monitoring Data” (Guidance Notes), EA Final technical report P1-471, 2002.
- “The Calculation of Actual Evaporation and Soil Moisture Deficit over Specified Catchment Areas”, Grindley J, November 1969, Hydrological Memorandum 38, Meteorological Office, Bracknell, UK.
- British Geological Survey (BGS): Published 1:50,000 scale solid and drift geological mapping.
- Dorset Wildlife Trust (DWT), Local Nature Reserve and DWT Reserve details, 2020.
- Environment Agency (EA), 2020, SPZ, Licensed abstraction, Flood Risk Mapping, Landfill Sites, Rainfall and WFD Catchment Mapping.
- Environment Agency, ‘Environmental Permitting Regulations: Inert Waste Guidance, Standards and Measures for the Deposit of Inert Waste Onto Land’.
- Environment Agency, ‘The Environment Agency’s Approach to Groundwater Protection’, Version 1.2, Feb 2018.
- Flood studies report, Volume II: Meteorological Studies”, National Environment Research Council (NERC), 1975.
- Geoindex, well details and borehole logs and On-line Lexicon of Named Rock Units, 2020, BGS.
- Golder Associates, ‘The Landsim Manual’, Environment Agency R&D Publication 120, including 2004 and 2007 addendums.
- Landfill Developments: Groundwater Risk Assessment for Leachate (https://www.gov.uk/guidance/landfill-developments-groundwater-risk-assessment-for-leachate).
- Natural England (NE): Spatial mapping & citation information for Designated Sites of ecological interest (Sites of Special Scientific Interest [SSSIs], RAMSAR Sites, Special Protection Areas (SPAs) & Special Areas of Conservancy [SACs]).
- Ordnance Survey (OS): Topographic maps at scales of 1:50,000 and 1:25,000.
- OS open-source digital data (Meridian 2, Panorama & Terra50 data-sets).
- Todd, D, K, ‘Groundwater Hydrology, 2nd Edition’, John Wiley & Sons, 1980.
- "Les Fontaines Publiques de la Ville de Dijon” (The Public Fountains of the City of Dijon), Darcy H, Dalmont, Paris, 1856.
- “Baseline Report Series: 9: The Lower Greensand of Southern England”, BGS & EA, Technical Report NC/99/74/9, P Shand, J Cobbing, R Tyler-Whittle, A F Tooth & A Lancaster, 2003.

Site Specific Data Sources

- Ferns Group, Site specific hydrometric monitoring data.
- BCL, Planning Application for Buttressing of Quarry Faces Using Indigenous and Imported Inert Materials’, Wrotham Quarry’, 2020, QPL.FERNS.WROTHAM.H&HIA20.02

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

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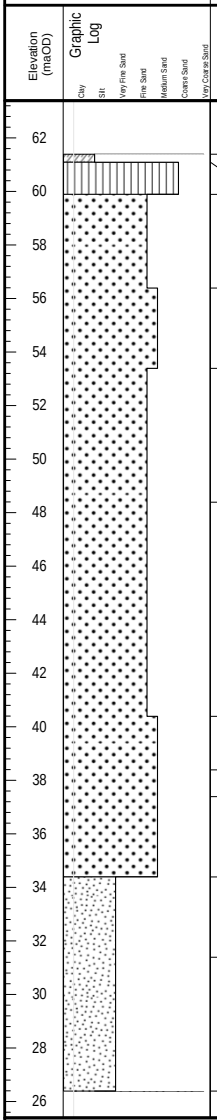
16th June 2022

Appendix 2 Drilling Logs

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373

PROJECT: BCL/CL/FA/EIA/17		BORING ID: BH5	
LOCATION: Wrotham Quarry		WELL ID: PZ5	
DRILLING CONTRACTOR: Hughes Exploration & Environmental Limited		NORTHING: 159553	EASTING: 565147
DRILLING EQUIPMENT: B40		GROUND SURFACE ELEV.: 61.39	TOC ELEVATION: 61.69
DRILLING METHOD: RC		TOTAL DEPTH: 35	DEPTH TO WATER: 25.01
LOGGED BY: **R.Pinto**	SAMPLING METHOD: NA	DATE STARTED: 8/2/2011	DATE COMPLETED: 8/2/2011



Description

TOPSOIL, dark brown loamy clay.

SUBSOIL, stiff sandy clay rich.

SAND, medium brown, medium-fine.

SAND, medium brown, medium.

SAND, medium orange, medium-fine.

SAND, cream, medium-fine.

SAND, cream, medium.

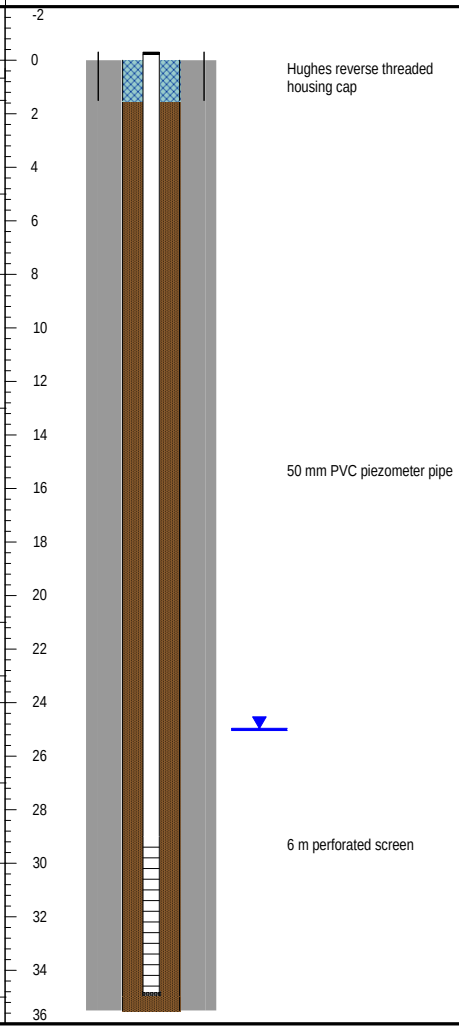
SAND WITH IRONSTONE, dark orange, medium.

SAND, dark-medium orange, medium.

SAND, grey, very fine.

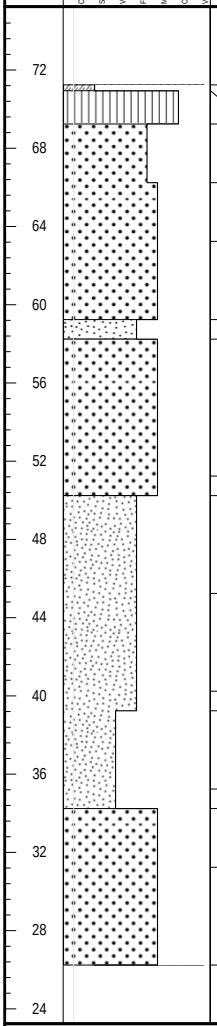
SAND, dark grey, very fine.

Well Construction



NOTES: Drilled depths are entirely contained within the Folkestone Beds as the distinctive lithology of the Sandgate Beds was not encountered.
Water strike at 25m depth. Long term monitoring data (12/08/2011 - 24/05/2017) minimum = 36.00 maOD, maximum = 38.84 maOD and average = 37.40 maOD.

PROJECT: BCL/CL/FA/EIA/17		BORING ID: BH6	
LOCATION: Wrotham Quarry		WELL ID: PZ6	
DRILLING CONTRACTOR: Hughes Exploration & Environmental Limited		NORTHING: 159753	EASTING: 565437
DRILLING EQUIPMENT: B40		GROUND SURFACE ELEV.: 71.24	TOC ELEVATION: 71.54
DRILLING METHOD: RC		TOTAL DEPTH: 45	DEPTH TO WATER: Drilled Dry
LOGGED BY: **R.Pinto**	SAMPLING METHOD: NA	DATE STARTED: 8/2/2011	DATE COMPLETED: 8/2/2011



Description

TOPSOIL, dark brown loamy clay.

SUBSOIL, stiff sandy clay rich.

SAND, medium brown, medium-fine.

SAND, medium brown, medium.

SAND, medium orange, medium.

SAND, orange-cream, fine.

SAND, cream, medium.

SAND, medium orange, medium.

SAND, medium orange, fine.

SAND, cream, fine.

SAND, cream orange, fine.

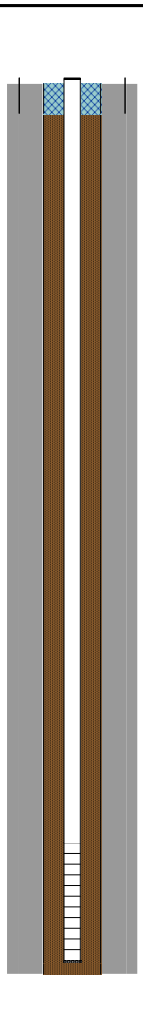
SAND, orange becoming darker with depth, very fine.

SAND, orange brown, very fine.

SAND, orange brown, medium.

SAND, dark brown, medium.

Well Construction



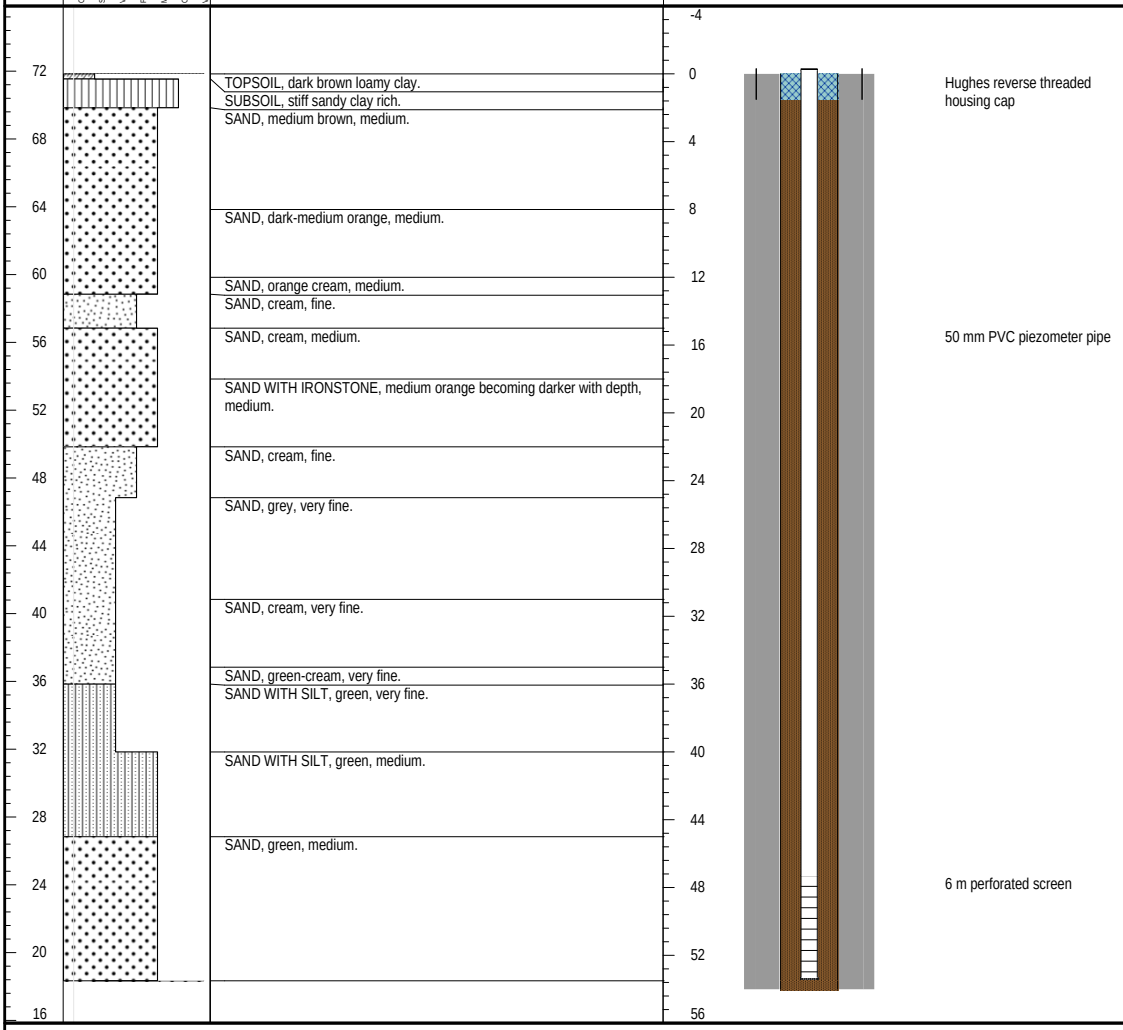
Hughes reverse threaded housing cap

50 mm PVC piezometer pipe

6 m perforated screen

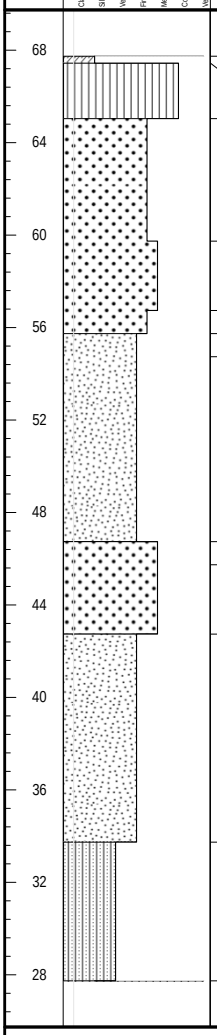
NOTES: Drilled depths are entirely contained within the Folkestone Beds as the distinctive lithology of the Sandgate Beds was not encountered.
Long term monitoring data (12/08/2011 - 24/05/2017) minimum = 26.17 maOD, maximum = 27.94 maOD and average = 27.24 maOD.

	PROJECT: BCL/CL/FA/EIA/17	BORING ID: BH7	
	LOCATION: Wrotham Quarry	WELL ID: PZ7	
	DRILLING CONTRACTOR: Hughes Exploration & Environmental Limited	NORTHING: 159687	EASTING: 565522
FERNS AGGREGATES	DRILLING EQUIPMENT: B40	GROUND SURFACE ELEV.: 71.84	TOC ELEVATION: 72.14
	DRILLING METHOD: RC	TOTAL DEPTH: 53	DEPTH TO WATER: Drilled Dry
LOGGED BY: **R.Pinto**	SAMPLING METHOD: NA	DATE STARTED: 8/2/2011	DATE COMPLETED: 8/2/2011



NOTES: Drilled depths are entirely contained within the Folkestone Beds as the distinctive lithology of the Sandgate Beds was not encountered.
Long term monitoring data (12/08/2011 - 24/05/2017) minimum = 24.16 maOD, maximum = 28.41 maOD and average = 27.08 maOD.

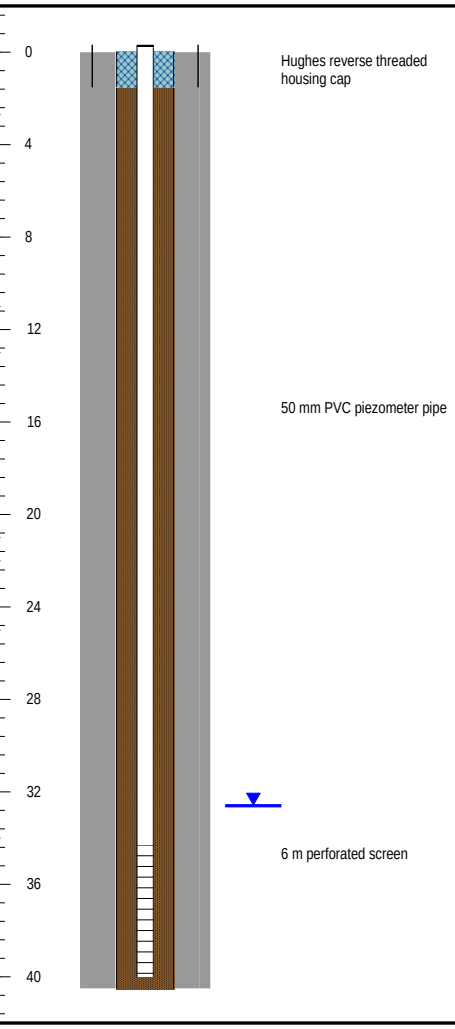
	PROJECT: BCL/CL/FA/EIA/17	BORING ID: BH8	
	LOCATION: Wrotham Quarry	WELL ID: PZ8	
	DRILLING CONTRACTOR: Hughes Exploration & Environmental Limited	NORTHING: 159574	EASTING: 565479
	DRILLING EQUIPMENT: B40	GROUND SURFACE ELEV.: 67.74	TOC ELEVATION: 68.04
	DRILLING METHOD: RC	TOTAL DEPTH: 40	DEPTH TO WATER: Drilled Dry
LOGGED BY: **R.Pinto**	SAMPLING METHOD: NA	DATE STARTED: 8/2/2011	DATE COMPLETED: 8/2/2011



Description

- TOPSOIL, dark brown loamy clay.
- SUBSOIL, stiff sandy clay rich.
- SAND, medium brown, medium-fine
- SAND, dark orange, medium.
- SAND, dark orange, medium-fine.
- SAND, medium orange, fine.
- SAND, cream, fine.
- SAND, cream-orange, medium.
- SAND WITH IRONSTONE, dark-orange becoming lighter with depth, medium.
- SAND, grey, fine.
- SAND WITH SILT, dark grey, very fine.

Well Construction



NOTES: Drilled depths are entirely contained within the Folkestone Beds as the distinctive lithology of the Sandgate Beds was not encountered.
Water strike at 32.60 m depth. Long term monitoring data (12/08/2011 - 24/05/2017) minimum = 35.18 maOD, maximum = 37.92 maOD and average = 36.61 maOD.

Contract Name: WROTHAM QUARRY

Contract No:

Date: 15-3-21

Sheet 1 of 1 Working Day 1

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: BCL

Order No:

Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
					MOVED TO SITE	
					10.00 - 12.15 WAITING FOR ACCESS TO BH-2	
BH-2	0.00	4.50	4.50		STIFF GREY CLAY (FILL)	
					1.00 - 5.00 WAITING FOR WATER TO BE SUPPLIED BY QUARRY	

INSTALLATION DETAILS

Borehole

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks

QUANTITIES

Site Moves ..... (No)	Casing ..... m	Core Boxes ..... (No)	Fixed Plant	DUMPER + BOWSER	
Bore Moves ..... (No)	Open Hole ..... m	Core Liner ..... m			
Return Moves ..... (No)	W. Samples ..... m	SPT/CPT ..... (No)	Standing Times	2 DRUMS POLYMER	(hrs)
Security YES / NO	Coring ..... m	Installation ..... m	Breakdown		(hrs)

Signed by Apex .....

Signed by Client ..... Date .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 16-3-21

Sheet 1 of 1 Working Day 2

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: BCL

Order No:

Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLC

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH-2	4.50	6.30	1.80		STIFF GREY CLAY	
	6.30	9.20	2.90		GAULT CLAY	
	9.20	21.00	11.80		SAND	
					10.10 TO 10.45 FILLING	WATER BOWSER
	21.00	27.00	6.00		SAND	
					11.45 - 12.25 FILLING	WATER BOWSER
	27.00	36.00	9.00		SAND	
					1.30 - 2.10 FILLING	WATER BOWSER
	36.00	42.00	6.00		SAND	
					3.00 - 4.00 WAITING FOR TANKER TO BE FILLED	
	42.00	45.00	3.00		SAND	
					FLUSH BH - 45MIN	

INSTALLATION DETAILS

Borehole

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves	(No)	Casing	m	Core Boxes	(No)	Fixed Plant	
Bore Moves	(No)	Open Hole	m	Core Liner	m		
Return Moves	(No)	W. Samples	m	SPT/CPT	(No)	Standing Times	(hrs)
Security YES / NO		Coring	m	Installation	m	Breakdown	(hrs)

Signed by Apex: T. Davies

Signed by Client: ..... Date .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 17-3-21

Sheet 1 of 1 Working Day 3

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: BCL

Order No:

Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH-2					NO WATER IN BH INSTRUCTED TO DRILL DEEPER	
					8.00 - 10.30 WAITING FOR WATER	
	45.00	47.10	2.10		SAND	LOST FLUSH 47.10
	47.10	50.00	2.90		SOFT DRILL	
					INSTALLED 50m PIPE TO 42.00m	
					0.00 - 30.00 PLAIN PIPE	
					30.00 - 42.00 SLOTTED PIPE	
					WITH GRAVEL FILTER + BENTONITE SEAL	
					PRESSURE WASH RIG + EQUIPMENT	
					CEMENT IN RAISED COVER	
					12.30 - 3.00 MOVE RIG + EQUIPMENT TO BH-1 + FILL WATER TANKS	
BH-1	0.00	0.90	0.90		FILL	
	0.90	18.00	17.20		STIFF GREY CLAY	ODEX 4.20m

INSTALLATION DETAILS

Borehole

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves ..... (No)
Bore Moves ..... (No)
Return Moves ..... (No)
Security YES / NO

Casing ..... m
Open Hole ..... m
W. Samples ..... m
Coring ..... m

Core Boxes ..... (No)
Core Liner ..... m
SPT/CPT ..... (No)
Installation ..... m

Fixed Plant .....
Standing Times ..... (hrs)
Breakdown ..... (hrs)

Signed by Apex .....

Signed by Client ..... Date .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 18-3-21

Sheet 1 of 1 Working Day 4

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: BCL

Order No:

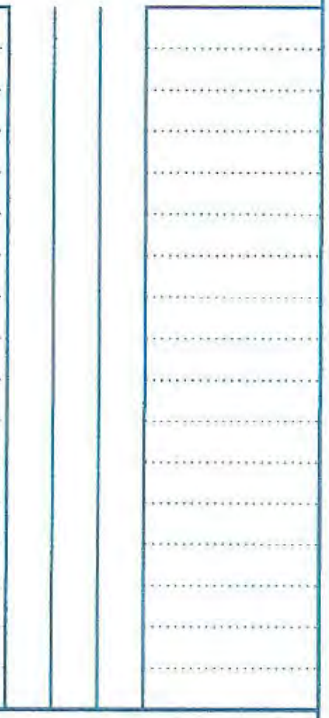
Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH-1	18.00	21.70	3.70		STIFF GREY CLAY	
	21.70	22.50	0.80		SAND	
	CPT-1 22.50				1 25 70~ | 2 — | 3 50 35~ | 4 | 5 | 6 |	TOTAL 50
	22.50	28.50	6.00		SAND	
	CPT-2 28.50				1 25 25~ | 2 — | 3 50 15~ | 4 | 5 | 6 |	TOTAL 50
	28.50	40.00	11.50		SAND	FLUSH BH - 30 MINS
					INSTALLED 50~ PIPE TO 40.00~	
					0.00 - 31.00 PLAIN PIPE 31.00 - 40.00 SLOTTED PIPE WITH GRAVEL FILTER + BENTONITE SEAL	
					CEMENT IN RAISED COVER PRESSURE WASH RIG + EQUIPMENT	

INSTALLATION DETAILS

Borehole



Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves	(No)	Casing	m	Core Boxes	(No)	Fixed Plant	
Bore Moves	(No)	Open Hole	m	Core Liner	m		
Return Moves	(No)	W. Samples	m	SPT/CPT	(No)	Standing Times	(hrs)
Security YES / NO		Coring	m	Installation	m	Breakdown	(hrs)

Certificate No: 08750A

Signed by Apex T. Davies

Signed by Client ..... Date .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 19-3-21

Sheet 1 of 1 Working Day 5

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149

E-mail: admin@apex-drilling.com

Client: BCL

Order No:

Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
					8.00 - 10.45 MOVE RIG + EQUIPMENT TO BH-4 + FILL WATER TANKS	
BH-4	0.00	1.40	1.40		BACKFILL	
	1.40	1.90	0.50		STIFF GREY CLAY	ODEX 4.20
	1.90	22.50	20.60		SAND	
					INSTALLED 50 PIPE TO 22.00	
					0.00 - 13.00 PLAIN PIPE	
					13.00 - 22.00 SLOTTED PIPE	
					WITH GRAVEL FILTER + BENTONITE SEAL	
					PRESSURE WASH RIG + EQUIPMENT	

INSTALLATION DETAILS

Borehole

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves	(No)	Casing	m	Core Boxes	(No)	Fixed Plant	
Bore Moves	(No)	Open Hole	m	Core Liner	m		
Return Moves	(No)	W. Samples	m	SPT/CPT	(No)	Standing Times	(hrs)
Security YES / NO		Coring	m	Installation	m	Breakdown	(hrs)

Certificate No: 08750A

Signed by Apex .....

Signed by Client ..... Date .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 22-3-21

Sheet: 1 of 1 Working Day: 6

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: BCL

Order No:

Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
					CEMENT IN RAISED COVER	
					10.00 - 12.45 MOVE RIG + EQUIPMENT TO BH-3 + FILL WATER TANKS	
BH-3	0.00	1.30	1.30		BACKFILL	
	1.30	7.80	6.50		STIFF GREY CLAY	ODEX 4.20-
	7.80	9.00	1.20		SAND	
	CPT-1 9.00-				1 | 2 | 3 | 4 | 5 | 6 23 | 2 2 | 3 50 5- 55-	TOTAL 50
	9.00	14.00	5.00		SAND	
	CPT-2 14.00				1 | 2 | 3 | 4 | 5 | 6 25 | — | 3 50 30- 20-	TOTAL 50
	14.00	26.00	12.00		SAND	

INSTALLATION DETAILS

Borehole

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves	(No)	Casing	m	Core Boxes	(No)	Fixed Plant	
Bore Moves	(No)	Open Hole	m	Core Liner	m		
Return Moves	(No)	W. Samples	m	SPT/CPT	(No)	Standing Times	(hrs)
Security YES / NO		Coring	m	Installation	m	Breakdown	(hrs)

BRITISH DRILLING ASSOCIATION

Certificate No: 08750A

Signed by Apex: T. Davies

Signed by Client: ..... Date: .....

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Contract Name: WROTHAM QUARRY

Contract No:

Date: 23-3-21

Sheet 1 of 1 Working Day 7

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149

E-mail: admin@apex-drilling.com

Client: BCL

Order No:

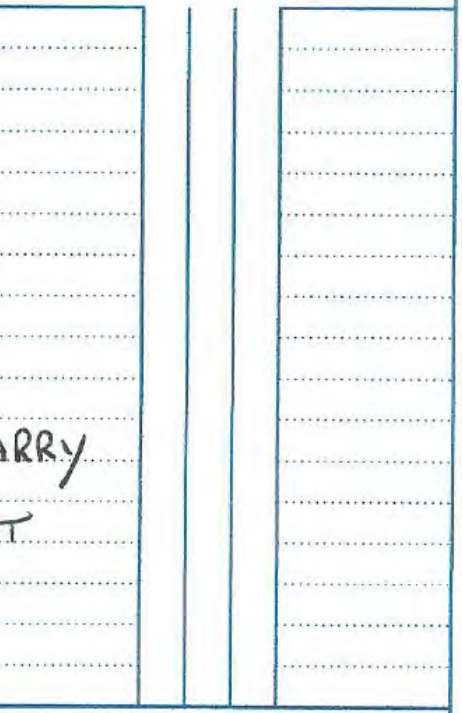
Drill Crew: T. DAVIES M. COWANS

Rig Type: FRASTE PLG

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH3	26.00	40.00	14.00		SAND	
					INSTALLED SO. PIPE TO 40.00.	
					0.00 - 31.00 PLAIN PIPE	
					31.00 - 40.00 SLOTTED PIPE	
					WITH GRAVEL FILTER + BENTONITE SEAL	
					CEMENT IN RAISED COVER	
					45MIN TRACK R.G BACK TO QUARRY	
					PRESSURE WASH R.G + EQUIPMENT	

INSTALLATION DETAILS

Borehole



Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves ..... (No)	Casing ..... m	Core Boxes ..... (No)	Fixed Plant .....
Bore Moves ..... (No)	Open Hole ..... m	Core Liner ..... m	.....
Return Moves ..... (No)	W. Samples ..... m	SPT/CPT ..... (No)	Standing Times ..... (hrs)
Security YES / NO	Coring ..... m	Installation ..... m	Breakdown ..... (hrs)

BRITISH DRILLING ASSOCIATION

Certificate No: 88750A

Signed by Apex: T. Davies

Signed by Client ..... Date .....

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Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 3 Groundwater Quality

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373

			Reference:	236		45		223	1	185	186	187
			Sample round:	Old Suite	Hazardous Substances	Hazardous Substances	Hazardous Substances	Old Suite	Quarterly & Annual	Old Suite	Old Suite	Old Suite
			Group:		PCBs	Phenols	VOCs			ICPMs	ICPMs	ICPs
			Method code:	PAHMSW				WSLM3		ICPMSWT	ICPMSWT	ICPWATVAR
			Units:	mg/l	mg/l	mg/l	mg/l	pH Units	mg/l	mg/l	mg/l	mg/l
Lab report ID	**Lab sample ID**	**Field sample ID**	**Date sampled**	**PAHs**	**PCBs**	**Phenols**	**TPH**	**pH**	**mmoniacal Nitrogen**	**Antimony**	**Arsenic**	**Barium**
21042147	21042147-001	PZ2/21	27/04/2021		<0.00001	<0.02	<0.005	6.90	0.03	<0.001	<0.001	0.11
21042147	21042147-002	PZ3/21	27/04/2021		<0.00001	<0.02	<0.005	7.20	0.05	<0.001	<0.001	0.03
21051680	21051680-001	PZ2/21	19/05/2021		<0.00001	<0.02	<0.005	6.90	0.10	<0.001	<0.001	0.10
21051680	21051680-002	PZ3/21	19/05/2021		<0.00001	<0.02	0.007	7.50	0.19	<0.001	<0.001	0.03
21062054	21062054-001	PZ2/21	23/06/2021		<0.00001	<0.02	<0.005	6.60	0.02	<0.001	<0.001	0.05
21062054	21062054-002	PZ3/21	23/06/2021		<0.00001	<0.02	<0.005	7.20	0.15	<0.001	<0.001	0.03
21080067	21080067-001	PZ2/21	27/07/2021		<0.00001	<0.02	<0.005	7.60	<0.01	<0.001	<0.001	0.05
21080067	21080067-002	PZ3/21	27/07/2021		<0.00001	<0.02	<0.005	7.40	<0.01	<0.001	<0.001	0.03
21082058	21082058-001	PZ3/21	24/08/2021		<0.00001	<0.02	<0.005	7.30	6.90	<0.001	<0.001	0.03
21082058	21082058-002	PZ2/21	24/08/2021		<0.00001	<0.02	<0.005	6.80	0.01	<0.001	<0.001	0.06
21100169	21100169-001	PZ3/21	24/09/2021	<0.00016	<0.00001	<0.02	<0.005	7.10	0.04	<0.001	<0.001	0.03
21100169	21100169-002	PZ2/21	24/09/2021	<0.00016	<0.00001	<0.02	<0.005	6.80	2.30	<0.001	<0.001	0.11
21101967	21101967-001	PZ2/21	20/10/2021	<0.00016	<0.00001	<0.02	<0.005	6.40	<0.01	<0.001	<0.001	0.06
21101967	21101967-002	PZ3/21	20/10/2021	<0.00016	<0.00001	<0.02	<0.005	7.30	<0.01	<0.001	<0.001	0.06
21111773	21111773-001	PZ2/21	17/11/2021	<0.00016	<0.00001	<0.02	<0.005	6.40	<0.01	<0.001	<0.001	0.06
21111773	21111773-002	PZ3/21	17/11/2021	<0.00016	<0.00001	<0.02	<0.005	7.30	<0.01	<0.001	<0.001	0.03
21121601	21121601-001	PZ2/21	15/12/2021	<0.00016	<0.00001		<0.005	6.50	<0.01	<0.001	<0.001	0.06
21121601	21121601-002	PZ3/21	15/12/2021	<0.00016	<0.00001	<0.02	<0.005	7.30	<0.01	<0.001	<0.001	0.03
22020193	22020193-001	PZ2-21	25/01/2022	<0.00016	<0.00001	<0.04	<0.005	6.40	<0.01	<0.001	<0.001	0.06
22020193	22020193-002	PZ3-21	25/01/2022	0.00016	<0.00001	<0.02	<0.005	7.30	<0.01	<0.001	<0.001	0.03
22022121	22022121-001	PZ2/21	21/02/2022	0.00017	<0.00001	<0.02	<0.005	6.00	0.01	<0.001	<0.001	0.07
22022121	22022121-002	PZ3/21	21/02/2022	0.00017	0.00002	<0.02	<0.005	6.70	0.01	<0.001	<0.001	0.03
22040086	22040086-001	PZ2/21	28/03/2022	0.00017	<0.00001	<0.02	<0.005	6.00	0.02	<0.001	<0.001	0.06
22040086	22040086-002	PZ3/21	28/03/2022	<0.00016	<0.00001	<0.02	<0.005	6.90	0.03	<0.001	<0.001	0.03
22050304	22050304-002	PZ2/21	27/04/2022	<0.00016	<0.00001	<0.350	<0.005	6.30	0.05	<0.001	<0.001	0.03
22050304	22050304-003	PZ3/21	27/04/2022	<0.00016	<0.00001	<0.350	<0.005	7.20	0.04	<0.001	<0.001	0.03

			Reference:	2	5	12	3	204	205	14	4	213
			Sample round:	Quarterly & Annual	Quarterly & Annual	Annual	Quarterly & Annual	Old Suite	Old Suite	Annual	Quarterly & Annual	Old Suite
			Group:									
			Method code:					WSLM13	ISEF			ICPMSWT
			Units:	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Lab report ID	**Lab sample ID**	**Field sample ID**	**Date sampled**	**Cadmium**	**Chloride**	**Chromium**	**Copper**	**issolved Organic Carbon**	**Fluoride**	**Lead**	**Mercury**	**Molybdenum**
21042147	21042147-001	PZ2/21	27/04/2021	0.0001	127.00	<0.001	0.001	2.00	0.10	<0.001	0.00005	<0.001
21042147	21042147-002	PZ3/21	27/04/2021	<0.00002	67.00	<0.001	0.001	2.90	0.10	<0.001	<0.00003	<0.001
21051680	21051680-001	PZ2/21	19/05/2021	0.00005	139.00	<0.001	<0.001	1.00	0.10	<0.001	<0.00003	<0.001
21051680	21051680-002	PZ3/21	19/05/2021	<0.00002	65.00	<0.001	0.001	2.20	0.10	<0.001	<0.00003	<0.001
21062054	21062054-001	PZ2/21	23/06/2021	0.0001	123.00	<0.001	<0.001	1.20	0.20	<0.001	<0.00003	<0.001
21062054	21062054-002	PZ3/21	23/06/2021	0.0001	76.00	<0.001	<0.001	2.80	0.20	<0.001	<0.00003	<0.001
21080067	21080067-001	PZ2/21	27/07/2021	0.00004	119.00	<0.001	<0.001	1.20	0.20	<0.001	<0.00003	<0.001
21080067	21080067-002	PZ3/21	27/07/2021	0.00002	71.00	<0.001	<0.001	2.70	0.20	<0.001	<0.00003	<0.001
21082058	21082058-001	PZ3/21	24/08/2021	<0.00002	436.00	<0.001	<0.001	2.40	0.10	<0.001	<0.00003	<0.001
21082058	21082058-002	PZ2/21	24/08/2021	0.00004	123.00	<0.001	<0.001	1.30	<0.1	<0.001	<0.00003	<0.001
21100169	21100169-001	PZ3/21	24/09/2021	<0.00002	65.00	<0.001	<0.001	2.70	1.10	<0.001	<0.00003	<0.001
21100169	21100169-002	PZ2/21	24/09/2021	0.00005	160.00	<0.001	<0.001	1.40	<0.1	<0.001	<0.00003	<0.001
21101967	21101967-001	PZ2/21	20/10/2021	0.00006	149.00	<0.001	<0.001	0.84	<0.1	<0.001	<0.00003	<0.001
21101967	21101967-002	PZ3/21	20/10/2021	0.00007	59.00	<0.001	<0.001	2.10	0.10	<0.001	<0.00003	<0.001
21111773	21111773-001	PZ2/21	17/11/2021	<0.00002	154.00	<0.001	<0.001	2.30	<0.1	<0.001	<0.00003	<0.001
21111773	21111773-002	PZ3/21	17/11/2021	<0.00002	58.00	<0.001	<0.001	2.70	<0.1	<0.001	<0.00003	<0.001
21121601	21121601-001	PZ2/21	15/12/2021	<0.00002	172.00		<0.001	0.79	<0.1	<0.001	<0.00003	<0.001
21121601	21121601-002	PZ3/21	15/12/2021	<0.00002	54.00		<0.001	2.70	<0.1	<0.001	<0.00003	<0.001
22020193	22020193-001	PZ2-21	25/01/2022	0.0000	164.00		<0.001	0.98	<0.1	<0.001	<0.00003	<0.001
22020193	22020193-002	PZ3-21	25/01/2022	0.0000	48.00		<0.001	3.10	0.10	0.001	<0.00003	<0.001
22022121	22022121-001	PZ2/21	21/02/2022	<0.00002	185.00		<0.001	1.30	<0.1	<0.001	<0.00003	<0.001
22022121	22022121-002	PZ3/21	21/02/2022	<0.00002	48.00		<0.001	3.00	0.10	<0.001	<0.00003	<0.001
22040086	22040086-001	PZ2/21	28/03/2022	0.0001	178.00		0.003	1.20	<0.1	<0.001	<0.00003	<0.001
22040086	22040086-002	PZ3/21	28/03/2022	0.0000	43.00		0.002	2.70	0.10	<0.001	<0.00003	<0.001
22050304	22050304-002	PZ2/21	27/04/2022	0.0001	50.00	<0.001	<0.001	0.92	<0.1	<0.001	<0.00003	<0.001
22050304	22050304-003	PZ3/21	27/04/2022	0.0001	49.00	<0.001	<0.001	2.70	0.10	<0.001	<0.00003	<0.001

			Reference:	15	229	237	238	16
			Sample round:	Annual	Old Suite	Old Suite	Old Suite	Annual
			Group:					
			Method code:		ICPMSWT	ICPWATVAR	WSLM13	
			Units:	mg/l	mg/l	mg/l	mg/l	mg/l
Lab report ID	Lab sample ID	Field sample ID	Date sampled	Nickel	Selenium	Sulphate	otal Organic Carbon	Zinc
21042147	21042147-001	PZ2/21	27/04/2021	0.022	<0.001	136.00	1.10	0.116
21042147	21042147-002	PZ3/21	27/04/2021	0.003	<0.001	189.00	2.50	0.008
21051680	21051680-001	PZ2/21	19/05/2021	0.011	<0.001	113.00	1.10	0.013
21051680	21051680-002	PZ3/21	19/05/2021	0.002	<0.001	168.00	2.30	0.008
21062054	21062054-001	PZ2/21	23/06/2021	0.007	<0.001	129.00	1.10	0.004
21062054	21062054-002	PZ3/21	23/06/2021	0.002	<0.001	189.00	2.60	0.008
21080067	21080067-001	PZ2/21	27/07/2021	0.009	<0.001	131.00	1.20	0.007
21080067	21080067-002	PZ3/21	27/07/2021	0.002	<0.001	184.00	2.50	0.003
21082058	21082058-001	PZ3/21	24/08/2021	0.006	<0.001	201.00	2.40	0.003
21082058	21082058-002	PZ2/21	24/08/2021	0.029	<0.001	137.00	0.97	0.007
21100169	21100169-001	PZ3/21	24/09/2021	0.002	<0.001	174.00	2.60	0.006
21100169	21100169-002	PZ2/21	24/09/2021	0.074	<0.001	127.00	1.30	0.036
21101967	21101967-001	PZ2/21	20/10/2021	0.097	<0.001	125.00	0.95	0.074
21101967	21101967-002	PZ3/21	20/10/2021	0.099	<0.001	132.00	2.10	0.099
21111773	21111773-001	PZ2/21	17/11/2021	0.090	<0.001	131.00	0.91	0.041
21111773	21111773-002	PZ3/21	17/11/2021	0.002	<0.001	161.00	2.10	0.009
21121601	21121601-001	PZ2/21	15/12/2021	0.066	<0.001	141.00	2.70	0.085
21121601	21121601-002	PZ3/21	15/12/2021	0.002	<0.001	171.00	0.80	0.043
22020193	22020193-001	PZ2-21	25/01/2022	0.087	<0.001	131.00	1.10	0.066
22020193	22020193-002	PZ3-21	25/01/2022	0.003	<0.001	140.00	3.10	0.074
22022121	22022121-001	PZ2/21	21/02/2022	0.109	<0.001	139.00	1.10	0.068
22022121	22022121-002	PZ3/21	21/02/2022	0.001	<0.001	153.00	3.00	0.008
22040086	22040086-001	PZ2/21	28/03/2022	0.091	<0.001	135.00	1.20	0.099
22040086	22040086-002	PZ3/21	28/03/2022	0.002	<0.001	116.00	2.70	0.027
22050304	22050304-002	PZ2/21	27/04/2022	0.001	<0.001	163.00	0.96	0.010
22050304	22050304-003	PZ3/21	27/04/2022	0.001	<0.001	166.00	2.90	0.029

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 4 Laboratory Certificates

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373

SOCOTEC

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 21042147

Client: BCL Consultant Hydrogeologists Limited

Quote Number: BEC210417464

Project Reference: Wrotham

Site Name: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands

Post Code: WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone No: 01902 824111

Number of Samples Received: 2

Date Received: 30/04/2021

Analysis Date: 11/05/2021

Date Issued: 12/05/2021

Job Status: Complete

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21042147

Date Issued: 12/05/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
Pz2 / 21	21042147-001	27/04/2021 00:00:00	WATER	Unclassified Liquid
Pz3 / 21	21042147-002	27/04/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21042147

Date Issued: 12/05/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred	Project ID: 21042147	
					Sample ID: 001	Sample ID: 002
					Customer ID: Pz2 / 21	Customer ID: Pz3 / 21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 27/04/2021	Sampling Date: 27/04/2021
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N	0.03	0.05
pH	WSLM2 & 3	1	pH units	N	6.9	7.2
TDS as mg/L	WSLM27	5	mg/l	N	675	533
Chloride as Cl	KONENS	1	mg/l	N	127	67
Fluoride as F	ISEF	0.1	mg/l	N	0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N	2.0	2.9
Total Organic Carbon	WSLM13	0.2	mg/l	N	1.1	2.5
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N	0.00010	<0.00002
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N	0.001	0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N	0.00005	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N	0.022	0.003
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N	0.116	0.008
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N	0.11	0.03
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N	136	189
Benzene	BTEXHSA	5	µg/l	N	<5	<5
Ethylbenzene	BTEXHSA	5	µg/l	N	<5	<5
m/p-Xylene	BTEXHSA	10	µg/l	N	<10	<10
o-Xylene	BTEXHSA	5	µg/l	N	<5	<5

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21042147

Date Issued: 12/05/2021

Analysis Results

					Project ID	21042147	
					Sample ID	001	002
					Customer ID	Pz2 / 21	Pz3 / 21
					Sample Type	WATER	WATER
					Sampling Date	27/04/2021	27/04/2021
Analysis	Method Code	MDL	Units	Accred			
Toluene	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		0.78	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		0.12	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		0.09	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		0.09	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		0.05	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		0.40	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		0.46	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.04	<0.01
Naphthalene	PAHMSW	0.01	µg/l	N		0.29	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		0.49	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		0.29	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<3.30	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01

Analysis Results

				Project ID	21042147	
				Sample ID	001	002
				Customer ID	Pz2 / 21	Pz3 / 21
				Sample Type	WATER	WATER
				Sampling Date	27/04/2021	27/04/2021
Analysis	Method Code	MDL	Units	Accred		
PCB 52	PCBECD	0.01	µg/l	N	<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N	<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N	<0.350	<0.350

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
PAHMSW	001-002	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (Indeno[1,2,3-cd]pyrene) . These circumstances should be taken into consideration when utilising the data.

LIMS-F002 - Report Notes

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21042147

Date Issued: 12/05/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Filtered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Filtered
WSLM2 & 3	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21042147

Date Issued: 12/05/2021

Additional Information

This report refers to samples as received, and SOCOTEC Uk Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105° c

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

SOCOTEC

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 21051680

Client: BCL Consultant Hydrogeologists Limited

Quote Number: BEC210417464

Project Reference: Wrotham Additional Testing

Site Name: Wrotham Additional Testing

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands

Post Code: WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone No: 01902 824111

Number of Samples Received: 2

Date Received: 25/05/2021

Analysis Date: 07/06/2021

Date Issued: 07/06/2021

Job Status: Complete

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham Additional Testing

Project No: 21051680

Date Issued: 07/06/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
P2/21	21051680-001	19/05/2021 00:00:00	WATER	Unclassified Liquid
P3/21	21051680-002	19/05/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham Additional Testing

Project No: 21051680

Date Issued: 07/06/2021

Analysis Results

					Project ID	21051680	
					Sample ID	001	002
					Customer ID	P2/21	P3/21
					Sample Type	WATER	WATER
					Sampling Date	19/05/2021	19/05/2021
Analysis	**Method Code**	**MDL**	**Units**	**Accred**			
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		0.10	0.19
pH	PHCONDW	1	pH units	N		6.9	7.5
TDS as mg/L	WSLM27	5	mg/l	N		723	549
Chloride as Cl	KONENS	1	mg/l	N		139	65
Fluoride as F	ISEF	0.1	mg/l	N		0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		1.0	2.2
Total Organic Carbon	WSLM13	0.2	mg/l	N		1.1	2.3
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00005	<0.00002
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.011	0.002
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.013	0.008
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.10	0.03
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		113	168
Benzene	BTEXHSA	5	µg/l	N		<5	7
Ethylbenzene	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene	BTEXHSA	5	µg/l	N		<5	<5

Analysis Results

Analysis	Method Code	MDL	Units	Accred	Project ID: 21051680	
					Sample ID: 001	Sample ID: 002
					Customer ID: P2/21	Customer ID: P3/21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 19/05/2021	Sampling Date: 19/05/2021
Toluene	BTEXHSA	5	µg/l	N	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Naphthalene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N	<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N	<0.01	<0.01

Analysis Results

				Project ID	21051680	
				Sample ID	001	002
				Customer ID	P2/21	P3/21
				Sample Type	WATER	WATER
				Sampling Date	19/05/2021	19/05/2021
Analysis	Method Code	MDL	Units	Accred		
PCB 52	PCBECD	0.01	µg/l	N	<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N	<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N	<0.350	<0.350

Report Number : 21051680

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
PAHMSW	001-002	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (Indeno[1,2,3-cd]pyrene) . These circumstances should be taken into consideration when utilising the data.

SOCOTEC

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 21062054

Client: BCL Consultant Hydrogeologists Limited

Quote Number: BEC210417464

Project Reference: Wrotham

Site Name: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands

Post Code: WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone No: 01902 824111

Number of Samples Received: 2

Date Received: 26/06/2021

Analysis Date: 07/07/2021

Date Issued: 07/07/2021

Job Status: Complete

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21062054

Date Issued: 07/07/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
P2	21062054-001	23/06/2021 00:00:00	WATER	Unclassified Liquid
P3	21062054-002	23/06/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21062054

Date Issued: 07/07/2021

Analysis Results

				Project ID	21062054	
				Sample ID	001	002
				Customer ID	P2	P3
				Sample Type	WATER	WATER
				Sampling Date	23/06/2021	23/06/2021
Analysis	Method Code	MDL	Units	Accred		
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N	0.02	0.15
pH	PHCONDW	1	pH units	N	6.6	7.2
TDS as mg/L	WSLM27	5	mg/l	N	4320	591
Chloride as Cl	KONENS	1	mg/l	N	123	76
Fluoride as F	ISEF	0.1	mg/l	N	0.2	0.2
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N	1.2	2.8
Total Organic Carbon	WSLM13	0.2	mg/l	N	1.1	2.6
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N	0.00010	0.00010
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N	<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N	0.007	0.002
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N	<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N	0.004	0.008
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N	0.05	0.03
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N	129	189
Benzene	BTEXHSA	5	µg/l	N	<5	<5
Ethylbenzene	BTEXHSA	5	µg/l	N	<5	<5
m/p-Xylene	BTEXHSA	10	µg/l	N	<10	<10
o-Xylene	BTEXHSA	5	µg/l	N	<5	<5

Analysis Results

				Project ID	21062054	
				Sample ID	001	002
				Customer ID	P2	P3
				Sample Type	WATER	WATER
				Sampling Date	23/06/2021	23/06/2021
Analysis	Method Code	MDL	Units	Accred		
Toluene	BTEXHSA	5	µg/l	N	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Naphthalene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N	<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N	<0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21062054

Date Issued: 07/07/2021

Analysis Results

					Project ID	21062054	
					Sample ID	001	002
					Customer ID	P2	P3
					Sample Type	WATER	WATER
					Sampling Date	23/06/2021	23/06/2021
Analysis	Method Code	MDL	Units	Accred			
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
BTEXHSA	001-002	The Secondary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily (including the Primary Process Control) and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation , where applicable, from the affected analytes (M&P - Xylene [GRO C8-C10]) . These circumstances should be taken into consideration when utilising the data.

LIMS-F002 - Report Notes

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21062054

Date Issued: 07/07/2021

HWOL Analysis

Customer ID	Analysis	HWOL CodeANALYSIS	Result
P2	Benzene	HS_1D_AR	<5
P2	Ethylbenzene	HS_1D_AR	<5
P2	m/p-Xylene	HS_1D_AR	<10
P2	o-Xylene	HS_1D_AR	<5
P2	Toluene	HS_1D_AR	<5
P3	Benzene	HS_1D_AR	<5
P3	Ethylbenzene	HS_1D_AR	<5
P3	m/p-Xylene	HS_1D_AR	<10
P3	o-Xylene	HS_1D_AR	<5
P3	Toluene	HS_1D_AR	<5

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM09	INORGANIC	Filtered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21062054

Date Issued: 07/07/2021

Additional Information

This report refers to samples as received, and SOCOTEC Uk Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105 º c

All Air Dried and Ground Samples (ADG) are oven dried at less than 35º c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

End of Certificate of Analysis

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 21080067

Client: BCL Consultant Hydrogeologists Limited

Quote Number: BEC210417464

Project Reference: Wrotham

Site Name: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands

Post Code: WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone No: 01902 824111

Number of Samples Received: 2

Date Received: 02/08/2021

Analysis Date: 12/08/2021

Date Issued: 12/08/2021

Job Status: Complete

Report Type: Final Version 01

This report supersedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited

Project Name: Wrotham

Project No: 21080067

Date Issued: 12/08/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ2/21	21080067-001	27/07/2021 00:00:00	WATER	Unclassified Liquid
PZ3/21	21080067-002	27/07/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21080067
Date Issued: 12/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	27/07/2021	27/07/2021
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		<0.01	<0.01
pH	PHCONDW	1	pH units	N		7.6	7.4
TDS as mg/L	WSLM27	5	mg/l	N		708	590
Chloride as Cl	KONENS	1	mg/l	N		119	71
Fluoride as F	ISEF	0.1	mg/l	N		0.2	0.2
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		1.2	2.7
Total Organic Carbon	WSLM13	0.2	mg/l	N		1.2	2.5
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00004	0.00002
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.009	0.002
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.007	0.003
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.05	0.03
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		131	184
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21080067
Date Issued: 12/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	27/07/2021	27/07/2021
Anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21080067
Date Issued: 12/08/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	27/07/2021	27/07/2021
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
BTEXHSA	001-002	The Secondary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily (including the Primary Process Control) and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation , where applicable, from the affected analytes (Benzene) . These circumstances should be taken into consideration when utilising the data.

LIMS-F002 - Report Notes

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21080067
Date Issued: 12/08/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ2/21	21080067-001	**WSLM13**						✓
PZ2/21	21080067-001	**WSLM13**						✓
PZ2/21	21080067-001	**PHCONDW**						✓
PZ3/21	21080067-002	**PHCONDW**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM09	INORGANIC	Filtered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21080067
Date Issued: 12/08/2021

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

SOCOTEC

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 21082058

Quote: BEC210417464

Project Ref: WROTHAM

Site: WROTHAM

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone: 01902 824111

No. Samples Received: 2

Date Received: 31/08/2021

Analysis Date: 10/09/2021

Date Issued: 10/09/2021

Job Status: Complete

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

Account Manager

Emily Jones

Authorised by the Operations Manager
Becky Batham

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ3/21	21082058-001	24/08/2021 00:00:00	WATER	Unclassified Liquid
PZ2/21	21082058-002	24/08/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Analysis Results

					Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/08/2021	24/08/2021
Analysis	Method Code	MDL	Units	Accred.			
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		6.90	0.01
pH	PHCONDW	1	pH units	N		7.3	6.8
TDS as mg/L	WSLM27	5	mg/l	N		563	735
Chloride as Cl	KONENS	1	mg/l	N		436	123
Fluoride as F	ISEF	0.1	mg/l	N		0.1	<0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		2.4	1.3
Total Organic Carbon	WSLM13	0.2	mg/l	N		2.4	0.97
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		<0.00002	0.00004
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.006	0.029
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.003	0.007
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.03	0.06

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Analysis Results

					Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/08/2021	24/08/2021
Analysis	Method Code	MDL	Units	Accred.			
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		201	137
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/08/2021	24/08/2021
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Analysis Results

					Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/08/2021	24/08/2021
Analysis	Method Code	MDL	Units	Accred.			
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name		Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ3/21	21082058-001	**KONENS**	Ammoniacal Nitrogen as N						✓
PZ3/21	21082058-001	**KONENS**	Chloride as Cl						✓
PZ2/21	21082058-002	**KONENS**	Ammoniacal Nitrogen as N						✓
PZ2/21	21082058-002	**KONENS**	Chloride as Cl						✓
PZ2/21	21082058-002	**WSLM13**							✓
PZ2/21	21082058-002	**WSLM13**							✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM09	INORGANIC	Filtered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: WROTHAM
Project No: 21082058
Date Issued: 10/09/2021

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105 º c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35º c.

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Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

SOCOTEC

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 21100169

Quote: BEC210417464

Project Ref: Wrotham

Site: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone: 01902 824111

No. Samples Received: 2

Date Received: 04/10/2021

Analysis Date: 13/10/2021

Date Issued: 13/10/2021

Job Status: Complete

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

Account Manager
Emily Jones
01283 554649

Authorised by the Operations Manager
Becky Batham

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ3/21	21100169-001	24/09/2021 00:00:00	WATER	Unclassified Liquid
PZ2/21	21100169-002	24/09/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/09/2021	24/09/2021
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		0.04	2.30
pH	PHCONDW	1	pH units	N		7.1	6.8
TDS as mg/L	WSLM27	5	mg/l	N		510	707
Chloride as Cl	KONENS	1	mg/l	N		65	160
Fluoride as F	ISEF	0.1	mg/l	N		0.1	<0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		2.7	1.4
Total Organic Carbon	WSLM13	0.2	mg/l	N		2.6	1.3
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		<0.00002	0.00005
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.002	0.074
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.006	0.036
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.03	0.11

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/09/2021	24/09/2021
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		174	127
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Analysis Results

					Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/09/2021	24/09/2021
Analysis	Method Code	MDL	Units	Accred.			
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ3/21	PZ2/21
					Sample Type	WATER	WATER
					Sampling Date	24/09/2021	24/09/2021
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ3/21	21100169-001	**PAHMSW**						✓
PZ2/21	21100169-002	**WSLM13**						✓
PZ2/21	21100169-002	**WSLM13**						✓
PZ2/21	21100169-002	**PAHMSW**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM09	INORGANIC	Filtered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21100169
Date Issued: 13/10/2021

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

SOCOTEC

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 21101967

Quote: BEC210417464

Project Ref: BCL Hydro

Site: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone: 01902 824111

No. Samples Received: 2

Date Received: 27/10/2021

Analysis Date: 05/11/2021

Date Issued: 05/11/2021

Job Status: Complete

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

Account Manager
Emily Jones
01283 554649

Authorised by the Operations Manager
Becky Batham

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: BCL Hydro
Project No: 21101967
Date Issued: 05/11/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ2/21	21101967-001	20/10/2021 00:00:00	WATER	Unclassified Liquid
PZ3/21	21101967-002	20/10/2021 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21101967
Date Issued: 05/11/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	20/10/2021	20/10/2021
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		<0.01	<0.01
pH	PHCONDW	1	pH units	N		6.4	7.3
TDS as mg/L	WSLM27	5	mg/l	N		811	530
Chloride as Cl	KONENS	1	mg/l	N		149	59
Fluoride as F	ISEF	0.1	mg/l	N		<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		0.84	2.1
Total Organic Carbon	WSLM13	0.2	mg/l	N		0.95	2.1
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00006	0.00007
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.097	0.099
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.074	0.099
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.06	0.06

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21101967
Date Issued: 05/11/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/21	Customer ID: PZ3/21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 20/10/2021	Sampling Date: 20/10/2021
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N	125	132
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N	<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N	<0.01 B	<0.01 B
Acenaphthylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N	<0.01 B	<0.01 B
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21101967
Date Issued: 05/11/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	20/10/2021	20/10/2021
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21101967
Date Issued: 05/11/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/21	Customer ID: PZ3/21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 20/10/2021	Sampling Date: 20/10/2021
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N	<0.350	<0.350

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21101967
Date Issued: 05/11/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ2/21	21101967-001	**WSLM13**						✓
PZ2/21	21101967-001	**WSLM13**						✓
PZ3/21	21101967-002	**BTEXHSA**	✓		✓			
PZ3/21	21101967-002	**WSLM13**						✓
PZ3/21	21101967-002	**WSLM13**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	21101967
Date Issued:	05/11/2021

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Environmental Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 21111773

Quote: BEC210417464

Project Ref: Wrotham

Site: Wrotham

Contact: Tom Herbert

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: tomh@bclhydro.co.uk

Phone: 01902 824111

No. Samples Received: 2

Date Received: 24/11/2021

Analysis Date: 07/12/2021

Date Issued: 07/12/2021

Job Status: Complete

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

Account Manager

Angela Kirby

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
P22/21	21111773-001	17/11/2021 14:15:00	WATER	Unclassified Liquid
P23/21	21111773-002	17/11/2021 14:40:00	WATER	Unclassified Liquid

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	P22/21	P23/21
					Sample Type	WATER	WATER
					Sampling Date	17/11/2021	17/11/2021
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		<0.01	<0.01
pH	PHCONDW	1	pH units	N		6.4	7.3
TDS as mg/L	WSLM27	5	mg/l	N		882	550
Chloride as Cl	KONENS	1	mg/l	N		154	58
Fluoride as F	ISEF	0.1	mg/l	N		<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		2.3	2.7
Total Organic Carbon	WSLM13	0.2	mg/l	N		0.91	2.9
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		<0.00002	<0.00002
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.090	0.002
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.041	0.009
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.06	0.03

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Analysis Results

					Sample ID	001	002
					Customer ID	P22/21	P23/21
					Sample Type	WATER	WATER
					Sampling Date	17/11/2021	17/11/2021
Analysis	Method Code	MDL	Units	Accred.			
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		131	161
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Analysis Results

					Sample ID	001	002
					Customer ID	P22/21	P23/21
					Sample Type	WATER	WATER
					Sampling Date	17/11/2021	17/11/2021
Analysis	Method Code	MDL	Units	Accred.			
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Analysis Results

					Sample ID	001	002
					Customer ID	P22/21	P23/21
					Sample Type	WATER	WATER
					Sampling Date	17/11/2021	17/11/2021
Analysis	Method Code	MDL	Units	Accred.			
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
P22/21	21111773-001	**KONENS**						✓
P22/21	21111773-001	**KONENS**						✓
P23/21	21111773-002	**KONENS**						✓
P23/21	21111773-002	**KONENS**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Unfiltered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	21111773
Date Issued:	07/12/2021

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 21111773
Date Issued: 07/12/2021

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105°C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35°C.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 22020193

Quote: BEC220124100 V1.1

Project Ref: Wrotham

Site: Wrotham

Contact: Matt Clewes

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: matt@bclhydro.co.uk

Phone: 00000000000

No. Samples Received: 2

Date Received: 02/02/2022

Analysis Date: 14/02/2022

Date Issued: 14/02/2022

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

A. M. Kirby

Account Manager
Angela Kirby

R. B Batham

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ2/20	22020193-001	25/01/2022 00:00:00	WATER	Unclassified Liquid
PZ3/20	22020193-002	25/01/2022 00:00:00	WATER	Unclassified Liquid

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/20	PZ3/20
					Sample Type	WATER	WATER
					Sampling Date	25/01/2022	25/01/2022
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		<0.01	<0.01
pH	PHCONDW	1	pH units	N		6.4	7.3
TDS as mg/L	WSLM27	5	mg/l	N		760	442
Chloride as Cl	KONENS	1	mg/l	N		164	48
Fluoride as F	ISEF	0.1	mg/l	N		<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		0.98	3.1
Total Organic Carbon	WSLM13	0.2	mg/l	N		1.1	3.1
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00004	0.00003
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.087	0.003
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.066	0.074
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.06	0.03

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/20	Customer ID: PZ3/20
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 25/01/2022	Sampling Date: 25/01/2022
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N	131	140
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N	<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N	<0.01 B	<0.01 B
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	0.01
Fluorene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/20	Customer ID: PZ3/20
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 25/01/2022	Sampling Date: 25/01/2022
Naphthalene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N	<0.16	0.16
PCB 101	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N	<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N	<0.020 ¤	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N	<0.010 ¤	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N	<0.040 ¤	<0.020

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/20	PZ3/20
					Sample Type	WATER	WATER
					Sampling Date	25/01/2022	25/01/2022
Analysis	Method Code	MDL	Units	Accred.			
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.040 D	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.100 D	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.010 D	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.040 D	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.100 D	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.100 D	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.040 D	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.700	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22020193
Date Issued: 14/02/2022

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ2/20	22020193-001	**PHCONDW**						✓
PZ2/20	22020193-001	**WSLM13**						✓
PZ2/20	22020193-001	**PAHMSW**						✓
PZ3/20	22020193-002	**PHCONDW**						✓
PZ3/20	22020193-002	**WSLM13**						✓
PZ3/20	22020193-002	**PAHMSW**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Filtered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22020193
Date Issued:	14/02/2022

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22020193
Date Issued:	14/02/2022

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

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Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 22022121

Quote: BEC220124100 V1.1

Project Ref: Wrotham

Site: Wrotham

Contact: Matt Clewes

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: matt@bclhydro.co.uk

Phone: 00000000000

No. Samples Received: 2

Date Received: 24/02/2022

Analysis Date: 15/03/2022

Date Issued: 16/03/2022

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

A. M. Kirby

Account Manager

Angela Kirby

R. B Batham

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ2/21	22022121-001	21/02/2022 00:00:00	WATER	Unclassified Liquid
PZ3/21	22022121-002	21/02/2022 00:00:00	WATER	Unclassified Liquid

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	21/02/2022	21/02/2022
Analysis	Method Code	MDL	Units	Accred.			
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		0.01	0.01
pH	PHCONDW	1	pH units	N		6.0	6.7
TDS as mg/L	WSLM27	5	mg/l	N		873	433
Chloride as Cl	KONENS	1	mg/l	N		185	48
Fluoride as F	ISEF	0.1	mg/l	N		<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		1.3	3.0
Total Organic Carbon	WSLM13	0.2	mg/l	N		1.1	3.0
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		<0.00002	<0.00002
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.109	0.001
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.068	0.008
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.07	0.03

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	21/02/2022	21/02/2022
Analysis	Method Code	MDL	Units	Accred.			
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		139	153
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/21	Customer ID: PZ3/21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 21/02/2022	Sampling Date: 21/02/2022
Naphthalene	PAHMSW	0.01	µg/l	N	0.02	0.02
Phenanthrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N	0.17	0.17
PCB 101	PCBECD	0.01	µg/l	N	<0.01	0.02
PCB 118	PCBECD	0.01	µg/l	N	<0.01	0.02
PCB 138	PCBECD	0.01	µg/l	N	<0.01	0.01
PCB 153	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N	<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N	<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N	<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	21/02/2022	21/02/2022
Analysis	Method Code	MDL	Units	Accred.			
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22022121
Date Issued: 16/03/2022

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ2/21	22022121-001	**PHCONDW**						✓
PZ2/21	22022121-001	**PAHMSW**						✓
PZ3/21	22022121-002	**PHCONDW**						✓
PZ3/21	22022121-002	**PAHMSW**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Filtered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22022121
Date Issued:	16/03/2022

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22022121
Date Issued:	16/03/2022

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105°c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35°c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

SOCOTEC

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 22040086

Quote: BEC220124100 V1.1

Project Ref: Wrotham

Site: Wrotham

Contact: Matt Clewes

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: matt@bclhydro.co.uk

Phone: 00000000000

No. Samples Received: 2

Date Received: 01/04/2022

Analysis Date: 12/04/2022

Date Issued: 13/04/2022

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

Account Manager

Ayshea Dunsby

01283 554434

Authorised by the Operations Manager
Becky Batham

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ2/21	22040086-001	28/03/2022 00:00:00	WATER	Unclassified Liquid
PZ3/21	22040086-002	28/03/2022 00:00:00	WATER	Unclassified Liquid

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	28/03/2022	28/03/2022
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		0.02	0.03
pH	PHCONDW	1	pH units	N		6.0	6.9
TDS as mg/L	WSLM27	5	mg/l	N		758	433
Chloride as Cl	KONENS	1	mg/l	N		178	43
Fluoride as F	ISEF	0.1	mg/l	N		<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		1.2	2.7
Total Organic Carbon	WSLM13	0.2	mg/l	N		1.2	2.7
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00009	0.00003
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		0.003	0.002
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.091	0.002
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.099	0.027
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.06	0.03

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	Sample ID: 002
					Customer ID: PZ2/21	Customer ID: PZ3/21
					Sample Type: WATER	Sample Type: WATER
					Sampling Date: 28/03/2022	Sampling Date: 28/03/2022
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N	135	116
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N	<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N	<0.01 B	<0.01 B
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N	0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N	0.01	<0.01

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	28/03/2022	28/03/2022
Analysis	Method Code	MDL	Units	Accred.			
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		0.02	<0.01
Total PAH 16	PAHMSW	0.16	µg/l	N		0.17	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Analysis Results

					Sample ID	001	002
					Customer ID	PZ2/21	PZ3/21
					Sample Type	WATER	WATER
					Sampling Date	28/03/2022	28/03/2022
Analysis	Method Code	MDL	Units	Accred.			
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N		<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N		<0.350	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Filtered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

SOCOTEC

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22040086
Date Issued: 13/04/2022

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105°c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35°c.

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Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

Environmental
Chemistry

Certificate of Analysis

Client: BCL Consultant Hydrogeologists Limited

Project: 22050304

Quote: BEC220124100 V1.1

Project Ref: Wrotham

Site: Wrotham

Contact: Matt Clewes

Address: Technology Centre
Wolverhampton Science Park
Wolverhampton
West Midlands
WV10 9RU

E-Mail: matt@bclhydro.co.uk

Phone: 00000000000

No. Samples Received: 3

Date Received: 06/05/2022

Analysis Date: 23/05/2022

Date Issued: 25/05/2022

Report Type: Final Version 01

This report supercedes any versions previously issued by the laboratory

A. L. Dunsby

Account Manager

Ayshea Dunsby

01283 554434

R. B. Batham

Authorised by the Operations Manager
Becky Batham

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Samples Analysed

Sample Reference	Text ID	Sample Date	Sample Type	Sample Description
PZ4/21	22050304-001	27/04/2022 00:00:00	WATER	Unclassified Liquid
PZ2/21	22050304-002	27/04/2022 00:00:00	WATER	Unclassified Liquid
PZ3/21	22050304-003	27/04/2022 00:00:00	WATER	Unclassified Liquid

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003
					Customer ID	PZ4/21	PZ2/21	PZ3/21
					Sample Type	WATER	WATER	WATER
					Sampling Date	27/04/2022	27/04/2022	27/04/2022
Ammoniacal Nitrogen as N	KONENS	0.01	mg/l	N		<0.01	0.05	0.04
pH	PHCONDW	1	pH units	N		7.1	6.3	7.2
TDS as mg/L	WSLM27	5	mg/l	N		421	878	515
Chloride as Cl	KONENS	1	mg/l	N		33	50	49
Fluoride as F	ISEF	0.1	mg/l	N		0.1	<0.1	0.1
Dissolved Organic Carbon	WSLM13	0.2	mg/l	N		2.9	0.92	2.7
Total Organic Carbon	WSLM13	0.2	mg/l	N		3.6	0.96	2.9
Antimony as Sb	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001	<0.001
Arsenic as As	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001	<0.001
Cadmium as Cd	ICPMSW (Dissolved)	0.00002	mg/l	N		0.00006	0.00005	0.00005
Total Chromium as Cr	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001	<0.001
Copper as Cu	ICPMSW (Dissolved)	0.001	mg/l	N		0.002	<0.001	<0.001
Lead as Pb	ICPMSW (Dissolved)	0.001	mg/l	N		0.001	<0.001	<0.001
Mercury as Hg	ICPMSW (Dissolved)	0.00003	mg/l	N		<0.00003	<0.00003	<0.00003
Molybdenum as Mo	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001	<0.001
Nickel as Ni	ICPMSW (Dissolved)	0.001	mg/l	N		0.003	0.001	0.001
Selenium as Se	ICPMSW (Dissolved)	0.001	mg/l	N		<0.001	<0.001	<0.001
Zinc as Zn	ICPMSW (Dissolved)	0.002	mg/l	N		0.037	0.010	0.029
Barium as Ba	ICPWATVAR (Dissolved)	0.01	mg/l	N		0.03	0.03	0.03

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID	001	002	003
					Customer ID	PZ4/21	PZ2/21	PZ3/21
					Sample Type	WATER	WATER	WATER
					Sampling Date	27/04/2022	27/04/2022	27/04/2022
Total Sulphur as SO4	ICPWATVAR (Dissolved)	3	mg/l	N		57	163	166
Benzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5	<5
Ethylbenzene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5	<5
m/p-Xylene HS_1D_AR	BTEXHSA	10	µg/l	N		<10	<10	<10
o-Xylene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5	<5
Toluene HS_1D_AR	BTEXHSA	5	µg/l	N		<5	<5	<5
Acenaphthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Acenaphthylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Benzo[a]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Benzo[a]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Benzo[b]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Benzo[g,h,i]perylene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Benzo[k]fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Chrysene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Dibenzo[a,h]anthracene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Fluoranthene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Fluorene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Analysis Results

					Sample ID	001	002	003
					Customer ID	PZ4/21	PZ2/21	PZ3/21
					Sample Type	WATER	WATER	WATER
					Sampling Date	27/04/2022	27/04/2022	27/04/2022
Analysis	Method Code	MDL	Units	Accred.				
Naphthalene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Phenanthrene	PAHMSW	0.01	µg/l	N		<0.01	<0.01	<0.01
Pyrene	PAHMSW	0.01	µg/l	N		<0.01 B	<0.01 B	<0.01 B
Total PAH 16	PAHMSW	0.16	µg/l	N		<0.16	<0.16	<0.16
PCB 101	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 118	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 138	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 153	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 180	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 28	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
PCB 52	PCBECD	0.01	µg/l	N		<0.01	<0.01	<0.01
2,4,5-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020
2,4,6-Trichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020
2,4-Dichlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020
2,4-Dimethylphenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020
2,4-Dinitrophenol	SVOCSW	0.01	mg/l	N		<0.010	<0.010	<0.010
2-Chlorophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020
2-Methylphenol	SVOCSW	0.005	mg/l	N		<0.005	<0.005	<0.005
2-Nitrophenol	SVOCSW	0.02	mg/l	N		<0.020	<0.020	<0.020

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Analysis Results

Analysis	Method Code	MDL	Units	Accred.	Sample ID: 001	002	003
					Customer ID: PZ4/21	PZ2/21	PZ3/21
					Sample Type: WATER	WATER	WATER
					Sampling Date: 27/04/2022	27/04/2022	27/04/2022
3- & 4-Methylphenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020	<0.020
4,6-Dinitro-2-methylphenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050	<0.050
4-Chloro-3-methylphenol	SVOCSW	0.005	mg/l	N	<0.005	<0.005	<0.005
4-Chlorophenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020	<0.020
4-Nitrophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050	<0.050
Pentachlorophenol	SVOCSW	0.05	mg/l	N	<0.050	<0.050	<0.050
Phenol	SVOCSW	0.02	mg/l	N	<0.020	<0.020	<0.020
Total (15) Phenols	SVOCSW	0.35	mg/l	N	<0.350	<0.350	<0.350

Client: BCL Consultant Hydrogeologists Limited
Project Name: Wrotham
Project No: 22050304
Date Issued: 25/05/2022

Deviating Sample Report

Sample Reference	Text ID	Reported Name	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
PZ4/21	22050304-001	**KONENS**						✓
PZ4/21	22050304-001	**KONENS**						✓
PZ4/21	22050304-001	**PHCONDW**						✓
PZ4/21	22050304-001	**BTEXHSA**						✓
PZ4/21	22050304-001	**WSLM13**						✓
PZ4/21	22050304-001	**PAHMSW**						✓
PZ2/21	22050304-002	**PHCONDW**						✓
PZ2/21	22050304-002	**BTEXHSA**						✓
PZ2/21	22050304-002	**WSLM13**						✓
PZ2/21	22050304-002	**PAHMSW**						✓
PZ3/21	22050304-003	**PHCONDW**						✓
PZ3/21	22050304-003	**BTEXHSA**						✓
PZ3/21	22050304-003	**WSLM13**						✓
PZ3/21	22050304-003	**PAHMSW**						✓

Analysis Method

Analysis	Analysis Type	Analysis Method
BTEXHSA	ORGANIC	Unfiltered
ICPMSW (Dissolved)	METALS	Filtered
ICPWATVAR (Dissolved)	METALS	Filtered
ISEF	INORGANIC	Unfiltered
KONENS	INORGANIC	Filtered
PAHMSW	ORGANIC	Unfiltered
PCBECD	ORGANIC	Unfiltered
PHCONDW	INORGANIC	Unfiltered
SVOCSW	ORGANIC	Unfiltered
WSLM13	INORGANIC	Unfiltered
WSLM27	INORGANIC	Filtered

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22050304
Date Issued:	25/05/2022

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are a follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to recoveries beyond our calibration range and following the maximum size of dilution allowed, the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing . Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Client:	BCL Consultant Hydrogeologists Limited
Project Name:	Wrotham
Project No:	22050304
Date Issued:	25/05/2022

Additional Information

This report refers to samples as received, and SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105°c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35°c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 5 Literature WAC Testing Data

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373

mg/l leach 10:1	BH02B	BH03	BH01	BH04	TP11	TP13	TP16	TP18	TP20	TP21	TP22	TP01	TP02	TP04	TP06	TP07	TP08	TP09	TP11	TP10
Arsenic	0.019	0.006	0.005	0.004	0.004	0.009	0.005	0.008	0.005	0.004	0.006	0.003	0.005	0.002	0.002	0.002	0.001	0.023	0.00317	0.00437
Barium	0.13	0.12	0.14	0.08	0.14	0.11	0.29	0.15	0.16	0.23	0.25	0.27	0.11	0.1	0.09	0.09	0.09	0.13	0.0299	0.0236
Cadmium	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
Chromium	0.005	0.001	0.01	0.008	0.018	0.011	0.007	0.004	0.004	0.022	0.007	0.005	0.012	0.02	0.016	0.01	0.025	0.002	0.00171	0.00234
Copper	0.019	0.004	0.013	0.009	0.013	0.019	0.017	0.013	0.01	0.014	0.012	0.005	0.004	0.007	0.007	0.006	0.027	0.007	0.0108	0.00764
Mercury	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	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000247	0.0000353
Molybdenum	0.01	0.019	0.021	0.011	0.028	0.006	0.008	0.03	0.018	0.025	0.009	0.009	0.009	0.005	0.009	0.007	0.006	0.004	0.00597	0.0054
Nickel	0.004	0.003	0.002	0.002	0.001	0.002	0.005	0.002	0.003	0.003	0.002	0.002	0.001	0.002	0.001	0.001	0.006	0.002	0.00196	0.00137
Lead	0.019	0.004	0.002	0.002	0.001	0.004	0.034	0.007	0.008	0.027	0.006	0.002	0.001	0.002	0.001	0.001	0.001	0.002	0.00126	0.00195
Antimony	0.009	0.005	0.027	0.008	0.056	0.014	0.006	0.011	0.01	0.01	0.008	0.004	0.01	0.014	0.009	0.014	0.005	0.016	0.0114	0.00798
Selenium	0.003	0.004	0.002	0.002	0.005	0.002	0.001	0.002	0.002	0.001	0.001	0.001	0.003	0.002	0.001	0.001	0.001	0.004	0.00159	0.00127
Zinc	0.021	0.013	0.03	0.016	0.017	0.013	0.134	0.026	0.048	0.073	0.078	0.095	0.006	0.025	0.01	0.008	0.014	0.025	0.00296	0.00171
Chloride	13	4.7	5.2	1.3	2.1	1.6	1.6	4	1.7	1.9	6.7	3.1	1.8	3.6	2.6	2.4	4.2	1.5	2	2
Fluoride	0.4	0.6	0.7	0.5	1	0.4	0.6	0.6	0.6	0.8	0.6	0.6	0.6	0.3	0.3	0.4	3.6	0.4	0.5	0.561
Sulphate	72.3	158.2	174.8	245.8	53.2	146.9	11.3	160.4	28.9	59	30.4	22.2	545.5	78.6	103.6	144.4	60.8	58	203	83.4
Cadmium	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Chloride	13	4.7	2.6	0.65	1.05	0.8	0.8	2	0.85	0.95	6.7	3.1	0.9	3.6	2.6	1.2	4.2	0.75	1	1
Flouride	0.4	0.6	0.7	0.5	1	0.4	0.6	0.6	0.6	0.8	0.6	0.6	0.6	0.3	0.3	0.4	3.6	0.4	0.025	0.561
Mercury	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0000247	0.0000353
Nickel	0.004	0.003	0.002	0.001	0.0005	0.002	0.005	0.002	0.003	0.003	0.002	0.002	0.0005	0.001	0.0005	0.0005	0.006	0.002	0.00196	0.00137
	TP07	TP07	TP09	TP23	TP24	TP17	TP18	TP19	TP20	TP12	TP13	TP04	TP03	TP21	TP22	TP08	TP01	TP02	TP14	TP15
Arsenic	0.0049	0.00169	0.00504	0.00512	0.00501	0.0157	0.00762	0.00536	0.00486	0.00385	0.00565	0.00201	0.00377	0.00474	0.00458	0.00363	0.00513	0.00697	0.00352	0.00318
Barium	0.0221	0.0391	0.0234	0.0239	0.0231	0.0153	0.02	0.0161	0.0171	0.0269	0.0098	0.0453	0.0211	0.0261	0.0256	0.0256	0.0229	0.033	0.0322	0.0273
Cadmium	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
Chromium	0.0032	0.00194	0.00286	0.00239	0.0034	0.00189	0.00243	0.00213	0.00476	0.00202	0.00309	0.00171	0.00236	0.00214	0.0016	0.00237	0.00245	0.00379	0.00372	0.00357
Copper	0.00713	0.00968	0.00971	0.00933	0.00951	0.0114	0.012	0.0105	0.0063	0.0123	0.0106	0.00708	0.00658	0.0111	0.0105	0.00778	0.00829	0.0125	0.00381	0.00375
Mercury	4.55E-05	0.0000163	0.0000628	0.0000376	0.0000175	0.0000154	0.0000487	0.0000204	0.00001	0.0000384	0.00002	0.0000182	0.0000193	0.0000564	0.0000466	0.000091	0.0000235	0.0000823	0.00001	0.0000111
Molybdenum	0.0058	0.00527	0.0211	0.00602	0.00601	0.00505	0.00499	0.00253	0.00457	0.00675	0.00268	0.0118	0.00376	0.00538	0.00534	0.00816	0.00427	0.00437	0.00332	0.00297
Nickel	0.00142	0.00399	0.00196	0.00158	0.00176	0.0039	0.00133	0.00119	0.00146	0.00203	0.000929	0.00455	0.00181	0.00189	0.00199	0.00198	0.00193	0.00154	0.00221	0.0019
Lead	0.00185	0.00165	0.00504	0.00251	0.00137	0.001	0.00607	0.00358	0.000216	0.00318	0.00342	0.000153	0.00322	0.00471	0.00473	0.00126	0.00263	0.00417	0.000924	0.00244
Antimony	0.00737	0.00839	0.00809	0.00699	0.00905	0.00542	0.00615	0.0108	0.0134	0.00734	0.00681	0.00697	0.00325	0.00556	0.00643	0.0115	0.00763	0.0128	0.00791	0.00694
Selenium	0.00161	0.000933	0.00204	0.00163	0.00178	0.0016	0.00201	0.00074	0.00096	0.00162	0.000837	0.00218	0.00137	0.00168	0.00109	0.00251	0.000766	0.00128	0.00154	0.00139
Zinc	0.00199	0.0115	0.00408	0.0026	0.00174	0.00319	0.00428	0.00393	0.00041	0.00835	0.00374	0.0117	0.00457	0.00477	0.00734	0.00435	0.00371	0.00436	0.00289	0.00399
Chloride	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.03	3.45	2	2	2
Fluoride	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.702	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sulphate	78.4	514	128	67.4	199	22.4	49.4	17.6	216	139	7.24	516	80.3	161	162	194	199	96.7	336	261
Cadmium	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.03	3.45	1	1	1
Flouride	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.702	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Mercury	4.55E-05	0.0000163	0.0000628	0.0000376	0.0000175	0.0000154	0.0000487	0.0000204	0.000005	0.0000384	0.00002	0.0000182	0.0000193	0.0000564	0.0000466	0.000091	0.0000235	0.0000823	0.000005	0.0000111
Nickel	0.00142	0.00399	0.00196	0.00158	0.00176	0.0039	0.00133	0.00119	0.00146	0.00203	0.000929	0.00455	0.00181	0.00189	0.00199	0.00198	0.00193	0.00154	0.00221	0.0019

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

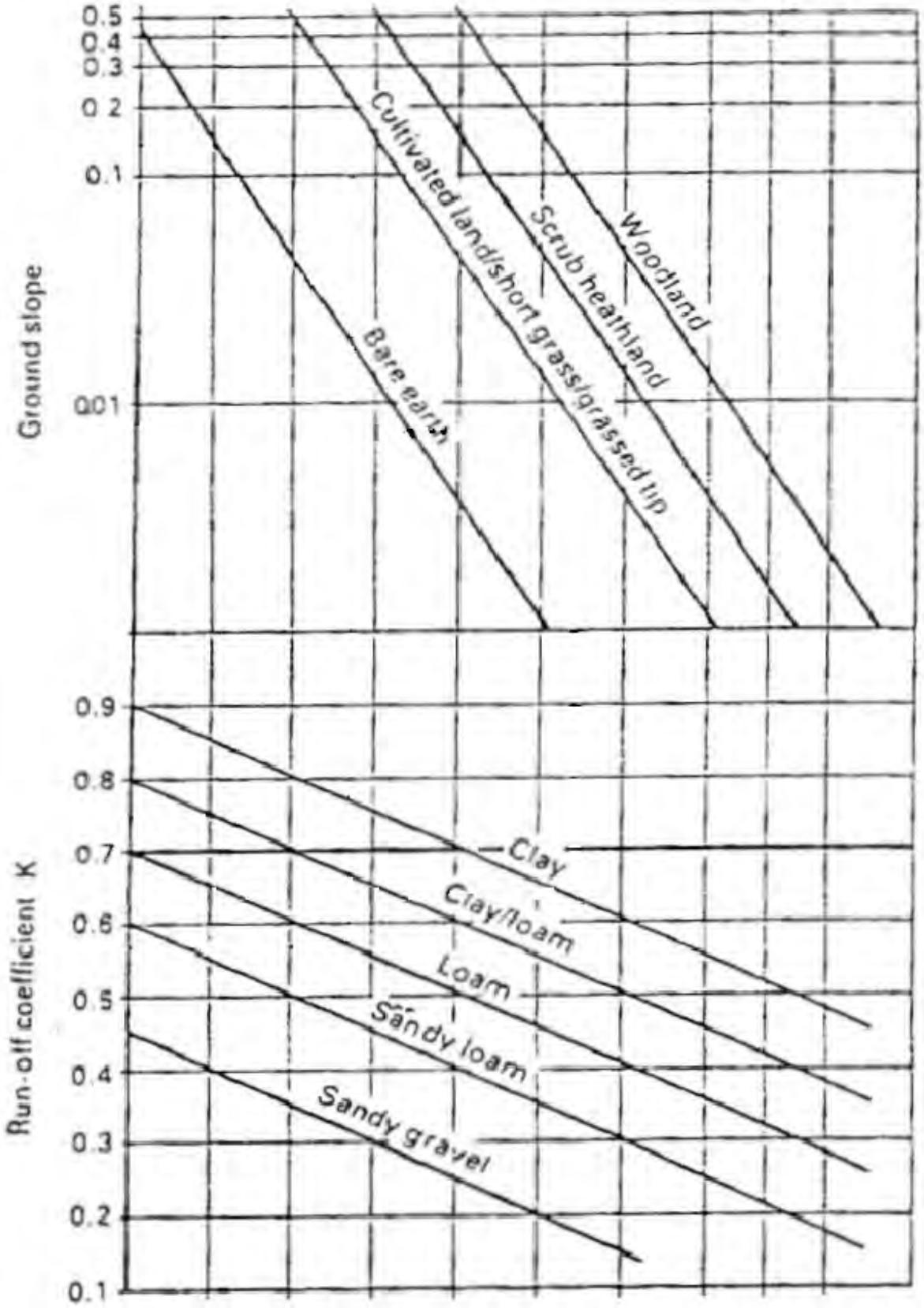
Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 6 NCB Nomogram

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
Registered Office: 33, Wolverhampton Road, Cannock, West Midlands, WV11 1AP
Registered in England & Wales. Company Registration Number: 4043373


Ground slope
0.5
0.4
0.3
0.2
0.1
0.01
Cultivated land/short grass/grassed up
Scrub heathland
Woodland
Bare earth
Run-off coefficient K
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Clay
Clay/loam
Loam
Sandy loam
Sandy gravel

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 7 Model Results

BCL HYDRO
BCL Consultant Hydrogeologists Limited

Technology Centre, Wolverhampton Science Park, Glashier Drive, Wolverhampton
West Midlands, WV10 9RU. Tel: 01902 824111, Fax: 01902 824112
email: info@bclhydro.co.uk, web: http://www.bclhydro.co.uk
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Registered in England & Wales. Company Registration Number: 4043373

iHRA Max Head
D:\Data\PROJEC 13/01/2022 13:49 Ferns Group Wrotham Butre Risk 0000
Probability

Maximum Head	Probability
0.127517	1
0.143394	0.979592
0.16233	0.959184
0.171086	0.938776
0.182548	0.918367
0.188941	0.897959
0.194951	0.877551
0.200345	0.857143
0.204606	0.836735
0.210029	0.816327
0.215188	0.795918
0.219761	0.77551
0.223335	0.755102
0.227788	0.734694
0.232408	0.714286
0.236227	0.693878
0.240224	0.673469
0.245828	0.653061
0.249188	0.632653
0.25292	0.612245
0.256589	0.591837
0.259659	0.571429
0.264063	0.55102
0.268338	0.530612
0.272546	0.510204
0.277244	0.489796
0.282433	0.469388
0.287477	0.44898
0.291956	0.428571
0.295786	0.408163
0.299759	0.387755
0.303204	0.367347
0.30786	0.346939
0.312523	0.326531
0.317464	0.306122
0.323121	0.285714
0.328653	0.265306
0.334304	0.244898
0.338522	0.22449
0.346979	0.204082
0.353293	0.183673
0.36112	0.163265
0.369748	0.142857
0.376465	0.122449
0.381549	0.102041
0.390205	0.0816327
0.395923	0.0612245
0.410335	0.0408163
0.42413	0.0204082
0.437718	0

IHRA Breakout
D:\Data\PROJEC 13/01/2022 14:09 Ferns Group Wrotham Butre Risk 0000
Surface Breakout [/day]

Time [years]	1st Percentile	5th Percentile	10th Percentile	50th Percentile	90th Percentile	95th Percentile	99th Percentile
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0
190	0	0	0	0	0	0	0
210	0	0	0	0	0	0	0
232	0	0	0	0	0	0	0
256	0	0	0	0	0	0	0
282	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0
312	0	0	0	0	0	0	0
344	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0
420	0	0	0	0	0	0	0
464	0	0	0	0	0	0	0
512	0	0	0	0	0	0	0
565	0	0	0	0	0	0	0
624	0	0	0	0	0	0	0
689	0	0	0	0	0	0	0
761	0	0	0	0	0	0	0
840	0	0	0	0	0	0	0
928	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0
1024	0	0	0	0	0	0	0
1131	0	0	0	0	0	0	0
1249	0	0	0	0	0	0	0
1379	0	0	0	0	0	0	0
1523	0	0	0	0	0	0	0
1681	0	0	0	0	0	0	0
1856	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0
2263	0	0	0	0	0	0	0
2499	0	0	0	0	0	0	0
2759	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0
3046	0	0	0	0	0	0	0
3363	0	0	0	0	0	0	0
3714	0	0	0	0	0	0	0
4100	0	0	0	0	0	0	0
4527	0	0	0	0	0	0	0
4999	0	0	0	0	0	0	0
5519	0	0	0	0	0	0	0
5094	0	0	0	0	0	0	0
6728	0	0	0	0	0	0	0
7428	0	0	0	0	0	0	0
8202	0	0	0	0	0	0	0
9056	0	0	0	0	0	0	0
9999	0	0	0	0	0	0	0
10000	0	0	0	0	0	0	0
11039	0	0	0	0	0	0	0
12189	0	0	0	0	0	0	0
13458	0	0	0	0	0	0	0
14859	0	0	0	0	0	0	0
16406	0	0	0	0	0	0	0
18114	0	0	0	0	0	0	0
20000	0	0	0	0	0	0	0

IHRA Leakage
D:\Debi\PROJEI 13/01/2022 14:10 Ferrix Group Wrotham Butre Risk 0000
Leakage From EBS (l/day)

Time (years)	1st Percentile	5th Percentile	10th Percentile	50th Percentile	90th Percentile	95th Percentile	99th Percentile
0	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21
1	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21
2	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21
3	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21	3277.21
4	1989.32	1988.32	1989.32	1988.32	1989.32	1989.32	1989.32
5	1989.32	1988.32	1989.32	1988.32	1989.32	1989.32	1989.32
6	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
7	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
8	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
9	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
10	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
11	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
13	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
14	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
16	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
17	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
19	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
21	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
23	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
26	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
28	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
32	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
35	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
39	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
43	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
47	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
52	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
57	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
64	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
70	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
78	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
86	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
95	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
105	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
116	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
128	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
141	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
156	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
172	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
190	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
210	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
232	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
256	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
282	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
300	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
312	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
344	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
380	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
420	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
464	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
512	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
565	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
624	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
689	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
761	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
840	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
928	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1000	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1024	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1131	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1249	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1379	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1523	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1681	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
1856	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
2050	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
2263	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
2499	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
2759	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
3000	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
3046	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
3363	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
3714	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
4100	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
4527	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
4999	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
5519	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
6094	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
6728	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
7428	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
8202	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
9056	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
9999	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
10000	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
11039	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
12189	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
13458	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
14859	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
16406	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
18114	1989.32	1989.32	1989.32	1988.32	1989.32	1989.32	1989.32
20000	19893.2	19893.2	19893.2	19883.2	19893.2	19893.2	19893.2

HRA Source

Ammoniacal N

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	4.09E-02	4.77E-02	5.15E-02	6.93E-02	8.72E-02	9.34E-02	1.05E-01
1.00E+00	4.07E-02	4.75E-02	5.14E-02	6.87E-02	8.67E-02	9.27E-02	1.04E-01
2.00E+00	4.06E-02	4.72E-02	5.10E-02	6.84E-02	8.62E-02	9.22E-02	1.03E-01
3.00E+00	4.04E-02	4.70E-02	5.08E-02	6.80E-02	8.57E-02	9.17E-02	1.03E-01
4.00E+00	4.01E-02	4.64E-02	5.05E-02	6.77E-02	8.52E-02	9.07E-02	1.02E-01
5.00E+00	3.81E-02	4.45E-02	4.87E-02	6.57E-02	8.26E-02	8.84E-02	9.96E-02
6.00E+00	3.63E-02	4.28E-02	4.68E-02	6.34E-02	8.02E-02	8.57E-02	9.69E-02
7.00E+00	3.46E-02	4.09E-02	4.50E-02	6.12E-02	7.79E-02	8.38E-02	9.46E-02
8.00E+00	3.14E-02	3.83E-02	4.33E-02	5.91E-02	7.60E-02	8.20E-02	9.29E-02
9.00E+00	2.87E-02	3.59E-02	4.12E-02	5.70E-02	7.37E-02	8.01E-02	9.13E-02
1.00E+01	2.57E-02	3.43E-02	3.96E-02	5.51E-02	7.22E-02	7.82E-02	8.96E-02
1.10E+01	2.32E-02	3.23E-02	3.75E-02	5.35E-02	7.08E-02	7.67E-02	8.80E-02
1.30E+01	1.89E-02	2.90E-02	3.40E-02	5.03E-02	6.76E-02	7.29E-02	8.47E-02
1.40E+01	1.66E-02	2.73E-02	3.24E-02	4.87E-02	6.61E-02	7.09E-02	8.32E-02
1.60E+01	1.33E-02	2.40E-02	2.92E-02	4.61E-02	6.33E-02	6.79E-02	8.02E-02
1.70E+01	1.19E-02	2.23E-02	2.75E-02	4.48E-02	6.18E-02	6.62E-02	7.82E-02
1.90E+01	9.54E-03	2.00E-02	2.46E-02	4.22E-02	5.88E-02	6.30E-02	7.46E-02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Arsenic

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Cadmium

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Chloride

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Copper

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Lead

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Mercury

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Sulphate

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Zinc

Concentration at Source [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

iHRA

Ammoniacal N

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-18
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-20	1.88E-16
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-19	4.10E-14
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-19	2.67E-16	4.71E-12
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-15	3.34E-13	1.65E-10
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-13	2.27E-11	2.53E-09
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.69E-11	2.31E-09	9.31E-08
1.40E+01	0.00E+00	0.00E+00	0.00E+00	1.11E-18	4.45E-10	7.50E-09	2.02E-07
1.60E+01	0.00E+00	0.00E+00	0.00E+00	1.99E-16	2.56E-09	4.71E-08	1.00E-06
1.70E+01	0.00E+00	0.00E+00	0.00E+00	1.58E-15	5.56E-09	1.06E-07	2.04E-06
1.90E+01	0.00E+00	0.00E+00	0.00E+00	3.40E-14	2.23E-08	3.68E-07	4.98E-06
2.10E+01	0.00E+00	0.00E+00	0.00E+00	5.79E-13	1.01E-07	9.90E-07	1.00E-05
2.30E+01	0.00E+00	0.00E+00	0.00E+00	2.79E-12	3.66E-07	2.15E-06	1.56E-05
2.60E+01	0.00E+00	0.00E+00	0.00E+00	1.07E-11	1.42E-06	6.25E-06	2.52E-05
2.80E+01	0.00E+00	0.00E+00	6.29E-19	2.77E-11	2.75E-06	1.00E-05	3.16E-05
3.20E+01	0.00E+00	0.00E+00	5.35E-17	1.37E-10	6.01E-06	2.01E-05	5.49E-05
3.50E+01	0.00E+00	1.62E-18	1.56E-15	1.37E-09	1.01E-05	2.86E-05	7.10E-05
3.90E+01	0.00E+00	5.21E-17	1.80E-14	2.02E-08	1.83E-05	3.72E-05	8.83E-05
4.30E+01	0.00E+00	2.64E-15	1.51E-13	1.15E-07	2.67E-05	4.60E-05	1.07E-04
4.70E+01	0.00E+00	1.95E-14	7.68E-13	4.75E-07	3.55E-05	5.75E-05	1.26E-04
5.20E+01	7.88E-19	2.44E-13	5.36E-12	1.59E-06	4.54E-05	7.53E-05	1.48E-04
5.70E+01	2.37E-18	1.36E-12	5.04E-11	3.48E-06	5.43E-05	8.69E-05	1.62E-04
6.40E+01	4.93E-16	7.06E-12	1.51E-09	6.71E-06	6.92E-05	9.89E-05	1.81E-04
7.00E+01	5.18E-15	5.37E-11	1.49E-08	9.55E-06	7.42E-05	1.13E-04	1.87E-04
7.80E+01	1.51E-14	5.39E-10	1.07E-07	1.32E-05	8.38E-05	1.22E-04	1.95E-04
8.60E+01	1.89E-13	1.47E-08	4.29E-07	1.72E-05	9.20E-05	1.29E-04	2.19E-04
9.50E+01	1.23E-13	7.45E-08	1.17E-06	2.01E-05	9.19E-05	1.31E-04	2.37E-04
1.05E+02	2.78E-13	2.35E-07	2.01E-06	2.28E-05	9.70E-05	1.36E-04	2.42E-04
1.16E+02	1.83E-13	6.53E-07	2.56E-06	2.37E-05	9.89E-05	1.36E-04	2.51E-04
1.28E+02	9.56E-14	8.66E-07	2.81E-06	2.33E-05	9.86E-05	1.37E-04	2.34E-04
1.41E+02	4.65E-14	7.45E-07	2.65E-06	2.22E-05	9.34E-05	1.34E-04	2.54E-04
1.56E+02	2.03E-14	6.05E-07	2.33E-06	1.94E-05	8.96E-05	1.35E-04	2.34E-04
1.72E+02	1.37E-14	3.59E-07	1.74E-06	1.63E-05	7.94E-05	1.13E-04	2.19E-04
1.90E+02	8.37E-15	2.20E-07	1.18E-06	1.29E-05	6.51E-05	9.91E-05	1.94E-04
2.10E+02	1.93E-14	1.44E-07	6.93E-07	9.81E-06	5.18E-05	8.18E-05	1.63E-04
2.32E+02	9.61E-15	8.22E-08	3.80E-07	7.14E-06	4.05E-05	6.66E-05	1.45E-04
2.56E+02	4.42E-15	4.16E-08	1.97E-07	4.94E-06	3.19E-05	5.33E-05	1.08E-04
2.82E+02	1.88E-15	1.88E-08	9.11E-08	3.31E-06	2.31E-05	3.88E-05	8.18E-05
3.00E+02	8.72E-16	7.59E-09	4.36E-08	2.16E-06	1.80E-05	2.98E-05	6.60E-05
3.12E+02	6.25E-16	3.01E-09	1.98E-08	1.49E-06	1.43E-05	2.43E-05	5.65E-05
3.44E+02	2.90E-16	9.20E-10	8.67E-09	8.96E-07	9.27E-06	1.48E-05	3.66E-05
3.80E+02	1.64E-16	2.35E-10	2.87E-09	4.92E-07	6.15E-06	9.69E-06	2.59E-05
4.20E+02	4.01E-17	5.45E-11	9.78E-10	2.71E-07	3.90E-06	6.40E-06	1.54E-05
4.64E+02	4.79E-17	1.23E-11	2.90E-10	1.35E-07	2.41E-06	3.96E-06	1.00E-05
5.12E+02	2.43E-17	2.13E-12	7.39E-11	6.20E-08	1.48E-06	2.38E-06	6.95E-06
5.65E+02	1.11E-17	3.55E-13	2.06E-11	3.07E-08	8.33E-07	1.36E-06	4.15E-06
6.24E+02	1.32E-19	6.45E-14	8.23E-12	1.80E-08	5.65E-07	9.96E-07	3.21E-06
6.89E+02	0.00E+00	9.56E-15	1.58E-12	7.42E-09	3.08E-07	5.69E-07	1.93E-06
7.61E+02	0.00E+00	7.48E-16	2.11E-13	2.51E-09	1.57E-07	3.18E-07	1.08E-06
8.40E+02	0.00E+00	6.85E-17	2.37E-14	8.36E-10	7.54E-08	1.59E-07	5.41E-07
9.28E+02	0.00E+00	1.68E-17	1.40E-15	2.27E-10	3.32E-08	7.59E-08	2.50E-07
1.00E+03	0.00E+00	1.25E-16	1.81E-14	6.23E-11	1.29E-08	3.44E-08	1.22E-07
1.02E+03	0.00E+00	4.26E-16	2.45E-14	1.93E-11	5.84E-09	1.49E-08	6.52E-08
1.13E+03	4.06E-19	6.69E-16	1.85E-14	6.85E-12	1.83E-09	5.87E-09	2.18E-08
1.25E+03	0.00E+00	1.50E-16	6.68E-15	2.74E-12	5.86E-10	2.09E-09	8.12E-09
1.38E+03	0.00E+00	0.00E+00	2.97E-16	1.17E-12	1.64E-10	6.67E-10	2.88E-09
1.52E+03	0.00E+00	0.00E+00	8.51E-17	6.16E-13	4.77E-11	2.04E-10	9.47E-10
1.68E+03	0.00E+00	0.00E+00	5.56E-18	2.64E-13	1.53E-11	5.43E-11	2.72E-10
1.86E+03	0.00E+00	9.97E-19	1.69E-17	4.07E-14	5.61E-12	1.55E-11	8.62E-11
2.05E+03	0.00E+00	0.00E+00	0.00E+00	3.94E-15	2.07E-12	8.27E-12	5.72E-11
2.26E+03	0.00E+00	0.00E+00	3.17E-19	1.66E-15	1.28E-13	1.19E-12	1.20E-11
2.50E+03	0.00E+00	0.00E+00	1.73E-18	8.30E-16	4.32E-14	1.74E-13	2.34E-12
2.76E+03	0.00E+00	0.00E+00	0.00E+00	1.80E-17	1.21E-14	4.32E-14	3.85E-13
3.00E+03	0.00E+00	0.00E+00	0.00E+00	1.74E-17	2.17E-15	8.01E-15	5.45E-14
3.05E+03	0.00E+00	0.00E+00	0.00E+00	3.08E-18	6.17E-16	2.37E-15	1.78E-14
3.36E+03	0.00E+00	0.00E+00	0.00E+00	1.11E-19	1.01E-16	2.58E-16	1.17E-15
3.71E+03	0.00E+00	0.00E+00	0.00E+00	3.51E-19	1.83E-17	4.13E-17	2.66E-16
4.10E+03	0.00E+00	0.00E+00	0.00E+00	3.92E-19	5.82E-18	1.31E-17	6.87E-17
4.53E+03	0.00E+00	0.00E+00	0.00E+00	2.40E-19	2.94E-18	5.84E-18	2.26E-17
5.00E+03	0.00E+00	0.00E+00	0.00E+00	1.99E-19	2.78E-18	5.58E-18	1.27E-17
5.52E+03	0.00E+00	0.00E+00	0.00E+00	3.07E-19	3.31E-18	5.60E-18	1.34E-17
6.09E+03	0.00E+00	0.00E+00	0.00E+00	1.08E-19	3.07E-18	5.64E-18	1.49E-17
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-18	7.71E-18	2.21E-17
7.43E+03	0.00E+00	0.00E+00	0.00E+00	9.36E-19	1.25E-17	2.05E-17	5.73E-17
8.20E+03	0.00E+00	0.00E+00	0.00E+00	4.95E-18	4.48E-17	6.60E-17	1.61E-16
9.06E+03	0.00E+00	0.00E+00	0.00E+00	1.33E-18	8.14E-17	1.34E-16	4.11E-16
1.00E+04	0.00E+00	0.00E+00	0.00E+00	4.64E-17	4.22E-16	7.01E-16	1.54E-15
1.00E+04	0.00E+00	0.00E+00	0.00E+00	4.42E-18	7.61E-17	1.47E-16	3.64E-16
1.10E+04	0.00E+00	0.00E+00	0.00E+00	4.39E-18	1.10E-16	2.13E-16	7.06E-16
1.22E+04	0.00E+00	0.00E+00	0.00E+00	6.14E-18	1.27E-16	2.30E-16	4.75E-16
1.35E+04	0.00E+00	0.00E+00	0.00E+00	1.65E-17	1.87E-16	3.10E-16	8.23E-16
1.49E+04	0.00E+00	0.00E+00	0.00E+00	5.40E-18	2.32E-16	4.54E-16	1.24E-15
1.64E+04	0.00E+00	0.00E+00	0.00E+00	9.67E-17	1.07E-15	1.89E-15	4.05E-15
1.81E+04	0.00E+00	0.00E+00	0.00E+00	1.86E-19	1.54E-18	2.54E-18	5.13E-18
2.00E+04	0.00E+00	0.00E+00	0.00E+00	2.64E-19	2.74E-18	4.49E-18	1.26E-17

Arsenic

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-16
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-13
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-10
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-16	7.50E-08
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-12	2.86E-07
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-14	1.33E-10	5.16E-07
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-11	7.74E-09	1.13E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-10	4.87E-08	1.82E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-09	8.44E-08	2.04E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-08	3.41E-07	3.27E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	8.22E-07	4.83E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-07	1.65E-06	7.39E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-07	2.50E-06	1.14E-05
1.68E+03	0.00E+00	0.00E+00	0.00E+00	6.84E-17	1.55E-06	3.20E-06	1.49E-05
1.86E+03	0.00E+00	0.00E+00	0.00E+00	3.50E-13	2.31E-06	4.52E-06	1.66E-05
2.05E+03	0.00E+00	0.00E+00	0.00E+00	1.61E-10	3.20E-06	5.59E-06	1.98E-05
2.26E+03	0.00E+00	0.00E+00	0.00E+00	5.70E-09	4.00E-06	7.47E-06	1.93E-05
2.50E+03	0.00E+00	0.00E+00	0.00E+00	4.12E-08	5.06E-06	8.82E-06	2.09E-05
2.76E+03	0.00E+00	0.00E+00	0.00E+00	1.32E-07	5.57E-06	9.93E-06	2.23E-05
3.00E+03	0.00E+00	0.00E+00	0.00E+00	2.75E-07	5.95E-06	1.05E-05	2.13E-05
3.05E+03	0.00E+00	0.00E+00	0.00E+00	2.92E-07	6.27E-06	1.06E-05	2.09E-05
3.36E+03	0.00E+00	0.00E+00	0.00E+00	4.53E-07	6.18E-06	1.06E-05	2.26E-05
3.71E+03	0.00E+00	0.00E+00	0.00E+00	5.14E-07	5.99E-06	1.07E-05	2.39E-05
4.10E+03	0.00E+00	0.00E+00	0.00E+00	5.23E-07	6.41E-06	1.01E-05	2.17E-05
4.53E+03	0.00E+00	0.00E+00	0.00E+00	4.77E-07	6.11E-06	9.13E-06	2.04E-05
5.00E+03	0.00E+00	0.00E+00	0.00E+00	3.87E-07	5.09E-06	8.14E-06	1.89E-05
5.52E+03	0.00E+00	0.00E+00	0.00E+00	2.89E-07	4.22E-06	7.34E-06	1.87E-05
6.09E+03	0.00E+00	0.00E+00	0.00E+00	1.98E-07	3.14E-06	5.61E-06	1.47E-05
6.73E+03	0.00E+00	0.00E+00	0.00E+00	1.27E-07	2.29E-06	4.14E-06	1.09E-05
7.43E+03	0.00E+00	0.00E+00	0.00E+00	7.39E-08	1.46E-06	3.06E-06	8.51E-06
8.20E+03	0.00E+00	0.00E+00	0.00E+00	3.37E-08	9.53E-07	1.94E-06	5.87E-06
9.06E+03	0.00E+00	0.00E+00	0.00E+00	1.52E-08	5.40E-07	1.18E-06	3.72E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	6.64E-09	3.07E-07	7.01E-07	2.14E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	6.63E-09	3.07E-07	7.01E-07	2.14E-06
1.10E+04	0.00E+00	0.00E+00	0.00E+00	2.44E-09	1.58E-07	3.47E-07	1.07E-06
1.22E+04	0.00E+00	0.00E+00	0.00E+00	8.24E-10	7.53E-08	1.68E-07	4.96E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	2.56E-10	3.18E-08	7.67E-08	2.73E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	7.07E-11	1.25E-08	3.59E-08	1.36E-07
1.64E+04	0.00E+00	0.00E+00	0.00E+00	1.59E-11	4.37E-09	1.50E-08	6.75E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	3.88E-12	1.46E-09	4.96E-09	2.82E-08
2.00E+04	0.00E+00	6.62E-19	1.10E-16	9.58E-13	4.52E-10	1.77E-09	1.30E-08

Cadmium

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-20
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-14
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-12
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-11
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-11
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-10
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-10
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-09
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-09
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-09
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-09
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-09
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-09
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-09
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.64E-18	3.73E-09
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-16	6.03E-09
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-14	9.23E-09
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-14	8.40E-09
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-13	9.04E-09
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-12	1.10E-08
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E-12	1.79E-08
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-11	1.66E-08
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-11	2.23E-08
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-10	3.02E-08
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-10	3.77E-08
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-10	3.65E-08
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-10	3.92E-08
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-10	4.66E-08
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-10	4.13E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-10	4.30E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-10	4.30E-08
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-10	4.67E-08
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-10	5.71E-08
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-10	6.51E-08
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E-11	7.49E-08
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-19	3.52E-11	9.89E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E-19	1.79E-11	9.17E-08
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-19	1.25E-11	8.65E-08

Chloride

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-17	9.97E-17	9.47E-15
2.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-16	4.07E-10	1.15E-09	4.33E-08
3.00E+00	0.00E+00	0.00E+00	6.52E-08	1.01E-05	1.90E-04	3.02E-04	6.06E-04
4.00E+00	3.37E-06	1.64E-05	4.09E-05	7.45E-04	4.74E-03	6.45E-03	1.11E-02
5.00E+00	6.40E-05	2.60E-04	6.03E-04	8.44E-03	3.26E-02	4.14E-02	6.19E-02
6.00E+00	1.17E-03	3.72E-03	6.24E-03	3.08E-02	7.94E-02	1.02E-01	1.39E-01
7.00E+00	7.22E-03	1.27E-02	1.71E-02	5.98E-02	1.36E-01	1.65E-01	2.19E-01
8.00E+00	9.85E-03	1.61E-02	2.12E-02	7.82E-02	1.86E-01	2.17E-01	2.67E-01
9.00E+00	8.50E-03	1.47E-02	1.99E-02	7.51E-02	2.24E-01	2.64E-01	3.31E-01
1.00E+01	7.09E-03	1.22E-02	1.67E-02	6.28E-02	2.23E-01	2.84E-01	3.86E-01
1.10E+01	6.77E-03	1.08E-02	1.42E-02	5.50E-02	2.05E-01	2.80E-01	4.12E-01
1.30E+01	6.58E-03	1.02E-02	1.32E-02	5.20E-02	1.73E-01	2.48E-01	4.17E-01
1.40E+01	6.31E-03	9.86E-03	1.28E-02	5.01E-02	1.68E-01	2.38E-01	4.00E-01
1.60E+01	5.57E-03	9.37E-03	1.22E-02	4.80E-02	1.58E-01	2.23E-01	3.76E-01
1.70E+01	5.20E-03	9.11E-03	1.19E-02	4.68E-02	1.54E-01	2.21E-01	3.69E-01
1.90E+01	5.07E-03	8.69E-03	1.13E-02	4.47E-02	1.47E-01	2.13E-01	3.56E-01
2.10E+01	4.65E-03	8.18E-03	1.05E-02	4.28E-02	1.41E-01	2.04E-01	3.42E-01
2.30E+01	4.17E-03	7.66E-03	1.02E-02	4.05E-02	1.35E-01	1.95E-01	3.29E-01
2.60E+01	3.94E-03	7.17E-03	9.73E-03	3.92E-02	1.30E-01	1.81E-01	3.06E-01
2.80E+01	3.62E-03	6.62E-03	9.29E-03	3.78E-02	1.27E-01	1.79E-01	2.96E-01
3.20E+01	3.15E-03	6.03E-03	8.65E-03	3.51E-02	1.19E-01	1.66E-01	2.73E-01
3.50E+01	2.81E-03	5.47E-03	7.92E-03	3.34E-02	1.12E-01	1.57E-01	2.60E-01
3.90E+01	2.04E-03	4.99E-03	7.35E-03	3.11E-02	1.06E-01	1.46E-01	2.45E-01
4.30E+01	1.68E-03	4.56E-03	6.62E-03	2.89E-02	1.01E-01	1.38E-01	2.31E-01
4.70E+01	1.29E-03	3.95E-03	6.04E-03	2.64E-02	9.37E-02	1.27E-01	2.20E-01
5.20E+01	9.23E-04	3.28E-03	5.09E-03	2.41E-02	8.61E-02	1.17E-01	2.06E-01
5.70E+01	6.49E-04	2.77E-03	4.51E-03	2.15E-02	7.86E-02	1.05E-01	1.92E-01
6.40E+01	4.45E-04	2.34E-03	3.84E-03	1.89E-02	7.06E-02	9.31E-02	1.75E-01
7.00E+01	3.08E-04	1.83E-03	3.24E-03	1.69E-02	6.44E-02	8.43E-02	1.64E-01
7.80E+01	2.04E-04	1.51E-03	2.81E-03	1.52E-02	5.91E-02	7.79E-02	1.53E-01
8.60E+01	1.29E-04	1.15E-03	2.37E-03	1.35E-02	5.22E-02	7.00E-02	1.40E-01
9.50E+01	9.11E-05	8.94E-04	2.00E-03	1.21E-02	4.76E-02	6.48E-02	1.29E-01
1.05E+02	4.93E-05	6.65E-04	1.62E-03	1.06E-02	4.28E-02	5.87E-02	1.17E-01
1.16E+02	2.16E-05	4.64E-04	1.25E-03	8.95E-03	3.75E-02	5.12E-02	1.04E-01
1.28E+02	8.88E-06	3.09E-04	9.02E-04	7.36E-03	3.21E-02	4.30E-02	9.20E-02
1.41E+02	3.41E-06	2.02E-04	6.49E-04	6.06E-03	2.74E-02	3.69E-02	8.09E-02
1.56E+02	1.06E-06	1.17E-04	4.26E-04	4.72E-03	2.26E-02	3.05E-02	6.73E-02
1.72E+02	3.38E-07	5.90E-05	2.72E-04	3.69E-03	1.85E-02	2.55E-02	5.60E-02
1.90E+02	1.08E-07	2.84E-05	1.50E-04	2.76E-03	1.50E-02	2.06E-02	4.64E-02
2.10E+02	3.23E-08	1.32E-05	8.36E-05	2.01E-03	1.18E-02	1.63E-02	3.73E-02
2.32E+02	8.76E-09	5.17E-06	4.66E-05	1.45E-03	9.01E-03	1.28E-02	2.89E-02
2.56E+02	2.12E-09	2.07E-06	2.10E-05	9.88E-04	6.61E-03	9.94E-03	2.30E-02
2.82E+02	4.49E-10	7.08E-07	9.22E-06	6.33E-04	4.95E-03	7.40E-03	1.91E-02
3.00E+02	7.77E-11	2.03E-07	3.77E-06	4.23E-04	3.55E-03	5.63E-03	1.55E-02
3.12E+02	1.29E-11	6.35E-08	1.51E-06	2.53E-04	2.48E-03	3.92E-03	1.15E-02
3.44E+02	2.30E-12	1.73E-08	5.66E-07	1.45E-04	1.78E-03	2.73E-03	8.35E-03
3.80E+02	4.26E-13	4.28E-09	1.57E-07	8.02E-05	1.14E-03	1.80E-03	6.00E-03
4.20E+02	7.88E-14	9.16E-10	4.46E-08	4.24E-05	7.70E-04	1.20E-03	4.13E-03
4.64E+02	1.58E-14	1.76E-10	1.12E-08	2.00E-05	4.87E-04	7.57E-04	2.72E-03
5.12E+02	4.13E-15	3.53E-11	2.76E-09	1.06E-05	3.15E-04	4.96E-04	1.81E-03
5.65E+02	9.40E-16	1.09E-11	9.55E-10	6.24E-06	2.23E-04	3.73E-04	1.30E-03
6.24E+02	2.05E-16	3.24E-12	3.62E-10	3.36E-06	1.48E-04	2.61E-04	8.46E-04
6.89E+02	2.41E-15	2.63E-13	4.98E-11	1.27E-06	7.58E-05	1.43E-04	4.55E-04
7.61E+02	0.00E+00	3.72E-14	4.61E-12	4.43E-07	3.82E-05	7.22E-05	2.54E-04
8.40E+02	0.00E+00	0.00E+00	6.19E-13	1.34E-07	1.71E-05	3.43E-05	1.20E-04
9.28E+02	0.00E+00	0.00E+00	1.55E-13	3.42E-08	7.11E-06	1.59E-05	5.66E-05
1.00E+03	0.00E+00	0.00E+00	1.13E-13	9.52E-09	2.70E-06	6.70E-06	2.60E-05
1.02E+03	0.00E+00	0.00E+00	6.60E-13	3.56E-09	9.36E-07	2.69E-06	1.10E-05
1.13E+03	0.00E+00	3.42E-14	2.14E-12	1.66E-09	2.96E-07	1.06E-06	4.67E-06
1.25E+03	0.00E+00	4.18E-14	2.07E-12	6.77E-10	8.87E-08	3.81E-07	1.72E-06
1.38E+03	0.00E+00	6.98E-15	3.13E-13	1.97E-10	3.24E-08	1.24E-07	5.75E-07
1.52E+03	0.00E+00	3.35E-15	1.37E-13	1.28E-10	1.25E-08	3.67E-08	1.81E-07
1.68E+03	2.45E-16	5.52E-15	9.21E-14	7.10E-11	5.19E-09	1.20E-08	6.12E-08
1.86E+03	2.10E-16	3.35E-15	3.46E-14	1.74E-11	1.30E-09	4.12E-09	2.27E-08
2.05E+03	0.00E+00	1.34E-15	7.85E-15	3.17E-12	1.91E-10	1.17E-09	8.79E-09
2.26E+03	0.00E+00	3.10E-16	2.01E-15	7.02E-13	2.31E-11	6.70E-11	1.33E-09
2.50E+03	0.00E+00	0.00E+00	1.48E-18	1.91E-13	1.02E-11	2.02E-11	1.29E-10
2.76E+03	0.00E+00	0.00E+00	0.00E+00	2.69E-15	3.84E-12	8.73E-12	4.46E-11
3.00E+03	0.00E+00	0.00E+00	0.00E+00	5.16E-15	8.71E-13	2.70E-12	1.92E-11
3.05E+03	0.00E+00	0.00E+00	0.00E+00	2.70E-15	1.02E-13	5.01E-13	2.00E-12
3.36E+03	0.00E+00	0.00E+00	0.00E+00	3.10E-16	3.14E-14	9.08E-14	3.24E-13
3.71E+03	0.00E+00	0.00E+00	0.00E+00	1.04E-16	4.39E-15	1.22E-14	4.66E-14
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.67E-16	2.44E-15	4.12E-15	1.69E-14
4.53E+03	0.00E+00	0.00E+00	5.50E-17	8.54E-16	4.72E-15	6.86E-15	1.40E-14
5.00E+03	0.00E+00	3.62E-17	1.80E-16	1.35E-15	6.14E-15	9.39E-15	1.85E-14
5.52E+03	0.00E+00	0.00E+00	0.00E+00	2.83E-16	3.74E-15	6.36E-15	1.49E-14
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-15	6.00E-15	1.65E-14
6.73E+03	0.00E+00	0.00E+00	0.00E+00	1.51E-15	1.17E-14	1.89E-14	3.96E-14
7.43E+03	0.00E+00	0.00E+00	0.00E+00	1.24E-14	5.76E-14	8.27E-14	1.42E-13
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-14	7.34E-14	3.61E-13
9.06E+03	0.00E+00	0.00E+00	0.00E+00	3.95E-14	2.59E-13	4.09E-13	8.61E-13
1.00E+04	0.00E+00	0.00E+00	5.31E-15	2.27E-13	1.11E-12	1.79E-12	3.38E-12
1.00E+04	0.00E+00	6.89E-18	1.12E-14	1.76E-13	5.07E-13	6.62E-13	1.03E-12
1.10E+04	0.00E+00	3.01E-15	1.31E-14	1.23E-13	6.72E-13	1.05E-12	2.13E-12
1.22E+04	0.00E+00	6.14E-16	4.17E-15	8.23E-14	4.90E-13	7.84E-13	1.48E-12
1.35E+04	0.00E+00	2.36E-17	1.67E-15	6.82E-14	4.95E-13	7.06E-13	1.61E-12
1.49E+04	0.00E+00	1.41E-17	1.65E-16	9.21E-14	5.94E-13	8.34E-13	1.91E-12
1.64E+04	0.00E+00	9.70E-17	3.08E-16	6.33E-14	5.10E-13	8.66E-13	2.71E-12
1.81E+04	0.00E+00	0.00E+00	2.96E-17	4.33E-16	2.36E-15	3.78E-15	7.23E-15
2.00E+04	0.00E+00	0.00E+00	0.00E+00	3.08E-16	2.38E-15	4.22E-15	8.77E-15

Copper

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Lead

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mercury

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-19
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.33E-18
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-16
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-15
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-14
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-13
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-12
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-12
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-11
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-11
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-10
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E-10
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-09
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E-09
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-09

Sulphate

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-17	2.09E-16	1.91E-14
2.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-15	8.99E-10	2.93E-09	6.56E-08
3.00E+00	0.00E+00	0.00E+00	1.57E-07	2.32E-05	4.19E-04	7.02E-04	1.28E-03
4.00E+00	7.89E-06	3.62E-05	8.88E-05	1.71E-03	1.09E-02	1.48E-02	2.14E-02
5.00E+00	1.36E-04	5.96E-04	1.41E-03	1.97E-02	7.58E-02	9.02E-02	1.23E-01
6.00E+00	2.26E-03	8.90E-03	1.44E-02	7.23E-02	1.80E-01	2.22E-01	2.93E-01
7.00E+00	1.67E-02	2.97E-02	4.06E-02	1.37E-01	2.97E-01	3.62E-01	4.63E-01
8.00E+00	2.35E-02	3.76E-02	5.13E-02	1.84E-01	4.17E-01	4.76E-01	6.09E-01
9.00E+00	2.06E-02	3.41E-02	4.71E-02	1.79E-01	4.99E-01	5.68E-01	7.49E-01
1.00E+01	1.80E-02	2.89E-02	3.85E-02	1.51E-01	5.25E-01	6.50E-01	8.28E-01
1.10E+01	1.66E-02	2.57E-02	3.51E-02	1.37E-01	4.87E-01	6.64E-01	8.90E-01
1.30E+01	1.62E-02	2.45E-02	3.39E-02	1.30E-01	4.19E-01	6.08E-01	8.58E-01
1.40E+01	1.60E-02	2.41E-02	3.35E-02	1.29E-01	4.10E-01	5.86E-01	8.34E-01
1.60E+01	1.56E-02	2.36E-02	3.26E-02	1.26E-01	3.98E-01	5.59E-01	8.04E-01
1.70E+01	1.53E-02	2.34E-02	3.21E-02	1.24E-01	3.95E-01	5.52E-01	7.92E-01
1.90E+01	1.49E-02	2.28E-02	3.14E-02	1.21E-01	3.85E-01	5.44E-01	7.78E-01
2.10E+01	1.45E-02	2.21E-02	3.05E-02	1.19E-01	3.75E-01	5.24E-01	7.63E-01
2.30E+01	1.38E-02	2.16E-02	2.97E-02	1.14E-01	3.63E-01	5.11E-01	7.49E-01
2.60E+01	1.36E-02	2.11E-02	2.85E-02	1.12E-01	3.54E-01	4.98E-01	7.31E-01
2.80E+01	1.32E-02	2.07E-02	2.76E-02	1.10E-01	3.50E-01	4.93E-01	7.23E-01
3.20E+01	1.29E-02	2.01E-02	2.68E-02	1.07E-01	3.36E-01	4.70E-01	7.03E-01
3.50E+01	1.20E-02	1.95E-02	2.61E-02	1.04E-01	3.27E-01	4.58E-01	6.90E-01
3.90E+01	1.14E-02	1.88E-02	2.54E-02	1.01E-01	3.16E-01	4.43E-01	6.70E-01
4.30E+01	1.06E-02	1.79E-02	2.44E-02	9.70E-02	3.04E-01	4.24E-01	6.51E-01
4.70E+01	9.75E-03	1.67E-02	2.28E-02	9.33E-02	2.91E-01	4.07E-01	6.31E-01
5.20E+01	8.86E-03	1.54E-02	2.17E-02	8.77E-02	2.79E-01	3.86E-01	6.10E-01
5.70E+01	7.68E-03	1.44E-02	2.02E-02	8.23E-02	2.66E-01	3.66E-01	5.88E-01
6.40E+01	6.26E-03	1.29E-02	1.84E-02	7.66E-02	2.52E-01	3.44E-01	5.61E-01
7.00E+01	4.87E-03	1.21E-02	1.71E-02	7.19E-02	2.38E-01	3.22E-01	5.37E-01
7.80E+01	4.04E-03	1.12E-02	1.60E-02	6.81E-02	2.28E-01	3.07E-01	5.13E-01
8.60E+01	3.42E-03	1.00E-02	1.46E-02	6.28E-02	2.18E-01	2.87E-01	4.82E-01
9.50E+01	2.95E-03	8.84E-03	1.35E-02	5.92E-02	2.08E-01	2.72E-01	4.60E-01
1.05E+02	2.07E-03	7.88E-03	1.21E-02	5.47E-02	1.94E-01	2.55E-01	4.36E-01
1.16E+02	1.42E-03	6.84E-03	1.07E-02	5.02E-02	1.79E-01	2.39E-01	4.07E-01
1.28E+02	1.04E-03	5.77E-03	9.35E-03	4.51E-02	1.62E-01	2.26E-01	3.77E-01
1.41E+02	7.57E-04	4.46E-03	8.03E-03	4.05E-02	1.49E-01	2.06E-01	3.49E-01
1.56E+02	4.97E-04	3.47E-03	6.47E-03	3.54E-02	1.31E-01	1.87E-01	3.21E-01
1.72E+02	3.19E-04	2.62E-03	5.19E-03	3.10E-02	1.17E-01	1.63E-01	2.90E-01
1.90E+02	1.79E-04	1.86E-03	4.16E-03	2.64E-02	1.02E-01	1.48E-01	2.61E-01
2.10E+02	8.09E-05	1.34E-03	3.25E-03	2.29E-02	8.97E-02	1.32E-01	2.33E-01
2.32E+02	3.37E-05	9.22E-04	2.42E-03	1.92E-02	7.66E-02	1.11E-01	2.11E-01
2.56E+02	1.29E-05	5.56E-04	1.72E-03	1.59E-02	6.68E-02	9.68E-02	1.90E-01
2.82E+02	4.50E-06	3.19E-04	1.16E-03	1.27E-02	5.62E-02	8.18E-02	1.67E-01
3.00E+02	1.46E-06	1.81E-04	7.34E-04	9.93E-03	4.64E-02	6.72E-02	1.37E-01
3.12E+02	4.96E-07	1.01E-04	4.70E-04	7.49E-03	3.86E-02	5.34E-02	1.11E-01
3.44E+02	1.59E-07	4.71E-05	2.82E-04	5.53E-03	3.17E-02	4.34E-02	8.93E-02
3.80E+02	4.73E-08	2.02E-05	1.55E-04	4.06E-03	2.51E-02	3.45E-02	7.53E-02
4.20E+02	1.26E-08	8.44E-06	8.34E-05	2.92E-03	1.93E-02	2.76E-02	6.25E-02
4.64E+02	3.00E-09	3.44E-06	4.42E-05	2.09E-03	1.49E-02	2.19E-02	5.27E-02
5.12E+02	7.96E-10	1.32E-06	2.27E-05	1.56E-03	1.17E-02	1.74E-02	4.53E-02
5.65E+02	2.94E-10	7.07E-07	1.43E-05	1.19E-03	9.56E-03	1.47E-02	3.79E-02
6.24E+02	9.56E-11	3.31E-07	6.80E-06	8.48E-04	7.36E-03	1.17E-02	3.03E-02
6.89E+02	1.35E-11	1.05E-07	2.56E-06	5.04E-04	5.30E-03	8.45E-03	2.28E-02
7.61E+02	1.53E-12	3.04E-08	9.51E-07	2.84E-04	3.69E-03	5.97E-03	1.68E-02
8.40E+02	1.97E-14	6.89E-09	2.54E-07	1.53E-04	2.46E-03	3.71E-03	1.15E-02
9.28E+02	3.57E-14	1.32E-09	6.83E-08	7.70E-05	1.55E-03	2.41E-03	7.62E-03
1.00E+03	0.00E+00	3.40E-10	1.97E-08	3.55E-05	9.06E-04	1.44E-03	4.86E-03
1.02E+03	0.00E+00	2.86E-10	7.44E-09	1.45E-05	5.23E-04	9.01E-04	2.92E-03
1.13E+03	2.17E-13	3.15E-10	2.95E-09	6.08E-06	2.74E-04	5.26E-04	1.73E-03
1.25E+03	6.93E-13	2.05E-10	1.09E-09	2.22E-06	1.46E-04	2.65E-04	9.57E-04
1.38E+03	0.00E+00	4.61E-11	3.15E-10	7.58E-07	7.18E-05	1.36E-04	4.79E-04
1.52E+03	0.00E+00	2.15E-11	2.92E-10	2.54E-07	3.25E-05	7.17E-05	2.54E-04
1.68E+03	2.31E-14	7.38E-12	1.55E-10	7.99E-08	1.54E-05	3.48E-05	1.31E-04
1.86E+03	2.95E-14	2.25E-12	3.82E-11	3.23E-08	8.42E-06	2.03E-05	7.76E-05
2.05E+03	4.61E-15	5.06E-13	6.31E-12	1.30E-08	4.70E-06	1.25E-05	5.25E-05
2.26E+03	1.40E-15	1.44E-13	1.41E-12	1.87E-09	1.63E-06	4.83E-06	2.08E-05
2.50E+03	0.00E+00	2.40E-14	2.95E-13	2.05E-10	4.78E-07	1.86E-06	7.95E-06
2.76E+03	0.00E+00	0.00E+00	1.13E-15	6.90E-11	1.35E-07	6.13E-07	2.72E-06
3.00E+03	0.00E+00	1.47E-16	6.02E-15	1.83E-11	3.43E-08	1.74E-07	8.32E-07
3.05E+03	0.00E+00	0.00E+00	1.81E-15	2.30E-12	6.81E-09	4.55E-08	2.39E-07
3.36E+03	0.00E+00	0.00E+00	0.00E+00	1.58E-13	1.42E-09	1.01E-08	6.09E-08
3.71E+03	0.00E+00	0.00E+00	0.00E+00	9.35E-15	2.15E-10	1.76E-09	1.30E-08
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.96E-15	1.99E-11	2.44E-10	2.34E-09
4.53E+03	0.00E+00	0.00E+00	2.41E-16	8.34E-15	2.45E-12	2.69E-11	3.23E-10
5.00E+03	0.00E+00	0.00E+00	7.39E-16	8.97E-15	4.46E-13	4.35E-12	3.39E-11
5.52E+03	0.00E+00	0.00E+00	0.00E+00	4.27E-15	8.24E-14	8.18E-13	1.35E-11
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-14	3.23E-13	8.42E-12
6.73E+03	0.00E+00	0.00E+00	0.00E+00	3.71E-15	4.80E-14	8.57E-14	6.60E-13
7.43E+03	0.00E+00	0.00E+00	1.97E-16	3.29E-14	1.58E-13	2.22E-13	3.96E-13
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-14	1.80E-13	4.18E-13
9.06E+03	0.00E+00	0.00E+00	0.00E+00	6.51E-14	5.05E-13	7.51E-13	1.46E-12
1.00E+04	0.00E+00	0.00E+00	5.62E-14	7.30E-13	3.32E-12	4.54E-12	9.62E-12
1.00E+04	0.00E+00	0.00E+00	2.67E-14	4.64E-13	1.30E-12	1.68E-12	2.53E-12
1.10E+04	0.00E+00	0.00E+00	1.03E-14	2.89E-13	1.62E-12	2.18E-12	5.13E-12
1.22E+04	0.00E+00	0.00E+00	4.86E-16	1.40E-13	1.20E-12	1.69E-12	5.11E-12
1.35E+04	0.00E+00	0.00E+00	4.38E-16	1.26E-13	9.79E-13	1.71E-12	5.28E-12
1.49E+04	0.00E+00	4.45E-18	2.18E-16	1.93E-13	1.62E-12	2.67E-12	8.93E-12
1.64E+04	7.66E-18	4.12E-16	1.17E-15	1.41E-13	1.50E-12	2.87E-12	8.95E-12
1.81E+04	0.00E+00	8.47E-17	2.03E-16	1.80E-15	9.17E-15	1.40E-14	3.08E-14
2.00E+04	0.00E+00	0.00E+00	0.00E+00	1.32E-15	8.04E-15	1.49E-14	3.73E-14

Zinc

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percen
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-18
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-16
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-14
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-12
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-11
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-10
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-09
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-09
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-08
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-07
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-07
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-07
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-07
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-06
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-06
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-18	2.00E-06
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-16	2.32E-06
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-14	2.64E-06
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-13	4.20E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-12	5.39E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.92E-12	5.17E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-11	3.57E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-10	4.33E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-09	5.23E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-09	4.22E-06
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-09	5.60E-06
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-08	5.54E-06
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-08	5.13E-06
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-08	4.76E-06
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-08	3.79E-06
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-08	3.60E-06
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-08	3.16E-06
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-08	3.16E-06
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-18	4.01E-08	2.36E-06
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-17	3.61E-08	2.13E-06
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.23E-17	2.49E-08	2.04E-06
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E-17	1.76E-08	2.36E-06
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-16	1.23E-08	2.05E-06
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-16	7.34E-09	2.19E-06
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-17	5.27E-09	1.67E-06
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-17	3.37E-09	1.11E-06
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-17	1.49E-09	7.18E-07
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-17	6.24E-10	4.71E-07
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-17	4.25E-10	3.24E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-17	1.49E-10	2.68E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-17	1.49E-10	2.68E-07
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-17	6.24E-11	1.63E-07
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-17	1.32E-11	1.10E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-17	4.19E-12	6.45E-08
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-16	8.25E-13	2.80E-08
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-16	1.68E-13	1.82E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-16	4.07E-14	9.77E-09
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-16	1.32E-14	3.48E-09

cLHRA

Ammoniacal N

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-18
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-20	7.21E-17
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-19	5.84E-14
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.59E-19	2.89E-16	5.81E-12
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-15	3.59E-13	1.62E-10
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-13	2.16E-11	2.51E-09
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-10	2.11E-09	9.09E-08
1.40E+01	0.00E+00	0.00E+00	0.00E+00	1.10E-18	4.32E-10	7.51E-09	1.98E-07
1.60E+01	0.00E+00	0.00E+00	0.00E+00	1.99E-16	2.52E-09	4.70E-08	9.98E-07
1.70E+01	0.00E+00	0.00E+00	0.00E+00	1.58E-15	5.56E-09	1.06E-07	2.06E-06
1.90E+01	0.00E+00	0.00E+00	0.00E+00	3.40E-14	2.28E-08	3.69E-07	5.03E-06
2.10E+01	0.00E+00	0.00E+00	0.00E+00	5.79E-13	1.01E-07	9.91E-07	9.97E-06
2.30E+01	0.00E+00	0.00E+00	0.00E+00	2.79E-12	3.63E-07	2.15E-06	1.56E-05
2.60E+01	0.00E+00	0.00E+00	0.00E+00	1.07E-11	1.42E-06	6.25E-06	2.48E-05
2.80E+01	0.00E+00	0.00E+00	6.29E-19	2.76E-11	2.74E-06	9.98E-06	3.32E-05
3.20E+01	0.00E+00	0.00E+00	5.35E-17	1.37E-10	6.02E-06	2.01E-05	5.49E-05
3.50E+01	0.00E+00	1.62E-18	1.56E-15	1.37E-09	1.01E-05	2.85E-05	7.12E-05
3.90E+01	0.00E+00	5.21E-17	1.80E-14	2.02E-08	1.81E-05	3.72E-05	8.84E-05
4.30E+01	0.00E+00	2.64E-15	1.51E-13	1.15E-07	2.67E-05	4.60E-05	1.07E-04
4.70E+01	0.00E+00	1.95E-14	8.08E-13	4.75E-07	3.55E-05	5.74E-05	1.26E-04
5.20E+01	7.88E-19	2.44E-13	6.42E-12	1.59E-06	4.54E-05	7.53E-05	1.48E-04
5.70E+01	2.37E-18	1.36E-12	5.04E-11	3.48E-06	5.43E-05	8.69E-05	1.62E-04
6.40E+01	4.93E-16	7.05E-12	1.51E-09	6.71E-06	6.92E-05	9.89E-05	1.81E-04
7.00E+01	5.18E-15	5.37E-11	1.49E-08	9.55E-06	7.42E-05	1.13E-04	1.87E-04
7.80E+01	1.51E-14	5.89E-10	1.07E-07	1.32E-05	8.38E-05	1.22E-04	1.93E-04
8.60E+01	1.89E-13	1.47E-08	4.29E-07	1.72E-05	9.20E-05	1.29E-04	2.19E-04
9.50E+01	1.13E-13	7.45E-08	1.17E-06	2.01E-05	9.19E-05	1.31E-04	2.37E-04
1.05E+02	2.78E-13	2.35E-07	2.01E-06	2.28E-05	9.70E-05	1.36E-04	2.42E-04
1.16E+02	1.83E-13	6.53E-07	2.56E-06	2.37E-05	9.89E-05	1.36E-04	2.51E-04
1.28E+02	9.56E-14	8.66E-07	2.81E-06	2.33E-05	9.86E-05	1.37E-04	2.34E-04
1.41E+02	4.65E-14	7.45E-07	2.65E-06	2.22E-05	9.34E-05	1.34E-04	2.54E-04
1.56E+02	2.02E-14	6.05E-07	2.33E-06	1.94E-05	8.96E-05	1.35E-04	2.34E-04
1.72E+02	1.37E-14	3.59E-07	1.74E-06	1.63E-05	7.94E-05	1.13E-04	2.19E-04
1.90E+02	8.66E-15	2.20E-07	1.18E-06	1.29E-05	6.51E-05	9.91E-05	1.94E-04
2.10E+02	1.93E-14	1.40E-07	6.93E-07	9.81E-06	5.18E-05	8.18E-05	1.63E-04
2.32E+02	9.62E-15	8.22E-08	3.80E-07	7.14E-06	4.05E-05	6.66E-05	1.45E-04
2.56E+02	4.42E-15	4.16E-08	1.97E-07	4.94E-06	3.19E-05	5.10E-05	1.08E-04
2.82E+02	1.88E-15	1.38E-08	9.12E-08	3.31E-06	2.31E-05	3.88E-05	8.18E-05
3.00E+02	8.70E-16	7.58E-09	4.37E-08	2.16E-06	1.80E-05	2.98E-05	6.62E-05
3.12E+02	6.25E-16	3.01E-09	1.98E-08	1.49E-06	1.43E-05	2.43E-05	5.65E-05
3.44E+02	2.90E-16	9.19E-10	8.68E-09	8.96E-07	9.27E-06	1.48E-05	3.66E-05
3.80E+02	1.64E-16	2.34E-10	2.87E-09	4.92E-07	6.15E-06	9.69E-06	2.59E-05
4.20E+02	8.97E-17	5.44E-11	9.77E-10	2.71E-07	3.90E-06	6.40E-06	1.54E-05
4.64E+02	4.78E-17	1.23E-11	2.90E-10	1.35E-07	2.41E-06	3.96E-06	1.03E-05
5.12E+02	2.23E-17	2.14E-12	7.39E-11	6.20E-08	1.48E-06	2.38E-06	6.95E-06
5.65E+02	2.33E-18	3.56E-13	2.06E-11	3.07E-08	8.33E-07	1.36E-06	4.15E-06
6.24E+02	0.00E+00	6.27E-14	8.20E-12	1.80E-08	5.65E-07	9.96E-07	3.21E-06
6.89E+02	0.00E+00	9.64E-15	1.58E-12	7.42E-09	3.09E-07	5.69E-07	1.93E-06
7.61E+02	8.81E-20	8.48E-16	2.17E-13	2.51E-09	1.57E-07	3.18E-07	1.08E-06
8.40E+02	0.00E+00	8.00E-17	2.44E-14	8.36E-10	7.54E-08	1.59E-07	5.41E-07
9.28E+02	0.00E+00	1.74E-17	2.03E-15	2.28E-10	3.32E-08	7.58E-08	2.50E-07
1.00E+03	0.00E+00	1.98E-18	1.02E-14	6.33E-11	1.29E-08	3.44E-08	1.22E-07
1.02E+03	0.00E+00	4.08E-17	1.46E-14	2.10E-11	5.81E-09	1.50E-08	6.52E-08
1.13E+03	0.00E+00	3.76E-16	1.12E-14	7.07E-12	1.82E-09	5.85E-09	2.19E-08
1.25E+03	0.00E+00	1.36E-16	4.20E-15	2.74E-12	5.81E-10	2.07E-09	8.10E-09
1.38E+03	0.00E+00	0.00E+00	4.32E-16	1.09E-12	1.66E-10	6.34E-10	2.88E-09
1.52E+03	0.00E+00	5.02E-17	4.60E-16	4.40E-13	4.96E-11	1.98E-10	9.33E-10
1.68E+03	0.00E+00	1.63E-18	2.69E-17	1.79E-13	1.46E-11	5.63E-11	2.76E-10
1.86E+03	0.00E+00	1.40E-18	3.11E-17	2.93E-14	4.87E-12	1.53E-11	8.76E-11
2.05E+03	0.00E+00	0.00E+00	2.72E-19	3.06E-15	1.01E-11	7.38E-11	5.77E-10
2.26E+03	0.00E+00	0.00E+00	7.70E-19	1.94E-15	1.36E-12	1.33E-11	1.19E-10
2.50E+03	0.00E+00	1.07E-19	2.83E-18	1.35E-15	4.71E-14	1.65E-12	2.35E-11
2.76E+03	0.00E+00	0.00E+00	0.00E+00	2.20E-17	2.18E-14	2.09E-13	3.63E-12
3.00E+03	0.00E+00	0.00E+00	0.00E+00	1.37E-17	1.04E-15	7.22E-15	4.09E-13
3.05E+03	0.00E+00	0.00E+00	0.00E+00	5.10E-18	1.55E-16	8.16E-16	3.90E-14
3.36E+03	0.00E+00	0.00E+00	0.00E+00	1.58E-18	1.77E-16	7.94E-16	4.23E-15
3.71E+03	0.00E+00	0.00E+00	0.00E+00	5.56E-19	2.69E-17	1.03E-16	5.65E-16
4.10E+03	0.00E+00	0.00E+00	0.00E+00	7.72E-19	8.32E-18	1.63E-17	1.41E-16
4.53E+03	0.00E+00	0.00E+00	4.86E-20	9.64E-19	9.35E-18	1.81E-17	7.05E-17
5.00E+03	0.00E+00	0.00E+00	0.00E+00	2.25E-19	3.36E-18	6.15E-18	2.25E-17
5.52E+03	0.00E+00	0.00E+00	0.00E+00	3.11E-19	3.97E-18	7.26E-18	2.09E-17
6.09E+03	0.00E+00	0.00E+00	0.00E+00	6.88E-19	6.98E-18	1.12E-17	2.79E-17
6.73E+03	0.00E+00	0.00E+00	0.00E+00	6.77E-19	8.33E-18	1.27E-17	3.10E-17
7.43E+03	0.00E+00	0.00E+00	0.00E+00	1.98E-18	2.54E-17	4.59E-17	1.47E-16
8.20E+03	0.00E+00	0.00E+00	0.00E+00	4.16E-18	5.10E-17	9.10E-17	2.34E-16
9.06E+03	0.00E+00	0.00E+00	0.00E+00	2.41E-17	1.62E-16	2.27E-16	4.25E-16
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.29E-18	1.57E-16	2.57E-16	5.05E-16
1.00E+04	0.00E+00	0.00E+00	0.00E+00	2.09E-17	1.34E-16	1.87E-16	4.03E-16
1.10E+04	0.00E+00	0.00E+00	0.00E+00	1.24E-17	1.26E-16	2.34E-16	5.80E-16
1.22E+04	0.00E+00	0.00E+00	0.00E+00	1.66E-17	1.65E-16	2.76E-16	7.41E-16
1.35E+04	0.00E+00	0.00E+00	0.00E+00	4.04E-17	1.72E-16	4.41E-16	9.06E-16
1.49E+04	0.00E+00	0.00E+00	0.00E+00	1.79E-17	2.58E-16	4.29E-16	1.05E-15
1.64E+04	0.00E+00	0.00E+00	0.00E+00	1.91E-16	1.44E-15	2.51E-15	5.49E-15
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-19	1.35E-18	3.11E-18
2.00E+04	0.00E+00	0.00E+00	0.00E+00	1.39E-19	2.75E-18	4.59E-18	1.33E-17

Arsenic

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-16
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-13
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-10
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-16	7.50E-08
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-12	2.86E-07
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-14	1.53E-10	5.16E-07
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-11	7.74E-09	1.13E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-10	4.87E-08	1.82E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-09	8.44E-08	2.04E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-08	3.41E-07	3.27E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	8.22E-07	4.83E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-07	1.65E-06	7.39E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-07	2.50E-06	1.14E-05
1.68E+03	0.00E+00	0.00E+00	0.00E+00	6.84E-17	1.55E-06	3.20E-06	1.49E-05
1.86E+03	0.00E+00	0.00E+00	0.00E+00	5.96E-13	2.39E-06	4.52E-06	1.68E-05
2.05E+03	0.00E+00	0.00E+00	0.00E+00	4.04E-08	6.86E-06	1.24E-05	3.21E-05
2.26E+03	0.00E+00	0.00E+00	1.06E-16	3.51E-07	1.72E-05	3.05E-05	6.27E-05
2.50E+03	0.00E+00	0.00E+00	4.69E-14	1.20E-06	3.06E-05	4.89E-05	9.63E-05
2.76E+03	0.00E+00	0.00E+00	7.57E-12	2.85E-06	4.14E-05	6.57E-05	1.35E-04
3.00E+03	0.00E+00	0.00E+00	2.76E-10	4.87E-06	4.72E-05	7.60E-05	1.53E-04
3.05E+03	0.00E+00	0.00E+00	4.23E-10	5.07E-06	4.79E-05	7.50E-05	1.59E-04
3.36E+03	0.00E+00	0.00E+00	3.64E-09	6.45E-06	5.31E-05	7.58E-05	1.75E-04
3.71E+03	0.00E+00	0.00E+00	3.13E-08	7.84E-06	5.36E-05	8.39E-05	1.74E-04
4.10E+03	0.00E+00	0.00E+00	5.52E-08	7.68E-06	5.47E-05	8.39E-05	1.91E-04
4.53E+03	0.00E+00	0.00E+00	5.95E-08	7.46E-06	5.25E-05	7.68E-05	1.71E-04
5.00E+03	0.00E+00	0.00E+00	3.20E-08	6.35E-06	4.94E-05	7.16E-05	1.67E-04
5.52E+03	0.00E+00	0.00E+00	1.41E-08	4.85E-06	4.26E-05	6.35E-05	1.55E-04
6.09E+03	0.00E+00	0.00E+00	6.60E-09	3.26E-06	3.29E-05	5.39E-05	1.18E-04
6.73E+03	0.00E+00	0.00E+00	1.67E-09	1.88E-06	2.38E-05	4.45E-05	9.43E-05
7.43E+03	0.00E+00	0.00E+00	5.80E-10	9.66E-07	1.54E-05	3.06E-05	7.07E-05
8.20E+03	0.00E+00	0.00E+00	1.52E-10	4.90E-07	1.00E-05	1.95E-05	5.26E-05
9.06E+03	0.00E+00	0.00E+00	4.14E-11	2.04E-07	5.75E-06	1.18E-05	3.34E-05
1.00E+04	0.00E+00	0.00E+00	9.94E-12	8.46E-08	3.11E-06	6.86E-06	1.90E-05
1.00E+04	0.00E+00	0.00E+00	8.82E-12	8.43E-08	3.11E-06	6.86E-06	1.69E-05
1.10E+04	0.00E+00	0.00E+00	9.03E-13	3.29E-08	1.54E-06	3.37E-06	9.36E-06
1.22E+04	0.00E+00	0.00E+00	2.01E-13	1.16E-08	7.46E-07	1.68E-06	4.57E-06
1.35E+04	0.00E+00	0.00E+00	1.63E-13	3.67E-09	3.17E-07	7.76E-07	2.56E-06
1.49E+04	0.00E+00	0.00E+00	2.36E-14	9.81E-10	1.26E-07	3.59E-07	1.36E-06
1.64E+04	0.00E+00	0.00E+00	4.91E-15	2.44E-10	4.34E-08	1.37E-07	6.26E-07
1.81E+04	0.00E+00	2.90E-17	1.86E-15	5.98E-11	1.49E-08	4.69E-08	2.72E-07
2.00E+04	0.00E+00	1.50E-17	1.02E-15	1.25E-11	4.51E-09	1.60E-08	1.23E-07

Cadmium

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-20
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-14
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-12
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-11
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-11
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-10
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-10
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-09
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-09
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-09
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-09
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-09
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-17	4.63E-09
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-15	5.97E-09
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-13	1.37E-08
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-12	1.94E-08
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-11	2.75E-08
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-11	3.03E-08
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-10	5.84E-08
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-18	5.37E-10	1.04E-07
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-16	1.25E-09	1.44E-07
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-15	1.99E-09	2.28E-07
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E-14	3.33E-09	2.79E-07
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-12	3.62E-09	3.83E-07
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-12	6.26E-09	4.50E-07
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-12	8.27E-09	4.72E-07
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E-12	7.82E-09	6.69E-07
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.53E-12	9.51E-09	1.13E-06
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-11	1.15E-08	1.24E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-11	1.08E-08	1.08E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-11	1.08E-08	1.08E-06
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-11	9.43E-09	8.54E-07
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-11	7.23E-09	7.44E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-12	5.19E-09	7.88E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-12	4.07E-09	8.28E-07
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E-13	2.97E-09	7.97E-07
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-14	2.14E-09	7.70E-07
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-14	1.46E-09	7.25E-07

Chloride

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-17	1.20E-16	1.50E-14
2.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-15	3.70E-10	1.02E-09	3.71E-08
3.00E+00	0.00E+00	0.00E+00	5.30E-08	9.08E-06	1.74E-04	2.74E-04	5.38E-04
4.00E+00	0.00E+00	1.08E-05	3.31E-05	7.32E-04	4.93E-03	6.72E-03	1.18E-02
5.00E+00	7.04E-05	4.02E-04	8.44E-04	9.38E-03	3.23E-02	4.10E-02	6.08E-02
6.00E+00	1.37E-03	4.05E-03	6.84E-03	3.08E-02	7.68E-02	9.84E-02	1.37E-01
7.00E+00	7.12E-03	1.29E-02	1.76E-02	6.06E-02	1.33E-01	1.59E-01	2.11E-01
8.00E+00	9.90E-03	1.65E-02	2.19E-02	7.86E-02	1.88E-01	2.16E-01	2.82E-01
9.00E+00	8.47E-03	1.51E-02	1.98E-02	7.51E-02	2.14E-01	2.68E-01	3.35E-01
1.00E+01	7.13E-03	1.22E-02	1.59E-02	6.39E-02	2.26E-01	2.86E-01	3.96E-01
1.10E+01	6.81E-03	1.08E-02	1.41E-02	5.56E-02	2.06E-01	2.84E-01	4.10E-01
1.30E+01	6.56E-03	1.01E-02	1.35E-02	5.17E-02	1.74E-01	2.52E-01	4.14E-01
1.40E+01	6.17E-03	9.82E-03	1.29E-02	5.02E-02	1.68E-01	2.39E-01	4.03E-01
1.60E+01	5.59E-03	9.31E-03	1.22E-02	4.80E-02	1.57E-01	2.25E-01	3.80E-01
1.70E+01	5.33E-03	9.12E-03	1.18E-02	4.69E-02	1.56E-01	2.20E-01	3.71E-01
1.90E+01	5.08E-03	8.71E-03	1.12E-02	4.48E-02	1.48E-01	2.12E-01	3.57E-01
2.10E+01	4.87E-03	8.24E-03	1.06E-02	4.29E-02	1.41E-01	2.04E-01	3.44E-01
2.30E+01	4.22E-03	7.77E-03	1.04E-02	4.16E-02	1.37E-01	1.97E-01	3.32E-01
2.60E+01	3.97E-03	7.25E-03	9.84E-03	3.97E-02	1.32E-01	1.87E-01	3.12E-01
2.80E+01	3.64E-03	6.62E-03	9.30E-03	3.80E-02	1.27E-01	1.81E-01	3.01E-01
3.20E+01	3.07E-03	6.03E-03	8.58E-03	3.52E-02	1.18E-01	1.64E-01	2.74E-01
3.50E+01	2.75E-03	5.36E-03	7.85E-03	3.33E-02	1.12E-01	1.57E-01	2.60E-01
3.90E+01	2.01E-03	4.98E-03	7.34E-03	3.10E-02	1.06E-01	1.46E-01	2.44E-01
4.30E+01	1.66E-03	4.95E-03	6.62E-03	2.88E-02	1.00E-01	1.37E-01	2.30E-01
4.70E+01	1.29E-03	3.91E-03	6.04E-03	2.64E-02	9.36E-02	1.27E-01	2.20E-01
5.20E+01	9.22E-04	3.28E-03	5.09E-03	2.41E-02	8.61E-02	1.17E-01	2.06E-01
5.70E+01	6.62E-04	2.79E-03	4.53E-03	2.16E-02	7.90E-02	1.06E-01	1.93E-01
6.40E+01	4.64E-04	2.38E-03	3.91E-03	1.92E-02	7.12E-02	9.38E-02	1.75E-01
7.00E+01	3.20E-04	1.87E-03	3.30E-03	1.69E-02	6.49E-02	8.52E-02	1.65E-01
7.80E+01	2.10E-04	1.53E-03	2.85E-03	1.53E-02	5.94E-02	7.87E-02	1.54E-01
8.60E+01	1.29E-04	1.15E-03	2.29E-03	1.35E-02	5.22E-02	7.03E-02	1.40E-01
9.50E+01	9.04E-05	9.16E-04	2.00E-03	1.22E-02	4.77E-02	6.49E-02	1.30E-01
1.05E+02	5.04E-05	6.81E-04	1.61E-03	1.06E-02	4.28E-02	5.89E-02	1.17E-01
1.16E+02	2.26E-05	4.70E-04	1.24E-03	8.93E-03	3.75E-02	5.10E-02	1.05E-01
1.28E+02	9.08E-06	3.20E-04	9.13E-04	7.40E-03	3.23E-02	4.31E-02	9.23E-02
1.41E+02	3.44E-06	2.05E-04	6.50E-04	6.07E-03	2.74E-02	3.68E-02	8.10E-02
1.56E+02	1.09E-06	1.18E-04	4.27E-04	4.74E-03	2.27E-02	3.06E-02	6.75E-02
1.72E+02	3.51E-07	5.96E-05	2.74E-04	3.69E-03	1.86E-02	2.55E-02	5.63E-02
1.90E+02	1.11E-07	2.92E-05	1.52E-04	2.79E-03	1.50E-02	2.05E-02	4.67E-02
2.10E+02	3.27E-08	1.34E-05	8.44E-05	2.02E-03	1.19E-02	1.63E-02	3.76E-02
2.32E+02	8.74E-09	5.27E-06	4.72E-05	1.46E-03	9.09E-03	1.30E-02	2.93E-02
2.56E+02	2.08E-09	2.06E-06	2.15E-05	9.91E-04	6.66E-03	9.95E-03	2.30E-02
2.82E+02	4.43E-10	7.14E-07	9.47E-06	6.38E-04	4.97E-03	7.42E-03	1.91E-02
3.00E+02	7.40E-11	2.06E-07	3.83E-06	4.27E-04	3.56E-03	5.63E-03	1.55E-02
3.12E+02	1.16E-11	6.39E-08	1.55E-06	2.54E-04	2.50E-03	3.93E-03	1.17E-02
3.44E+02	1.57E-12	1.75E-08	5.69E-07	1.46E-04	1.79E-03	2.75E-03	8.47E-03
3.80E+02	2.13E-13	4.27E-09	1.56E-07	8.00E-05	1.14E-03	1.79E-03	5.97E-03
4.20E+02	8.19E-14	9.00E-10	4.42E-08	4.19E-05	7.66E-04	1.19E-03	4.16E-03
4.64E+02	1.62E-14	1.71E-10	1.11E-08	1.98E-05	4.90E-04	7.59E-04	2.71E-03
5.12E+02	8.88E-15	3.24E-11	2.67E-09	1.05E-05	3.15E-04	4.96E-04	1.82E-03
5.65E+02	6.60E-15	1.04E-11	9.05E-10	6.19E-06	2.21E-04	3.71E-04	1.30E-03
6.24E+02	1.25E-15	3.19E-12	3.55E-10	3.32E-06	1.47E-04	2.60E-04	8.49E-04
6.89E+02	0.00E+00	2.95E-13	4.64E-11	1.25E-06	7.43E-05	1.42E-04	4.52E-04
7.61E+02	1.22E-14	7.09E-14	4.70E-12	4.28E-07	3.71E-05	7.21E-05	2.53E-04
8.40E+02	0.00E+00	0.00E+00	4.14E-13	1.31E-07	1.67E-05	3.39E-05	1.19E-04
9.28E+02	3.63E-14	1.42E-13	3.89E-13	3.47E-08	7.03E-06	1.58E-05	5.59E-05
1.00E+03	0.00E+00	1.93E-14	8.18E-13	9.25E-09	2.66E-06	4.62E-06	2.57E-05
1.02E+03	0.00E+00	0.00E+00	1.31E-12	3.74E-09	9.29E-07	2.69E-06	1.10E-05
1.13E+03	0.00E+00	2.53E-14	1.48E-12	1.67E-09	2.93E-07	1.04E-06	4.64E-06
1.25E+03	0.00E+00	3.53E-14	6.84E-13	6.84E-10	8.87E-08	3.81E-07	1.75E-06
1.38E+03	0.00E+00	4.41E-14	3.21E-13	2.47E-10	2.76E-08	1.21E-07	5.72E-07
1.52E+03	0.00E+00	6.87E-14	2.57E-13	1.13E-10	1.07E-08	3.64E-08	1.70E-07
1.68E+03	0.00E+00	3.80E-15	6.03E-14	4.45E-11	5.20E-09	1.43E-08	8.53E-08
1.86E+03	0.00E+00	1.10E-15	1.73E-14	1.51E-11	2.52E-09	1.21E-08	8.13E-08
2.05E+03	0.00E+00	3.90E-16	3.10E-15	3.09E-12	1.57E-09	1.20E-08	8.26E-08
2.26E+03	0.00E+00	1.17E-16	1.18E-15	8.32E-13	1.28E-10	1.80E-09	1.62E-08
2.50E+03	0.00E+00	2.02E-16	1.09E-15	3.34E-13	1.42E-11	2.06E-10	2.62E-09
2.76E+03	0.00E+00	0.00E+00	0.00E+00	5.92E-15	4.64E-12	2.86E-11	3.64E-10
3.00E+03	0.00E+00	0.00E+00	0.00E+00	4.36E-15	4.39E-13	2.33E-12	2.80E-11
3.05E+03	0.00E+00	0.00E+00	0.00E+00	9.85E-16	9.24E-14	3.12E-13	3.73E-12
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-14	1.74E-13	1.22E-12
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-15	5.96E-15	1.38E-13
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.48E-16	2.63E-15	5.19E-15	2.40E-14
4.53E+03	0.00E+00	0.00E+00	0.00E+00	6.95E-16	4.50E-15	7.02E-15	2.39E-14
5.00E+03	0.00E+00	0.00E+00	0.00E+00	6.31E-16	3.78E-15	6.10E-15	1.49E-14
5.52E+03	0.00E+00	0.00E+00	0.00E+00	5.08E-16	4.04E-15	6.61E-15	1.58E-14
6.09E+03	0.00E+00	0.00E+00	0.00E+00	1.44E-15	9.31E-15	1.42E-14	3.16E-14
6.73E+03	0.00E+00	0.00E+00	0.00E+00	1.65E-15	1.97E-14	2.95E-14	7.38E-14
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-14	3.90E-14	1.04E-13
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-14	7.00E-14	1.94E-13
9.06E+03	0.00E+00	0.00E+00	0.00E+00	6.51E-14	3.58E-13	4.89E-13	9.31E-13
1.00E+04	0.00E+00	0.00E+00	0.00E+00	6.73E-14	6.94E-13	1.04E-12	1.89E-12
1.00E+04	0.00E+00	0.00E+00	5.92E-17	1.43E-13	5.52E-13	7.61E-13	1.26E-12
1.10E+04	0.00E+00	3.05E-15	9.05E-15	1.16E-13	6.85E-13	1.03E-12	2.11E-12
1.22E+04	5.62E-16	6.47E-15	1.43E-14	1.15E-13	5.82E-13	8.99E-13	1.91E-12
1.35E+04	8.40E-16	1.33E-14	2.90E-14	1.79E-13	8.09E-13	1.15E-12	2.35E-12
1.49E+04	1.51E-17	1.03E-14	2.77E-14	2.08E-13	9.68E-13	1.38E-12	2.43E-12
1.64E+04	0.00E+00	2.02E-16	2.70E-15	1.19E-13	7.26E-13	1.11E-12	2.36E-12
1.81E+04	0.00E+00	0.00E+00	0.00E+00	3.08E-16	1.98E-15	2.91E-15	5.75E-15
2.00E+04	0.00E+00	0.00E+00	0.00E+00	2.54E-16	2.48E-15	4.50E-15	1.10E-14

Copper

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Lead

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mercury

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-15
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-13
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-12
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-11
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-19	2.26E-10
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-17	1.20E-09
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-15	4.84E-09
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-14	1.18E-08
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-13	2.32E-08
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E-19	3.71E-12	2.84E-08
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-17	2.24E-11	6.03E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-15	1.35E-10	9.07E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-15	1.35E-10	9.07E-08
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-14	4.95E-10	1.25E-07
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-13	1.00E-09	1.48E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-12	2.73E-09	2.19E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-11	6.36E-09	3.09E-07
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-10	1.17E-08	3.16E-07
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-10	1.95E-08	4.63E-07
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.84E-10	2.82E-08	6.34E-07

Sulphate

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-17	2.34E-16	3.07E-14
2.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-15	8.56E-10	2.47E-09	6.32E-08
3.00E+00	0.00E+00	0.00E+00	1.31E-07	2.12E-05	3.96E-04	6.29E-04	1.11E-03
4.00E+00	0.00E+00	2.76E-05	7.39E-05	1.72E-03	1.12E-02	1.53E-02	2.26E-02
5.00E+00	1.61E-04	8.61E-04	1.91E-03	2.14E-02	7.46E-02	8.86E-02	1.21E-01
6.00E+00	2.69E-03	1.02E-02	1.60E-02	7.14E-02	1.75E-01	2.12E-01	2.84E-01
7.00E+00	1.85E-02	3.10E-02	4.21E-02	1.42E-01	2.93E-01	3.51E-01	4.53E-01
8.00E+00	2.36E-02	3.84E-02	5.27E-02	1.87E-01	4.16E-01	4.80E-01	5.98E-01
9.00E+00	2.06E-02	3.44E-02	4.83E-02	1.80E-01	5.02E-01	5.99E-01	7.47E-01
1.00E+01	1.80E-02	2.91E-02	3.98E-02	1.54E-01	5.29E-01	6.65E-01	8.41E-01
1.10E+01	1.68E-02	2.59E-02	3.55E-02	1.39E-01	4.91E-01	6.77E-01	9.08E-01
1.30E+01	1.63E-02	2.46E-02	3.40E-02	1.31E-01	4.22E-01	6.12E-01	8.76E-01
1.40E+01	1.61E-02	2.42E-02	3.34E-02	1.29E-01	4.12E-01	5.91E-01	8.44E-01
1.60E+01	1.56E-02	2.37E-02	3.30E-02	1.26E-01	3.99E-01	5.65E-01	8.06E-01
1.70E+01	1.54E-02	2.34E-02	3.21E-02	1.25E-01	3.96E-01	5.55E-01	7.96E-01
1.90E+01	1.49E-02	2.29E-02	3.14E-02	1.22E-01	3.86E-01	5.46E-01	7.80E-01
2.10E+01	1.45E-02	2.22E-02	3.06E-02	1.19E-01	3.76E-01	5.25E-01	7.64E-01
2.30E+01	1.43E-02	2.20E-02	3.00E-02	1.16E-01	3.67E-01	5.16E-01	7.53E-01
2.60E+01	1.37E-02	2.13E-02	2.90E-02	1.13E-01	3.56E-01	5.04E-01	7.36E-01
2.80E+01	1.32E-02	2.07E-02	2.77E-02	1.11E-01	3.50E-01	4.97E-01	7.27E-01
3.20E+01	1.28E-02	2.00E-02	2.67E-02	1.07E-01	3.37E-01	4.70E-01	7.02E-01
3.50E+01	1.20E-02	1.94E-02	2.61E-02	1.04E-01	3.26E-01	4.57E-01	6.89E-01
3.90E+01	1.14E-02	1.88E-02	2.53E-02	1.00E-01	3.16E-01	4.42E-01	6.69E-01
4.30E+01	1.06E-02	1.79E-02	2.43E-02	9.69E-02	3.03E-01	4.24E-01	6.50E-01
4.70E+01	9.75E-03	1.66E-02	2.28E-02	9.10E-02	2.91E-01	4.07E-01	6.30E-01
5.20E+01	8.85E-03	1.54E-02	2.17E-02	8.78E-02	2.79E-01	3.86E-01	6.10E-01
5.70E+01	7.74E-03	1.44E-02	2.02E-02	8.31E-02	2.67E-01	3.67E-01	5.89E-01
6.40E+01	6.41E-03	1.29E-02	1.86E-02	7.73E-02	2.53E-01	3.47E-01	5.63E-01
7.00E+01	4.98E-03	1.22E-02	1.72E-02	7.23E-02	2.39E-01	3.25E-01	5.38E-01
7.80E+01	4.09E-03	1.12E-02	1.61E-02	6.85E-02	2.29E-01	3.08E-01	5.16E-01
8.60E+01	3.44E-03	1.00E-02	1.46E-02	6.28E-02	2.18E-01	2.88E-01	4.83E-01
9.50E+01	2.99E-03	8.81E-03	1.35E-02	5.91E-02	2.07E-01	2.72E-01	4.60E-01
1.05E+02	2.08E-03	7.87E-03	1.20E-02	5.46E-02	1.94E-01	2.55E-01	4.34E-01
1.16E+02	1.41E-03	6.82E-03	1.07E-02	5.03E-02	1.80E-01	2.39E-01	4.07E-01
1.28E+02	1.04E-03	5.85E-03	9.38E-03	4.53E-02	1.62E-01	2.26E-01	3.78E-01
1.41E+02	7.53E-04	4.50E-03	8.04E-03	4.06E-02	1.49E-01	2.06E-01	3.50E-01
1.56E+02	4.96E-04	3.48E-03	6.49E-03	3.54E-02	1.32E-01	1.87E-01	3.21E-01
1.72E+02	3.20E-04	2.64E-03	5.21E-03	3.11E-02	1.17E-01	1.64E-01	2.91E-01
1.90E+02	1.84E-04	1.86E-03	4.18E-03	2.65E-02	1.03E-01	1.47E-01	2.61E-01
2.10E+02	8.23E-05	1.35E-03	3.26E-03	2.30E-02	9.02E-02	1.32E-01	2.33E-01
2.32E+02	3.42E-05	9.25E-04	2.42E-03	1.93E-02	7.70E-02	1.11E-01	2.11E-01
2.56E+02	1.30E-05	5.60E-04	1.74E-03	1.60E-02	6.67E-02	9.67E-02	1.90E-01
2.82E+02	4.55E-06	3.19E-04	1.15E-03	1.28E-02	5.68E-02	8.18E-02	1.67E-01
3.00E+02	1.48E-06	1.82E-04	7.36E-04	9.97E-03	4.67E-02	6.73E-02	1.38E-01
3.12E+02	4.93E-07	1.03E-04	4.76E-04	7.49E-03	3.87E-02	5.34E-02	1.12E-01
3.44E+02	1.61E-07	4.77E-05	2.84E-04	5.56E-03	3.18E-02	4.35E-02	8.97E-02
3.80E+02	4.65E-08	2.04E-05	1.55E-04	4.08E-03	2.50E-02	3.44E-02	7.53E-02
4.20E+02	1.21E-08	8.38E-06	8.28E-05	2.91E-03	1.92E-02	2.76E-02	6.26E-02
4.64E+02	2.91E-09	3.82E-06	4.40E-05	2.08E-03	1.47E-02	2.18E-02	5.29E-02
5.12E+02	7.66E-10	1.30E-06	2.26E-05	1.56E-03	1.17E-02	1.73E-02	4.52E-02
5.65E+02	2.76E-10	7.02E-07	1.42E-05	1.18E-03	9.54E-03	1.46E-02	3.78E-02
6.24E+02	8.92E-11	3.25E-07	6.66E-06	8.41E-04	7.39E-03	1.16E-02	3.04E-02
6.89E+02	1.23E-11	1.03E-07	2.45E-06	4.99E-04	5.26E-03	8.38E-03	2.28E-02
7.61E+02	1.12E-12	1.88E-08	6.97E-07	2.79E-04	3.66E-03	5.54E-03	1.64E-02
8.40E+02	3.66E-14	6.64E-09	2.49E-07	1.51E-04	2.41E-03	3.67E-03	1.14E-02
9.28E+02	5.74E-13	1.22E-09	6.62E-08	7.65E-05	1.54E-03	2.37E-03	7.62E-03
1.00E+03	3.01E-14	3.57E-10	1.91E-08	3.48E-05	9.00E-04	1.43E-03	4.91E-03
1.02E+03	9.75E-15	1.88E-10	6.62E-09	1.45E-05	5.22E-04	8.97E-04	2.92E-03
1.13E+03	3.42E-13	3.86E-10	3.34E-09	5.88E-06	2.71E-04	5.25E-04	1.71E-03
1.25E+03	1.58E-13	1.55E-10	1.41E-09	2.19E-06	1.45E-04	2.65E-04	9.52E-04
1.38E+03	6.96E-13	7.63E-11	5.75E-10	7.51E-07	7.13E-05	1.38E-04	4.75E-04
1.52E+03	1.51E-13	2.40E-11	2.14E-10	2.78E-07	3.75E-05	8.05E-05	2.78E-04
1.68E+03	1.29E-14	9.29E-12	7.48E-11	1.34E-07	2.72E-05	8.04E-05	2.60E-04
1.86E+03	3.10E-14	3.73E-12	2.21E-11	1.29E-07	3.96E-05	1.12E-04	4.16E-04
2.05E+03	3.44E-15	1.04E-12	6.02E-12	1.25E-07	4.71E-05	1.25E-04	4.89E-04
2.26E+03	5.13E-17	2.09E-13	1.21E-12	2.43E-08	1.63E-05	4.85E-05	2.00E-04
2.50E+03	1.61E-15	7.19E-14	4.99E-13	4.08E-09	4.87E-06	1.85E-05	8.32E-05
2.76E+03	0.00E+00	8.92E-16	1.49E-14	5.55E-10	1.32E-06	6.07E-06	2.78E-05
3.00E+03	0.00E+00	0.00E+00	4.64E-15	4.50E-11	3.31E-07	1.74E-06	8.24E-06
3.05E+03	0.00E+00	0.00E+00	0.00E+00	2.64E-12	6.52E-08	4.41E-07	2.33E-06
3.36E+03	0.00E+00	0.00E+00	0.00E+00	4.85E-13	1.12E-08	9.44E-08	5.91E-07
3.71E+03	0.00E+00	0.00E+00	0.00E+00	1.28E-14	1.61E-09	1.72E-08	1.31E-07
4.10E+03	0.00E+00	0.00E+00	0.00E+00	7.84E-15	1.92E-10	2.61E-09	2.44E-08
4.53E+03	0.00E+00	0.00E+00	0.00E+00	1.27E-14	1.07E-11	2.89E-10	3.90E-09
5.00E+03	0.00E+00	0.00E+00	0.00E+00	8.34E-15	2.72E-12	3.67E-11	5.57E-10
5.52E+03	0.00E+00	0.00E+00	0.00E+00	7.11E-15	6.17E-13	6.79E-12	1.23E-10
6.09E+03	0.00E+00	0.00E+00	0.00E+00	1.07E-14	1.46E-13	3.14E-12	5.60E-11
6.73E+03	0.00E+00	0.00E+00	0.00E+00	3.94E-15	7.65E-14	3.10E-13	5.98E-12
7.43E+03	0.00E+00	0.00E+00	0.00E+00	1.45E-16	8.67E-14	1.66E-13	4.53E-13
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-14	1.55E-13	3.49E-13
9.06E+03	0.00E+00	0.00E+00	0.00E+00	1.59E-13	7.79E-13	1.15E-12	1.99E-12
1.00E+04	0.00E+00	0.00E+00	0.00E+00	9.03E-14	1.53E-12	2.51E-12	4.80E-12
1.00E+04	0.00E+00	0.00E+00	0.00E+00	2.34E-13	1.45E-12	1.96E-12	3.18E-12
1.10E+04	0.00E+00	0.00E+00	0.00E+00	2.03E-13	1.31E-12	2.13E-12	4.34E-12
1.22E+04	0.00E+00	1.64E-15	1.54E-14	2.36E-13	1.30E-12	2.00E-12	4.06E-12
1.35E+04	0.00E+00	2.02E-14	4.82E-14	3.73E-13	1.86E-12	2.58E-12	5.57E-12
1.49E+04	1.14E-17	1.73E-14	5.03E-14	4.81E-13	2.13E-12	3.10E-12	6.01E-12
1.64E+04	4.40E-17	9.39E-16	5.53E-15	2.64E-13	1.72E-12	2.42E-12	5.06E-12
1.81E+04	0.00E+00	0.00E+00	4.50E-17	1.11E-15	7.19E-15	1.07E-14	2.77E-14
2.00E+04	0.00E+00	0.00E+00	0.00E+00	1.06E-15	9.13E-15	1.59E-14	3.51E-14

Zinc

Concentration in groundwater [mg/l]

Time (years)	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percenti
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-18
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-16
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-14
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-12
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-11
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-10
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-09
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-09
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-08
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-07
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-07
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-07
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-07
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-06
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-06
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-18	2.00E-06
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-16	2.32E-06
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-14	2.64E-06
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-13	4.20E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-12	5.39E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.92E-12	5.17E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-11	3.57E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-10	4.33E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-09	5.23E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-09	4.21E-06
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-09	5.60E-06
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-08	5.53E-06
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-19	5.31E-08	5.13E-06
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-16	6.57E-08	4.76E-06
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-15	6.12E-08	3.86E-06
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-14	5.85E-08	3.60E-06
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-13	7.50E-08	3.23E-06
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-13	8.92E-08	3.23E-06
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-13	6.00E-08	2.36E-06
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-12	7.40E-08	2.15E-06
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-12	6.10E-08	2.08E-06
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-12	3.75E-08	2.51E-06
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-13	3.16E-08	2.18E-06
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.74E-13	2.33E-08	2.42E-06
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.01E-13	1.63E-08	1.85E-06
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-13	1.29E-08	1.12E-06
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-14	7.51E-09	8.22E-07
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-14	2.98E-09	5.93E-07
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-15	2.16E-09	3.24E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-16	9.47E-10	2.68E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-16	9.50E-10	2.68E-07
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-16	2.51E-10	1.87E-07
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-16	5.55E-11	1.10E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-16	2.07E-11	6.46E-08
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-16	6.00E-12	3.93E-08
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-16	2.99E-12	2.17E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-16	6.83E-13	1.10E-08
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-16	1.27E-13	3.94E-09

i2HRA

Ammoniacal N

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-19
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-18
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-18	4.13E-15
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-18	2.63E-15	4.69E-12
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-15	5.44E-13	1.77E-10
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-12	1.13E-10	2.01E-08
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-11	5.33E-10	5.76E-08
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-10	7.41E-09	3.90E-07
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-09	1.03E-08	7.04E-07
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-09	1.06E-07	2.40E-06
2.10E+01	0.00E+00	0.00E+00	0.00E+00	3.84E-19	3.92E-08	3.08E-07	4.94E-06
2.30E+01	0.00E+00	0.00E+00	0.00E+00	2.23E-17	1.19E-07	7.84E-07	9.42E-06
2.60E+01	0.00E+00	0.00E+00	0.00E+00	1.74E-15	4.66E-07	2.51E-06	1.73E-05
2.80E+01	0.00E+00	0.00E+00	0.00E+00	1.91E-14	9.23E-07	4.36E-06	2.42E-05
3.20E+01	0.00E+00	0.00E+00	0.00E+00	9.71E-13	2.74E-06	9.63E-06	4.22E-05
3.50E+01	0.00E+00	0.00E+00	0.00E+00	1.46E-11	4.48E-06	1.52E-05	5.89E-05
3.90E+01	0.00E+00	0.00E+00	0.00E+00	1.68E-10	8.53E-06	2.44E-05	7.87E-05
4.30E+01	0.00E+00	0.00E+00	0.00E+00	1.61E-09	1.45E-05	3.34E-05	9.58E-05
4.70E+01	0.00E+00	0.00E+00	0.00E+00	7.83E-09	1.98E-05	4.18E-05	1.12E-04
5.20E+01	0.00E+00	0.00E+00	1.03E-18	3.83E-08	3.00E-05	5.88E-05	1.41E-04
5.70E+01	0.00E+00	0.00E+00	9.90E-17	1.45E-07	3.98E-05	7.41E-05	1.68E-04
6.40E+01	0.00E+00	4.54E-19	5.94E-15	4.88E-07	5.14E-05	9.23E-05	1.87E-04
7.00E+01	0.00E+00	6.31E-17	3.69E-13	1.26E-06	6.46E-05	1.09E-04	2.02E-04
7.80E+01	0.00E+00	5.44E-15	4.71E-12	2.99E-06	7.72E-05	1.26E-04	2.23E-04
8.60E+01	0.00E+00	1.68E-13	8.22E-11	5.89E-06	8.75E-05	1.37E-04	2.63E-04
9.50E+01	0.00E+00	4.70E-12	6.68E-10	9.51E-06	1.05E-04	1.53E-04	2.79E-04
1.05E+02	1.90E-18	1.38E-10	5.30E-09	1.38E-05	1.16E-04	1.74E-04	2.92E-04
1.16E+02	2.22E-15	1.81E-09	3.10E-08	1.73E-05	1.25E-04	1.89E-04	3.02E-04
1.28E+02	1.29E-13	1.03E-08	1.42E-07	2.16E-05	1.35E-04	2.05E-04	3.65E-04
1.41E+02	1.09E-11	5.79E-08	5.85E-07	2.57E-05	1.38E-04	2.03E-04	3.52E-04
1.56E+02	1.76E-10	2.17E-07	1.59E-06	3.02E-05	1.43E-04	2.01E-04	3.69E-04
1.72E+02	2.17E-09	8.74E-07	2.89E-06	3.23E-05	1.51E-04	2.08E-04	3.87E-04
1.90E+02	6.18E-08	1.58E-06	4.75E-06	3.51E-05	1.47E-04	2.05E-04	3.80E-04
2.10E+02	4.14E-07	2.62E-06	6.26E-06	3.60E-05	1.49E-04	2.12E-04	3.63E-04
2.32E+02	7.29E-07	3.58E-06	6.27E-06	3.59E-05	1.40E-04	2.14E-04	3.28E-04
2.56E+02	9.20E-07	3.60E-06	6.08E-06	3.53E-05	1.34E-04	2.10E-04	3.03E-04
2.82E+02	5.53E-07	3.21E-06	5.70E-06	3.25E-05	1.23E-04	1.88E-04	3.13E-04
3.00E+02	3.86E-07	2.47E-06	4.88E-06	2.95E-05	1.15E-04	1.81E-04	3.03E-04
3.12E+02	2.28E-07	1.81E-06	4.06E-06	2.65E-05	1.10E-04	1.71E-04	3.16E-04
3.44E+02	1.42E-07	1.29E-06	3.11E-06	2.27E-05	9.94E-05	1.50E-04	2.71E-04
3.80E+02	5.74E-08	8.46E-07	2.24E-06	1.85E-05	8.38E-05	1.22E-04	2.40E-04
4.20E+02	2.96E-08	5.02E-07	1.39E-06	1.47E-05	6.83E-05	1.08E-04	2.06E-04
4.64E+02	1.49E-08	3.03E-07	8.36E-07	1.08E-05	5.55E-05	8.81E-05	1.73E-04
5.12E+02	6.56E-09	1.68E-07	4.96E-07	7.67E-06	4.45E-05	7.10E-05	1.40E-04
5.65E+02	2.10E-09	9.03E-08	2.89E-07	5.64E-06	3.36E-05	5.65E-05	1.09E-04
6.24E+02	6.51E-10	4.79E-08	1.64E-07	4.14E-06	2.65E-05	4.03E-05	7.87E-05
6.89E+02	2.33E-10	1.93E-08	7.98E-08	2.73E-06	1.94E-05	2.89E-05	5.80E-05
7.61E+02	5.74E-11	8.06E-09	3.36E-08	1.75E-06	1.37E-05	2.13E-05	4.54E-05
8.40E+02	1.23E-11	2.83E-09	1.33E-08	1.04E-06	9.58E-06	1.48E-05	3.36E-05
9.28E+02	2.76E-12	7.68E-10	5.28E-09	6.08E-07	6.47E-06	1.00E-05	2.33E-05
1.00E+03	1.08E-12	2.23E-10	1.76E-09	3.31E-07	4.24E-06	6.72E-06	1.58E-05
1.02E+03	4.94E-13	6.36E-11	5.98E-10	1.89E-07	2.94E-06	4.89E-06	1.32E-05
1.13E+03	3.60E-13	2.63E-11	2.47E-10	1.10E-07	2.07E-06	3.28E-06	9.04E-06
1.25E+03	1.50E-13	7.47E-12	6.85E-11	5.00E-08	1.23E-06	2.00E-06	5.76E-06
1.38E+03	4.15E-14	2.89E-12	1.91E-11	2.21E-08	6.83E-07	1.20E-06	3.54E-06
1.52E+03	1.73E-15	7.22E-13	5.47E-12	9.14E-09	3.44E-07	6.64E-07	1.95E-06
1.68E+03	1.57E-16	1.93E-13	1.82E-12	3.09E-09	1.74E-07	3.70E-07	1.04E-06
1.86E+03	4.77E-16	4.16E-14	4.65E-13	9.71E-10	7.74E-08	1.74E-07	5.39E-07
2.05E+03	5.91E-17	3.86E-15	2.08E-13	2.79E-09	2.56E-07	5.23E-07	1.60E-06
2.26E+03	1.15E-17	1.58E-15	1.15E-14	6.97E-10	1.12E-07	2.64E-07	8.62E-07
2.50E+03	1.47E-18	7.54E-16	3.99E-15	1.63E-10	4.31E-08	1.20E-07	3.88E-07
2.76E+03	0.00E+00	2.72E-17	5.70E-16	3.24E-11	1.60E-08	4.56E-08	1.77E-07
3.00E+03	0.00E+00	7.08E-18	7.07E-17	6.23E-12	5.24E-09	1.62E-08	7.09E-08
3.05E+03	0.00E+00	0.00E+00	9.96E-18	9.59E-13	1.56E-09	5.96E-09	2.73E-08
3.36E+03	0.00E+00	0.00E+00	1.87E-18	1.63E-13	4.63E-10	2.11E-09	1.01E-08
3.71E+03	0.00E+00	0.00E+00	0.00E+00	1.38E-14	1.08E-10	6.17E-10	3.14E-09
4.10E+03	0.00E+00	0.00E+00	0.00E+00	1.56E-15	2.27E-11	1.56E-10	8.70E-10
4.53E+03	0.00E+00	0.00E+00	3.53E-19	1.99E-16	4.08E-12	3.12E-11	2.11E-10
5.00E+03	0.00E+00	0.00E+00	0.00E+00	2.63E-17	6.38E-13	5.45E-12	4.38E-11
5.52E+03	0.00E+00	0.00E+00	0.00E+00	1.15E-17	8.91E-14	7.56E-13	9.13E-12
6.09E+03	0.00E+00	0.00E+00	2.86E-19	1.21E-17	4.83E-14	5.74E-13	7.23E-12
6.73E+03	0.00E+00	0.00E+00	0.00E+00	3.34E-18	4.21E-15	7.38E-14	1.13E-12
7.43E+03	0.00E+00	0.00E+00	0.00E+00	7.80E-18	2.08E-16	5.88E-15	1.19E-13
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-17	1.91E-16	1.24E-14
9.06E+03	0.00E+00	0.00E+00	3.37E-18	6.74E-17	3.54E-16	5.80E-16	1.45E-15
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.78E-17	4.46E-16	7.64E-16	2.14E-15
1.00E+04	0.00E+00	0.00E+00	0.00E+00	3.17E-17	2.44E-16	4.18E-16	8.83E-16
1.10E+04	0.00E+00	0.00E+00	0.00E+00	2.33E-17	2.66E-16	4.77E-16	3.35E-15
1.22E+04	0.00E+00	0.00E+00	0.00E+00	3.76E-17	3.76E-16	8.57E-16	4.68E-15
1.35E+04	0.00E+00	0.00E+00	4.70E-20	7.61E-17	5.45E-16	8.41E-16	2.59E-15
1.49E+04	0.00E+00	0.00E+00	0.00E+00	4.69E-17	4.01E-16	6.52E-16	1.44E-15
1.64E+04	0.00E+00	0.00E+00	4.19E-20	1.68E-16	1.22E-15	1.93E-15	3.42E-15
1.81E+04	0.00E+00	0.00E+00	0.00E+00	4.95E-19	1.45E-17	3.77E-17	1.52E-16
2.00E+04	0.00E+00	0.00E+00	0.00E+00	6.96E-19	8.30E-18	1.61E-17	7.97E-17

Arsenic

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.21E-20
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-15
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-13
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-11
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.53E-10
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-16	4.39E-09
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-13	1.30E-08
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-18	1.11E-11	4.68E-08
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-15	1.81E-10	1.09E-07
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.93E-13	1.54E-09	2.44E-07
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-11	7.53E-09	5.24E-07
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-10	4.07E-08	1.04E-06
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-09	1.23E-07	1.79E-06
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-08	3.88E-07	2.94E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	6.70E-19	8.44E-08	7.08E-07	3.97E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	6.38E-18	1.15E-07	8.69E-07	4.33E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	1.32E-15	3.91E-07	1.85E-06	7.10E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	6.43E-14	8.28E-07	2.87E-06	9.74E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	1.62E-12	1.48E-06	4.56E-06	1.36E-05
1.52E+03	0.00E+00	0.00E+00	0.00E+00	2.95E-11	2.51E-06	6.46E-06	1.67E-05
1.68E+03	0.00E+00	0.00E+00	0.00E+00	2.96E-10	3.62E-06	8.77E-06	2.26E-05
1.86E+03	0.00E+00	0.00E+00	0.00E+00	2.06E-09	5.28E-06	1.21E-05	2.85E-05
2.05E+03	0.00E+00	0.00E+00	0.00E+00	9.60E-09	7.55E-06	1.54E-05	3.40E-05
2.26E+03	0.00E+00	0.00E+00	1.19E-17	3.83E-08	1.15E-05	2.20E-05	4.57E-05
2.50E+03	0.00E+00	0.00E+00	1.50E-15	1.23E-07	1.85E-05	3.10E-05	6.56E-05
2.76E+03	0.00E+00	1.49E-18	1.24E-13	3.27E-07	2.68E-05	4.48E-05	9.59E-05
3.00E+03	0.00E+00	1.99E-16	3.17E-12	7.53E-07	3.31E-05	5.98E-05	1.22E-04
3.05E+03	0.00E+00	1.74E-15	4.61E-12	8.94E-07	3.39E-05	6.07E-05	1.27E-04
3.36E+03	0.00E+00	1.32E-14	7.48E-11	1.64E-06	4.07E-05	7.10E-05	1.42E-04
3.71E+03	0.00E+00	9.75E-13	7.94E-10	3.25E-06	4.59E-05	8.37E-05	1.60E-04
4.10E+03	0.00E+00	3.17E-11	6.16E-09	5.28E-06	5.13E-05	8.03E-05	1.61E-04
4.53E+03	1.15E-18	3.13E-10	2.79E-08	7.32E-06	5.63E-05	8.62E-05	1.68E-04
5.00E+03	1.47E-15	2.69E-09	1.22E-07	9.73E-06	6.07E-05	8.51E-05	1.60E-04
5.52E+03	4.37E-13	1.49E-08	3.44E-07	1.15E-05	6.24E-05	8.92E-05	1.56E-04
6.09E+03	3.40E-11	7.29E-08	6.37E-07	1.24E-05	6.34E-05	9.09E-05	1.84E-04
6.73E+03	1.12E-09	2.26E-07	1.23E-06	1.26E-05	6.64E-05	9.24E-05	1.79E-04
7.43E+03	6.03E-09	2.76E-07	1.23E-06	1.25E-05	6.44E-05	9.38E-05	1.59E-04
8.20E+03	4.23E-09	2.49E-07	1.10E-06	1.20E-05	6.12E-05	8.80E-05	1.55E-04
9.06E+03	2.91E-09	2.69E-07	9.31E-07	1.06E-05	5.72E-05	7.93E-05	1.62E-04
1.00E+04	1.96E-09	1.53E-07	5.70E-07	8.91E-06	4.85E-05	6.83E-05	1.64E-04
1.00E+04	1.96E-09	1.53E-07	5.70E-07	8.91E-06	4.85E-05	6.83E-05	1.64E-04
1.10E+04	8.52E-10	8.40E-08	5.24E-07	6.51E-06	4.06E-05	5.82E-05	1.32E-04
1.22E+04	4.36E-10	3.68E-08	1.76E-07	4.22E-06	3.26E-05	4.91E-05	1.15E-04
1.35E+04	1.86E-10	1.41E-08	8.22E-08	2.75E-06	2.47E-05	4.22E-05	9.46E-05
1.49E+04	4.71E-11	4.83E-09	3.60E-08	1.62E-06	1.74E-05	3.22E-05	7.19E-05
1.64E+04	1.16E-11	1.65E-09	1.38E-08	8.76E-07	1.16E-05	2.18E-05	5.12E-05
1.81E+04	1.43E-12	4.92E-10	4.69E-09	4.51E-07	7.45E-06	1.42E-05	3.52E-05
2.00E+04	1.31E-13	1.46E-10	1.38E-09	2.19E-07	4.37E-06	8.55E-06	2.06E-05

Cadmium

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-18
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-17
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-16
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-15
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-14
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-13
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.41E-13
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-12
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-12
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-11
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-10
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E-10
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-17	2.67E-09
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-16	6.71E-09
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-15	1.22E-08
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-14	3.19E-08
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-12	4.26E-08
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-11	4.92E-08
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-17	3.63E-11	6.61E-08
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-17	5.18E-11	6.81E-08
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-14	4.80E-10	9.07E-08
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-13	2.62E-09	1.29E-07
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-12	7.66E-09	1.25E-07
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-11	1.32E-08	1.55E-07
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-10	2.01E-08	2.20E-07
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-10	2.40E-08	2.56E-07
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-09	3.71E-08	2.59E-07
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-09	5.06E-08	2.61E-07
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-09	6.71E-08	3.24E-07
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-09	7.44E-08	3.77E-07
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.13E-09	7.33E-08	5.52E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-09	6.44E-08	6.48E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-09	6.44E-08	6.49E-07
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-09	5.37E-08	6.88E-07
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-09	6.11E-08	6.38E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.38E-09	6.62E-08	6.01E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-09	6.65E-08	5.24E-07
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-08	6.13E-08	6.38E-07
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-08	5.52E-08	5.89E-07
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-08	5.40E-08	7.81E-07

Chloride

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-18	3.16E-17	2.11E-15
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-11	2.57E-10	2.55E-09
3.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-07	6.21E-05	1.27E-04	3.12E-04
4.00E+00	0.00E+00	9.82E-13	8.09E-09	4.61E-05	2.26E-03	3.73E-03	7.56E-03
5.00E+00	0.00E+00	6.32E-12	2.39E-07	9.99E-04	1.96E-02	2.81E-02	4.76E-02
6.00E+00	0.00E+00	2.29E-06	5.03E-05	8.03E-03	5.26E-02	7.12E-02	1.15E-01
7.00E+00	0.00E+00	6.78E-05	1.19E-03	2.69E-02	9.69E-02	1.31E-01	1.88E-01
8.00E+00	5.50E-03	1.16E-02	1.60E-02	5.72E-02	1.45E-01	1.79E-01	2.57E-01
9.00E+00	1.00E-02	1.67E-02	2.24E-02	8.04E-02	1.90E-01	2.26E-01	2.99E-01
1.00E+01	8.58E-03	1.47E-02	1.95E-02	7.75E-02	2.22E-01	2.71E-01	3.51E-01
1.10E+01	7.83E-03	1.30E-02	1.66E-02	6.71E-02	2.31E-01	2.96E-01	3.95E-01
1.30E+01	7.13E-03	1.17E-02	1.51E-02	5.74E-02	2.00E-01	2.60E-01	4.30E-01
1.40E+01	7.07E-03	1.11E-02	1.47E-02	5.62E-02	1.88E-01	2.64E-01	4.25E-01
1.60E+01	6.99E-03	1.10E-02	1.44E-02	5.50E-02	1.80E-01	2.47E-01	4.11E-01
1.70E+01	6.90E-03	1.08E-02	1.42E-02	5.43E-02	1.78E-01	2.43E-01	4.07E-01
1.90E+01	6.79E-03	1.06E-02	1.40E-02	5.33E-02	1.75E-01	2.37E-01	3.99E-01
2.10E+01	6.67E-03	1.04E-02	1.37E-02	5.28E-02	1.71E-01	2.34E-01	3.93E-01
2.30E+01	6.59E-03	1.01E-02	1.35E-02	5.19E-02	1.67E-01	2.31E-01	3.87E-01
2.60E+01	6.45E-03	9.94E-03	1.32E-02	5.06E-02	1.62E-01	2.26E-01	3.79E-01
2.80E+01	6.08E-03	9.76E-03	1.27E-02	4.97E-02	1.60E-01	2.23E-01	3.76E-01
3.20E+01	5.49E-03	9.49E-03	1.24E-02	4.84E-02	1.56E-01	2.18E-01	3.66E-01
3.50E+01	5.31E-03	9.29E-03	1.21E-02	4.74E-02	1.52E-01	2.15E-01	3.59E-01
3.90E+01	5.20E-03	9.01E-03	1.16E-02	4.61E-02	1.48E-01	2.10E-01	3.49E-01
4.30E+01	5.05E-03	8.79E-03	1.13E-02	4.48E-02	1.44E-01	2.05E-01	3.40E-01
4.70E+01	4.90E-03	8.48E-03	1.08E-02	4.35E-02	1.40E-01	2.00E-01	3.30E-01
5.20E+01	4.27E-03	7.81E-03	1.04E-02	4.20E-02	1.35E-01	1.93E-01	3.17E-01
5.70E+01	3.98E-03	7.40E-03	1.00E-02	4.05E-02	1.30E-01	1.84E-01	3.05E-01
6.40E+01	3.85E-03	6.90E-03	9.44E-03	3.84E-02	1.25E-01	1.72E-01	2.90E-01
7.00E+01	3.31E-03	6.31E-03	8.85E-03	3.66E-02	1.20E-01	1.65E-01	2.78E-01
7.80E+01	2.95E-03	5.86E-03	8.34E-03	3.47E-02	1.16E-01	1.59E-01	2.63E-01
8.60E+01	2.55E-03	5.42E-03	7.75E-03	3.27E-02	1.10E-01	1.50E-01	2.49E-01
9.50E+01	2.09E-03	5.02E-03	7.32E-03	3.13E-02	1.06E-01	1.44E-01	2.40E-01
1.05E+02	1.74E-03	4.57E-03	6.68E-03	2.93E-02	1.01E-01	1.36E-01	2.31E-01
1.16E+02	1.39E-03	4.08E-03	6.14E-03	2.70E-02	9.51E-02	1.29E-01	2.20E-01
1.28E+02	1.06E-03	3.44E-03	5.42E-03	2.45E-02	8.96E-02	1.19E-01	2.09E-01
1.41E+02	8.25E-04	2.93E-03	4.85E-03	2.30E-02	8.35E-02	1.08E-01	1.93E-01
1.56E+02	5.88E-04	2.58E-03	4.22E-03	2.05E-02	7.64E-02	9.76E-02	1.82E-01
1.72E+02	4.15E-04	2.14E-03	3.64E-03	1.83E-02	6.87E-02	8.87E-02	1.71E-01
1.90E+02	2.47E-04	1.61E-03	3.04E-03	1.61E-02	6.13E-02	8.00E-02	1.59E-01
2.10E+02	1.37E-04	1.28E-03	2.51E-03	1.40E-02	5.38E-02	7.21E-02	1.45E-01
2.32E+02	8.91E-05	9.46E-04	2.03E-03	1.23E-02	4.83E-02	6.54E-02	1.31E-01
2.56E+02	4.44E-05	6.65E-04	1.60E-03	1.06E-02	4.26E-02	5.83E-02	1.18E-01
2.82E+02	1.89E-05	4.46E-04	1.22E-03	8.88E-03	3.75E-02	5.03E-02	1.04E-01
3.00E+02	7.25E-06	2.97E-04	8.97E-04	7.26E-03	3.20E-02	4.26E-02	9.13E-02
3.12E+02	2.61E-06	1.87E-04	6.18E-04	5.90E-03	2.72E-02	3.65E-02	7.94E-02
3.44E+02	9.07E-07	1.12E-04	4.11E-04	4.64E-03	2.23E-02	3.03E-02	6.71E-02
3.80E+02	3.12E-07	6.07E-05	2.50E-04	3.61E-03	1.83E-02	2.51E-02	5.60E-02
4.20E+02	1.12E-07	2.72E-05	1.46E-04	2.78E-03	1.52E-02	2.06E-02	4.64E-02
4.64E+02	3.45E-08	1.32E-05	8.78E-05	2.04E-03	1.21E-02	1.65E-02	3.84E-02
5.12E+02	1.09E-08	5.71E-06	5.00E-05	1.53E-03	9.35E-03	1.38E-02	3.25E-02
5.65E+02	4.86E-09	3.19E-06	3.30E-05	1.24E-03	7.75E-03	1.18E-02	2.75E-02
6.24E+02	2.14E-09	1.89E-06	2.00E-05	9.75E-04	6.60E-03	1.00E-02	2.30E-02
6.89E+02	4.41E-10	6.82E-07	9.33E-06	6.52E-04	4.89E-03	7.69E-03	1.91E-02
7.61E+02	7.55E-11	2.10E-07	3.75E-06	4.14E-04	3.60E-03	5.64E-03	1.53E-02
8.40E+02	1.04E-11	6.45E-08	1.39E-06	2.54E-04	2.58E-03	3.97E-03	1.14E-02
9.28E+02	9.67E-13	1.78E-08	5.08E-07	1.49E-04	1.81E-03	2.77E-03	8.31E-03
1.00E+03	4.58E-12	4.77E-09	1.64E-07	8.11E-05	1.21E-03	1.86E-03	5.83E-03
1.02E+03	6.71E-12	1.76E-09	5.26E-08	4.04E-05	7.86E-04	1.24E-03	3.99E-03
1.13E+03	5.43E-12	8.50E-10	1.57E-08	1.96E-05	4.92E-04	7.51E-04	2.74E-03
1.25E+03	3.27E-12	4.33E-10	6.29E-09	8.40E-06	2.90E-04	4.48E-04	1.66E-03
1.38E+03	6.31E-13	1.09E-10	2.11E-09	3.37E-06	1.56E-04	2.70E-04	9.55E-04
1.52E+03	2.94E-13	4.75E-11	1.03E-09	1.36E-06	8.28E-05	1.54E-04	5.17E-04
1.68E+03	1.36E-13	2.10E-11	2.86E-10	6.14E-07	4.51E-05	9.81E-05	3.11E-04
1.86E+03	6.12E-14	9.47E-12	8.40E-11	4.43E-07	4.13E-05	1.00E-04	3.17E-04
2.05E+03	6.51E-15	2.22E-12	1.39E-11	5.67E-07	7.40E-05	1.54E-04	5.15E-04
2.26E+03	2.00E-16	3.71E-13	2.79E-12	1.47E-07	3.14E-05	6.91E-05	2.45E-04
2.50E+03	3.79E-15	1.86E-13	1.21E-12	3.37E-08	1.22E-05	3.04E-05	1.21E-04
2.76E+03	0.00E+00	1.11E-15	1.57E-13	6.95E-09	4.16E-06	1.10E-05	4.82E-05
3.00E+03	0.00E+00	3.45E-15	1.86E-14	1.25E-09	1.29E-06	4.45E-06	1.97E-05
3.05E+03	0.00E+00	4.51E-17	3.45E-15	1.40E-10	3.60E-07	1.56E-06	6.63E-06
3.36E+03	0.00E+00	0.00E+00	0.00E+00	9.35E-12	9.48E-08	4.71E-07	2.05E-06
3.71E+03	0.00E+00	0.00E+00	0.00E+00	1.91E-12	1.82E-08	1.20E-07	5.93E-07
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.06E-13	3.30E-09	2.73E-08	1.54E-07
4.53E+03	0.00E+00	0.00E+00	0.00E+00	2.71E-14	5.24E-10	5.40E-09	3.40E-08
5.00E+03	0.00E+00	0.00E+00	4.57E-17	9.59E-15	9.09E-11	9.40E-10	6.81E-09
5.52E+03	0.00E+00	0.00E+00	0.00E+00	6.76E-15	1.86E-11	2.34E-10	1.94E-09
6.09E+03	0.00E+00	0.00E+00	3.23E-16	8.64E-15	7.46E-12	1.24E-10	1.11E-09
6.73E+03	0.00E+00	0.00E+00	0.00E+00	4.60E-15	7.82E-13	1.39E-11	1.55E-10
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-14	1.01E-12	1.61E-11
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-14	9.18E-14	1.13E-12
9.06E+03	0.00E+00	0.00E+00	0.00E+00	3.90E-14	1.29E-13	4.89E-13	1.23E-12
1.00E+04	0.00E+00	0.00E+00	0.00E+00	4.36E-14	9.26E-13	1.57E-12	3.65E-12
1.00E+04	0.00E+00	0.00E+00	0.00E+00	7.32E-14	5.08E-13	6.71E-13	1.18E-12
1.10E+04	0.00E+00	0.00E+00	0.00E+00	6.23E-14	7.25E-13	1.28E-12	2.64E-12
1.22E+04	0.00E+00	0.00E+00	0.00E+00	8.87E-14	6.75E-13	1.13E-12	2.30E-12
1.35E+04	0.00E+00	1.16E-15	8.16E-15	1.40E-13	8.11E-13	1.25E-12	2.91E-12
1.49E+04	2.72E-17	1.53E-14	3.39E-14	2.24E-13	1.32E-12	1.71E-12	3.71E-12
1.64E+04	4.60E-17	6.77E-16	1.16E-14	2.22E-13	1.30E-12	1.92E-12	4.40E-12
1.81E+04	0.00E+00	0.00E+00	3.45E-17	6.09E-16	7.10E-15	1.61E-14	6.88E-14
2.00E+04	0.00E+00	0.00E+00	0.00E+00	8.20E-16	7.57E-15	1.22E-14	4.01E-14

Copper

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Lead

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mercury

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-18
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-16
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-14
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-13
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-12
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-19	1.76E-11
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-17	6.85E-11
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-15	3.72E-10
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-14	1.55E-09
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-14	1.56E-09
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-19	2.90E-13	4.39E-09
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-17	2.47E-12	8.25E-09
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-16	1.08E-11	1.45E-08
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-15	5.05E-11	2.06E-08
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-14	1.18E-10	3.84E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-13	3.48E-10	5.91E-08
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-12	1.11E-09	7.42E-08

Sulphate

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-18	7.66E-17	5.39E-15
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-10	5.76E-10	5.21E-09
3.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-07	1.35E-04	2.92E-04	6.73E-04
4.00E+00	0.00E+00	2.62E-12	1.80E-08	1.03E-04	5.37E-03	8.80E-03	1.57E-02
5.00E+00	0.00E+00	1.19E-11	5.40E-07	2.25E-03	4.64E-02	6.14E-02	9.76E-02
6.00E+00	0.00E+00	6.13E-06	1.05E-04	1.83E-02	1.22E-01	1.60E-01	2.49E-01
7.00E+00	0.00E+00	1.28E-04	2.64E-03	6.39E-02	2.22E-01	2.77E-01	3.99E-01
8.00E+00	1.22E-02	2.70E-02	3.98E-02	1.33E-01	3.22E-01	4.09E-01	5.40E-01
9.00E+00	2.34E-02	3.87E-02	5.32E-02	1.88E-01	4.10E-01	5.07E-01	6.44E-01
1.00E+01	1.99E-02	3.42E-02	4.66E-02	1.84E-01	5.08E-01	6.02E-01	7.80E-01
1.10E+01	1.79E-02	2.95E-02	4.02E-02	1.58E-01	5.35E-01	6.90E-01	8.38E-01
1.30E+01	1.72E-02	2.74E-02	3.64E-02	1.40E-01	4.62E-01	6.58E-01	9.34E-01
1.40E+01	1.70E-02	2.62E-02	3.58E-02	1.37E-01	4.41E-01	6.34E-01	8.98E-01
1.60E+01	1.69E-02	2.59E-02	3.54E-02	1.36E-01	4.24E-01	5.98E-01	8.49E-01
1.70E+01	1.68E-02	2.55E-02	3.49E-02	1.35E-01	4.22E-01	5.93E-01	8.36E-01
1.90E+01	1.66E-02	2.53E-02	3.47E-02	1.34E-01	4.17E-01	5.83E-01	8.24E-01
2.10E+01	1.64E-02	2.50E-02	3.44E-02	1.32E-01	4.13E-01	5.76E-01	8.15E-01
2.30E+01	1.63E-02	2.48E-02	3.41E-02	1.31E-01	4.10E-01	5.71E-01	8.04E-01
2.60E+01	1.62E-02	2.45E-02	3.37E-02	1.30E-01	4.04E-01	5.63E-01	7.93E-01
2.80E+01	1.59E-02	2.43E-02	3.33E-02	1.28E-01	4.01E-01	5.61E-01	7.89E-01
3.20E+01	1.56E-02	2.39E-02	3.28E-02	1.26E-01	3.96E-01	5.53E-01	7.80E-01
3.50E+01	1.54E-02	2.37E-02	3.25E-02	1.25E-01	3.93E-01	5.50E-01	7.75E-01
3.90E+01	1.52E-02	2.33E-02	3.19E-02	1.24E-01	3.87E-01	5.43E-01	7.68E-01
4.30E+01	1.49E-02	2.29E-02	3.14E-02	1.22E-01	3.81E-01	5.30E-01	7.62E-01
4.70E+01	1.46E-02	2.25E-02	3.08E-02	1.20E-01	3.75E-01	5.21E-01	7.55E-01
5.20E+01	1.42E-02	2.21E-02	3.01E-02	1.16E-01	3.66E-01	5.11E-01	7.46E-01
5.70E+01	1.37E-02	2.16E-02	2.92E-02	1.14E-01	3.57E-01	5.02E-01	7.35E-01
6.40E+01	1.34E-02	2.09E-02	2.82E-02	1.11E-01	3.47E-01	4.91E-01	7.21E-01
7.00E+01	1.32E-02	2.04E-02	2.69E-02	1.09E-01	3.41E-01	4.77E-01	7.09E-01
7.80E+01	1.28E-02	1.99E-02	2.65E-02	1.07E-01	3.31E-01	4.65E-01	6.95E-01
8.60E+01	1.19E-02	1.94E-02	2.58E-02	1.04E-01	3.23E-01	4.52E-01	6.80E-01
9.50E+01	1.13E-02	1.88E-02	2.53E-02	1.01E-01	3.15E-01	4.37E-01	6.67E-01
1.05E+02	1.07E-02	1.80E-02	2.44E-02	9.75E-02	3.05E-01	4.18E-01	6.51E-01
1.16E+02	9.88E-03	1.69E-02	2.34E-02	9.49E-02	2.95E-01	4.08E-01	6.34E-01
1.28E+02	9.08E-03	1.60E-02	2.20E-02	9.07E-02	2.84E-01	3.87E-01	6.13E-01
1.41E+02	8.19E-03	1.48E-02	2.09E-02	8.60E-02	2.72E-01	3.74E-01	5.94E-01
1.56E+02	7.28E-03	1.37E-02	1.93E-02	8.05E-02	2.60E-01	3.55E-01	5.70E-01
1.72E+02	5.88E-03	1.25E-02	1.81E-02	7.52E-02	2.47E-01	3.37E-01	5.51E-01
1.90E+02	4.36E-03	1.15E-02	1.66E-02	7.00E-02	2.34E-01	3.15E-01	5.23E-01
2.10E+02	3.69E-03	1.03E-02	1.51E-02	6.51E-02	2.22E-01	2.94E-01	4.94E-01
2.32E+02	3.09E-03	8.87E-03	1.37E-02	5.97E-02	2.09E-01	2.76E-01	4.65E-01
2.56E+02	2.07E-03	7.95E-03	1.21E-02	5.52E-02	1.90E-01	2.55E-01	4.38E-01
2.82E+02	1.44E-03	6.68E-03	1.04E-02	5.02E-02	1.78E-01	2.39E-01	4.08E-01
3.00E+02	1.04E-03	5.51E-03	9.27E-03	4.49E-02	1.61E-01	2.26E-01	3.77E-01
3.12E+02	7.31E-04	4.30E-03	7.90E-03	3.96E-02	1.46E-01	2.03E-01	3.46E-01
3.44E+02	4.88E-04	3.41E-03	6.46E-03	3.53E-02	1.31E-01	1.86E-01	3.22E-01
3.80E+02	3.19E-04	2.58E-03	5.19E-03	3.09E-02	1.17E-01	1.63E-01	2.93E-01
4.20E+02	1.67E-04	1.84E-03	4.18E-03	2.67E-02	1.03E-01	1.48E-01	2.63E-01
4.64E+02	7.93E-05	1.34E-03	3.27E-03	2.32E-02	9.02E-02	1.30E-01	2.37E-01
5.12E+02	4.06E-05	9.64E-04	2.57E-03	2.01E-02	8.10E-02	1.13E-01	2.15E-01
5.65E+02	2.35E-05	7.27E-04	2.03E-03	1.82E-02	7.37E-02	1.06E-01	1.99E-01
6.24E+02	1.19E-05	5.46E-04	1.67E-03	1.62E-02	6.73E-02	9.72E-02	1.89E-01
6.89E+02	4.17E-06	3.28E-04	1.18E-03	1.27E-02	5.66E-02	8.30E-02	1.67E-01
7.61E+02	1.54E-06	1.86E-04	7.62E-04	9.99E-03	4.70E-02	6.94E-02	1.41E-01
8.40E+02	5.62E-07	1.04E-04	4.75E-04	7.59E-03	3.91E-02	5.50E-02	1.14E-01
9.28E+02	1.85E-07	5.09E-05	2.83E-04	5.67E-03	3.26E-02	4.40E-02	9.00E-02
1.00E+03	5.77E-08	2.23E-05	1.59E-04	4.15E-03	2.58E-02	3.55E-02	7.59E-02
1.02E+03	1.74E-08	8.88E-06	8.43E-05	2.97E-03	1.97E-02	2.85E-02	6.13E-02
1.13E+03	6.26E-09	3.24E-06	4.15E-05	2.05E-03	1.46E-02	2.21E-02	4.96E-02
1.25E+03	3.41E-09	1.12E-06	1.74E-05	1.36E-03	1.08E-02	1.65E-02	3.96E-02
1.38E+03	2.24E-09	3.69E-07	7.02E-06	8.73E-04	7.83E-03	1.22E-02	3.19E-02
1.52E+03	6.63E-10	1.20E-07	2.97E-06	5.59E-04	5.93E-03	8.77E-03	2.39E-02
1.68E+03	3.62E-10	4.36E-08	1.37E-06	3.90E-04	4.74E-03	7.75E-03	1.95E-02
1.86E+03	8.16E-11	2.49E-08	9.92E-07	4.21E-04	5.68E-03	9.62E-03	2.38E-02
2.05E+03	7.51E-12	2.78E-08	1.14E-06	6.54E-04	1.05E-02	1.63E-02	5.04E-02
2.26E+03	9.15E-13	5.55E-09	3.13E-07	3.49E-04	6.68E-03	1.07E-02	3.44E-02
2.50E+03	1.29E-12	9.15E-10	6.89E-08	1.55E-04	3.98E-03	6.55E-03	2.13E-02
2.76E+03	7.63E-14	1.48E-10	1.31E-08	6.48E-05	2.29E-03	3.90E-03	1.28E-02
3.00E+03	6.34E-15	1.36E-11	1.83E-09	2.49E-05	1.20E-03	2.30E-03	7.52E-03
3.05E+03	0.00E+00	7.03E-13	1.75E-10	9.10E-06	6.30E-04	1.25E-03	4.21E-03
3.36E+03	0.00E+00	8.92E-15	1.20E-11	3.28E-06	3.14E-04	6.25E-04	2.16E-03
3.71E+03	0.00E+00	0.00E+00	5.16E-12	9.30E-07	1.39E-04	3.09E-04	1.09E-03
4.10E+03	0.00E+00	0.00E+00	7.43E-13	2.49E-07	5.74E-05	1.39E-04	5.26E-04
4.53E+03	0.00E+00	1.26E-15	4.27E-14	5.57E-08	2.15E-05	5.90E-05	2.41E-04
5.00E+03	0.00E+00	9.53E-16	1.62E-14	1.20E-08	7.70E-06	2.31E-05	9.58E-05
5.52E+03	0.00E+00	2.49E-17	6.76E-15	3.23E-09	3.30E-06	1.08E-05	4.96E-05
6.09E+03	0.00E+00	4.31E-15	1.61E-14	1.89E-09	2.30E-06	7.82E-06	3.42E-05
6.73E+03	0.00E+00	0.00E+00	1.83E-15	2.47E-10	6.11E-07	2.74E-06	1.13E-05
7.43E+03	0.00E+00	0.00E+00	0.00E+00	2.52E-11	1.54E-07	7.89E-07	3.60E-06
8.20E+03	0.00E+00	0.00E+00	0.00E+00	1.46E-12	3.04E-08	2.06E-07	1.03E-06
9.06E+03	0.00E+00	0.00E+00	0.00E+00	7.11E-13	5.37E-09	4.61E-08	2.61E-07
1.00E+04	0.00E+00	0.00E+00	0.00E+00	7.87E-13	9.20E-10	8.93E-09	5.88E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.28E-13	7.41E-10	4.07E-09	3.82E-08
1.10E+04	0.00E+00	0.00E+00	0.00E+00	1.25E-12	6.30E-10	1.68E-09	7.73E-09
1.22E+04	0.00E+00	0.00E+00	9.88E-15	2.44E-12	2.54E-10	7.80E-10	2.79E-09
1.35E+04	0.00E+00	4.17E-16	4.89E-14	1.73E-12	7.61E-11	2.18E-10	1.05E-09
1.49E+04	0.00E+00	0.00E+00	0.00E+00	7.93E-13	1.36E-11	4.40E-11	2.80E-10
1.64E+04	0.00E+00	0.00E+00	5.92E-15	6.40E-13	8.58E-12	2.18E-11	1.50E-10
1.81E+04	0.00E+00	1.51E-16	5.01E-16	5.51E-14	3.44E-12	9.84E-12	7.73E-11
2.00E+04	0.00E+00	0.00E+00	5.68E-16	3.27E-14	1.65E-12	4.66E-12	3.17E-11

Zinc

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percenti
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-20
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-19
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-17
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-16
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-15
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.37E-14
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-13
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-11
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-10
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.93E-09
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-08
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-08
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-07
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-07
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E-20	6.01E-07
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-19	1.14E-06
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-17	2.19E-06
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-15	4.11E-06
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-13	6.70E-06
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-11	8.11E-06
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-10	1.05E-05
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-19	2.48E-09	1.29E-05
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-18	8.64E-09	1.41E-05
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-17	1.16E-08	1.43E-05
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-15	6.76E-08	1.98E-05
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-14	1.98E-07	2.01E-05
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-12	3.50E-07	1.90E-05
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-11	6.25E-07	2.30E-05
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-10	1.23E-06	2.19E-05
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-09	2.00E-06	2.37E-05
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-09	2.28E-06	2.01E-05
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-08	3.42E-06	2.02E-05
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-07	3.76E-06	2.16E-05
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-07	4.95E-06	2.41E-05
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-07	4.30E-06	2.44E-05
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-07	4.18E-06	2.42E-05
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-07	4.47E-06	2.13E-05
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-07	4.39E-06	1.86E-05
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E-07	4.56E-06	1.67E-05
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-06	3.66E-06	1.65E-05
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.45E-07	3.59E-06	1.53E-05
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E-07	4.21E-06	1.52E-05
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-07	3.40E-06	1.41E-05
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-07	3.39E-06	1.37E-05
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-07	3.42E-06	1.30E-05
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-07	2.75E-06	1.30E-05
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-07	2.24E-06	1.27E-05
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-07	1.76E-06	1.12E-05
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-07	1.76E-06	1.12E-05
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-07	1.82E-06	1.26E-05
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-07	1.53E-06	1.07E-05
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-07	1.16E-06	8.88E-06
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-07	9.68E-07	6.45E-06
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-07	7.73E-07	5.18E-06
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.07E-08	5.51E-07	5.42E-06
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-08	3.74E-07	5.52E-06

Lysine (Concentration in Groundwater [ng/l])	Methionine (Concentration in Groundwater [ng/l])	Phenylalanine (Concentration in Groundwater [ng/l])	Threonine (Concentration in Groundwater [ng/l])	Tryptophan (Concentration in Groundwater [ng/l])	Valine (Concentration in Groundwater [ng/l])	Arsenic (Concentration in Groundwater [ng/l])	Cadmium (Concentration in Groundwater [ng/l])	Chromium (Concentration in Groundwater [ng/l])	Copper (Concentration in Groundwater [ng/l])	Lead (Concentration in Groundwater [ng/l])	Mercury (Concentration in Groundwater [ng/l])	Nickel (Concentration in Groundwater [ng/l])	Selenium (Concentration in Groundwater [ng/l])	Zinc (Concentration in Groundwater [ng/l])

Aluminum

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Arsenic

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Cadmium

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Chromium

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Copper

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Lead

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mercury

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Selenium

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Zinc

Time Frame	1st Percentile	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile	99th Percentile
1 Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Week	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Month	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 Months	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 Year	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 Years	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Assessment %	Lecture	Homework	Tutorial	Seminar	Project	Dissertation	Exam
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100

sEHRA

Ammoniacal N

Concentration in groundwater [mg/l]

Time [years]	1st Percentile	5th Percentile	10th Percentile	50th Percentile	90th Percentile	95th Percentile	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-17
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-17	1.70E-13
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-17	1.24E-15	4.51E-12
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E-15	5.73E-13	4.32E-10
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-14	6.29E-12	1.79E-09
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-12	1.70E-10	1.71E-08
2.10E+01	0.00E+00	0.00E+00	0.00E+00	3.05E-18	3.81E-11	1.58E-09	1.02E-07
2.30E+01	0.00E+00	0.00E+00	0.00E+00	1.64E-16	3.10E-10	8.59E-09	4.17E-07
2.60E+01	0.00E+00	0.00E+00	0.00E+00	9.01E-15	1.48E-09	6.96E-08	1.77E-06
2.80E+01	0.00E+00	0.00E+00	0.00E+00	7.83E-14	1.48E-08	2.16E-07	4.17E-06
3.20E+01	0.00E+00	0.00E+00	0.00E+00	1.88E-12	1.49E-07	1.24E-06	1.52E-05
3.50E+01	0.00E+00	0.00E+00	0.00E+00	9.11E-12	5.28E-07	3.67E-06	3.08E-05
3.90E+01	0.00E+00	0.00E+00	1.55E-17	7.69E-11	2.03E-06	1.12E-05	6.45E-05
4.30E+01	0.00E+00	9.82E-19	5.31E-16	7.64E-10	5.89E-06	2.53E-05	1.11E-04
4.70E+01	0.00E+00	4.73E-17	6.54E-15	6.11E-09	1.30E-05	4.75E-05	1.70E-04
5.20E+01	0.00E+00	2.20E-15	1.20E-13	5.70E-08	2.94E-05	8.61E-05	2.51E-04
[illegible]							

Arsenic

Concentration in groundwater [mg/l]

Time [years] | 1st Percentile | 5th Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 95th Percentile | 99th Percentile

[illegible]

Cadmium

Concentration in groundwater [mg/l]

[illegible]

Chloride

Concentration in groundwater [mg/l]

[illegible]

Copper

Concentration in groundwater [mg/l]

[illegible]

Lead

Concentration in groundwater [mg/l]

[illegible]

Mercury

Concentration in groundwater [mg/l]

[illegible]

Sulphate

Concentration in groundwater [mg/l]

[illegible]

Zinc

Concentration in groundwater [mg/l]

[illegible]

Canada	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]	Concentration in Environment [ng/l]
Time (min)	12 (Control)	24 (Control)	36 (Control)	48 (Control)	60 (Control)	72 (Control)	84 (Control)	96 (Control)	108 (Control)	120 (Control)
1	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
2	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
3	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
4	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
5	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
6	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
7	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
8	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
9	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
10	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
11	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
12	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
13	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
14	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
15	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
16	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
17	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
18	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
19	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
20	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
21	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
22	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
23	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
24	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
25	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
26	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
27	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
28	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
29	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00
30	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00

cHRA

Ammoniacal N

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-19	4.01E-18
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-19	1.59E-18	3.10E-16
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E-18	3.50E-16	4.74E-13
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E-15	4.13E-13	1.65E-10
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-12	2.94E-11	4.85E-09
1.30E+01	0.00E+00	0.00E+00	0.00E+00	2.21E-19	3.07E-10	4.15E-09	1.79E-07
1.40E+01	0.00E+00	0.00E+00	0.00E+00	1.19E-17	1.17E-09	1.55E-08	4.51E-07
1.60E+01	0.00E+00	0.00E+00	0.00E+00	1.22E-15	5.67E-09	7.52E-08	2.56E-06
1.70E+01	0.00E+00	0.00E+00	0.00E+00	1.31E-14	1.43E-08	1.66E-07	4.71E-06
1.90E+01	0.00E+00	0.00E+00	0.00E+00	2.25E-13	5.57E-08	7.86E-07	1.39E-05
2.10E+01	0.00E+00	0.00E+00	0.00E+00	2.39E-12	2.43E-07	2.62E-06	3.12E-05
2.30E+01	0.00E+00	0.00E+00	0.00E+00	1.03E-11	8.06E-07	6.75E-06	5.81E-05
2.60E+01	0.00E+00	0.00E+00	0.00E+00	4.70E-11	3.66E-06	1.87E-05	1.14E-04
2.80E+01	0.00E+00	0.00E+00	2.85E-18	1.77E-10	7.84E-06	3.13E-05	1.48E-04
3.20E+01	0.00E+00	8.24E-20	2.60E-16	9.82E-10	2.14E-05	6.54E-05	2.39E-04
3.50E+01	0.00E+00	2.64E-17	7.35E-15	8.00E-09	3.52E-05	9.94E-05	3.26E-04
3.90E+01	0.00E+00	5.72E-16	1.45E-13	9.03E-08	6.11E-05	1.48E-04	4.14E-04
4.30E+01	0.00E+00	1.60E-14	8.95E-13	4.56E-07	9.88E-05	2.00E-04	5.05E-04
4.70E+01	0.00E+00	2.23E-13	3.66E-12	1.64E-06	1.28E-04	2.42E-04	5.76E-04
5.20E+01	3.31E-18	1.74E-12	2.35E-11	5.66E-06	1.85E-04	3.07E-04	6.56E-04
5.70E+01	8.00E-16	6.55E-12	3.20E-10	1.27E-05	2.29E-04	3.42E-04	7.51E-04
6.40E+01	1.37E-14	3.17E-11	4.85E-09	2.75E-05	2.87E-04	4.03E-04	8.51E-04
7.00E+01	1.14E-13	3.48E-10	7.00E-08	4.24E-05	3.07E-04	4.71E-04	9.99E-04
7.80E+01	2.25E-13	5.58E-09	4.60E-07	5.76E-05	3.55E-04	5.00E-04	1.04E-03
8.60E+01	3.08E-13	6.30E-08	1.78E-06	7.25E-05	4.00E-04	5.47E-04	1.12E-03
9.50E+01	1.65E-13	3.75E-07	4.77E-06	8.76E-05	4.43E-04	6.08E-04	1.16E-03
1.05E+02	3.54E-13	1.23E-06	8.13E-06	1.03E-04	4.79E-04	6.50E-04	1.11E-03
1.16E+02	3.57E-13	2.82E-06	1.32E-05	1.03E-04	4.83E-04	6.79E-04	1.15E-03
1.28E+02	3.89E-13	4.47E-06	1.49E-05	1.00E-04	4.95E-04	6.62E-04	1.10E-03
1.41E+02	2.46E-13	4.26E-06	1.27E-05	9.14E-05	4.50E-04	6.48E-04	1.05E-03
1.56E+02	3.31E-13	3.21E-06	1.05E-05	8.47E-05	4.20E-04	6.28E-04	9.64E-04
1.72E+02	8.92E-14	2.44E-06	7.87E-06	6.89E-05	3.69E-04	5.39E-04	8.94E-04
1.90E+02	8.21E-14	1.56E-06	5.03E-06	5.65E-05	3.11E-04	4.48E-04	9.67E-04
2.10E+02	2.79E-14	9.23E-07	2.95E-06	4.39E-05	2.56E-04	3.62E-04	8.33E-04
2.32E+02	1.46E-14	3.98E-07	1.74E-06	3.22E-05	2.11E-04	2.94E-04	6.89E-04
2.56E+02	5.13E-15	1.87E-07	9.36E-07	2.27E-05	1.58E-04	2.33E-04	5.43E-04
2.82E+02	7.63E-16	6.26E-08	4.65E-07	1.52E-05	1.13E-04	1.81E-04	4.16E-04
3.00E+02	1.50E-15	2.52E-08	2.30E-07	1.03E-05	8.66E-05	1.41E-04	3.30E-04
3.12E+02	7.09E-14	1.14E-08	1.17E-07	7.31E-06	7.05E-05	1.19E-04	2.81E-04
3.44E+02	3.29E-15	3.47E-09	5.57E-08	4.65E-06	4.56E-05	7.63E-05	1.73E-04
3.80E+02	2.43E-15	9.14E-10	2.03E-08	2.62E-06	3.04E-05	5.38E-05	1.16E-04
4.20E+02	9.52E-17	2.28E-10	7.19E-09	1.49E-06	1.91E-05	3.56E-05	8.20E-05
4.64E+02	5.34E-17	5.01E-11	2.14E-09	7.23E-07	1.21E-05	2.36E-05	5.12E-05
5.12E+02	9.94E-18	7.79E-12	6.57E-10	3.73E-07	7.20E-06	1.35E-05	3.17E-05
5.65E+02	2.87E-18	1.92E-12	1.71E-10	1.80E-07	4.22E-06	8.09E-06	1.99E-05
6.24E+02	3.07E-19	5.90E-13	6.66E-11	1.07E-07	3.26E-06	6.18E-06	1.49E-05
6.89E+02	0.00E+00	6.82E-14	1.27E-11	4.33E-08	1.83E-06	3.63E-06	9.12E-06
7.61E+02	0.00E+00	4.85E-15	1.76E-12	1.62E-08	9.66E-07	1.95E-06	5.25E-06
8.40E+02	0.00E+00	3.20E-16	1.83E-13	5.21E-09	4.75E-07	1.02E-06	2.68E-06
9.28E+02	0.00E+00	8.42E-17	1.79E-14	1.58E-09	2.02E-07	5.00E-07	1.39E-06
1.00E+03	0.00E+00	1.31E-18	3.58E-14	4.39E-10	8.51E-08	2.24E-07	6.82E-07
1.02E+03	0.00E+00	1.35E-16	4.84E-14	1.36E-10	3.84E-08	1.01E-07	4.35E-07
1.13E+03	0.00E+00	9.20E-16	5.81E-14	4.71E-11	1.36E-08	3.90E-08	1.33E-07
1.25E+03	0.00E+00	7.01E-16	2.84E-14	1.48E-11	4.60E-09	1.47E-08	5.52E-08
1.38E+03	0.00E+00	3.13E-20	1.76E-15	5.52E-12	1.40E-09	4.80E-09	1.97E-08
1.52E+03	0.00E+00	8.92E-17	1.61E-15	2.26E-12	4.29E-10	1.41E-09	6.46E-09
1.68E+03	0.00E+00	5.60E-18	2.57E-16	9.20E-13	1.23E-10	3.98E-10	1.92E-09
1.86E+03	0.00E+00	4.07E-18	1.32E-16	1.91E-13	3.59E-11	1.14E-10	4.49E-10
2.05E+03	0.00E+00	0.00E+00	0.00E+00	1.74E-14	1.09E-10	5.46E-10	2.68E-09
2.26E+03	0.00E+00	0.00E+00	5.78E-18	9.42E-15	1.68E-11	1.02E-10	5.21E-10
2.50E+03	0.00E+00	1.32E-18	1.13E-17	6.43E-15	1.50E-12	1.52E-11	8.69E-11
2.76E+03	0.00E+00	0.00E+00	0.00E+00	1.19E-16	2.85E-13	2.16E-12	1.34E-11
3.00E+03	0.00E+00	0.00E+00	0.00E+00	6.72E-17	1.08E-14	1.28E-13	1.72E-12
3.05E+03	0.00E+00	0.00E+00	0.00E+00	1.94E-17	1.16E-15	5.95E-15	2.01E-13
3.36E+03	0.00E+00	0.00E+00	0.00E+00	5.09E-18	1.11E-15	2.75E-15	2.41E-14
3.71E+03	0.00E+00	0.00E+00	0.00E+00	3.06E-18	1.70E-16	5.38E-16	4.49E-15
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.52E-18	2.84E-17	7.49E-17	6.16E-16
4.53E+03	0.00E+00	0.00E+00	4.19E-19	4.46E-18	4.10E-17	8.03E-17	3.21E-16
5.00E+03	0.00E+00	0.00E+00	0.00E+00	1.30E-18	1.93E-17	2.97E-17	1.40E-16
5.52E+03	0.00E+00	0.00E+00	0.00E+00	1.08E-18	1.84E-17	3.95E-17	8.96E-17
6.09E+03	0.00E+00	0.00E+00	0.00E+00	2.78E-18	2.83E-17	4.60E-17	1.08E-16
6.73E+03	0.00E+00	0.00E+00	0.00E+00	1.78E-18	3.19E-17	5.77E-17	1.60E-16
7.43E+03	0.00E+00	0.00E+00	0.00E+00	7.75E-18	9.39E-17	1.62E-16	3.37E-16
8.20E+03	0.00E+00	0.00E+00	0.00E+00	1.67E-17	2.15E-16	3.47E-16	8.28E-16
9.06E+03	0.00E+00	0.00E+00	0.00E+00	1.00E-16	6.51E-16	1.14E-15	2.62E-15
1.00E+04	0.00E+00	0.00E+00	0.00E+00	9.09E-18	7.72E-16	1.31E-15	3.10E-15
1.00E+04	0.00E+00	0.00E+00	0.00E+00	9.34E-17	6.59E-16	1.07E-15	2.15E-15
1.10E+04	0.00E+00	0.00E+00	0.00E+00	5.99E-17	6.41E-16	1.02E-15	1.82E-15
1.22E+04	0.00E+00	0.00E+00	0.00E+00	6.93E-17	6.20E-16	9.57E-16	2.27E-15
1.35E+04	0.00E+00	0.00E+00	5.25E-20	1.63E-16	1.23E-15	1.95E-15	5.52E-15
1.49E+04	0.00E+00	0.00E+00	0.00E+00	8.56E-17	1.02E-15	1.69E-15	5.65E-15
1.64E+04	0.00E+00	0.00E+00	3.42E-19	7.22E-16	6.33E-15	9.26E-15	1.91E-14
1.81E+04	0.00E+00	0.00E+00	0.00E+00	2.18E-19	3.17E-18	5.59E-18	1.96E-17
2.00E+04	0.00E+00	0.00E+00	0.00E+00	7.88E-19	1.26E-17	2.38E-17	6.63E-17

Arsenic

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-14
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-11
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-09
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-09
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-15	2.17E-07
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-11	5.44E-07
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-17	2.59E-09	1.49E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-12	2.50E-08	1.99E-06
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-10	1.40E-07	3.09E-06
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-09	3.78E-07	4.98E-06
2.05E+03	0.00E+00	0.00E+00	0.00E+00	9.14E-10	1.03E-06	3.85E-06	1.65E-05
2.26E+03	0.00E+00	0.00E+00	0.00E+00	2.10E-10	5.19E-06	1.50E-05	3.26E-05
2.50E+03	0.00E+00	0.00E+00	0.00E+00	5.02E-09	1.16E-05	2.66E-05	5.21E-05
2.76E+03	0.00E+00	0.00E+00	0.00E+00	4.50E-08	1.68E-05	3.42E-05	7.26E-05
3.00E+03	0.00E+00	0.00E+00	0.00E+00	1.51E-07	1.96E-05	3.57E-05	8.46E-05
3.05E+03	0.00E+00	0.00E+00	0.00E+00	1.86E-07	2.08E-05	3.67E-05	8.54E-05
3.36E+03	0.00E+00	0.00E+00	0.00E+00	3.66E-07	2.21E-05	4.06E-05	9.67E-05
3.71E+03	0.00E+00	0.00E+00	0.00E+00	4.68E-07	2.07E-05	4.07E-05	8.51E-05
4.10E+03	0.00E+00	0.00E+00	0.00E+00	4.64E-07	1.99E-05	3.80E-05	9.46E-05
4.53E+03	0.00E+00	0.00E+00	0.00E+00	3.61E-07	1.81E-05	3.47E-05	8.52E-05
5.00E+03	0.00E+00	0.00E+00	0.00E+00	2.24E-07	1.40E-05	2.66E-05	7.08E-05
5.52E+03	0.00E+00	0.00E+00	0.00E+00	1.08E-07	1.01E-05	2.21E-05	6.35E-05
6.09E+03	0.00E+00	0.00E+00	0.00E+00	4.96E-08	6.25E-06	1.64E-05	5.05E-05
6.73E+03	0.00E+00	0.00E+00	0.00E+00	2.10E-08	3.46E-06	9.54E-06	3.31E-05
7.43E+03	0.00E+00	0.00E+00	0.00E+00	7.39E-09	1.69E-06	5.97E-06	2.10E-05
8.20E+03	0.00E+00	0.00E+00	0.00E+00	2.64E-09	7.27E-07	2.83E-06	1.17E-05
9.06E+03	0.00E+00	0.00E+00	0.00E+00	7.31E-10	3.14E-07	1.14E-06	6.72E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.62E-10	1.20E-07	4.76E-07	2.84E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.60E-10	1.20E-07	4.76E-07	2.84E-06
1.10E+04	0.00E+00	0.00E+00	0.00E+00	3.30E-11	4.56E-08	1.69E-07	1.33E-06
1.22E+04	0.00E+00	0.00E+00	0.00E+00	5.67E-12	1.44E-08	5.31E-08	5.79E-07
1.35E+04	0.00E+00	0.00E+00	0.00E+00	1.94E-12	4.11E-09	1.61E-08	1.99E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	4.40E-13	1.21E-09	4.49E-09	7.47E-08
1.64E+04	0.00E+00	0.00E+00	0.00E+00	9.70E-14	2.99E-10	1.24E-09	1.85E-08
1.81E+04	0.00E+00	0.00E+00	0.00E+00	3.15E-14	6.55E-11	8.40E-10	5.49E-09
2.00E+04	0.00E+00	0.00E+00	0.00E+00	5.81E-15	1.31E-11	8.72E-11	1.48E-09

Cadmium

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-19
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-18
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.52E-18
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-16
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-15
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-14
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-13
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-12
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-12
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-11
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-10
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-10
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.59E-11
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-11
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-10
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-10
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-10
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-09
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-09
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-09
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.53E-09
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-09
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-09
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-20	8.29E-09
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-19	8.29E-09
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-19	1.63E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-19	1.58E-08
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-19	1.58E-08
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-19	1.06E-08
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-19	8.83E-09
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-18	7.55E-09
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-18	7.10E-09
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-20	9.06E-18	4.33E-09
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-19	7.91E-18	1.73E-09
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-19	9.48E-18	1.04E-09

Chloride

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-16	1.37E-15	6.14E-14
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-09	9.55E-09	3.97E-08
3.00E+00	0.00E+00	1.55E-08	8.09E-07	9.61E-05	2.28E-03	3.60E-03	6.07E-03
4.00E+00	0.00E+00	1.20E-04	4.42E-04	8.27E-03	6.69E-02	8.76E-02	1.24E-01
5.00E+00	8.05E-04	4.59E-03	1.12E-02	1.14E-01	4.47E-01	5.36E-01	7.06E-01
6.00E+00	1.50E-02	5.42E-02	1.04E-01	4.21E-01	1.05E+00	1.23E+00	1.53E+00
7.00E+00	9.41E-02	1.96E-01	2.63E-01	8.67E-01	1.77E+00	2.02E+00	2.61E+00
8.00E+00	1.58E-01	2.44E-01	3.24E-01	1.15E+00	2.54E+00	2.95E+00	3.74E+00
9.00E+00	1.49E-01	2.11E-01	2.94E-01	1.09E+00	3.19E+00	3.77E+00	4.75E+00
1.00E+01	1.21E-01	1.75E-01	2.41E-01	9.04E-01	3.48E+00	4.34E+00	5.66E+00
1.10E+01	1.04E-01	1.59E-01	2.08E-01	7.93E-01	3.23E+00	4.34E+00	5.91E+00
1.30E+01	9.61E-02	1.52E-01	1.94E-01	7.46E-01	2.72E+00	4.07E+00	5.79E+00
1.40E+01	9.16E-02	1.49E-01	1.88E-01	7.13E-01	2.60E+00	3.86E+00	5.59E+00
1.60E+01	8.76E-02	1.38E-01	1.79E-01	6.81E-01	2.44E+00	3.57E+00	5.20E+00
1.70E+01	8.41E-02	1.32E-01	1.73E-01	6.63E-01	2.40E+00	3.50E+00	5.11E+00
1.90E+01	7.45E-02	1.21E-01	1.61E-01	6.22E-01	2.27E+00	3.34E+00	4.91E+00
2.10E+01	6.73E-02	1.12E-01	1.54E-01	5.83E-01	2.16E+00	3.16E+00	4.72E+00
2.30E+01	6.01E-02	1.08E-01	1.49E-01	5.63E-01	2.10E+00	3.02E+00	4.50E+00
2.60E+01	5.29E-02	9.94E-02	1.36E-01	5.33E-01	1.97E+00	2.81E+00	4.32E+00
2.80E+01	4.23E-02	9.33E-02	1.27E-01	5.06E-01	1.89E+00	2.74E+00	4.18E+00
3.20E+01	3.04E-02	8.11E-02	1.18E-01	4.78E-01	1.74E+00	2.43E+00	3.86E+00
3.50E+01	2.43E-02	7.44E-02	1.10E-01	4.40E-01	1.65E+00	2.29E+00	3.69E+00
3.90E+01	1.80E-02	6.58E-02	9.96E-02	4.15E-01	1.52E+00	2.18E+00	3.47E+00
4.30E+01	1.27E-02	5.95E-02	8.90E-02	3.86E-01	1.41E+00	2.05E+00	3.25E+00
4.70E+01	8.75E-03	5.22E-02	7.93E-02	3.49E-01	1.30E+00	1.96E+00	3.03E+00
5.20E+01	5.95E-03	4.47E-02	6.90E-02	3.14E-01	1.18E+00	1.79E+00	2.83E+00
5.70E+01	3.94E-03	3.85E-02	5.90E-02	2.79E-01	1.08E+00	1.58E+00	2.60E+00
6.40E+01	2.17E-03	3.06E-02	4.85E-02	2.45E-01	9.83E-01	1.40E+00	2.35E+00
7.00E+01	1.18E-03	2.25E-02	3.99E-02	2.19E-01	8.95E-01	1.26E+00	2.20E+00
7.80E+01	6.87E-04	1.77E-02	3.30E-02	1.95E-01	8.41E-01	1.13E+00	2.06E+00
8.60E+01	3.32E-04	1.35E-02	2.57E-02	1.66E-01	7.52E-01	1.00E+00	1.86E+00
9.50E+01	1.72E-04	9.29E-03	2.03E-02	1.44E-01	6.75E-01	9.15E-01	1.66E+00
1.05E+02	8.86E-05	6.60E-03	1.64E-02	1.24E-01	6.04E-01	8.03E-01	1.50E+00
1.16E+02	4.21E-05	4.71E-03	1.22E-02	1.05E-01	5.26E-01	7.00E-01	1.34E+00
1.28E+02	1.67E-05	2.87E-03	9.03E-03	8.46E-02	4.51E-01	5.82E-01	1.19E+00
1.41E+02	7.29E-06	1.60E-03	5.89E-03	6.85E-02	3.79E-01	5.03E-01	1.03E+00
1.56E+02	2.33E-06	8.81E-04	3.47E-03	5.16E-02	3.13E-01	4.27E-01	8.64E-01
1.72E+02	6.20E-07	4.08E-04	2.13E-03	3.88E-02	2.51E-01	3.56E-01	7.06E-01
1.90E+02	1.56E-07	1.85E-04	1.19E-03	2.90E-02	1.94E-01	2.92E-01	5.58E-01
2.10E+02	3.04E-08	8.25E-05	6.64E-04	2.09E-02	1.47E-01	2.30E-01	4.57E-01
2.32E+02	1.21E-09	3.04E-05	3.50E-04	1.46E-02	1.12E-01	1.82E-01	3.66E-01
2.56E+02	1.52E-10	1.10E-05	1.32E-04	1.00E-02	8.40E-02	1.37E-01	2.76E-01
2.82E+02	1.92E-10	3.73E-06	5.98E-05	6.49E-03	6.20E-02	1.00E-01	2.12E-01
3.00E+02	3.26E-11	1.11E-06	2.11E-05	3.81E-03	4.23E-02	7.29E-02	1.61E-01
3.12E+02	9.38E-12	2.81E-07	7.20E-06	2.17E-03	2.92E-02	5.25E-02	1.19E-01
3.44E+02	7.87E-13	6.20E-08	2.11E-06	1.20E-03	1.94E-02	3.65E-02	8.41E-02
3.80E+02	4.87E-14	1.18E-08	5.90E-07	6.06E-04	1.23E-02	2.32E-02	5.44E-02
4.20E+02	3.96E-14	2.12E-09	1.49E-07	3.02E-04	7.53E-03	1.46E-02	3.53E-02
4.64E+02	1.24E-14	3.17E-10	3.08E-08	1.44E-04	4.59E-03	9.11E-03	2.30E-02
5.12E+02	2.50E-15	5.59E-11	5.93E-09	7.26E-05	3.02E-03	5.72E-03	1.54E-02
5.65E+02	1.49E-14	1.19E-11	1.93E-09	4.36E-05	2.04E-03	4.12E-03	1.13E-02
6.24E+02	0.00E+00	2.90E-12	7.05E-10	2.30E-05	1.24E-03	2.79E-03	8.36E-03
6.89E+02	0.00E+00	2.53E-13	8.70E-11	8.30E-06	6.26E-04	1.41E-03	4.61E-03
7.61E+02	1.13E-13	6.56E-13	8.96E-12	2.67E-06	2.86E-04	7.04E-04	2.35E-03
8.40E+02	0.00E+00	0.00E+00	7.92E-13	7.48E-07	1.26E-04	3.10E-04	1.09E-03
9.28E+02	3.24E-13	1.67E-12	3.83E-12	1.83E-07	4.80E-05	1.41E-04	4.70E-04
1.00E+03	0.00E+00	2.68E-13	2.94E-12	4.84E-08	1.80E-05	5.40E-05	1.94E-04
1.02E+03	0.00E+00	0.00E+00	1.15E-12	2.29E-08	6.13E-06	1.88E-05	7.75E-05
1.13E+03	0.00E+00	1.49E-15	2.71E-12	1.23E-08	1.88E-06	6.08E-06	2.80E-05
1.25E+03	0.00E+00	3.14E-13	2.67E-12	5.23E-09	5.28E-07	1.91E-06	9.29E-06
1.38E+03	0.00E+00	4.72E-13	2.30E-12	1.88E-09	1.70E-07	5.77E-07	2.83E-06
1.52E+03	0.00E+00	2.46E-13	1.94E-12	6.55E-10	8.21E-08	1.90E-07	8.99E-07
1.68E+03	0.00E+00	2.48E-14	1.66E-13	2.55E-10	3.09E-08	8.88E-08	3.29E-07
1.86E+03	0.00E+00	1.27E-14	6.94E-14	9.79E-11	1.61E-08	5.67E-08	2.41E-07
2.05E+03	0.00E+00	3.84E-15	1.88E-14	2.08E-11	5.28E-09	3.51E-08	2.71E-07
2.26E+03	0.00E+00	4.94E-16	1.26E-14	6.55E-12	1.93E-10	3.81E-09	4.03E-08
2.50E+03	0.00E+00	4.72E-16	9.35E-15	2.49E-12	1.04E-10	3.50E-10	3.64E-09
2.76E+03	0.00E+00	0.00E+00	0.00E+00	5.44E-14	2.64E-11	1.07E-10	7.46E-10
3.00E+03	0.00E+00	0.00E+00	0.00E+00	4.20E-14	1.71E-12	7.54E-12	6.52E-11
3.05E+03	0.00E+00	0.00E+00	0.00E+00	8.73E-15	8.13E-13	3.29E-12	1.51E-11
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-13	1.58E-12	9.73E-12
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-14	2.95E-14	2.29E-13
4.10E+03	0.00E+00	0.00E+00	0.00E+00	2.44E-15	2.79E-14	5.09E-14	1.99E-13
4.53E+03	0.00E+00	0.00E+00	0.00E+00	8.28E-15	5.16E-14	8.13E-14	1.89E-13
5.00E+03	0.00E+00	0.00E+00	0.00E+00	8.92E-15	5.62E-14	8.50E-14	1.67E-13
5.52E+03	0.00E+00	0.00E+00	0.00E+00	7.95E-15	6.65E-14	1.01E-13	2.12E-13
6.09E+03	0.00E+00	0.00E+00	0.00E+00	2.19E-14	1.48E-13	2.01E-13	4.21E-13
6.73E+03	0.00E+00	0.00E+00	0.00E+00	2.85E-14	2.65E-13	4.12E-13	8.96E-13
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-13	6.64E-13	1.54E-12
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E-13	8.99E-13	3.01E-12
9.06E+03	0.00E+00	0.00E+00	0.00E+00	9.05E-13	5.40E-12	7.95E-12	1.27E-11
1.00E+04	0.00E+00	0.00E+00	0.00E+00	1.13E-12	8.93E-12	1.44E-11	2.76E-11
1.00E+04	0.00E+00	0.00E+00	3.32E-15	1.89E-12	7.73E-12	1.05E-11	2.13E-11
1.10E+04	4.87E-17	3.33E-14	1.41E-13	1.64E-12	9.61E-12	1.57E-11	2.79E-11
1.22E+04	8.81E-15	8.92E-14	1.97E-13	1.75E-12	9.30E-12	1.42E-11	2.43E-11
1.35E+04	5.12E-15	2.34E-13	4.21E-13	2.58E-12	1.36E-11	2.08E-11	3.13E-11
1.49E+04	7.82E-16	2.36E-13	5.25E-13	3.33E-12	1.57E-11	2.17E-11	3.72E-11
1.64E+04	0.00E+00	6.12E-15	4.87E-14	1.86E-12	1.11E-11	1.67E-11	3.52E-11
1.81E+04	0.00E+00	0.00E+00	0.00E+00	4.02E-15	2.66E-14	4.30E-14	8.80E-14
2.00E+04	0.00E+00	0.00E+00	0.00E+00	3.26E-15	2.79E-14	5.13E-14	1.26E-13

Copper

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Lead

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Mercury

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Sulphate

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-15	4.48E-15	1.62E-13
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	3.15E-08	1.30E-07
3.00E+00	0.00E+00	5.08E-08	2.61E-06	3.14E-04	7.49E-03	1.18E-02	1.90E-02
4.00E+00	0.00E+00	3.88E-04	1.41E-03	2.72E-02	2.19E-01	2.88E-01	4.03E-01
5.00E+00	2.24E-03	1.50E-02	3.62E-02	3.72E-01	1.46E+00	1.75E+00	2.33E+00
6.00E+00	4.99E-02	1.74E-01	3.35E-01	1.38E+00	3.44E+00	3.98E+00	4.98E+00
7.00E+00	3.06E-01	6.47E-01	8.58E-01	2.86E+00	5.81E+00	6.59E+00	8.56E+00
8.00E+00	5.24E-01	7.98E-01	1.10E+00	3.81E+00	8.36E+00	9.63E+00	1.17E+01
9.00E+00	5.03E-01	7.19E-01	9.83E-01	3.66E+00	1.06E+01	1.24E+01	1.55E+01
1.00E+01	4.34E-01	6.05E-01	8.13E-01	3.10E+00	1.15E+01	1.42E+01	1.81E+01
1.10E+01	3.74E-01	5.51E-01	7.37E-01	2.80E+00	1.10E+01	1.47E+01	1.96E+01
1.30E+01	3.56E-01	5.35E-01	7.14E-01	2.65E+00	9.43E+00	1.39E+01	1.93E+01
1.40E+01	3.47E-01	5.28E-01	6.92E-01	2.59E+00	9.03E+00	1.33E+01	1.90E+01
1.60E+01	3.44E-01	5.20E-01	6.76E-01	2.53E+00	8.72E+00	1.27E+01	1.86E+01
1.70E+01	3.29E-01	5.13E-01	6.70E-01	2.49E+00	8.63E+00	1.25E+01	1.82E+01
1.90E+01	3.08E-01	4.96E-01	6.48E-01	2.41E+00	8.38E+00	1.21E+01	1.76E+01
2.10E+01	3.02E-01	4.86E-01	6.16E-01	2.34E+00	8.21E+00	1.17E+01	1.70E+01
2.30E+01	2.97E-01	4.75E-01	6.10E-01	2.29E+00	8.03E+00	1.15E+01	1.66E+01
2.60E+01	2.86E-01	4.55E-01	5.86E-01	2.23E+00	7.70E+00	1.12E+01	1.62E+01
2.80E+01	2.75E-01	4.31E-01	5.66E-01	2.16E+00	7.60E+00	1.11E+01	1.60E+01
3.20E+01	2.53E-01	4.10E-01	5.37E-01	2.07E+00	7.28E+00	1.05E+01	1.54E+01
3.50E+01	2.34E-01	3.83E-01	5.18E-01	1.97E+00	7.11E+00	1.02E+01	1.50E+01
3.90E+01	2.16E-01	3.64E-01	5.00E-01	1.88E+00	6.89E+00	9.63E+00	1.45E+01
4.30E+01	1.88E-01	3.42E-01	4.80E-01	1.80E+00	6.56E+00	9.27E+00	1.42E+01
4.70E+01	1.59E-01	3.18E-01	4.37E-01	1.72E+00	6.25E+00	8.86E+00	1.35E+01
5.20E+01	1.31E-01	2.99E-01	4.10E-01	1.63E+00	5.90E+00	8.24E+00	1.29E+01
5.70E+01	9.65E-02	2.63E-01	3.82E-01	1.53E+00	5.59E+00	7.68E+00	1.22E+01
6.40E+01	7.57E-02	2.38E-01	3.55E-01	1.43E+00	5.29E+00	7.36E+00	1.16E+01
7.00E+01	5.58E-02	2.13E-01	3.22E-01	1.34E+00	4.90E+00	7.07E+00	1.10E+01
7.80E+01	4.18E-02	1.96E-01	2.96E-01	1.28E+00	4.66E+00	6.69E+00	1.04E+01
8.60E+01	3.03E-02	1.77E-01	2.67E-01	1.18E+00	4.29E+00	6.42E+00	9.85E+00
9.50E+01	2.42E-02	1.62E-01	2.48E-01	1.10E+00	4.00E+00	6.06E+00	9.32E+00
1.05E+02	1.81E-02	1.43E-01	2.18E-01	9.98E-01	3.73E+00	5.54E+00	8.75E+00
1.16E+02	1.21E-02	1.23E-01	1.91E-01	9.07E-01	3.42E+00	5.02E+00	8.14E+00
1.28E+02	7.38E-03	9.92E-02	1.61E-01	8.09E-01	3.20E+00	4.55E+00	7.58E+00
1.41E+02	3.97E-03	7.48E-02	1.29E-01	7.11E-01	2.97E+00	4.09E+00	7.14E+00
1.56E+02	1.92E-03	5.43E-02	1.01E-01	6.14E-01	2.71E+00	3.55E+00	6.41E+00
1.72E+02	9.07E-04	3.85E-02	7.89E-02	5.21E-01	2.41E+00	3.18E+00	5.71E+00
1.90E+02	3.96E-04	2.64E-02	6.09E-02	4.35E-01	2.07E+00	2.60E+00	5.15E+00
2.10E+02	1.70E-04	1.73E-02	4.57E-02	3.65E-01	1.63E+00	2.42E+00	4.58E+00
2.32E+02	7.37E-05	1.09E-02	3.27E-02	3.00E-01	1.53E+00	2.00E+00	4.02E+00
2.56E+02	2.95E-05	6.16E-03	2.19E-02	2.37E-01	1.31E+00	1.71E+00	3.48E+00
2.82E+02	1.06E-05	3.45E-03	1.33E-02	1.83E-01	1.09E+00	1.47E+00	2.99E+00
3.00E+02	3.03E-06	1.68E-03	8.03E-03	1.39E-01	8.87E-01	1.24E+00	2.49E+00
3.12E+02	7.67E-07	8.09E-04	4.85E-03	1.06E-01	6.96E-01	1.03E+00	1.99E+00
3.44E+02	1.58E-07	3.82E-04	2.71E-03	7.79E-02	5.34E-01	8.20E-01	1.61E+00
3.80E+02	2.72E-08	1.44E-04	1.41E-03	5.42E-02	4.09E-01	6.53E-01	1.31E+00
4.20E+02	4.65E-09	5.41E-05	6.18E-04	3.74E-02	3.05E-01	4.96E-01	1.03E+00
4.64E+02	6.59E-10	2.15E-05	2.77E-04	2.61E-02	2.35E-01	3.84E-01	8.01E-01
5.12E+02	9.44E-11	8.76E-06	1.28E-04	1.77E-02	1.81E-01	3.06E-01	6.37E-01
5.65E+02	1.80E-11	3.99E-06	6.94E-05	1.30E-02	1.45E-01	2.49E-01	5.32E-01
6.24E+02	6.65E-12	1.63E-06	3.75E-05	9.15E-03	1.13E-01	1.97E-01	4.46E-01
6.89E+02	3.80E-13	3.85E-07	1.18E-05	5.12E-03	7.60E-02	1.41E-01	3.19E-01
7.61E+02	1.59E-12	7.87E-08	3.10E-06	2.62E-03	4.86E-02	9.37E-02	2.18E-01
8.40E+02	0.00E+00	1.36E-08	9.02E-07	1.35E-03	3.11E-02	5.81E-02	1.40E-01
9.28E+02	4.61E-12	1.52E-09	2.03E-07	6.29E-04	1.80E-02	3.66E-02	8.87E-02
1.00E+03	0.00E+00	2.18E-09	5.84E-08	2.82E-04	1.03E-02	2.15E-02	5.56E-02
1.02E+03	0.00E+00	3.76E-09	3.21E-08	1.17E-04	5.45E-03	1.24E-02	3.46E-02
1.13E+03	0.00E+00	3.37E-09	2.02E-08	4.31E-05	2.80E-03	6.26E-03	1.97E-02
1.25E+03	3.06E-13	1.98E-09	9.52E-09	1.54E-05	1.35E-03	3.13E-03	1.07E-02
1.38E+03	0.00E+00	1.15E-10	2.78E-09	4.99E-06	6.17E-04	1.57E-03	5.08E-03
1.52E+03	0.00E+00	2.51E-11	9.64E-10	1.61E-06	2.92E-04	7.56E-04	2.63E-03
1.68E+03	1.04E-13	6.18E-11	4.44E-10	6.48E-07	2.24E-04	6.89E-04	2.22E-03
1.86E+03	1.67E-14	3.72E-11	1.72E-10	5.29E-07	3.24E-04	9.38E-04	2.77E-03
2.05E+03	1.88E-14	8.80E-12	3.79E-11	5.54E-07	3.26E-04	1.01E-03	3.95E-03
2.26E+03	1.01E-14	2.32E-12	9.63E-12	7.74E-08	1.05E-04	3.24E-04	1.50E-03
2.50E+03	0.00E+00	3.14E-13	2.39E-12	8.32E-09	2.84E-05	1.04E-04	5.08E-04
2.76E+03	0.00E+00	0.00E+00	5.37E-14	1.26E-09	6.63E-06	3.07E-05	1.57E-04
3.00E+03	0.00E+00	0.00E+00	3.57E-14	8.38E-11	1.40E-06	7.10E-06	4.19E-05
3.05E+03	0.00E+00	0.00E+00	0.00E+00	2.79E-12	2.49E-07	1.43E-06	8.88E-06
3.36E+03	0.00E+00	0.00E+00	0.00E+00	7.35E-13	3.48E-08	2.50E-07	1.90E-06
3.71E+03	0.00E+00	0.00E+00	0.00E+00	7.92E-15	3.71E-09	3.29E-08	3.41E-07
4.10E+03	0.00E+00	0.00E+00	0.00E+00	4.43E-14	3.58E-10	4.11E-09	4.71E-08
4.53E+03	0.00E+00	0.00E+00	0.00E+00	1.14E-13	3.57E-11	1.94E-10	6.80E-09
5.00E+03	0.00E+00	0.00E+00	0.00E+00	9.77E-14	1.10E-11	7.17E-11	5.39E-10
5.52E+03	0.00E+00	0.00E+00	0.00E+00	1.04E-13	2.13E-12	1.64E-11	9.11E-11
6.09E+03	0.00E+00	0.00E+00	0.00E+00	1.82E-13	1.30E-12	2.39E-12	3.22E-11
6.73E+03	0.00E+00	0.00E+00	0.00E+00	7.64E-14	9.81E-13	1.87E-12	9.01E-12
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-12	2.16E-12	6.90E-12
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-12	2.97E-12	7.54E-12
9.06E+03	0.00E+00	0.00E+00	0.00E+00	3.11E-12	1.70E-11	2.51E-11	4.50E-11
1.00E+04	0.00E+00	0.00E+00	0.00E+00	2.24E-12	3.05E-11	4.56E-11	9.88E-11
1.00E+04	0.00E+00	0.00E+00	0.00E+00	5.34E-12	2.55E-11	3.53E-11	6.02E-11
1.10E+04	0.00E+00	0.00E+00	1.61E-13	4.91E-12	2.90E-11	4.51E-11	9.08E-11
1.22E+04	0.00E+00	9.93E-14	4.59E-13	5.65E-12	2.91E-11	4.35E-11	8.87E-11
1.35E+04	4.36E-15	5.34E-13	1.12E-12	8.39E-12	3.95E-11	6.21E-11	1.12E-10
1.49E+04	1.22E-15	6.93E-13	1.46E-12	1.09E-11	4.76E-11	7.32E-11	1.31E-10
1.64E+04	6.08E-16	2.49E-14	1.91E-13	6.17E-12	3.61E-11	5.85E-11	1.22E-10
1.81E+04	0.00E+00	0.00E+00	9.22E-16	2.05E-14	1.24E-13	2.03E-13	5.66E-13
2.00E+04	0.00E+00	0.00E+00	0.00E+00	2.35E-14	1.97E-13	3.09E-13	7.45E-13

Zinc

Concentration in groundwater [mg/l]

Time [years]	1st Percenti	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percenti
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-20
1.72E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-19
1.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-19
2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-19
2.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-19
2.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-18
2.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-18
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-17
3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-17
3.44E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-15
3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-12
4.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.89E-11
4.64E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-09
5.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08
5.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-08
6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-07
6.89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-07
7.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-06
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-06
9.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-06
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-06
1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-06
1.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-19	4.55E-06
1.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-19	6.42E-06
1.38E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E-16	8.07E-06
1.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-14	1.17E-05
1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-12	1.37E-05
1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-11	1.60E-05
2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-10	1.72E-05
2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.06E-10	2.01E-05
2.50E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-09	2.12E-05
2.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-09	2.14E-05
3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-09	2.36E-05
3.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-09	2.37E-05
3.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-08	1.90E-05
3.71E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-09	1.60E-05
4.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-08	1.27E-05
4.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-09	1.25E-05
5.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-09	1.43E-05
5.52E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.92E-10	1.51E-05
6.09E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-10	1.16E-05
6.73E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-18	1.88E-10	1.11E-05
7.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-18	3.21E-11	9.97E-06
8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-18	4.59E-12	7.67E-06
9.06E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-17	1.35E-12	5.55E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-17	3.63E-13	3.84E-06
1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-17	2.85E-13	3.84E-06
1.10E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-17	1.87E-13	2.40E-06
1.22E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-17	8.17E-14	1.20E-06
1.35E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-17	4.04E-14	4.96E-07
1.49E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-15	1.13E-14	3.24E-07
1.64E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-15	9.50E-15	2.01E-07
1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.80E-16	1.19E-14	9.90E-08
2.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-16	2.11E-14	4.44E-08

Ammoniacal N

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
7.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
8.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
9.00E+00	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.00E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.10E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.30E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.40E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.60E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.70E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.90E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.10E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.30E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.60E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.80E+01	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.20E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.50E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.90E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.30E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.70E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.20E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.70E+01	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.40E+01	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
7.00E+01	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
7.80E+01	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
8.60E+01	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
9.50E+01	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.05E+02	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.16E+02	1.62E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.28E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.41E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.56E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.72E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.90E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.10E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.32E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.56E+02	1.61E-02	3.19E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.82E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.00E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.12E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.44E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.80E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.20E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.64E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.12E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.65E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.24E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.89E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
7.61E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
8.40E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
9.28E+02	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.00E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.02E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.13E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.25E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.38E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.52E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.68E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.86E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.05E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.26E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.50E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.76E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.00E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.05E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.36E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
3.71E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.10E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
4.53E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.00E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
5.52E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.09E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
6.73E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
7.43E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
8.20E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
9.06E+03	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.00E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.00E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.10E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.22E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.35E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.49E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.64E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
1.81E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00
2.00E+04	1.61E-02	3.18E-02	4.82E-02	3.61E-01	1.71E+00	2.51E+00	4.47E+00

Arsenic

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.05E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.16E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.41E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.72E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.32E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.82E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.44E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.80E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.20E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.64E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.65E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.24E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.89E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.61E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.40E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.02E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.13E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.25E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.38E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.68E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.86E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.02E-03
2.05E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.02E-03	1.04E-03
2.26E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.02E-03	1.03E-03	1.07E-03
2.50E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.03E-03	1.05E-03	1.12E-03
2.76E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.04E-03	1.07E-03	1.13E-03
3.00E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.06E-03	1.08E-03	1.15E-03
3.05E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.05E-03	1.08E-03	1.14E-03
3.36E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.05E-03	1.09E-03	1.19E-03
3.71E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.06E-03	1.09E-03	1.18E-03
4.10E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.06E-03	1.09E-03	1.14E-03
4.53E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.06E-03	1.08E-03	1.18E-03
5.00E+03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.05E-03	1.08E-03	1.17E-03
5.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.05E-03	1.07E-03	1.17E-03
6.09E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.04E-03	1.06E-03	1.14E-03
6.73E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.03E-03	1.05E-03	1.12E-03
7.43E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.02E-03	1.03E-03	1.08E-03
8.20E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.02E-03	1.05E-03
9.06E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.01E-03	1.03E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.02E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03	1.02E-03
1.10E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.22E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.01E-03
1.35E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.49E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.64E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.81E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Cadmium

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
7.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
8.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
9.00E+00	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.00E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.10E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.30E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.40E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.60E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.70E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.90E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.10E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.30E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.60E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.80E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.20E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.50E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.90E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.30E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.70E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.20E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.70E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.40E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
7.00E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
7.80E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
8.60E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
9.50E+01	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.05E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.16E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.28E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.41E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.56E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.72E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.90E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.10E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.32E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.56E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.82E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.00E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.12E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.44E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.80E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.20E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.64E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.12E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.65E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.24E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.89E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
7.61E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
8.40E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
9.28E+02	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.00E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.02E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.13E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.25E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.38E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.52E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.68E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.86E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.05E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.26E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.50E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
2.76E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.00E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.05E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.36E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
3.71E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.10E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
4.53E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.00E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
5.52E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.09E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
6.73E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
7.43E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
8.20E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
9.06E+03	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.89E-05
1.00E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.90E-05
1.00E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.90E-05
1.10E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.93E-05
1.22E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05
1.35E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05
1.49E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05
1.64E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05
1.81E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05
2.00E+04	2.26E-05	2.56E-05	2.92E-05	4.54E-05	6.99E-05	7.81E-05	8.95E-05

Chloride

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.00E+00	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.00E+00	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.00E+00	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.00E+00	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.00E+00	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.00E+00	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
7.00E+00	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
8.00E+00	6.70E+01	7.52E+01	8.56E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
9.00E+00	6.70E+01	7.52E+01	8.56E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.00E+01	6.70E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.10E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.30E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.40E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.60E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.70E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.90E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.10E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.30E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.60E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.80E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.20E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.50E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.90E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.30E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.70E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.20E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.70E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.40E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
7.00E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
7.80E+01	6.69E+01	7.52E+01	8.55E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
8.60E+01	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
9.50E+01	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.05E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.16E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.28E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.41E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.56E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.72E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.90E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.10E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.32E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.56E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.82E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.00E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.12E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.44E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.80E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.20E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.64E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.12E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.65E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.24E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.89E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
7.61E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
8.40E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
9.28E+02	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.00E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.02E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.13E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.25E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.38E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.52E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.68E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.86E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.05E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.26E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.50E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.76E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.00E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.05E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.36E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
3.71E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.10E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
4.53E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.00E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
5.52E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.09E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
6.73E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
7.43E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
8.20E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
9.06E+03	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.00E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.00E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.10E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.22E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.35E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.49E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.64E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
1.81E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02
2.00E+04	6.69E+01	7.52E+01	8.54E+01	1.38E+02	2.56E+02	3.02E+02	3.77E+02

Copper

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.05E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.16E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.41E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.72E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.32E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.82E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.44E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.80E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.20E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.64E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.65E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.24E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.89E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.61E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.40E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.02E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.13E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.25E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.38E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.68E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.86E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.05E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.26E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.50E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.76E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.05E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.36E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.71E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.10E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.53E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.09E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.73E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.43E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.20E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.06E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.10E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.22E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.35E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.49E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.64E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.81E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Lead

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.00E+00	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.90E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.30E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.20E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.70E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.40E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.00E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.80E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.60E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.50E+01	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.05E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.16E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.41E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.72E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.90E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.10E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.32E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.56E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.82E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.44E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.80E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.20E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.64E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.12E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.65E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.24E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.89E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.61E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.40E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.28E+02	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.02E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.13E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.25E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.38E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.68E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.86E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.05E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.26E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.50E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.76E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.05E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.36E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
3.71E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.10E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
4.53E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.00E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
5.52E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.09E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
6.73E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
7.43E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
8.20E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
9.06E+03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.10E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.22E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.35E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.49E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.64E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
1.81E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03
2.00E+04	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03	1.00E-03

Mercury

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
7.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
8.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
9.00E+00	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.00E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.10E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.30E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.40E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.60E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.70E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.90E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.10E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.30E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.60E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.80E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.20E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.50E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.90E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.30E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.70E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.20E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.70E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.40E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
7.00E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
7.80E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
8.60E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
9.50E+01	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.05E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.16E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.28E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.41E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.56E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.72E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.90E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.10E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.32E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.56E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.82E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.00E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.12E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.44E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.80E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.20E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.64E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.12E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.65E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.24E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.89E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
7.61E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
8.40E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
9.28E+02	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.00E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.02E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.13E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.25E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.38E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.52E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.68E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
1.86E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.05E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.26E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.50E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
2.76E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.00E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.05E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.36E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
3.71E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.10E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
4.53E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.00E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
5.52E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.09E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
6.73E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
7.43E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
8.20E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.22E-05	4.52E-05	4.77E-05
9.06E+03	3.05E-05	3.09E-05	3.12E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.00E+04	3.05E-05	3.09E-05	3.13E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.00E+04	3.05E-05	3.09E-05	3.13E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.10E+04	3.05E-05	3.09E-05	3.13E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.22E+04	3.05E-05	3.09E-05	3.13E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.35E+04	3.06E-05	3.09E-05	3.13E-05	3.50E-05	4.23E-05	4.52E-05	4.77E-05
1.49E+04	3.06E-05	3.09E-05	3.13E-05	3.51E-05	4.23E-05	4.52E-05	4.77E-05
1.64E+04	3.06E-05	3.09E-05	3.13E-05	3.51E-05	4.23E-05	4.52E-05	4.77E-05
1.81E+04	3.06E-05	3.09E-05	3.13E-05	3.51E-05	4.23E-05	4.52E-05	4.77E-05
2.00E+04	3.06E-05	3.09E-05	3.13E-05	3.51E-05	4.23E-05	4.52E-05	4.77E-05

Sulphate

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percentile
0.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
4.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
5.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
6.00E+00	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
7.00E+00	1.19E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
8.00E+00	1.19E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
9.00E+00	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.00E+01	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.10E+01	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.30E+01	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.40E+01	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.60E+01	1.19E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.70E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
1.90E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
2.10E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
2.30E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
2.60E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
2.80E+01	1.18E+02	1.24E+02	1.29E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
3.20E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
3.50E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
3.90E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
4.30E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
4.70E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
5.20E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
5.70E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.93E+02
6.40E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
7.00E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
7.80E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
8.60E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
9.50E+01	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.05E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.16E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.28E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.41E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.56E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.72E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.90E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.10E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.32E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.56E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.82E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.00E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.12E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.44E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.80E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
4.20E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
4.64E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
5.12E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
5.65E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
6.24E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
6.89E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
7.61E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
8.40E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
9.28E+02	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.00E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.02E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.13E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.25E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.38E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.52E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.68E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.86E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.05E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.26E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.50E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.76E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.00E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.05E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.36E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
3.71E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
4.10E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
4.53E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
5.00E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
5.52E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
6.09E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
6.73E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
7.43E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
8.20E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
9.06E+03	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.00E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.00E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.10E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.22E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.35E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.49E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.64E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
1.81E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02
2.00E+04	1.18E+02	1.24E+02	1.28E+02	1.52E+02	1.79E+02	1.85E+02	1.92E+02

Zinc

Concentration in groundwater [mg/l]

Time [years]	1st Percentil	5th Percenti	10th Percen	50th Percen	90th Percen	95th Percen	99th Percenti
0.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
7.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
8.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
9.00E+00	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.00E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.10E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.30E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.40E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.60E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.70E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.90E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.10E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.30E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.60E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.80E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.20E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.50E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.90E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.30E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.70E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.20E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.70E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.40E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
7.00E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
7.80E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
8.60E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
9.50E+01	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.05E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.16E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.28E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.41E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.56E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.72E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.90E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.10E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.32E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.56E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.82E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.00E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.12E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.44E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.80E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.20E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.64E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.12E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.65E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.24E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.89E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
7.61E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
8.40E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
9.28E+02	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.00E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.02E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.13E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.25E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.38E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.52E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.68E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.86E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.05E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.26E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.50E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.76E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.00E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.05E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.36E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
3.71E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.10E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
4.53E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.00E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
5.52E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.09E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
6.73E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
7.43E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
8.20E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
9.06E+03	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.00E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.00E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.10E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.22E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.35E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.49E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.64E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
1.81E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02
2.00E+04	4.07E-03	5.58E-03	7.43E-03	2.24E-02	5.64E-02	6.63E-02	8.81E-02

Ferns Group

Wrotham Quarry

Addington, Kent

Environmental Permit Application
Buttressing of Quarry Faces Using Inert Materials

Hydrogeological Risk Assessment

Version 3
16th June 2022

Appendix 8 Derivation of Control Levels and Compliance Limits

BCL HYDRO
BCL Consultant Hydrogeologists Limited

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Registered in England & Wales. Company Registration Number: 4043373

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Cadmium, Down Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021				
19/05/2021				
23/06/2021	0.0001			
27/07/2021	0.00002			
24/08/2021				
24/09/2021				
20/10/2021	0.00007			
17/11/2021				
15/12/2021				
25/01/2022	0.0000			
21/02/2022				
28/03/2022	0.0000			
27/04/2022	0.0001			

Natural Logs of Baseline Data

Date				
27/04/2021				
19/05/2021				
23/06/2021	-9.2103			
27/07/2021	-10.8198			
24/08/2021				
24/09/2021				
20/10/2021	-9.5670			
17/11/2021				
15/12/2021				
25/01/2022	-10.4143			
21/02/2022				
28/03/2022	-10.4143			
27/04/2022	-9.9035			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	0.00002	-2.5	-0.00005
2	0.0000	-1.5	-0.000045
3	0.0000	-0.5	-0.000015
4	0.0001	0.5	0.000025
5	0.00007	1.5	0.000105
6	0.0001	2.5	0.00025

NORMALITY DISTRIBUTION TEST

n	6	
Mean	0.00	
Standard Deviation	0.00	
T	0.00	
D	0.247	
Y	-2.845	
Y 1% value	-4.33	
Y 99% value	0.11	
Y in range? (& therefore Data is Normally Distributed)	Yes	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	**0.00011**	mg/l
Percentile	**97.725%**	
μ + 3σ	**0.00014**	mg/l
Percentile	**99.865%**	

LOG-NORMALITY DISTRIBUTION TEST

n	6	
Mean	-10.05	
Standard Deviation	0.60	
T	5.55	
D	0.256	
Y	-2.157	
Y 1% value	-4.33	
Y 99% value	0.11	
Y in range? (& therefore Data is Log-Normally Distributed)	Yes	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	**0.00014**	mg/l
Percentile	**97.725%**	
μ + 3σ	**0.00026**	mg/l
Percentile	**99.865%**	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	-10.8198	-3	27.0
2	-10.4143	-2	15.6
3	-10.4143	-1	5.2
4	-9.90349	1	-5.0
5	-9.5670	2	-14.4
6	-9.2103	3	-23.0

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Cadmium, Up Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021	0.0001			
19/05/2021	0.00005			
23/06/2021	0.0001			
27/07/2021	0.00004			
24/08/2021	0.00004			
24/09/2021	0.00005			
20/10/2021	0.00006			
17/11/2021				
15/12/2021				
25/01/2022	0.0000			
21/02/2022				
28/03/2022	0.0001			
27/04/2022	0.0001			

Natural Logs of Baseline Data

Date				
27/04/2021	-9.2103			
19/05/2021	-9.9035			
23/06/2021	-9.2103			
27/07/2021	-10.1266			
24/08/2021	-10.1266			
24/09/2021	-9.9035			
20/10/2021	-9.7212			
17/11/2021				
15/12/2021				
25/01/2022	-10.1266			
21/02/2022				
28/03/2022	-9.3157			
27/04/2022	-9.9035			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	0.00004	-4.5	-0.00018
2	0.00004	-3.5	-0.00014
3	0.0000	-2.5	-0.0001
4	0.00005	-1.5	-0.000075
5	0.00005	-0.5	-0.000025
6	0.0001	0.5	0.000025
7	0.00006	1.5	0.00009
8	0.0001	2.5	0.000225
9	0.0001	3.5	0.00035
10	0.0001	4.5	0.00045

NORMALITY DISTRIBUTION TEST		
n	10	
Mean	0.00	
Standard Deviatior	0.00	
T	0.00	
D	0.249	
Y	-3.443	
Y 1% value	-4.11	
Y 99% value	0.36	
Y in range? (& therefore Data is Normally Distributed)	Yes	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	**0.00011**	mg/l
Percentile	**97.725%**	
μ + 3σ	**0.00014**	mg/l
Percentile	**99.865%**	

LOG-NORMALITY DISTRIBUTION TEST		
n	10	
Mean	-9.75	
Standard Deviatior	0.38	
T	9.63	
D	0.257	
Y	-2.689	
Y 1% value	-4.11	
Y 99% value	0.36	
Y in range? (& therefore Data is Log-Normally Distributed)	Yes	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	**0.00012**	mg/l
Percentile	**97.725%**	
μ + 3σ	**0.00018**	mg/l
Percentile	**99.865%**	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	-10.1266	-5	45.6
2	-10.1266	-4	35.4
3	-10.1266	-3	25.3
4	-9.9035	-2	14.9
5	-9.9035	-1	5.0
6	-9.9035	1	-5.0
7	-9.7212	2	-14.6
8	-9.3157	3	-23.3
9	-9.2103	4	-32.2
10	-9.2103	5	-41.4

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Sulphate, Down Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021	189.00			
19/05/2021	168.00			
23/06/2021	189.00			
27/07/2021	184.00			
24/08/2021	201.00			
24/09/2021	174.00			
20/10/2021	132.00			
17/11/2021	161.00			
15/12/2021	171.00			
25/01/2022	140.00			
21/02/2022	153.00			
28/03/2022	116.00			
27/04/2022	166.00			

Natural Logs of Baseline Data

Date				
27/04/2021	5.2417			
19/05/2021	5.1240			
23/06/2021	5.2417			
27/07/2021	5.2149			
24/08/2021	5.3033			
24/09/2021	5.1591			
20/10/2021	4.8828			
17/11/2021	5.0814			
15/12/2021	5.1417			
25/01/2022	4.9416			
21/02/2022	5.0304			
28/03/2022	4.7536			
27/04/2022	5.1120			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	116.00	-6	-696
2	132.00	-5	-660
3	140.00	-4	-560
4	153.00	-3	-459
5	161.00	-2	-322
6	166.00	-1	-166
7	168.00	0	0
8	171.00	1	171
9	174.00	2	348
10	184.00	3	552
11	189.00	4	756
12	189.00	5	945
13	201.00	6	1206

NORMALITY DISTRIBUTION TEST		
n	13	
Mean	164.92	
Standard Deviatior	24.51	
T	1115.00	
D	0.269	
Y	-1.558	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Normally Distributed)	Yes	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	214	mg/l
Percentile	97.725%	
μ + 3σ	238	mg/l
Percentile	99.865%	

LOG-NORMALITY DISTRIBUTION TEST		
n	13	
Mean	5.09	
Standard Deviatior	0.16	
T	7.03	
D	0.264	
Y	-2.156	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Log-Normally Distributed)	Yes	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	223.520	mg/l
Percentile	97.725%	
μ + 3σ	261.651	mg/l
Percentile	99.865%	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	4.7536	-6	-28.5
2	4.8828	-5	-24.4
3	4.9416	-4	-19.8
4	5.0304	-3	-15.1
5	5.0814	-2	-10.2
6	5.11199	-1	-5.1
7	5.1240	0	0.0
8	5.1417	1	5.1
9	5.1591	2	10.3
10	5.2149	3	15.6
11	5.2417	4	21.0
12	5.2417	5	26.2
13	5.3033	6	31.8

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Sulphate, Up Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021	136.00			
19/05/2021	113.00			
23/06/2021	129.00			
27/07/2021	131.00			
24/08/2021	137.00			
24/09/2021	127.00			
20/10/2021	125.00			
17/11/2021	131.00			
15/12/2021	141.00			
25/01/2022	131.00			
21/02/2022	139.00			
28/03/2022	135.00			
27/04/2022	163.00			

Natural Logs of Baseline Data

Date				
27/04/2021	4.9127			
19/05/2021	4.7274			
23/06/2021	4.8598			
27/07/2021	4.8752			
24/08/2021	4.9200			
24/09/2021	4.8442			
20/10/2021	4.8283			
17/11/2021	4.8752			
15/12/2021	4.9488			
25/01/2022	4.8752			
21/02/2022	4.9345			
28/03/2022	4.9053			
27/04/2022	5.0938			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	113.00	-6	-678
2	125.00	-5	-625
3	127.00	-4	-508
4	129.00	-3	-387
5	131.00	-2	-262
6	131.00	-1	-131
7	131.00	0	0
8	135.00	1	135
9	136.00	2	272
10	137.00	3	411
11	139.00	4	556
12	141.00	5	705
13	163.00	6	978

NORMALITY DISTRIBUTION TEST

n	13	
Mean	133.69	
Standard Deviatior	11.37	
T	466.00	
D	0.243	
Y	-4.754	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Normally Distributed)	No	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	N/A	mg/l
Percentile	N/A	
μ + 3σ	N/A	mg/l
Percentile	N/A	

LOG-NORMALITY DISTRIBUTION TEST

n	13	
Mean	4.89	
Standard Deviatior	0.08	
T	3.45	
D	0.246	
Y	-4.329	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Log-Normally Distributed)	No	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	N/A	mg/l
Percentile	N/A	
μ + 3σ	N/A	mg/l
Percentile	N/A	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	4.7274	-6	-28.4
2	4.8283	-5	-24.1
3	4.8442	-4	-19.4
4	4.8598	-3	-14.6
5	4.8752	-2	-9.8
6	4.8752	-1	-4.9
7	4.8752	0	0.0
8	4.9053	1	4.9
9	4.9127	2	9.8
10	4.9200	3	14.8
11	4.9345	4	19.7
12	4.9488	5	24.7
13	5.0938	6	30.6

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Zinc, Down Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021	0.008			
19/05/2021	0.008			
23/06/2021	0.008			
27/07/2021	0.003			
24/08/2021	0.003			
24/09/2021	0.006			
20/10/2021	0.099			
17/11/2021	0.009			
15/12/2021	0.043			
25/01/2022	0.074			
21/02/2022	0.008			
28/03/2022	0.027			
27/04/2022	0.029			

Natural Logs of Baseline Data

Date				
27/04/2021	-4.8283			
19/05/2021	-4.8283			
23/06/2021	-4.8283			
27/07/2021	-5.8091			
24/08/2021	-5.8091			
24/09/2021	-5.1160			
20/10/2021	-2.3126			
17/11/2021	-4.7105			
15/12/2021	-3.1466			
25/01/2022	-2.6037			
21/02/2022	-4.8283			
28/03/2022	-3.6119			
27/04/2022	-3.5405			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	0.003	-6	-0.018
2	0.003	-5	-0.015
3	0.006	-4	-0.024
4	0.008	-3	-0.024
5	0.008	-2	-0.016
6	0.008	-1	-0.008
7	0.008	0	0
8	0.009	1	0.009
9	0.027	2	0.054
10	0.029	3	0.087
11	0.043	4	0.172
12	0.074	5	0.37
13	0.099	6	0.594

NORMALITY DISTRIBUTION TEST		
n	13	
Mean	0.03	
Standard Deviation	0.03	
T	1.18	
D	0.231	
Y	-6.118	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Normally Distributed)	No	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	N/A	mg/l
Percentile	N/A	
μ + 3σ	N/A	mg/l
Percentile	N/A	

LOG-NORMALITY DISTRIBUTION TEST		
n	13	
Mean	-4.31	
Standard Deviation	1.14	
T	51.30	
D	0.265	
Y	-2.025	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Log-Normally Distributed)	Yes	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	0.133	mg/l
Percentile	97.725%	
μ + 3σ	0.418	mg/l
Percentile	99.865%	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	-5.8091	-6	34.9
2	-5.8091	-5	29.0
3	-5.1160	-4	20.5
4	-4.8283	-3	14.5
5	-4.8283	-2	9.7
6	-4.8283	-1	4.8
7	-4.8283	0	0.0
8	-4.7105	1	-4.7
9	-3.6119	2	-7.2
10	-3.54046	3	-10.6
11	-3.1466	4	-12.6
12	-2.6037	5	-13.0
13	-2.3126	6	-13.9

D'Agostino's Test for Normal / Log-Normal Distribution
From: "Techniques for the Interpretation of Landfill Monitoring Data" (Guidance Notes), EA Final technical report P1-471, 2002.

Zinc, Up Gradient
Concentrations <LOD excluded.

Time-series plot does not suggest there is a clear trend in the data over time

Baseline Data (mg/l)

Date				
27/04/2021	0.116			
19/05/2021	0.013			
23/06/2021	0.004			
27/07/2021	0.007			
24/08/2021	0.007			
24/09/2021	0.036			
20/10/2021	0.074			
17/11/2021	0.041			
15/12/2021	0.085			
25/01/2022	0.066			
21/02/2022	0.068			
28/03/2022	0.099			
27/04/2022	0.010			

Natural Logs of Baseline Data

Date				
27/04/2021	-2.1542			
19/05/2021	-4.3428			
23/06/2021	-5.5215			
27/07/2021	-4.9618			
24/08/2021	-4.9618			
24/09/2021	-3.3242			
20/10/2021	-2.6037			
17/11/2021	-3.1942			
15/12/2021	-2.4651			
25/01/2022	-2.7181			
21/02/2022	-2.6882			
28/03/2022	-2.3126			
27/04/2022	-4.6052			

D'Agostino's Test for Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	0.004	-6	-0.024
2	0.007	-5	-0.035
3	0.007	-4	-0.028
4	0.010	-3	-0.03
5	0.013	-2	-0.026
6	0.036	-1	-0.036
7	0.041	0	0
8	0.066	1	0.066
9	0.068	2	0.136
10	0.074	3	0.222
11	0.085	4	0.34
12	0.099	5	0.495
13	0.116	6	0.696

NORMALITY DISTRIBUTION TEST		
n	13	
Mean	0.05	
Standard Deviatior	0.04	
T	1.78	
D	0.270	
Y	-1.432	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Normally Distributed)	Yes	
Parameter level and percentile (assuming normal distribution)		
μ + 2σ	0.126	mg/l
Percentile	97.725%	
μ + 3σ	0.165	mg/l
Percentile	99.865%	

LOG-NORMALITY DISTRIBUTION TEST		
n	13	
Mean	-3.53	
Standard Deviatior	1.18	
T	53.36	
D	0.267	
Y	-1.810	
Y 1% value	-4.00	
Y 99% value	0.49	
Y in range? (& therefore Data is Log-Normally Distributed)	Yes	
Parameter level and percentile (assuming log-normal distribution)		
μ + 2σ	0.313	mg/l
Percentile	97.725%	
μ + 3σ	1.020	mg/l
Percentile	99.865%	

D'Agostino's Test for Log-Normal Distribution, P1

Count [x]	Sorted Data [A]	x-(n+1)/2 [B]	Product of A & B
1	-5.5215	-6	33.1
2	-4.9618	-5	24.8
3	-4.9618	-4	19.8
4	-4.6052	-3	13.8
5	-4.3428	-2	8.7
6	-3.3242	-1	3.3
7	-3.1942	0	0.0
8	-2.7181	1	-2.7
9	-2.6882	2	-5.4
10	-2.6037	3	-7.8
11	-2.4651	4	-9.9
12	-2.3126	5	-11.6
13	-2.1542	6	-12.9