Report

Furhter soil investigation Ringdijk 390 in Ridderkerk

projectnummer 465250.100
Final revisie 01
6 januari 2021

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final revision 01
6 January 2021

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Opdrachtgever

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1 Introduction

On behalf of Panattoni Dutch Development Coöperatie U.A., Antea Group carried out a more detailed soil survey at the site Ringdijk 390 in Ridderkerk in the period from September to December 2020.

Reason and goal

Reasons for the more detailed soil survey were the results of surveys carried out previously (in 2019 and 2020) and the contemplated redevelopment of the site. There are plans in place to remove the current buildings and develop logistics facilities on the site.

The goal of the survey is to record the size of the contaminations being present, and to determine to what extent remedial action will have to be undertaken with a view to the intended redevelopment.

Investigation strategy and quality

The survey was carried out with NTA 5755 as a guideline. For the execution of the more detailed soil survey, the NTA provides that a conceptual model aimed at filling knowledge gaps is to be drawn up.
Surveys carried out previously show that the site contains various contaminations (see Section 2). The following contaminations are concerned:

- Contamination of the topsoil with immobile parameters;
- Contamination of the subsoil with mobile parameters;
- Contamination of the groundwater with mobile parameters.

The table below provides the conceptual model for each contamination. This has been taken into account in designing the survey.

Contamination	Conceptual model
Contamination of the topsoil with immobile parameters	Contaminations with heavy metals, PCB and mineral oil have been identified. The contaminations are related to the admixtures that were found and also to the business activities. Some strong contaminations (above the intervention value) were identified in composite samples. The exploratory survey also showed that no significant contaminations were identified in the central and northern sections of the site underneath the buildings with a sealed concrete paving. As far as is known, no earth was moved as a result of which the immobile contaminations might have spread. The contaminants were not found in the groundwater. The starting point is that the strong contaminations may occur heterogeneously within the contour. The survey is aimed at delineating the strong contaminations in the topsoil by drilling adjacent boreholes down to at least 0.5m BGL and analysing these for normative components. This is combined with verifying 'old' composite samples by resampling the old boring locations. Where necessary, a second ring of boreholes will be drilled.
Contamination of the subsoil with mobile parameters	In the previous surveys, strong contaminations with mineral oil in the subsoil were measured at various locations. The quality of the groundwater was not established at the time. These contaminations can potentially spread. The aim of the survey is to first establish whether there is any groundwater contamination. If yes, the surrounding groundwater will also be sampled for normative components. Inside one of the locations there is a basement. Given the nature of the contamination to be investigated (oil), this basement is considered to be a physical boundary. In positioning the monitoring tubes, the field observations and the expected groundwater flow in the phreatic package (west-southwesterly) are taken into account.
Contamination of the groundwater with mobile parameters	In the previous survey, strong contaminations with mineral oil and various VOCLs were found in the groundwater. The contamination with mineral oil is not expected to spread to the deeper groundwater to any significant extent. An NAPL layer (floating layer) has also been found at the site. With this contamination, the adjacent groundwater is examined by placing phreatic monitoring tubes. In positioning the monitoring tubes, the field observations and the expected groundwater flow in the phreatic package (west-southwesterly) are taken into account. The VOCL contaminants are known to be able to spread to the deeper groundwater ('sink layers'). During the 1995 survey, pure product was found in the southern section of the site near an old collection pit (concentrations > 200,000µg/l). Vertically, this contamination has not been completely delineated in more detailed surveys. A remediation was also carried out

	on site. However, the execution and results of that remediation have not been recorded. The expected groundwater flow is west-southwesterly for the shallow phreatic water and west-northwesterly for the deeper phreatic water. In positioning the monitoring tubes, spreading in southern and northwestern direction and in a vertical direction to the deeper groundwater has been taken into account. Investigations were also carried out at the potential source location.

Table 1: Conceptual model per contamination

Based on the above starting points in the conceptual model, the design of the more detailed survey has been worked out.

For the survey's quality aspects, methods used and reliability/guarantees, please refer to Appendix 1.

This report is not suitable as a certificate of quality for determining the suitability of possible future applications of any released soil.

This report gives an account of the activities performed and describes the results of the survey.

2 Preliminary investigation

2.1 Introduction

In 2020, an extensive preliminary investigation was carried out prior to the purchase of the site. The results are included in the report 'Phase I environmental site assessment' Ringdijk 390 in Ridderkerk (Antea Group, ref. 462424, dated 12 June 2020). Following on the preliminary investigation, Antea Group carried out an exploratory soil survey (ref. 460838, dated 17 June 2020).

Both reports are an addition to the exploratory survey carried out by Haskoning on the site in 2019 (report with reference BG8479IBRP1910181025, 2019).

2.2 Site details

The survey site is located at Ringdijk 390 in Ridderkerk and is cadastrally known as Municipality of Ridderkerk, section B, numbers 2389 and 2569. The site has an area of approximately 57,800m² and is partly built-up, partly paved with Stelcon, clinkers and/or asphalt, and is partly used as green space. A small part of the Veerweg road also belongs to the site under review. The buildings were used as storage space, industrial units/production halls, and office space.

The site is located on the Donkersloot business park northeast of the town of Ridderkerk. On the west side flows the river Noord near the influx of the river Lek.

The site has been in use for business activities since around 1930. From around 1940 Holec BV, later Brush, was established on the site. The activities were discontinued around December 2019. The activities consisted of manufacturing machines and products for the metal and steel industries. In the past, the site was raised with various materials.

Figure 1 is an aerial photo showing the location of the survey site.



Figure 1: Aerial photo of the site (source: Cyclomedia, 2019)

2.3 Previous surveys

From 1989 to 2020, various surveys were carried out on the site. Also, a remediation was carried at the former buildings Y17 and Y18. Little information is known about the remediation: the exact activities performed (presumably excavation of soil, and groundwater remediation for about 10 years) and the result of the remediation are not known. However, results from various influent and effluent samples show that around 2018 no increased levels of VOCL or mineral oil were measured in the extracted groundwater.

For a detailed description of the surveys and activities carried out on the site, please refer to the reports mentioned in paragraph 2.1. The survey results are also included in drawings 465250.100-S2 to -S10. The most relevant results of the previous surveys are summarised below. For the locations, please refer to Figure 2.

In the central and (north)eastern sections of the site, there is a heterogeneously contaminated layer of fill. This concerns, roughly, the buildings Y40, Y7, Y6, Y2, Y3, Y1, Y5, Y39 and Y9. This layer contains various admixtures and is strongly contaminated (above the intervention value) with heavy metals, mineral oil, PCBs (polychlorobiphenyls) and/or asbestos. In general, no significantly increased levels of these substances have been measured in the subsoil. However, strong contaminations with heavy metals, volatile aromatics (BTEX; building Y17), volatile halogenated hydrocarbons (VOCL; buildings Y17 and Y5) and/or mineral oil (buildings Y7B, Y1 and Y34) have been locally measured in the subsoil.

At buildings Y17 and Y18 (washing area with oil-water separator (OBAS) and collection pit), strong groundwater contaminations with various VOCLs, volatile aromatics and mineral oil were measured in the past. The levels measured reflected pure product (total VOCL > 200,000µg/l). During a detailed survey in 2000 (carried out by Oranjewoud), the VOCL contamination was not delineated to a depth of 6m BGL. Following on the detailed survey, the remediation mentioned earlier presumably started. Based on the known data, the collection/settlement pit and the OBAS are located at the plot boundary.

Strong VOCL contaminations were also measured during previous surveys: roughly, in the vicinity of buildings Y6, Y38 and Y39 (tetra- or pervinyl chloride (PER); 1995 and 2020 surveys), building Y5 (vinyl chloride (vc); 2020 survey), building Y9 (PER, 2020 survey) and building Y34 (cis-1,2-dichloroethene (cis), 2020 survey).

At building Y34 (former above-ground fuel tank), an NAPL layer of mineral oil on the groundwater was demonstrated in 1995, 2007 and 2020. The subsoil here was strongly contaminated with mineral oil.

Based on the previous surveys, a more detailed survey was carried out into the following contaminations/aspects:

- Further mapping of contaminations with heavy metals, asbestos, mineral oil (not mobile) and PCBs in the topsoil;
- Further mapping of the size and volume of contaminations with mineral oil and VOCL in the subsoil and groundwater;
- Possibilities of biological VOCL degradation (for remediation approach);

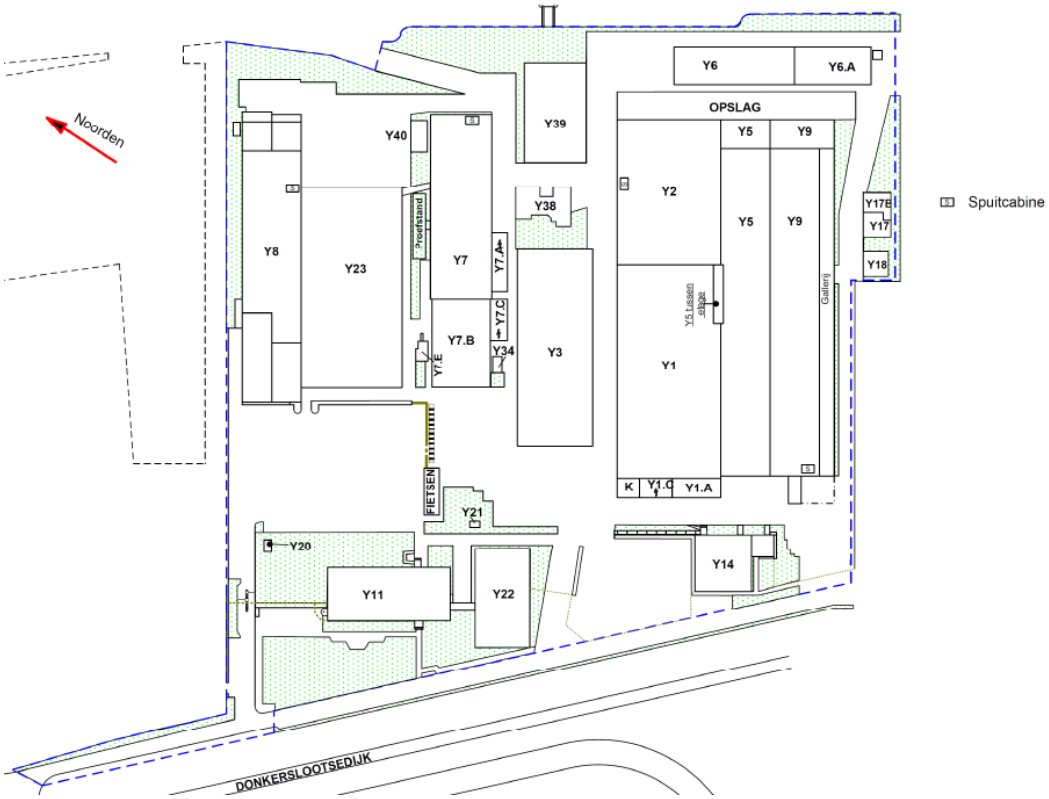


Figure 2: Overview of former on-site buildings

2.4 Soil structure and geohydrology

The regional soil structure is shown in table 2.1 below.

Table 2.1: soil structure

Global depth (m)	Geohydrological unit	Lithostratigraphic unit	Lithological composition
0-12	coating	Westland formation	clay and peat with silt-containing fine and coarse sands
12-37	first aquifers	Formation of Sterksel Kreftenheye and Kedichem	moderately coarse to coarse gravel-containing sands with clay layers

As a result of the location outside the dike, the phreatic groundwater level depends strongly by the water level in the Noord, Nieuwe Maas and the Lek. It can be assumed that at high water levels in the river a horizontal flow of water from the river takes place towards the location. The flow rate depends on the density of the clay covering of the dike. This situation is reversed at low river levels. As a result, the resulting flow of the phreatic groundwater in the horizontal direction will be limited.
The influence of the Noord and Nieuwe Maas with ebb and flow on groundwater flow is rather large (in April 2020, in a relatively dry season in NW Europe, the water level on-site was recorded between NAP -0.5 and 1.2 m). In winter there will be a much higher water level. It is expected there will always be an infiltrating effect from the Noord to the surrounding area.
The groundwater can be found from a depth of approximately 1.4 m bgl and flows in a south-western direction towards the lower lying polders/agricultural lands.

The groundwater flow direction in the first aquifer is oriented west northwest due to a drinking water abstraction west of the site.

The geohydrological information comes from the Groundwater Map of the Netherlands, from the TNO Groundwater Survey Service, Gorinchem, 38 West, July 1979.

3 Fieldwork

3.1 Fieldwork performed

The fieldwork was carried out in the period from September to November 2020 by R. Kantier and P. Aarts of Antea Group, [redacted] and C. Brussee of Brussee Milieukundig Veldwerkbureau and V. Hoogendoorn and M. Meijer of Ground Research.

The fieldwork was carried out in accordance with BRL SIKB 2000. The fieldwork carried out is included in Table 3.1.

Table 3.1: Overview of fieldwork activities

Site section/Component	Goal	Drillings	Monitoring tubes (filter depth, metres BGL)
Heavy metal contamination, topsoil	Delineating heavy metal contamination	516 to 545, 547 to 551	-
PCB contamination at buildings Y9 and Y40	Verifying and delineating volume of strong contamination	530, 530a, 531, 532, 541, 542, 551 (building Y9), 520 to 524 (building Y40)	-
Asbestos contamination underneath buildings Y1, Y2, Y5 and Y9	Further investigating asbestos underneath building Y1 (clinker-paved)	Holes 536 to 540	-
Strong subsoil contamination with oil, bfoto3 location, building Y7	Determining whether on-site groundwater is contaminated with oil and, if yes, determining the scope	505	504, 506, 507, 508, 509
Strong soil and groundwater contamination with oil at building Y34 (NAPL layer)	Determining the size and volume	512, 514	510, 511, 513
Groundwater contaminations with VOCL, areas Y6, Y34, Y38, Y39 and Y5, Y9, Y17, Y18	Determining size and volume, investigating potential source location	-	515 (2-3), 1002 to 1020 (2-3, 5-6 and 9-10)
Strong subsoil contamination with oil, borehole a5, buildings Y17/Y18	Determining whether on-site groundwater is contaminated with oil and, if yes, determining the scope	500	501, 502, 503 (1.9-2.9)
Investigation into biological degradation	Determining the natural conditions for VOCL degradation	-	Sampling existing monitoring tubes 9 (5-6), a4 (2-3), 19 (2-3), 154 (0.8-2.8), 41 (1.8-2.8)

During the placement of deep monitoring tubes (number 1001), an oil cooled electric cable was pierced. As a result the cable had to be replaced and a remediation was carried out. During the remediation work (in accordance with the proper authorities DCMR, case ID 9999192511) performed the filters of monitoring tube 1001 (filter depths of 2-3, 5-6 and 9-10m BGL) and monitoring tube 1002 (filter depth 5-6m BGL) were removed from the site.

The bore material was sensorily assessed in the field whereby, for safety reasons, no active odour observations were made. When inspecting the site within the survey area and performing the borings, attention was also given to the presence of asbestos-suspect materials in the extracted and excavated materials.

Thereupon, the soil layers were described and sampled, and the (composite) samples to be analysed were selected.

The positions of the borings, holes and observation tubes are indicated on drawing no. 465250.100-S1.

3.2 Fieldwork results

The profile descriptions of the borings made, along with the corresponding field observations, are included in Appendix 2.

The profile descriptions show that the soil consists alternately of sand and clay from ground level or the underside of the pavement down to about 10m BGL.

During various drillings, traces of strong admixtures were found or a foundation layer was encountered. No asbestos-suspect materials were found.

Locally, fuel-related observations (odour or oil-water reaction (observation of a floating oil layer on water when a small amount of soil is placed in clean water) were made at the site sections suspected of presence of oil. A chemical odour was detected in one bore. The relevant field observations are included in Table 3.2.

Table 3.2: Field observations

Drilling	Drilling depth (m BGL)	Range (m BGL)	Soil type	Observations or particulars
1016_N	10.00	0.00 - 1.50	Sand	
		1.50 - 2.00	Clay	strong diesel odour, slight oil-water reaction
		8.00 - 10.00		Drawn 3 times down to 10.5m but no samples, possibly too soft. Also, no tube resistance.
1018	10.00	0.15 - 0.50	Sand	
		0.50 - 1.00	Sludge	
		1.00 - 2.00	Sludge	strong chemical odour
1020	10.00	0.00 - 0.10	Asphalt	
		0.10 - 0.40		rubble-only
506	2.70	0.10 - 0.30	Sand	
		0.30 - 1.30	Clay	chunks of rubble, lightly gravelly
		1.30 - 2.20	Clay	slightly woody
		2.20 - 2.70	Clay	
547	0.50	0.00 - 0.50	Sand	slightly rubbly, slightly gravelly, slightly woody
507	2.70	0.05 - 0.40	Sand	
		0.40 - 1.40	Clay	moderately rubbly
548	0.60	0.08 - 0.20	Sand	
		0.20 - 0.40	Sand	strongly granulated
550	0.50	0.00 - 0.50	Sand	moderately gravelly, slightly rubbly, traces of coaldust
508	2.70	0.00 - 0.12		concrete-only
		0.70 - 1.20	Clay	moderately rubbly
509	2.70	0.05 - 1.20	Sand	slightly gravelly
		1.20 - 2.00	Clay	slight oil-water reaction, oil-water reaction layered
		2.00 - 2.30	Clay	no oil-water reaction
542	0.31	0.08 - 0.30	Sand	
		0.30 - 0.31		Discontinued
551	1.10	0.08 - 0.60	Sand	slightly gravelly
		0.60 - 1.10	Clay	
525a	1.01	0.00 - 0.12		concrete-only
		0.12 - 0.25	Sand	
		0.25 - 0.70	Sand	moderately gravelly, strongly rubbly, slightly bricky, strongly slaggy
		0.70 - 1.00	Sand	
		1.00 - 1.01		Discontinued on concrete
a113	0.65	0.00 - 0.15	asphalt	
		0.15 - 0.65		Rubble
515	2.60	0.00 - 1.30	Clay	
		1.30 - 1.50	Clay	slight oil-water reaction
		1.50 - 2.00	Clay	slight oil-water reaction
		2.00 - 2.60	Clay	no oil-water reaction
516	0.60	0.00 - 0.10		gravel-only, on anti-root membrane
Grit 1	0.01	0.00 - 0.01		Grit on floor, indoor
Grit 2	0.01	0.00 - 0.01		Grit on floor, indoor
520	0.70	0.12 - 0.20	Sand	

Drilling	Drilling depth (m BGL)	Range (m BGL)	Soil type	Observations or particulars
		0.20 - 0.45		granulate-only
521	0.70	0.12 - 0.15	Sand	
		0.15 - 0.40		granulate-only
522	0.70	0.12 - 0.15	Sand	
		0.15 - 0.45		granulate-only
		0.45 - 0.70	Sand	
523	0.60	0.00 - 0.10		gravel-only
524	0.50	0.00 - 0.30	Clay	strongly gravelly
		0.30 - 0.50	Clay	slightly gravelly
503	1.50	0.00 - 0.50	Sand	
		0.50 - 1.50	Sand	discontinued on concrete
525	0.70	0.00 - 0.12		concrete-only, Concrete edge demolished
		0.12 - 0.20		Cement-only foundation
		0.20 - 0.70	Sand	strongly slaggy, strongly gravelly
504	2.20	0.00 - 1.50	Sand	strong oil-water reaction, PID=0
		1.50 - 2.20	Sand	strong oil-water reaction, PID=0
527	0.50	0.00 - 0.35	Clay	
		0.35 - 0.50	Sand	slightly rubbly
528	0.50	0.00 - 0.50	Sand	slightly rubbly, slightly bricky, slightly gravelly
529	0.50	0.00 - 0.50	Sand	slightly rubbly, slightly bricky
532	0.58	0.08 - 0.58	Sand	slightly gravelly
528a	1.75	0.00 - 1.00	Sand	slightly rubbly, slightly bricky, slightly gravelly
		1.00 - 1.25	Clay	slightly rubbly, slightly bricky, slightly gravelly
534	0.50	0.00 - 0.50	Sand	strongly slaggy
535	0.60	0.09 - 0.30	Sand	slightly bricky, slightly rubbly, slightly slaggy
536	0.70	0.12 - 0.20	Gravel	
		0.20 - 0.45		traces of rubble, granulate-only, strongly slaggy Lava/slags Demolition hammer. rubble 85% wv 45>20
537	0.60	0.08 - 0.15	Sand	
		0.15 - 0.40		granulate-only, slightly lavalithic, Demolition hammer. rubble 90% wv 40>20
538	0.60	0.12 - 0.20	Sand	
		0.20 - 0.45		Concrete cement-only, demolition hammer slightly rubbly 5%
539	0.60	0.12 - 0.25	Sand	
		0.25 - 0.45		concrete cement-only, demolition hammer slightly rubbly 5%
540	0.60	0.12 - 0.14	Sand	
		0.14 - 0.45		Concrete cement-only, demolition hammer slightly rubbly 5%
1015	2.00	0.00 - 0.70	Sand	strongly rubbly, moderately ferruginous
505	1.80	0.00 - 0.12		concrete-only
		1.10 - 1.30	Clay	moderate oil-water reaction
		1.30 - 1.80	Clay	no oil-water reaction
512	1.70	0.05 - 0.70	Clay	no oil-water reaction
		0.70 - 1.70	Clay	slight oil-water reaction
514	1.41	1.40 - 1.41		Discontinued on concrete?

Groundwater data

The groundwater data collected in the field are shown in Table 3.3.

Table 3.3: Field data - groundwater

Monitoring tube (filter, m BGL)	Groundwater level (m BGL)	Aerated?	pH (-)	EC (µS/cm)	Turbidity (NTU)	Odour
1002-3 (9.00-10.00)	1.71	no	6.50	2,500	621	-
1002-1 (2.00-3.00)	1.85	no	7.10	1,050	27	-
1003-3 (9.00-10.00)	2.76	no	6.90	1,940	247	-
1003-2 (5.00-6.00)	2.58	yes	7.00	1,310	229	-
1003-1 (2.00-3.00)	1.38	yes	7.30	970	207	-
1004-3 (9.00-10.00)	3.25	no	6.80	1,450	126	-
1004-2 (5.00-6.00)	3.08	yes	7.00	1,510	1,000	-
1004-1 (2.00-3.00)	1.26	no	7.30	940	22	-
1005-3 (9.00-10.00)	3.34	no	7.00	1,230	180	-

Monitoring tube (filter, m BGL)	Groundwater level (m BGL)	Aerated?	pH (-)	EC (µS/cm)	Turbidity (NTU)	Odour
1005-2 (5.00-6.00)	3.05	yes	7.10	1,510	1,000	-
1005-1 (2.00-3.00)	1.19	no	7.30	820	881	-
1006-3 (9.00-10.00)	3.07	no	7.10	800	35	-
1006-2 (5.00-6.00)	3.29	yes	7.00	1,000	653	-
1006-1 (2.00-3.00)	1.03	yes	7.20	810	130	-
1007-1 (2.00-3.00)	1.31	no	7.20	910	67	-
1007-2 (5.00-6.00)	3.49	yes	7.20	1,610	212	-
1007-3 (9.00-10.00)	3.89	no	7.10	1,090	12	-
1008-1 (2.00-3.00)	1.22	yes	7.10	920	25	-
1008-2 (5.00-6.00)	3.80	yes	7.10	1,390	55	-
1008-3 (9.00-10.00)	4.04	no	6.90	1,430	24	-
1009-1 (2.00-3.00)	1.30	yes	7.30	124	526	-
1009-2 (5.00-6.00)	3.72	no	7.00	1,330	49	-
1009-3 (9.00-10.00)	4.02	no	6.90	1,860	42	-
1010-1 (2.00-3.00)	0.71	no	7.40	610	34	-
1010-2 (5.00-6.00)	2.72	yes	7.30	920	691	-
1010-3 (9.00-10.00)	3.70	no	6.80	2,140	52	-
1011-1 (2.00-3.00)	0.73	no	7.20	390	113	-
1011-2 (5.00-6.00)	2.69	yes	6.90	880	1,000	-
1011-3 (9.00-10.00)	3.73	no	6.60	2,140	14	-
1012-2 (5.00-6.00)	3.29	yes	6.80	1,380	1,000	-
1012-1 (2.00-3.00)	1.06	yes	7.40	890	890	-
1012-3 (9.00-10.00)	3.34	yes	7.00	2,350	1,000	-
1013-1 (2.00-3.00)	1.02	yes	7.70	880	64	-
1013-2 (5.00-6.00)	3.37	yes	-	-	-	-
1013-3 (9.00-10.00)	3.60	yes	7.10	1,690	1,000	-
1014-1 (2.00-3.00)	1.58	yes	7.20	670	120	
1014-2 (5.00-6.00)	3.36	no	6.90	1,030	618	-
1014-3 (9.00-10.00)	3.54	no	6.90	1,220	463	-
1015-1 (2.00-3.00)	2.15	yes	7.50	670	404	-
1015-2 (5.00-6.00)	3.40	yes	7.10	930	297	-
1015-3 (9.00-10.00)	3.60	no	7.00	1,070	362	-
1016(6m)	2.40	no	7.06	892	60	-
1016(10m)	3.50	no	6.74	1,335	16	-
1017(3m)	1.12	no	7.31	560	210	-
1017(6m)	3.33	no	6.85	1,473	95	-
1017(10m)	3.48	no	6.81	1,592	30	-
1019(3m)	1.10	no	6.96	2,695	21	-
1019(6m)	3.78	no	6.99	1,292	27	-
1019(10m)	4.13	no	6.56	1,704	123	-
1018(3m)	0.82	no	7.39	699	136	-
1018(6m)	1.91	no	7.16	903	114	-
1018(10m)	3.88	no	6.63	2,040	155	-
1020(10m)	4.06	no	6.73	1,764	226	-
1020(6m)	3.89	no	6.58	1,917	37	-
1020(3m)	1.19	no	7.03	1,171	188	-
41 (1.8-2.8)	1.17	no	6.98	698	9	-
97 (1.8-2.8)	0.90	no	7.05	676	16	-
501 (1.90-2.90)	1.10	no	6.81	722	9	-
502 (1.90-2.90)	0.96	no	6.95	691	9	-
503 (0.00-0.00)	1.12	no	6.93	708	31	-
504 (1.20-2.20)	1.25	no	7.32	554	9	-
506 (1.70-2.70)	1.21	no	7.26	656	39	-
508 (1.70-2.70)	0.97	no	7.58	422	8	-
507 (1.70-2.70)	1.00	no	7.34	570	29	-
509 (1.70-2.70)	1.15	no	7.21	783	41	-
510 (1.70-2.70)	1.12	no	7.68	659	34	-
511 (1.50-2.50)	1.02	no	7.31	779	42	-
513 (1.50-2.50)	1.00	no	7.54	511	9	-
515 (1.60-2.60)	1.02	no	7.41	899	11	-

Explanatory notes
- : no data known
Aerated: during sampling mixture of sampling water and air occurred.

Groundwater readings show that the groundwater level in the shallow monitoring tubes (filter depths down to approx. 3m BGL) ranges from 0.7 to 1.6m BGL. In monitoring tubes with deeper filters (down to 10 m BGL), the groundwater level ranges between 2.6 and 4.0m BGL. It should be noted that the difference in ground water levels in monitoring tubes with filter depths of 5-6 and 9-10m BGL is no more than 0.4m BGL.

The acidity (pH) and electrical conductivity (EC) levels do not deviate from those found in a natural situation.

In many monitoring tubes the turbidity is increased (> 10). This applies to monitoring tubes placed both by machine and by hand and to filter depths of down to 3, 6 and 10m BGL. There is no obvious reason for this. Increased turbidity may cause increased levels of, in particular, poorly soluble organic parameters. The analysis results show that in a large number of samples from a monitoring tube with increased turbidity, no increased VOCL levels were measured. Based on this, it can be stated that the effect of the increased turbidity on these analyses is nil and therefore does not significantly affect the measured concentrations or the conclusions of this report. The deviation is therefore considered not to be critical with regard to the conclusions of the report, so no further investigations into the cause of the increased turbidity have been carried out.

4 Laboratory analyses

4.1 Analyses carried out

The following table provides an overview of the analyses carried out.

Table 4.1: Overview of analyses carried out

Sample name	Range (m BGL)	Sample composition (measuring point + range in m BGL)	Laboratory analysis
Soil			
500-2	0.60-1.00	500 (0.60-1.00)	Organic matter (calcination residue) Mineral oil (C10-C40)
501-2	0.60-1.10	501 (0.60-1.10)	Organic matter (calcination residue) Mineral oil (C10-C40)
502-2	0.60-1.00	502 (0.60-1.00)	Organic matter (calcination residue) Mineral oil (C10-C40)
503-2	0.50-1.00	503 (0.50-1.00)	Organic matter (calcination residue) Mineral oil (C10-C40)
504-6	0.60-0.80	504 (0.60-0.80)	BTEXN + Mineral oil GC Organic matter (calcination residue)
515-4	1.30-1.50	515 (1.30-1.50)	VOCL (11) + vinyl chloride Organic matter (calcination residue) Mineral oil (C10-C40)
515-6	2.00-2.50	515 (2.00-2.50)	VOCL (11) + vinyl chloride Organic matter (calcination residue) Mineral oil (C10-C40)
505-3	1.10-1.30	505 (1.10-1.30)	Organic matter (calcination residue) Mineral oil (C10-C40)
505-4	1.30-1.80	505 (1.30-1.80)	Organic matter (calcination residue) Mineral oil (C10-C40)
506-3	0.80-1.30	506 (0.80-1.30)	Organic matter (calcination residue) Mineral oil (C10-C40)
507-3	0.90-1.40	507 (0.90-1.40)	Organic matter (calcination residue) Mineral oil (C10-C40)
508-3	0.70-1.20	508 (0.70-1.20)	Organic matter (calcination residue) Mineral oil (C10-C40)
509-3	1.20-1.70	509 (1.20-1.70)	Organic matter (calcination residue) Mineral oil (C10-C40)
510-4	1.20-1.70	510 (1.20-1.70)	Organic matter (calcination residue) Mineral oil (C10-C40)
511-4	1.00-1.50	511 (1.00-1.50)	Organic matter (calcination residue) Mineral oil (C10-C40)
513-3	1.10-1.60	513 (1.10-1.60)	Organic matter (calcination residue) Mineral oil (C10-C40)
516-1	0.10-0.60	516 (0.10-0.60)	Standard soil package incl. LUOS [(1)]
518-1	0.08-0.58	518 (0.08-0.58)	Standard soil package incl. LUOS [(1)]
519-1	0.08-0.58	519 (0.08-0.58)	Organic matter (calcination residue), PCB (7)
520-2	0.20-0.45	520 (0.20-0.45)	Organic matter (calcination residue), PCB (7)
521-1	0.15-0.40	521 (0.15-0.40)	Organic matter (calcination residue), PCB (7)
522-1	0.15-0.45	522 (0.15-0.45)	Organic matter (calcination residue), PCB (7)
523-1	0.10-0.60	523 (0.10-0.60)	Organic matter (calcination residue), PCB (7)
525-2	0.20-0.70	525 (0.20-0.70)	Standard soil package incl. LUOS [(1)]
526-2	0.20-0.50	526 (0.20-0.50)	Argillaceous material + Organic matter, Copper (Cu)
527-1	0.00-0.35	527 (0.00-0.35)	Argillaceous material + Organic matter, Copper (Cu)
528-1	0.00-0.50	528 (0.00-0.50)	Argillaceous material + Organic matter, Copper (Cu)
529-1	0.00-0.50	529 (0.00-0.50)	Argillaceous material + Organic matter, Copper (Cu)

Sample name	Range (m BGL)	Sample composition (measuring point + range in m BGL)	Laboratory analysis
531-1	0.12-0.62	531 (0.12-0.62)	Organic matter (calcination residue), PCB (7)
532-1	0.08-0.58	532 (0.08-0.58)	Organic matter (calcination residue), PCB (7)
533-1	0.00-0.50	533 (0.00-0.50)	Argillaceous material + Organic matter, Zinc (Zn)
534-1	0.00-0.50	534 (0.00-0.50)	Argillaceous material + Organic matter, Zinc (Zn)
535-1	0.09-0.30	535 (0.09-0.30)	Standard soil package incl. LUOS (1)
MM01	0.15-0.45	536 (0.20-0.45) 537 (0.15-0.40) 538 (0.20-0.45)	Standard soil package incl. LUOS (1)
MM02	0.40-0.70	536 (0.45-0.70) 537 (0.40-0.60) 538 (0.45-0.60)	Standard soil package incl. LUOS (1)
MM03	0.08-0.60	530 (0.08-0.30) 530 (0.30-0.60)	Organic matter (calcination residue) PCB (7)
MM04	0.00-0.50	524 (0.00-0.30) 524 (0.30-0.50)	Standard soil package incl. LUOS (1)
MM05	0.12-0.65	517 (0.12-0.35) 517 (0.35-0.65)	Standard soil package incl. LUOS (1)
AMM01	0.14-0.45	AMM2 (0.14-0.45) AMM1 (0.15-0.45)	Asbestos Rubble NEN5898 2016
1016_N-4	1.50-2.00	1016_N (1.50-2.00)	VOCL (11) + vinyl chloride Organic matter (calcination residue) Mineral oil (C10-C40)
1016_N-16	7.50-8.00	1016_N (7.50-8.00)	VOCL (11) + vinyl chloride Organic matter (calcination residue)
1017-19	9.00-9.50	1017 (9.00-9.50)	VOCL (11) + vinyl chloride Organic matter (calcination residue)
1018-3	1.00-1.50	1018 (1.00-1.50)	VOCL (11) + vinyl chloride Organic matter (calcination residue) Mineral oil (C10-C40)
509-5	2.00-2.30	509 (2.00-2.30)	Organic matter (calcination residue) Mineral oil (C10-C40)
535-2	0.30-0.60	535 (0.30-0.60)	9 metals (standard package, new) Argillaceous material + Organic matter
525a-3	0.70-1.00	525a (0.70-1.00)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
528a-2	0.50-1.00	528a (0.50-1.00)	Argillaceous material + Organic matter, Copper (Cu)
528a-3	1.00-1.25	528a (1.00-1.25)	Argillaceous material + Organic matter, Copper (Cu)
530a-3	0.60-1.10	530a (0.60-1.10)	Organic matter (calcination residue), PCB (7)
541-1	0.00-0.50	541 (0.00-0.50)	Organic matter (calcination residue), PCB (7)
542-1	0.08-0.30	542 (0.08-0.30)	Organic matter (calcination residue), PCB (7)
543-2	0.30-0.65	543 (0.30-0.65)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
544-1	0.00-0.50	544 (0.00-0.50)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
545	0.08-0.60	545 (0.08-0.20) 545 (0.20-0.60)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
547-1	0.00-0.50	547 (0.00-0.50)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
548-2	0.20-0.40	548 (0.20-0.40)	Argillaceous material + Organic matter, Copper (Cu)
550-1	0.00-0.50	550 (0.00-0.50)	Argillaceous material + Organic matter, Copper (Cu)

Sample name	Range (m BGL)	Sample composition (measuring point + range in m BGL)	Laboratory analysis
551-1	0.08-0.58	551 (0.08-0.58)	Standard soil package incl. LUOS (1)
Grit 1-1	0.00-0.01	Grit 1 (0.00-0.01)	Organic matter (calcination residue) Mineral oil (C10-C40)
549	0.00-0.50	549 (0.00-0.15) 549 (0.15-0.50)	Argillaceous material + Organic matter, Copper (Cu) Zinc (Zn)
528a-4	1.25-1.75	528a (1.25-1.75)	Argillaceous material + Organic matter, Copper (Cu)
Groundwater			
009-1-2	5.00-6.00	009 (5.00-6.00)	Iron Package, Manganese (Mn), Nitrate, Nitrite, Chloride, Sulphide Free, Sulphate Total (measured as S), VOCL (11), Methane, Ethane and Ethylene, DOC
019-1-2	2.00-3.00	019 (2.00-3.00)	Iron Package, Manganese (Mn), Nitrate, Nitrite, Chloride, Sulphide Free, Sulphate Total (measured as S), VOCL (11), Methane, Ethane and Ethylene, DOC
041a-1-2	1.80-2.80	041a (1.80-2.80)	Iron Package, Manganese (Mn), Nitrate, Nitrite, Chloride, Sulphide Free, Sulphate Total (measured as S), VOCL (11), Methane, Ethane and Ethylene, DOC
154-1-2	0.80-2.80	154 (0.80-2.80)	Iron Package, Manganese (Mn), Nitrate, Nitrite, Chloride, Sulphide Free, Sulphate Total (measured as S), VOCL (11), Methane, Ethane and Ethylene, DOC
a4-1-2	2.00-3.00	a4 (2.00-3.00)	Iron Package, Manganese (Mn), Nitrate, Nitrite, Chloride, Sulphide Free, Sulphate Total (measured as S), VOCL (11), Methane, Ethane and Ethylene, DOC
1002-3-1-1	9.00-10.00	1002-3 (9.00-10.00)	VOCL (11)
1002-1-1-1	2.00-3.00	1002-1 (2.00-3.00)	VOCL (11)
1003-3-1-1	9.00-10.00	1003-3 (9.00-10.00)	VOCL (11)
1003-2-1-1	5.00-6.00	1003-2 (5.00-6.00)	VOCL (11)
1003-1-1-1	2.00-3.00	1003-1 (2.00-3.00)	VOCL (11)
1004-3-1-1	9.00-10.00	1004-3 (9.00-10.00)	VOCL (11)
1004-2-1-1	5.00-6.00	1004-2 (5.00-6.00)	VOCL (11)
1004-1-1-1	2.00-3.00	1004-1 (2.00-3.00)	VOCL (11)
1005-3-1-1	9.00-10.00	1005-3 (9.00-10.00)	VOCL (11)
1005-2-1-1	5.00-6.00	1005-2 (5.00-6.00)	VOCL (11)
1005-1-1-1	2.00-3.00	1005-1 (2.00-3.00)	VOCL (11)
1006-3-1-1	9.00-10.00	1006-3 (9.00-10.00)	VOCL (11)
1006-2-1-1	5.00-6.00	1006-2 (5.00-6.00)	VOCL (11)
1006-1-1-1	2.00-3.00	1006-1 (2.00-3.00)	VOCL (11)
1007-1-1-1	2.00-3.00	1007-1 (2.00-3.00)	VOCL (11)
1007-2-1-1	5.00-6.00	1007-2 (5.00-6.00)	VOCL (11)
1007-3-1-1	9.00-10.00	1007-3 (9.00-10.00)	VOCL (11)
1008-1-1-1	2.00-3.00	1008-1 (2.00-3.00)	VOCL (11)
1008-2-1-1	5.00-6.00	1008-2 (5.00-6.00)	VOCL (11)
1008-3-1-1	9.00-10.00	1008-3 (9.00-10.00)	VOCL (11)
1009-1-1-1	2.00-3.00	1009-1 (2.00-3.00)	VOCL (11)
1009-2-1-1	5.00-6.00	1009-2 (5.00-6.00)	VOCL (11)
1009-3-1-1	9.00-10.00	1009-3 (9.00-10.00)	VOCL (11)
1010-1-1-1	2.00-3.00	1010-1 (2.00-3.00)	VOCL (11)
1010-2-1-1	5.00-6.00	1010-2 (5.00-6.00)	VOCL (11)
1010-3-1-1	9.00-10.00	1010-3 (9.00-10.00)	VOCL (11)
1011-1-1-1	2.00-3.00	1011-1 (2.00-3.00)	VOCL (11)
1011-2-1-1	5.00-6.00	1011-2 (5.00-6.00)	VOCL (11)
1011-3-1-1	9.00-10.00	1011-3 (9.00-10.00)	VOCL (11)
1012-1-1-1	5.00-6.00	1012-2 (5.00-6.00)	VOCL (11)
1012-1-1-2	2.00-3.00	1012-1 (2.00-3.00)	VOCL (11)
1012-3-1-1	9.00-10.00	1012-3 (9.00-10.00)	VOCL (11)
1013-1-1-1	2.00-3.00	1013-1 (2.00-3.00)	VOCL (11)
1013-2-1-1	5.00-6.00	1013-2 (5.00-6.00)	VOCL (11)
1013-3-1-1	9.00-10.00	1013-3 (9.00-10.00)	VOCL (11)

Sample name	Range (m BGL)	Sample composition (measuring point + range in m BGL)	Laboratory analysis
1014-1-1-1	2.00-3.00	1014-1 (2.00-3.00)	VOCL (11)
1014-2-1-1	5.00-6.00	1014-2 (5.00-6.00)	VOCL (11)
1014-3-1-1	9.00-10.00	1014-3 (9.00-10.00)	VOCL (11)
1015-1-1-1	2.00-3.00	1015-1 (2.00-3.00)	VOCL (11)
1015-2-1-1	5.00-6.00	1015-2 (5.00-6.00)	VOCL (11)
1015-3-1-1	9.00-10.00	1015-3 (9.00-10.00)	VOCL (11)
41-1-3	0.00-0.00	42 (0.00-0.00)	Mineral oil (C10-C40)
501-1-1	1.90-2.90	501 (1.90-2.90)	Mineral oil (C10-C40)
OBAS-1-1	0.00-0.00	OBAS (0.00-0.00)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
502-1-1	1.90-2.90	502 (1.90-2.90)	Mineral oil (C10-C40)
503-1-1	0.00-0.00	503 (0.00-0.00)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
97-1-1	0.00-0.00	97 (0.00-0.00)	VOCL (11) + Vinyl chloride
504-1-1	1.20-2.20	504 (1.20-2.20)	Mineral oil (C10-C40)
506-1-1	1.70-2.70	506 (1.70-2.70)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
508-1-1	1.70-2.70	508 (1.70-2.70)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
507-1-1	1.70-2.70	507 (1.70-2.70)	VOCL (11) + Vinyl chloride
509-1-1	1.70-2.70	509 (1.70-2.70)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
510-1-1	1.70-2.70	510 (1.70-2.70)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
511-1-1	1.50-2.50	511 (1.50-2.50)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
513-1-1	1.50-2.50	513 (1.50-2.50)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
515-1-1	1.60-2.60	515 (1.60-2.60)	VOCL (11) + Vinyl chloride Mineral oil (C10-C40)
1020-3-1-1	9.00-10.00	1020(10m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1020-2-1-1	5.00-6.00	1020(6m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1020-1-1-1	2.00-3.00	1020(3m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1018-1-1-1	2.00-3.00	1018(3m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1018-2-1-1	5.00-6.00	1018(6m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1018-3-1-1	9.00-10.00	1018(10m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1019-3-1-1	9.00-10.00	1019(10m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1019-2-1-1	5.00-6.00	1019(6m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1019-3-1-1	9.00-10.00	1019(3m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1017-1-1-1	2.00-3.00	1017(3m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1017-3-1-1	9.00-10.00	1017(10m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1017-2-1-1	5.00-6.00	1017(6m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1016-3-1-1	9.00-10.00	1016(10m) (0.00-0.00)	VOCL (11) + Vinyl chloride
1016-2-1-1	5.00-6.00	1016(6m) (0.00-0.00)	VOCL (11) + Vinyl chloride

Explanatory notes
1: For the composition of the standard package, see the appendix 'Explanatory notes on soil surveys'.

4.2 Soil Protection Act (Wbb) reference framework

The tested analysis results of the examined ground and groundwater samples are shown in appendices 3, 4 and 5. The analysis certificates are added in appendix 8. The results are tested against the current background, target and intervention values from the Soil Quality Act and the Circular Soil Remediation . BOTOVA validated software has been used for this. The background / target and intervention values are included in Appendix 6. An explanation of the testing framework is included in Appendix 7. A sample can meet the background value, while a substance within the sample exceeds the background value (Soil Quality Act, Art. 4.2. 2).

In the text, the term 'increased' will be used at levels higher than the background or target values and lower than the intervention values. The term 'strongly increased' is used at levels higher than or equal to the intervention values. An index is also included with the tested values. This index is calculated as follows: Index = (GSSD - AW) / (I - AW).

A negative value for the index means that the standardized measurement value (= GSSD) is lower than the background value (= AW). With an index above 1, the standardized measured value is above the intervention value (= I). An index between 0 and 0.5 means that the standardized measured value is (far) below the intervention value. An index between 0.5 and 1 means that the standardized measurement value is (close) to the intervention value.

4.3 Analysis Results - Soil

The following table represents the parameters exceeding the relevant background or intervention values.

The table also includes the indicative referencing to the Dutch Soil Quality Decree (BBK).

Table 4.2: Analysis Results - Soil

Sample (m BGL)	**Drilling** (m BGL)	**Observation**	**Exceedances**			**Conclusion sample**(**)
			> AW (i <= 0.5) slight	**> AW & <= I** (0.5 < i <= 1) moderate	**> I** (i > 1) strong	
Mapping of oil contamination in borehole a5, buildings Y17/Y18						
500-2 (0.60-1.00)	500 (0.60-1.00)	PID 0	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
501-2 (0.60-1.10)	501 (0.60-1.10)	PID 0	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
502-2 (0.60-1.00)	502 (0.60-1.00)	PID 0	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
503-2 (0.50-1.00)	503 (0.50-1.00)	PID 0 discontinued on concrete	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
515-4 (1.30-1.50)	515 (1.30-1.50)	slight oil-water reaction	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
515-6 (2.00-2.50)	515 (2.00-2.50)	-	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
1016_N-4 (1.50-2.00)	1016_N (1.50-2.00)	slight oil-water reaction, strong diesel odour, diameter=100	-	Mineral oil	-	Wbb: Exceeding background value, BBK: Not applicable > Industry
Mapping of oil contamination at location 'bfoto3', building Y7						
504-6 (0.60-0.80)	504 (0.60-0.80)	strong oil-water reaction, PID=0	-	-	Mineral oil	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
505-3 (1.10-1.30)	505 (1.10-1.30)	moderate oil-water reaction	-	-	Mineral oil	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
505-4 (1.30-1.80)	505 (1.30-1.80)	-	Mineral oil	-	-	Wbb: Exceeding background value, BBK: Not applicable > Industry
506-3 (0.80-1.30)	506 (0.80-1.30)	chunks of rubble	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
507-3 (0.90-1.40)	507 (0.90-1.40)	moderately rubbly	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
508-3 (0.70-1.20)	508 (0.70-1.20)	moderately rubbly	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
509-3 (1.20-1.70)	509 (1.20-1.70)	slight oil-water reaction, oil-water reaction layered	-	-	Mineral oil	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
509-5 (2.00-2.30)	509 (2.00-2.30)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
Grit 2-1 (0.00-0.01)	Grit 2 (0.00-0.01)	Grit on floor, Y7	-	-	Mineral oil	
Mapping of oil contamination at building Y34 ('NAPL layer')						

Sample (m BGL)	Drilling (m BGL)	Observation	Exceedances			Conclusion sample(**)
			> AW (i <= 0.5) slight	> AW & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
510-4 (1.20-1.70)	510 (1.20-1.70)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
511-4 (1.00-1.50)	511 (1.00-1.50)	-	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry
513-3 (1.10-1.60)	513 (1.10-1.60)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
Mapping of heavy metals (immobile contaminants)						
516-1 (0.10-0.60)	516 (0.10-0.60)	-	Mineral oil, zinc, mercury, lead, PAH	-	-	Wbb: Exceeding background value, BBK: Not applicable > Industry
518-1 (0.08-0.58)	518 (0.08-0.58)	-	PCB, cobalt, cadmium, mercury	zinc	-	Wbb: Exceeding background value, BBK: quality class Industry
525-2 (0.20-0.70)	525 (0.20-0.70)	strongly slaggy	PCB, cobalt, zinc, mercury, molybdenum, lead	cadmium	nickel, copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
526-2 (0.20-0.50)	526 (0.20-0.50)	-	copper	-	-	Wbb: Exceeding background value, BBK: quality class Industry
527-1 (0.00-0.35)	527 (0.00-0.35)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
528-1 (0.00-0.50)	528 (0.00-0.50)	slightly rubbly and bricky	-	-	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
529-1 (0.00-0.50)	529 (0.00-0.50)	slightly rubbly and bricky	-	copper	-	Wbb: Exceeding background value, BBK: quality class Industry
533-1 (0.00-0.50)	533 (0.00-0.50)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
534-1 (0.00-0.50)	534 (0.00-0.50)	strongly slaggy	zinc	-	-	Wbb: Exceeding background value, BBK: quality class Industry
535-1 (0.09-0.30)	535 (0.09-0.30)	slightly bricky, rubbly and slaggy	PCB, Mineral oil, cobalt, zinc, molybdenum, cadmium, mercury, lead, PAH	-	nickel, copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
MM01 (0.15-0.45)	536 (0.20-0.45), 537 (0.15-0.40), 538 (0.20-0.45)	Traces of rubble/slightly rubbly, granulate-only, strongly slaggy, Lava/slags. Concrete cement-only	PCB, Mineral oil, cobalt, copper, zinc, molybdenum, PAH	nickel	-	Wbb: Exceeding background value, BBK: quality class Industry
MM02 (0.40-0.70)	536 (0.45-0.70), 537 (0.40-0.60), 538 (0.45-0.60)	-	Mineral oil, zinc, cadmium, PAH	-	-	Wbb: Exceeding background value, BBK: quality class Industry
MM04 (0.00-0.50)	524 (0.00-0.30), 524 (0.30-0.50)	-	PCB, nickel, copper, zinc, cadmium, lead	-	-	Wbb: Exceeding background value, BBK: quality class Industry
MM05 (0.12-0.65)	517 (0.12-0.35), 517 (0.35-0.65)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
535-2 (0.30-0.60)	535 (0.30-0.60)	-	cobalt, zinc, molybdenum	nickel, copper	-	Wbb: Exceeding background value, BBK: quality class Industry
525a-3 (0.70-1.00)	525a (0.70-1.00)	-	zinc	-	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
528a-2 (0.50-1.00)	528a (0.50-1.00)	slightly rubbly and bricky	-	-	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
528a-3 (1.00-1.25)	528a (1.00-1.25)	slightly rubbly and bricky	-	-	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value

Sample (m BGL)	Drilling (m BGL)	Observation	Exceedances			Conclusion sample(**)
			> AW (i <= 0.5) slight	> AW & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
528a-4 (1.25-1.75)	528a (1.25-1.75)	-	copper	-		Wbb: Exceeding background value, BBK: quality class Industry
543-2 (0.30-0.65)	543 (0.30-0.65)	-	zinc	copper	-	Wbb: Exceeding background value, BBK: quality class Industry
544-1 (0.00-0.50)	544 (0.00-0.50)	-	copper, zinc	-	-	Wbb: Exceeding background value, BBK: quality class Industry
545 (0.08-0.60)	545 (0.08-0.20), 545 (0.20-0.60)	-	zinc	copper	-	Wbb: Exceeding background value, BBK: quality class Industry
547-1 (0.00-0.50)	547 (0.00-0.50)	slightly rubbly and slightly woody	zinc	copper	-	Wbb: Exceeding background value, BBK: quality class Industry
548-2 (0.20-0.40)	548 (0.20-0.40)	strongly granulated	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
549 (0.00-0.50)	549 (0.00-0.15), 549 (0.15-0.50)	-	copper, zinc	-	-	Wbb: Exceeding background value, BBK: quality class Industry
550-1 (0.00-0.50)	550 (0.00-0.50)	slightly rubbly, traces of coaldust	-	-	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
551-1 (0.08-0.58)	551 (0.08-0.58)	-	PCB, cobalt, nickel, zinc, cadmium, mercury, lead	Mineral oil	copper	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
Verification and mapping of PCB contamination of topsoil at building Y40						
519-1 (0.08-0.58)	519 (0.08-0.58)	-	PCB	-	-	Wbb: Exceeding background value, BBK: quality class Industry
520-2 (0.20-0.45)	520 (0.20-0.45)	granulate-only	-	PCB	-	Wbb: Exceeding background value, BBK: Not applicable > Industry
521-1 (0.15-0.40)	521 (0.15-0.40)	granulate-only	PCB	-	-	Wbb: Exceeding background value, BBK: quality class Industry
522-1 (0.15-0.45)	522 (0.15-0.45)	granulate-only	PCB	-	-	Wbb: Exceeding background value, BBK: quality class Industry
523-1 (0.10-0.60)	523 (0.10-0.60)	-	PCB	-	-	Wbb: Exceeding background value, BBK: Quality class Residential
Verification and mapping of PCB contamination of topsoil at building Y9						
MM03 (0.08-0.60)	530 (0.08-0.30), 530 (0.30-0.60)	-	-	-	PCB	Wbb: Exceeding intervention value, BBK: Not applicable > Intervention Value
531-1 (0.12-0.62)	531 (0.12-0.62)	-	PCB	-	-	Wbb: Exceeding background value, BBK: Quality class Residential
532-1 (0.08-0.58)	532 (0.08-0.58)	-	PCB	-	-	Wbb: Exceeding background value, BBK: quality class Industry
530a-3 (0.60-1.10)	530a (0.60-1.10)	-	PCB	-	-	Wbb: Exceeding background value, BBK: Quality class Residential
541-1 (0.00-0.50)	541 (0.00-0.50)	-	PCB	-	-	Wbb: Exceeding background value, BBK: quality class Industry
542-1 (0.08-0.30)	542 (0.08-0.30)	-	PCB	-	-	Wbb: Exceeding background value, BBK: Quality class Residential
Asbestos survey at building Y2 (clinker pavement)						
AMM01 (0.14-0.45)	536 to 540	Traces of rubble/slightly rubbly, granulate-only, strongly slaggy, Lava/slags. Concrete cement-only	-	-	-	Wbb: Not referenced, BBK: Not referenced
Survey of VOCL contamination at potential source location, building Y17						
1016_N-16 (7.50-8.00)	1016_N (7.50-8.00)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value

Sample (m BGL)	Drilling (m BGL)	Observation	Exceedances			Conclusion sample(**)
			> AW (i <= 0.5) slight	> AW & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
1017-19 (9.00-9.50)	1017 (9.00-9.50)	-	-	-	-	Wbb: Complies with background value, BBK: Complies with background value
1018-3 (1.00-1.50)	1018 (1.00-1.50)	strong chemical odour	Mineral oil	-	-	Wbb: Exceeding background value, BBK: quality class Industry

Explanatory notes

- : No observation/no exceedance
AW, I, i : AW = background value ("*achtergrondwaarde*"), I = intervention value, i = index, see annex 'Explanatory notes on soil surveys' for explanations of AW, I and index
* : No index to be determined due to lack of background or intervention value
** : Whilst a sample can comply with the background value, a substance within the sample may exceed the background value (Dutch Soil Quality Regulation, art. 4.2.2)

Below, the analysis results are discussed per component/site section.

Mapping of oil contamination in borehole a5, buildings Y17/Y18

Some fuel-related observations were made in the soil. The soil with a weak oil-water reaction and strong diesel odour (borehole 1016, 1.5-2.0m BGL) contains moderately increased levels of mineral oil. In borehole 515 (immediately adjacent to 1016) a lightly increased mineral oil level was measured in the subsoil (2.0-2.5m BGL). Around borehole a5, a mineral oil level in the analysed soil was measured that was not or lightly increased, which delineates the soil contamination.

Mapping of oil contamination at bfoto3 borehole, building Y7

Some fuel-related observations were made in the soil. In boreholes 504 (located next to 'bfoto3' borehole), 505 and 509, strongly increased mineral oil levels were measured between approximately 0.6 and 1.3 to 2.0m BGL. In the surrounding boreholes (all outside the building), at most lightly increased levels of mineral oil were measured. Underneath the building, this contamination is bounded by a basement at a distance of about 3m from the facade. Based on this, the soil contamination with mineral oil has been delineated. The C-chain distribution corresponds to that measured in the Grit 2 sample. This sample concerns an oil absorbent and was collected indoors.

Mapping of oil contamination at building Y34 ('NAPL layer')

In the soil samples from the boreholes around monitoring tube 41, at most lightly increased levels of mineral oil were read. No borings were carried out along the side of the building because the concrete floor could not be penetrated (> 50cm thick; discontinued several times). Based on the expected westerly/northwesterly flow direction of the groundwater, an additional borehole, no. 514, was placed. In this borehole no fuel-related observations were made, which roughly delineates the oil contamination in the soil.

Mapping of heavy metals (immobile contaminants)

In the various soil samples, not increased to strongly increased levels of various heavy metals (mainly copper and, locally, nickel) were read. The measured levels can be related to the admixtures found. Also, the strong contamination is locally present in the subsoil. In the soil samples from boreholes 516, 517, 518, 524, 526, 528a, 529, 543, 544 and 548, not increased to moderately increased levels of heavy metals were measured. Because these contaminants are immobile in nature and no significant earth movement has taken place, the older analysis results are still considered to be normative. Based on all analysis results and field observations, the strong contamination of the soil with heavy metals is roughly delineated. Within this delineation, it can be stated that the contaminations are heterogeneous in nature and partly coincide with the asbestos contamination underneath buildings Y5 and Y9 and the previously demonstrated immobile contaminations with mineral oil in the topsoil.

Verification and mapping of PCB contamination of topsoil at building Y40

During a previous survey (Haskoning, 2020), a strongly increased PCB level was measured in a composite sample from the topsoil. Verification boreholes drilled on site (numbers 520 and 523) show that the topsoil of borehole 520 contains a moderately increased level of PCB, and that of borehole 523 a lightly increased level. In the surrounding boreholes, not increased to lightly increased levels of PCB were measured. Based on the verification, it can be stated that additional analyses of the composite sample have shown that no to moderate contamination with PCB is concerned there, and that a strong contamination, if any, will be very limited in volume.

Verification and mapping of PCB contamination of topsoil at building Y9

During a previous survey (Haskoning, 2008), a strongly increased PCB level was measured in a composite sample from the topsoil. The on-site verification boreholes (boreholes 530, 531 and 532) show that a strongly increased level of PCB was measured in the topsoil of borehole 530. In the other two boreholes, surrounding boreholes and in the subsoil (530a), lightly increased PCB levels were measured, which delineates the strong contamination in the soil.

Asbestos survey at building Y2 (clinker pavement)

In the composite sample from the layer containing rubble, granulate (Repac), slag and concrete underneath building Y1, no asbestos has been demonstrated either sensorily or analytically.

Survey of VOCL contamination at potential source location, building Y17

No increased levels of VOCL were measured in the deeper subsoil near the potential source location. In addition, a lightly increased mineral oil level was measured in the plume zone (borehole 1018; strong chemical odour).

4.4 Analysis Results - Groundwater

The following table represents the parameters exceeding the relevant target or intervention values.

Table 4.3: Analysis Results - Groundwater

Sample	Monitoring tube (filter, m BGL)	Exceedances			Conclusion sample
		> S (i <= 0.5) slight	> S & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
Mapping of VOCL contamination of groundwater					
1002-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1002-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1003-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1003-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1003-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1004-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1004-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1004-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1005-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1005-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1005-1-1-1	1 (2.00 - 3.00)	total dichloroethene isomers, vinyl chloride	-	-	Exceeds target value
1006-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1006-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1006-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1007-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1007-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1007-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1008-1-1-1	1 (2.00 - 3.00)	total dichloroethene isomers	-	-	Exceeds target value
1008-2-1-1	1 (5.00 - 6.00)	vinyl chloride	-	-	Exceeds target value
1008-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1009-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1009-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1009-3-1-1	1 (9.00 - 10.00)	1,1-dichloroethane	-	total dichloroethene isomers, vinyl chloride	Exceeds intervention value

Sample	Monitoring tube (filter, m BGL)	Exceedances			Conclusion sample
		> S (i <= 0.5) slight	> S & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
1010-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1010-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1010-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1011-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1011-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1011-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1012-1-1-1	1 (5.00 - 6.00)	trichloroethene	1,1-dichloroethane	total dichloroethene isomers, tetrachloroethene	Exceeds intervention value
1012-1-1-2	1 (2.00 - 3.00)	total dichloroethene isomers, tetrachloroethene	-	-	Exceeds target value
1012-3-1-1	1 (9.00 - 10.00)	1,1-dichloroethane, tetrachloroethene	-	total dichloroethene isomers	Exceeds intervention value
1013-1-1-1	1 (2.00 - 3.00)	trichloroethene	tetrachloroethene	total dichloroethene isomers, vinyl chloride	Exceeds intervention value
1013-2-1-1	1 (5.00 - 6.00)	-	-	total dichloroethene isomers, 1,1-dichloroethane, trichloroethene, vinyl chloride, tetrachloroethene	Exceeds intervention value
1013-3-1-1	1 (9.00 - 10.00)	1,1-dichloroethane	-	total dichloroethene isomers, trichloroethene, tetrachloroethene	Exceeds intervention value
1014-1-1-1	1 (2.00 - 3.00)	total dichloroethene isomers, tetrachloroethene	-	-	Exceeds target value
1014-2-1-1	1 (5.00 - 6.00)	total dichloroethene isomers, tetrachloroethene	-	-	Exceeds target value
1014-3-1-1	1 (9.00 - 10.00)	total dichloroethene isomers, tetrachloroethene	-	-	Exceeds target value
1015-1-1-1	1 (2.00 - 3.00)	total dichloroethene isomers, 1,1,1-trichloroethane	-	tetrachloroethene	Exceeds intervention value
1015-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
515-1-1	1 (1.60 - 2.60)	total dichloroethene isomers, 1,1,1-trichloroethane, tetrachloroethene	-	-	Exceeds target value
1016-2-1-1	1 (5.00 - 6.00)	total dichloroethene isomers, vinyl chloride	-	-	Exceeds target value
1016-3-1-1	1 (9.00 - 10.00)	vinyl chloride	-	-	Exceeds target value
1017-1-1-1	1 (2.00 - 3.00)	total dichloroethene isomers	-	-	Exceeds target value
1017-3-1-1	1 (9.00 - 10.00)	vinyl chloride	-	-	Exceeds target value
1017-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1018-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1018-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1018-3-1-1	1 (9.00 - 10.00)	1,1-dichloroethane	-	total dichloroethene isomers, vinyl chloride	Exceeds intervention value
1019-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1019-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1019-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
1020-3-1-1	1 (9.00 - 10.00)	-	-	-	Complies with target value
1020-2-1-1	1 (5.00 - 6.00)	-	-	-	Complies with target value
1020-1-1-1	1 (2.00 - 3.00)	-	-	-	Complies with target value
OBAS-1-1	1 (0.00 - 0.00)	-	-	-	Complies with target value
97-1-1	1 (0.00 - 0.00)	-	-	-	Complies with target value
Mapping of oil contamination in borehole a5, buildings Y17/Y18					
501-1-1	1 (1.90 - 2.90)	-	-	Mineral oil	Exceeds intervention value
502-1-1	1 (1.90 - 2.90)	-	-	-	Complies with target value
503-1-1	1 (1.90-2.90)	total dichloroethene isomers	-	-	Exceeds target value
Mapping of oil contamination at location 'bfoto3', building Y7					
504-1-1	1 (1.20 - 2.20)	Mineral oil	-	-	Exceeds target value

Sample	Monitoring tube (filter, m BGL)	Exceedances			Conclusion sample
		> S (i <= 0.5) slight	> S & <= I (0.5 < i <= 1) moderate	> I (i > 1) strong	
506-1-1	1 (1.70 - 2.70)	Mineral oil, total dichloroethene isomers, vinyl chloride	-	-	Exceeds target value
508-1-1	1 (1.70 - 2.70)	vinyl chloride	-	-	Exceeds target value
507-1-1	1 (1.70 - 2.70)	total dichloroethene isomers, vinyl chloride	-	-	Exceeds target value
509-1-1	1 (1.70 - 2.70)	total dichloroethene isomers, vinyl chloride	-	-	Exceeds target value
Mapping of oil contamination at building Y34 ('NAPL layer')					
41-1-3*	1 (2.00 - 3.00)	-	-	-	Complies with target value
510-1-1	1 (1.70 - 2.70)	-	-	-	Complies with target value
511-1-1	1 (1.50 - 2.50)	-	-	-	Complies with target value
513-1-1	1 (1.50 - 2.50)	-	-	-	Complies with target value

Explanatory notes

- : No exceedance

S, I, i : S = target value ("*streefwaarde*"), I = intervention value, i = index, see annex 'Explanatory notes on soil surveys' for explanations of S, I and index

* concerns monitoring tube 41 repositioned by Haskoning to approximately 5 metres from the original monitoring tube 41 (from the 1995 survey) and the NAPL layer.

Below, the analysis results are discussed per component/site section.

Mapping of VOCL contamination of groundwater

The analysis results show that at the former remediation location near (former) buildings Y17 and Y18 at most lightly increased levels of VOCL were measured (monitoring tubes 515 and 1016). No VOCLs were measured in the water from the local oil-petrol separator. In monitoring tube 1017, situated between the (former) buildings Y17 and Y18 and monitoring tubes 1012, 1013 and a4, at most lightly increased levels of dichloroethenes or vinyl chloride were measured.

In monitoring tubes 1012 and 1013, placed near location a4 where a strong groundwater contamination with PER (tetrachloroethene) was measured in the 2020 survey, strong contaminations with dichloroethenes, 1,1-dichloroethane, trichloroethene, PER and/or vinyl chloride (vinyl chloride; vc) were measured down to 10m BGL. Based on the levels measured, this is pure product.

Downstream, in monitoring tubes 1009 and 1018 (at about 1m from the western boundary of the plot), strong contaminations with dichloroethenes and vinyl chloride and a lightly increased level of 1,1-dichloroethane were measured at 9-10m BGL.

In the eastern section of the site under review, a strongly increased level of PER was measured in monitoring tube 1015 in the groundwater at 2-3 m BGL. In the monitoring tubes with filter depths of 5-6 and 9-10m BGL, no increased levels of VOCL were measured.

In the other groundwater samples that were analyzed (1014, 504 to 509 from the eastern section of the site and 1002 to 1008, 1010, 1011, 1019 and 1020 from the western section of the site), at most lightly increased levels of VOCL were measured.

Mapping of oil contamination in borehole a5, buildings Y17/Y18

In groundwater from monitoring tubes 515, 502 and 503 (around a5 from the exploratory survey), no increased levels of mineral oil were measured. A strong groundwater contamination with mineral oil was measured in monitoring tube 501.

Mapping of oil contamination at location 'bfoto3', building Y7

The analysis results show that the groundwater at the 'bfoto3' location contains at most lightly increased levels of mineral oil and some VOCLs. Therefore, there is no substantial groundwater contamination at that location.

Mapping of oil contamination at building Y34 ('NAPL layer')

In the surrounding monitoring tubes, no NAPL layer was found and the analyses showed no mineral oil or VOCL. The strong oil contamination along with NAPL layer in the groundwater (in monitoring tube 41 from the 1995 survey) has been sufficiently delineated based on field observations and analysis results.

4.5 Investigation into biological degradation

In September 2020, groundwater was analysed for a number of macro parameters that are normative for monitoring conditions for on-site natural degradation (see Table 4.4).

Table 4.4: Analysis results for biological degradation (groundwater)

Parameter	Unit	9 (5.0-6.0)	A4 (2.0-3.0)	19 (2.0-3.0)	154 (0.8-2.8)	41 (1.8-2.8)
pH		6.2	6.9	7.2	7.8	7.0
Conductivity	µS/cm	2020	650	1550	870	698
Oxygen*	mg/l	10.3	11.6	11.5	10.2	-
Redox	mV	0.7	-34.3	-310	-91.7	-
Iron (total)	mg/l	64	5.1	21	0.14	30
Iron (2+)	mg/l	61	5	19	0.15	30
Iron (3+)	mg/l	2.9	0.05	2.4	<0.05	<0.05
Sulphate	mg/l	7.9	6	5.6	38	< 3
Sulphide	mg/l	<0.05	<0.05	<0.05	<0.05	0.58
DOC	mg/l	21	4	16	6.4	12
Ethene	µg/l	370	< 2	< 2	< 2	< 2
Ethane	µg/l	870	10	< 2	< 2	< 2
Methane	µg/l	4,500	1,300	1,900	< 2	1,400

* probably a reading error (factor 100)

Degradation of VOCL requires substrate in addition to good conditions. Measurements show that the soil contains sufficient dissolved organic carbon (DOC) to serve as a substrate. The measured levels are likely to be partly related to the heterogeneously occurring contaminations with mineral oil. In all cases the acidity (pH) is well within 5.5 and 8.5, which is a prerequisite for natural degradation.

The measured oxygen concentrations are extremely high and are probably reading errors. The redox values suggest reducing anaerobic conditions in the soil. Practically, iron (2+) represents the total amount of iron in the groundwater, resulting in iron-reducing conditions. In addition, sulphate concentrations are below 10mg/l, which suggests sulphate-reducing conditions.

In 4 of the 5 groundwater samples, a methane level of > 1mg/l was measured, which, together with the reduction of sulphate, suggests methanogenic conditions. Incidentally, this is also partly caused by the breakdown of organic matter and to a lesser extent by the breakdown of VOCL (monitoring tube 19). Monitoring tube 9 (5-6m BGL) clearly represents methanogenic conditions caused by strong biological degradation.

Based on the measured values, it appears that good conditions for biological degradation exist at the location. This is also shown by the measured levels of cis-1,2-dichloroethene and vinyl chloride in the plume zone. In the source zone, the measured concentrations are so high that biological degradation is expected to be more difficult over there.

5 Overview of contamination situation

The contamination situation is shown on drawings 465250.100-S3 through to -S11 and -S13.

Oil contamination in borehole 13, building Y1
In the exploratory survey of June 2020, a strong oil contamination was measured in borehole 13 from 0.1 to 1.5m BGL. No oil contamination was present at 1.5m BGL. The local groundwater is at most lightly contaminated with mineral oil.
At the location of this contamination, clear oil stains on the pavement (clinkers) are visible. On the basis of the analysis results and the oil stains on the pavement found in the field, the extent of the strong soil contamination is estimated at approximately 15m³ (10 m² x 1,5m).

Oil contamination in borehole a5, buildings Y17/Y18
In the exploratory survey of June 2020, a strong oil contamination was measured in borehole a5 from 0.7 to 0.9m BGL. A slight oil contamination was present at 1.5m BGL. In the present survey, at most slight oil contaminations were measured in the surrounding boreholes (500 to 503; 0.5 to 1.1m BGL. The strong soil contamination with mineral oil is thus delineated and is estimated to be less than 10m³.
No mineral oil was measured in the groundwater from monitoring tube a5. Approximately 5m to the west, a strong oil contamination was identified in the groundwater from monitoring tube 501. This contamination is probably related to the high level of soil contamination in a5 and, given the results for monitoring tubes a5, 502 (2020 survey) and 97 (2019 survey), is expected to be limited in volume.

Fuel-related observations were also made at about 20m southeast of borehole a5 (boreholes 515 and 1016). Analysis results show that this soil has at most a moderately increased level of mineral oil.

Oil contamination at bfoto3 borehole, building Y7
Some fuel-related observations were made in the soil over there. In boreholes 504 (located next to 'bfoto3' borehole), 505 and 509, strongly increased mineral oil levels were measured between approximately 0.6 and 1.3 to 2.0m BGL. In the surrounding boreholes outside the building, at most lightly increased levels of mineral oil were measured. In the building, this contamination is bounded by a basement at a distance of about 3m from the facade. Based on this, the soil contamination with mineral oil has been delineated both horizontally and vertically. Based on the field observations and analysis results, the volume of this soil contamination is estimated at approximately 15m³ (20m² x 0.75m).

The local groundwater is at most lightly contaminated with mineral oil.

Oil contamination at building Y34 ('NAPL layer')
During the exploratory survey of June 2020, a strong oil contamination was measured in borehole 41 (1.4-2.6m BGL). At 2.6m BGL, a moderate contamination was present. In the present survey, at most slight oil contaminations were measured in the surrounding boreholes (510, 511 and 513). No borings were carried out along the side of the building because the concrete floor could not be penetrated (> 50cm thick; discontinued several times). Based on the expected westerly/northwesterly flow direction of the groundwater, an additional borehole, no. 514, was placed. In this borehole no fuel-related observations were made,
which delineates the heavy soil contamination with mineral oil, and the volume is estimated at approximately 30m³ (25m² x 1.2m).

In the groundwater from monitoring tube 41, an NAPL layer was found, and the groundwater contains a strong mineral oil contamination. In the surrounding monitoring tubes (510, 511, 41H and 513), at most lightly increased levels of mineral oil were measured. The groundwater contamination is thus sufficiently delineated and is expected to have roughly the same volume as

the soil contamination (approximately 30m³). Under the Soil Remediation Circular, an NAPL layer requires in principle urgent remediation. However, it can be sufficiently demonstrated that the contamination remains within the boundaries of the plot, and that there is little potential for spreading.

Mapping of heavy metals (immobile contaminants)
In various soil samples, not increased to strongly increased levels of various heavy metals (mainly copper and, locally, nickel) were read. The measured levels can, in part, be related to the admixtures found. Also, the strong contamination is locally present in the subsoil. In the soil samples from boreholes 516, 517, 518, 524, 526, 528a, 529, 543, 544 and 548, not increased to moderately increased levels of heavy metals were measured. Within the contour of this heterogeneous contamination with heavy metals, (immobile) strong contaminations with mineral oil and/or asbestos were also detected locally in the topsoil. Because these contaminants are immobile in nature and no significant earth movement has taken place, previous surveys are also considered to be representative.

The volume of the heavy metal contaminations in the topsoil is estimated at approximately 14,000m³ (18,750m² x 0.75m). Locally within this contour, there are also strong contaminations with asbestos and mineral oil.

PCB contamination of topsoil at building Y40
In a previous survey (Haskoning, 2020), a strongly increased PCB level was measured in a composite sample from the topsoil. Verification boreholes 520 and 523 show that in borehole 520 a moderately increased PCB level was measured, and in borehole 523 a lightly increased level. In the surrounding boreholes, no to lightly increased levels were measured. Based on the present survey, it can be stated that a not to moderately increased PCB level is concerned, and that any strong contamination will be very limited in volume.

PCB contamination of topsoil at building Y9
In a previous survey (Haskoning, 2008), a strongly increased PCB level was measured in a composite sample from the topsoil. The verification boreholes 530, 531 and 532 show that a strongly increased level of PCB was only measured in the topsoil of borehole 530. In the other two boreholes, the surrounding boreholes and in the subsoil (530a), lightly increased levels were measured, With this, the strong contamination in the soil is delineated and has a limited volume (estimated at 5m³ (10m² x 0.5m)).

VOCL contaminations
During the exploratory survey of June 2020, strong contaminations with VOCL were measured at three locations. The more detailed survey shows that two contamination cores are concerned.

In the central section of the site (monitoring tubes 1015, 41) a contamination with PER and cis-1,2-dichloroethene was identified in the shallow groundwater (2.0-3.0m BGL). In the nearby monitoring tubes bfoto5, 506 to 511 and 513, at most lightly increased levels of VOCL were measured. In the groundwater of 5 to 6m BGL and 9 to 10m BGL, no increased levels of VOCL were found. It is noted that at the former source area (tube 1015) only PER is found in relatively low levels (1,83 x I-value). The current levels of PER are comparable to the levels found in 1995. In tube 41 only the degradation product dichloroethene was found (1,85 X I-value). In all the tubes to the west and northwest, at most lightly increased levels of VOCL were measured very locally.
Based on this it can be stated that downstream degradation is already taking place and the contamination is sufficiently contoured on site. The volume of this VOCL contamination is estimated at approximately 5,000m³ (1,250m² x 4m).

In the southern section of the site, the phreatic monitoring tube a4 of the exploratory study of June 2020 showed a strong contamination with PER.

In monitoring tubes 1012 and 1013 (placed near the a4 location), strong contaminations with PER, TRI, dichloroethenes, 1,1-dichloroethane and/or vinyl chloride were measured down to 10m BGL. Pure product is concerned here. There is a distinct decrease in VOCL concentrations from 6 to 10m BGL. These monitoring tubes are located 4m outside building Y9, and a direct relationship with a possible local source is unclear.

The analysis results show that at the former remediation location near (former) buildings Y17 and Y18, the groundwater contains at most lightly increased levels of VOCL (monitoring tubes 515 and 1016). No VOCL was measured in the water from the local oil-petrol separator. In monitoring tube 1017, situated between the potential source location and monitoring tubes 1012, 1013 and a4, at most lightly increased levels of dichloroethenes or vinyl chloride were measured.
Downstream, near the western boundary, in monitoring tubes 1009 and 1018 (at about 1m from the western boundary of the plot), strong contaminations with dichloroethenes and vinyl chloride and a lightly increased level of 1,1-dichloroethane were measured at 9-10m BGL.

In the other analyzed groundwater samples, at most lightly increased levels of VOCL were measured very locally.

It is concluded that no clear former source can be identified for this VOCL contamination. It is clear however that the source is no longer present due to the fact that the activities have been stopped.
Furthermore there is a distinct decrease in VOCL concentrations from 6 to 10m BGL and in monitoring tubes 1009 and 1018 only degradation products are present. Due to the predominant groundwater flow direction in the deeper package (west-northwesterly) and the analytical results from the groundwater in de monitoring tubes on the western boundary it can be stated that the contamination is spread in a quite narrow area. Based on this spreading of the contamination in southerly direction is also expected to be limited.

Based on this, the volume of this VOCL contamination is estimated to be at least 25,000m³ (soil volume) of strongly contaminated groundwater (2,500m² x 10m). It is concluded that a case of serious groundwater contamination is present for which remediation measures are required.

6 Resume, conclusions and recommendations

On behalf of Panattoni Dutch Development Coöperatie U.A., Antea Group carried out a more detailed soil survey at the site Ringdijk 390 in Ridderkerk in the period from September to December 2020.

Reasons for the more detailed soil survey were the results of surveys carried out previously (in 2019 and 2020) and the contemplated redevelopment of the site. There are plans in place to remove the current buildings and develop logistics facilities on the site.

The goal of the survey is to record the size of the contaminations being present, and to determine to what extent remedial action will have to be undertaken with a view to the intended redevelopment.

Results for soil and groundwater

A summary of the results is provided in Table 6.1.

Table 6.1: Overview results

Site section/Component	Delineated	Estimated volume of strong soil contamination (m^3)	Estimated volume of strong groundwater contamination (m^3)
Contaminations with heavy metals, mineral oil and asbestos in topsoil	Yes	14,000	N/A
PCB contamination at building Y9	Yes	5	N/A
PCB contamination at building Y40	Yes	At most moderately contaminated	N/A
Strong subsoil contamination with oil, bfoto3 location, building Y7	Yes	15	N/A
Strong subsoil contamination with oil, drilling 13, building Y1	Yes	15	N/A
Strong soil and groundwater contamination with oil at building Y34 (NAPL layer)	Yes	30	30
Strong subsoil contamination with oil, borehole a5, buildings Y17/Y18	Yes	< 10	50
Groundwater contaminations with VOCL, area Y6, Y34, Y38, Y39	Yes	N/A	5,000
Groundwater contaminations with VOCL, area Y5, Y9, Y17, Y18	Roughly	N/A	25,000
Investigation into biological degradation	Based on the measured values, it appears that good conditions for biological degradation exist at the location.		

Conclusions and recommendations

Based on the results of the survey, it can be concluded that the site contains various strong contaminations with heavy metals, asbestos, mineral oil, PCB and VOCL. The contaminations are mostly delineated.

Based on the estimated size and volume of the contaminations (> 25m^3 soil and > 100m^3 soil volume of groundwater being strongly contaminated), a case of serious soil contamination is concerned. It will be necessary to take remediation measures in connection with the contemplated redevelopment.
It is recommended that a remediation plan will be drawn up for this purpose and submitted for approval to the competent authority under the Dutch Soil Protection Act (Wbb), being DCMR.

The aforementioned conclusions are based on the preliminary investigation, the exploratory soil survey, the sensory perceptions and the analysis results of the present survey.

Antea Group
Almere, December 2020

Appendix 1 Explanation of soil investigation

Quality aspects of soil research

Reliability / Warranties

In general, soil research is carried out by sampling samples of suspect or non-suspicious soil layers. Although Antea Group acts in accordance with the applicable and applicable regulations, it is precisely this random sampling approach that makes it impossible to issue guarantees regarding the contamination situation based on the results of a soil investigation.

The above means that Antea Group does not accept any liability in advance with regard to possible decisions that the client takes in response to the soil investigation carried out by Antea Group. Where appropriate, we advise you to always contact your contact point within Antea Group.

In this context, it may also be noted that the sources consulted for historical research are not always without errors and complete. Antea Group is dependent on these sources to obtain historical information, which is why Antea Group cannot guarantee the correctness and completeness of the collected historical information.

Certification / accreditation

Antea Group is certified according to NEN-ISO 9001. Our agency is a member of the Dutch Association for Quality Assurance of Soil Research (VKB).

The fieldwork for the environmental hygiene soil research has been carried out in accordance with the BRL SIKB 2000 (Assessment guideline for the SIKB process certificate for fieldwork in environmental hygiene soil research). In the appendix 'Accountability for the implementation of the BRL 2000 investigation', it is stated whether Antea Group has carried out the fieldwork itself or has outsourced it to another agency. Both Antea Group and the agencies to which Antea Group outsources field work are certified and recognized according to the BRL SIKB 2000. Any deviations from the assessment guideline are stated in the present report. The appendix 'Accountability for conducting BRL 2000 research' lists the names and initials of the field employees who performed the critical functions within the fieldwork.

Compliance with the quality requirements and procedures is periodically tested by internal auditors and external auditors, under the supervision of the Dutch Accreditation Council (RvA).

The location investigated is not owned by Antea Group or related sister companies.

Antea Group has the analyzes of soil and groundwater required in the soil investigation carried out by a laboratory accredited by RvA. This accreditation guarantees that the analyzes consistently use the correct and recorded procedures so that the analysis results have a high degree of reliability. The analyzes must be carried out in accordance with the Accreditation Scheme (AS) 3000. The analysis results have been validated and tested using BOTOVA.

Application soil

The soil investigation provides insight into the environmental hygiene quality of the soil in the context of the use and / or destination of the location investigated. However, if soil is removed from the site for use elsewhere, the results of the soil investigation performed may not be sufficient. Depending on the size of the batch (s) of soil to be removed and the requirements set by the acceptor or the competent authority at the location of the new application location (for example, the presence of a soil quality map with the associated soil management plan), the soil may still have to be in accordance with the guidelines of the Soil Quality Decree to be examined.

Asbestos

It is emphasized that research into the presence of asbestos in the soil is not part of research carried out by Antea Group according to NEN 5740. Only if the report states that research has been carried out in accordance with NEN 5707, specific asbestos research has been carried out . If asbestos-suspect materials were noticed during the fieldwork in the soil, this will be reflected in the profile descriptions and the conclusions.

Explanation of the conducted research

Exploratory asbestos research

A visual inspection of the research area must be carried out prior to the performance of the fieldwork. The top layer of the site is searched for asbestos-suspect material and rubble residues. In some cases visual ground level inspection is very limited or not possible due to the presence of pavement and / or vegetation. Conducting a ground level inspection is used to assess whether there are areas within the research site that may be considered more or less suspicious with regard to the presence of asbestos.

Across the research site, holes were dug from 0.3 x 0.3 m to 0.5 m -mv (meters below ground level). Drilling to approximately 1 m-mv has been made in these holes. The excavated soil has been assessed for the prevention of contamination, described and sampled. The excavated material is spread, raked / sieved and visually inspected for the appearance of asbestos-suspect materials. After inspection and sampling, the holes are closed with the excavated material. The positions of the holes with bores are measured and shown on the situation drawing.

Exploratory soil investigation

The exploratory soil survey was conducted using NEN 5740 + A1 as a guideline. Based on the preliminary research, the strategy for an unexpected line-shaped location (ONV-L) was chosen for the research area. Due to the limited length of the route, this strategy does not apply to very small digging movements. The investigation strategy for these situations is based on the strategy 'suspect location with a local soil load with a clear contamination core (VEP)'. Because the research was carried out in preparation for the same activities as for linear locations, the criteria for drilling depth and placement of a monitoring well were followed in accordance with the strategy for linear locations.

Drilling has been carried out across the research location. The excavated soil has been assessed for the prevention of contamination, described and sampled.

If the groundwater is near or within the excavation depth of the work, a monitoring well has been placed for sampling the groundwater. The monitoring well was thoroughly pumped immediately after installation and, at least one week later, after another good pumping, sampled for laboratory research. The groundwater level was recorded prior to sampling and the acidity (pH), electrical conductivity (EC) and turbidity were measured. To determine the general soil quality, the soil was examined for the standard fabric package. This concerns analyzes on:

- Heavy metals (barium, cadmium, cobalt, molybdenum, copper, mercury, lead, nickel and zinc);
- Polychlorinated biphenyls (PCBs; sum 7);
- Mineral oil (GC; including pre-treatment);
- Polycyclic aromatic hydrocarbons (PAH total, 10 units according to VROM);
- Percentages of clay, organic and dry matter.

The selection of the soil (mixing) samples is based on sample depth, soil type and field observations.

To determine the general soil quality, the groundwater was examined for the standard fabric package. This concerns analyzes on:

- Heavy metals (barium, cadmium, cobalt, copper, mercury, lead, molybdenum, nickel and zinc);

Volatile aromatics (benzene, toluene, xylenes, styrene and ethylbenzene) and naphthalene;

- Volatile chlorinated hydrocarbons (VOCL);
- Mineral oil (GC).

Determination of safety classes

Especially what is stated in industry publications is considered by the Inspectorate SZW as 'the state of the art' and should therefore be carefully observed.

The safety class established in this study concerns the provisional safety class. In determining the provisional safety class, assumptions were made with regard to the conditions during the execution of the work.

If the work covers an estimated duration of more than 30 man days and there are more than 20 employees working on the site at the same time, or if the estimated duration of the work exceeds 500 man days, the intention must also be notified via a notification to the Inspectorate SZW to be notified of the completion of the work.

Explanation of the assessment frameworks

Assessment framework for background, target and intervention values

The concepts of background, target and intervention values and their meaning are discussed in more detail below.

During the assessment, a statement is made at the parameter level and at the sample level. With regard to determining the background values, in some cases the overall conclusion at the sample level may differ from the conclusion at the parameter level as a result of the test rule set out in Article 4.2.2 of the Soil Quality Regulation. This article describes what is meant by exceeding the background values.

The background values (AW) are nationally valid values for a multifunctional soil quality and indicate the upper limit for what is called 'clean soil' in daily practice. These background values have been determined on the basis of the levels as they occur in the soil of nature and agricultural land. This is because in such soils no load from local pollution sources is considered to be present. The target value (S) indicates the concentration level in groundwater above and below which there is no demonstrable pollution.

The intervention value (I) indicates the concentration level in the soil, sediment or groundwater above which the functional properties that the soil has for humans, plants and animals may be seriously reduced. Public policy refers to a case of serious soil contamination, if the average concentration of one substance exceeds the intervention value in at least 25 m^3 of soil / sludge or for the groundwater in at least 100 m^3 of soil volume. In a first investigation, it is usually not yet possible to make a reliable statement about the amount of soil / sludge or groundwater where a possible exceeding of the intervention value occurs. Therefore, based on the results of this initial investigation, no conclusions can be drawn as to whether or not the contamination is serious.

The tested values also include an index.
This index is calculated as follows: Index = (GSSD - AW (or S)) / (I - AW (or S)). A negative value for the index means that the standardized measure (GSSD) is lower than the background value. With an index above 1, the standardized measurement value is above the intervention value. An index between 0 and 0.5 means that the standardized measured value is (far) below the intervention value. An index between 0.5 and 1 means that the standardized measurement value is (close) to the intervention value. Depending on the specific situation, this may lead to the breakdown of a composite sample and / or to a further investigation. The depth and urgency of the case can be determined with a closer examination of the soil. A further investigation can be conducted if there is a clear indication that there is a case of serious soil contamination.

A case of serious soil contamination can also occur without the intervention values being exceeded. If a contamination spreads in another environmental compartment (eg groundwater) or objects (eg consumer crops) in such a way that harmful effects can occur there, then there is a case of serious soil contamination. Even if point sources of contamination (e.g. based on calculations) are likely to cause contamination of the aforementioned 25 or 100 m^3 soil volume without measures in the short term (within a maximum of several months), this is a case of serious soil pollution.

In the test, the measured contents in soil samples are validated by means of analyzed or estimated levels of organic matter and lutum, converted to so-called standard soil conditions (soil with 10% organic matter and 25% lutum). If the levels or concentrations in ground and groundwater samples are lower than the reported reporting limit, these are validated recalculated using BOTOVA to a standardized measured value (reported reporting limit times 0.7). These standardized measured values (GSSD) are compared with the standard values.

Barium
The Circular Soil Remediation as of 1 July 2013 indicates that the standard for barium has been temporarily withdrawn. It has been found that the intervention value for barium was lower than the level that naturally occurs in the soil. If there are elevated barium levels relative to the natural background due to an

anthropogenic source, this level can be assessed based on the former barium intervention value of 920 mg / kg ds (for standard soil). Analyzes on barium still need to be performed, but the results do not need to be tested anymore, unless a clear anthropogenic source is present. The measured content of barium is in accordance with the circular soil remediation as of 1 July 2013 and has not been tested against the former intervention value. This is due to the lack of an identifiable anthropogenic source for this parameter.

Assessment framework for asbestos

In accordance with current government policy, the results of the NEN 5707 + C2 study are tested against the intervention value from the Circular Soil Remediation. The intervention value for asbestos in soil, soil and dredging sludge is 100 mg / kg ds, based on the so-called 'weighted content' (the serpentine asbestos content, plus ten times the amphibole asbestos content). The weighted content of asbestos that is tested against the intervention value is the calculated total of asbestos-containing material (size> 20 mm) and asbestos in the fine fraction (<20 mm).
If research has been conducted into respirable fibers, the measured concentration is tested against the risk limit value of 10 mg / kg (weighted). If this concentration is not exceeded, there are no unacceptable risks.

To determine the urgency of a remediation of a soil contamination with asbestos that arose before June 1993, the protocol 'Environmental Hygiene Remediation Criterion Soil - protocol asbestos' should be used. This protocol is included as appendix 3 of the Circular soil remediation.

Based on the physical and chemical nature, asbestos is not subject to spread and ecological risks, but to human risks. Two categories of (human) risks are distinguished in this context:

Acceptable risks
The location, extent and extent of the soil contamination must be accurately registered with the Land Registry. The competent authority may also prescribe control measures to be taken to prevent exposure to the contamination. If the layout of the site changes, the site-specific risks must be reassessed.

Unacceptable risks
In addition to cadastral registration, remediation measures must be taken quickly at the relevant part of the location. The term 'soon' must be worked out by the competent authority in a decision.

Debris
In accordance with current government policy, the results of the NEN 5897 + C2 study are tested against the regulations as included in the Asbestos Products Decree.
The Asbestos Products Decree states that it is prohibited to manufacture, import, hold, make available to another person, apply or process asbestos or products containing asbestos in the Netherlands. A product is not considered to contain asbestos if no asbestos has been added deliberately to the product and the serpentine asbestos content, increased by ten times the amphibole asbestos content, does not exceed 100 mg / kg ds. This value is referred to in this report as the residual concentration standard.

Reuse of soil and rubble
If the soil and rubble are reused, the Soil Quality Decree applies. This Decree states that for asbestos in soil and rubble a weighted content of 100 mg / kg ds (the content of serpentine asbestos, increased by ten times the content of amphibole asbestos) is the maximum composition value.

Assessment framework Soil Quality Decree

The measured contents in a batch of land are tested against the maximum values and calculation rules from the Decree and the Soil Quality Regulation, specifically the rules that apply to applying land to land in accordance with the generic framework. The extent to which the aforementioned maximum values are exceeded determines to which class a batch of land to be applied or the receiving land soil belongs. However, this classification is only possible if the sampling and laboratory examination have been carried out by methods determined by regulation of Our Ministers, as well as by a person or institution that has accreditation for this.

The classes to be classified based on the above maximum values are:
Background value
The land soil or a batch of land to be used is classified as 'meets the background value' (ie clean), if the measured contents do not exceed the background values. Article 4.2.2 of the Regulation describes what is meant by exceeding the background values.

Quality class 'living'
The quality of a lot of land that is used on land soil is assessed as the quality class 'housing', if the measured contents exceed the above background values but are lower than the maximum values for the soil quality class 'housing' (see article 4.4.1 of the Regulation). The quality of the receiving land soil is assessed as the quality class 'living', if the measured levels exceed the above background values but are lower than the maximum values for the soil quality class 'living'. Article 4.10.2 of the Regulation describes what is meant by exceeding the maximum values for the quality class 'living'.

Quality class 'industry'
The quality of the receiving land soil and of a lot of land that is applied to land soil is assessed as the quality class 'industry' when the measured contents exceed the maximum values for the quality class 'housing', but are lower than the maximum values for the soil quality class. 'industry' (see Articles 4.4.1 and 4.10.2 of the Regulation).

Not applicable soil
When the measured contents in a batch of soil exceed the maximum values for the quality class 'industry' (and are classified as 'not applicable> industry' or 'not applicable> intervention value'), this soil is not eligible for reuse according to the generic assessment framework or processing in a large-scale soil application. In that case, it must be examined whether the conditions for the area-specific assessment framework may be met (Articles 44 to 53 of the Decree).

Appendix 2 Profile descriptions and field observations

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

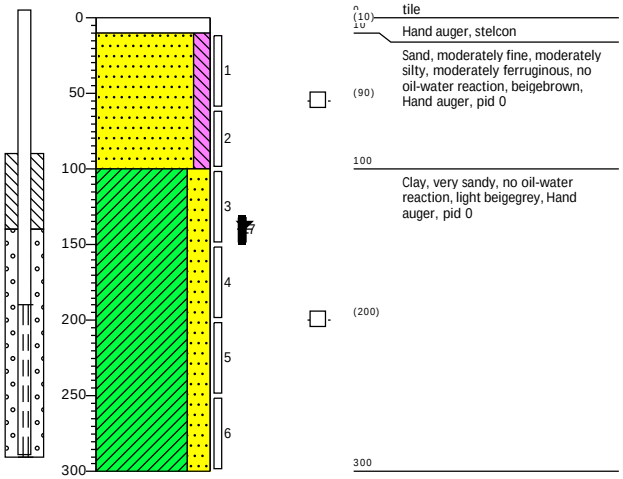
Borehole: 500

Date: 1-10-2020 GWL (cm -mv): 140

Drilling master: [redacted]

X-coordinate: 102248.37

Y-coordinate: 433060.41



0 (10) 10 tile

Hand auger, stelcon

Sand, moderately fine, moderately silty, moderately ferruginous, no oil-water reaction, beigebrown, Hand auger, pid 0

(90)

100

Clay, very sandy, no oil-water reaction, light beigegrey, Hand auger, pid 0

(200)

300

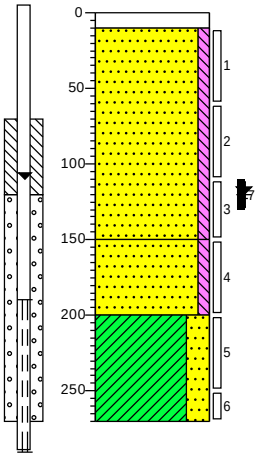
Borehole: 501

Date: 1-10-2020 GWL (cm -mv): 120

Drilling master: [redacted]

X-coordinate: 102241.36

Y-coordinate: 433061.18



0 (10) 10 tile

Hand auger, stelcon

Sand, moderately coarse, slightly silty, no oil-water reaction, beigebrown, Hand auger, pid 0

(140)

150

Sand, moderately coarse, slightly silty, no oil-water reaction, beigegrey, Hand auger, pid 0

(50)

200

Clay, very sandy, no oil-water reaction, light beigegrey, Hand auger, pid 0

(70)

270

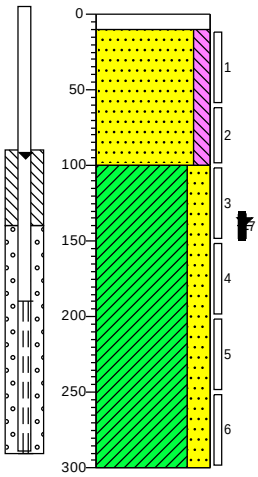
Borehole: 502

Date: 1-10-2020 GWL (cm -mv): 140

Drilling master: [redacted]

X-coordinate: 102238.11

Y-coordinate: 433055.41



0 (10) 10 tile

Hand auger, stelcon

Sand, moderately fine, moderately silty, moderately ferruginous, no oil-water reaction, beigebrown, Hand auger, pid 0

(90)

100

Clay, very sandy, no oil-water reaction, light beigegrey, Hand auger, pid 0

(200)

300

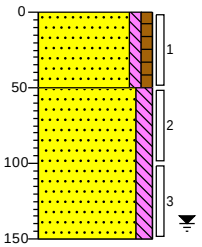
Borehole: 503

Date: 1-10-2020 GWL (cm -mv): 140

Drilling master: [redacted]

X-coordinate: 102246.15

Y-coordinate: 433050.31



0 tile

(50)

Sand, moderately fine, slightly silty, slightly humous, no oil-water reaction, beigebrown, Hand auger, pid 0

50

Sand, moderately fine, moderately silty, no oil-water reaction, Hand auger, pid 0 gestaakt op beton

(100)

150

Project leader: Alex Ooijvaar

Scale: 1: 50

Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

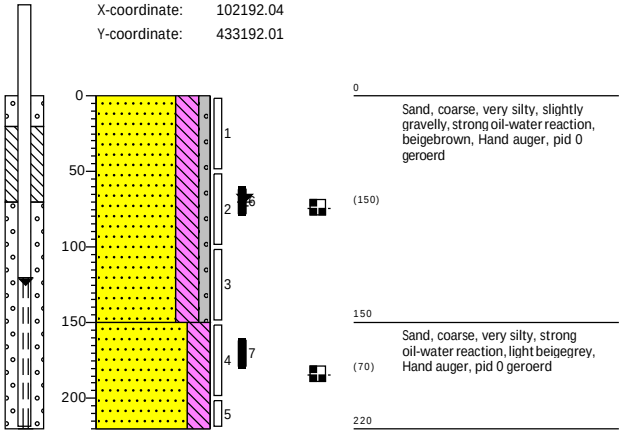
Borehole: 504

Date: 1-10-2020 GWL (cm -mv): 70

Drilling master: [redacted]

X-coordinate: 102192.04

Y-coordinate: 433192.01



0 Sand, coarse, very silty, slightly gravelly, strong oil-water reaction, beigebrown, Hand auger, pid 0 geroerd

(150)

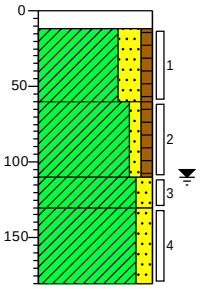
150 Sand, coarse, very silty, strong oil-water reaction, light beigegrey, Hand auger, pid 0 geroerd

(70)

220

Borehole: 505

Date: 23-10-2020 GWL (cm -mv): 110



0 Stelcon

(12) 12 Exclusively concrete

(48) Clay, very sandy, slightly humous, no oil-water reaction, lightbrown, Hand auger

60 Clay, slightly sandy, slightly humous, no oil-water reaction, light greybrown, Hand auger

(50)

110 Clay, moderately sandy, moderate oil-water reaction, neutralgrey, Hand auger

(20)

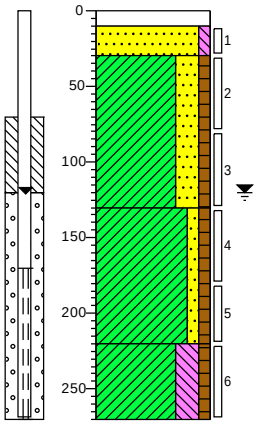
130 Clay, moderately sandy, no oil-water reaction, lightgrey, Hand auger

(50)

180

Borehole: 506

Date: 23-10-2020 GWL (cm -mv): 120



0 clinker brick

(10) 10

(20) 30 Sand, moderately coarse, slightly silty, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger

(100) Clay, very sandy, slightly humous, fragments of rubble, slightly gravelly, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger

130 Clay, slightly sandy, slightly humous, slightly wood, no oil-water reaction, pid (0 ppm), neutralgrey, Hand auger

(90)

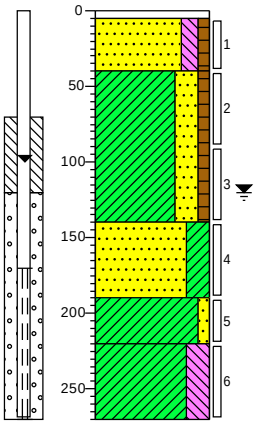
220 Clay, very silty, slightly humous, no oil-water reaction, pid (0 ppm), browngrey, Hand auger

(50)

270

Borehole: 507

Date: 23-10-2020 GWL (cm -mv): 120



(5) tile

(35) 40 Sand, moderately fine, moderately silty, slightly humous, fragments of clay, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger

(100) Clay, very sandy, slightly humous, moderately rubbly, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger

140 Sand, extremely fine, clayey, no oil-water reaction, pid (0 ppm), lightgrey, Hand auger

(50)

190 Clay, slightly sandy, no oil-water reaction, pid (0 ppm), lightgrey, Hand auger

(30)

220 Clay, very silty, no oil-water reaction, neutralgrey, Hand auger

(50)

270

Project leader: Alex Ooijvaar

Scale: 1: 50

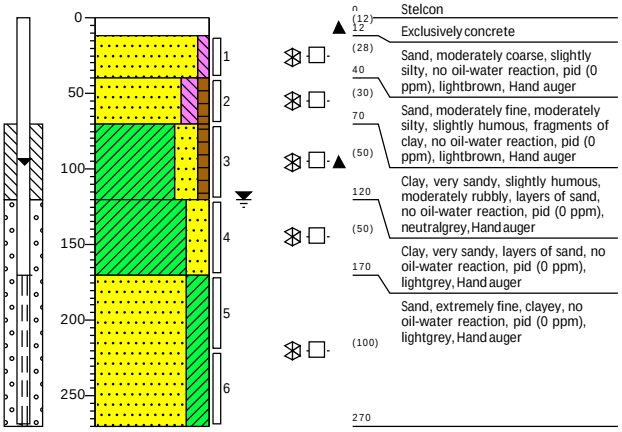
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 508

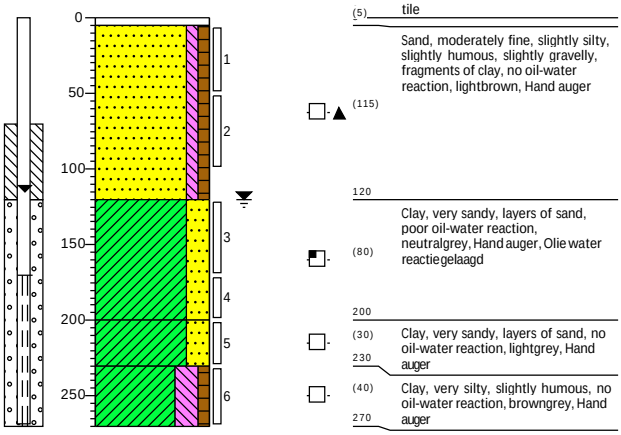
Date: 23-10-2020 GWL (cm -mv): 120



0		Stelcon
	(12)	
12		Exclusively concrete
	(28)	
40		Sand, moderately coarse, slightly silty, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger
	(30)	
70		Sand, moderately fine, moderately silty, slightly humous, fragments of clay, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger
	(50)	
120		Clay, very sandy, slightly humous, moderately rubbly, layers of sand, no oil-water reaction, pid (0 ppm), neutralgrey, Hand auger
	(50)	
170		Clay, very sandy, layers of sand, no oil-water reaction, pid (0 ppm), lightgrey, Hand auger
	(100)	Sand, extremely fine, clayey, no oil-water reaction, pid (0 ppm), lightgrey, Hand auger
270		

Borehole: 509

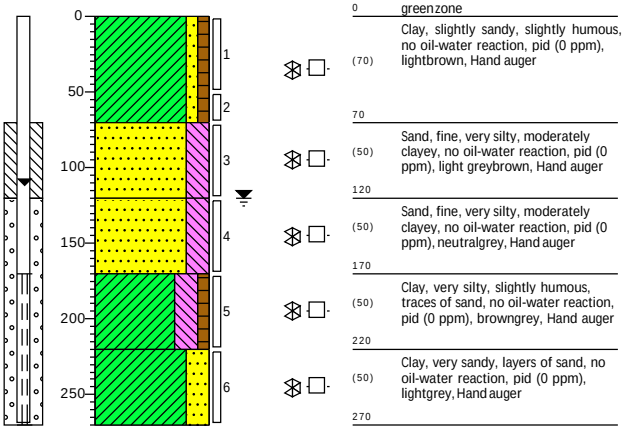
Date: 23-10-2020 GWL (cm -mv): 120



	(5)	tile
		Sand, moderately fine, slightly silty, slightly humous, slightly gravelly, fragments of clay, no oil-water reaction, lightbrown, Hand auger
	(115)	
120		
		Clay, very sandy, layers of sand, poor oil-water reaction, neutralgrey, Hand auger, Olie water reactie gelaagd
	(80)	
200		
	(30)	Clay, very sandy, layers of sand, no oil-water reaction, lightgrey, Hand auger
230		
	(40)	Clay, very silty, slightly humous, no oil-water reaction, browngrey, Hand auger
270		

Borehole: 510

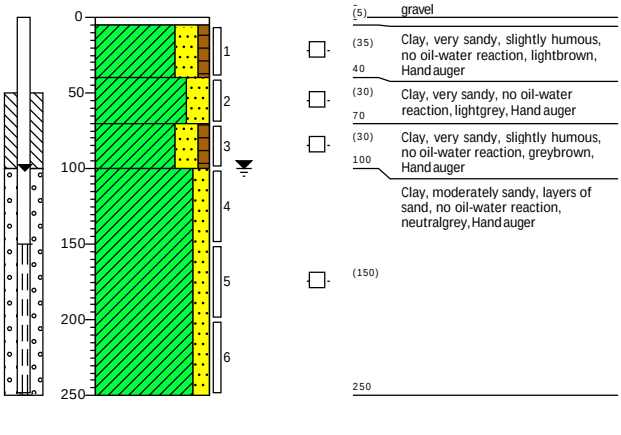
Date: 23-10-2020 GWL (cm -mv): 120



0		green zone
	(70)	Clay, slightly sandy, slightly humous, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger
70		
	(50)	Sand, fine, very silty, moderately clayey, no oil-water reaction, pid (0 ppm), light greybrown, Hand auger
120		
	(50)	Sand, fine, very silty, moderately clayey, no oil-water reaction, pid (0 ppm), neutralgrey, Hand auger
170		
	(50)	Clay, very silty, slightly humous, traces of sand, no oil-water reaction, pid (0 ppm), browngrey, Hand auger
220		
	(50)	Clay, very sandy, layers of sand, no oil-water reaction, pid (0 ppm), lightgrey, Hand auger
270		

Borehole: 511

Date: 23-10-2020 GWL (cm -mv): 100



	(5)	gravel
	(35)	Clay, very sandy, slightly humous, no oil-water reaction, lightbrown, Hand auger
40		
	(30)	Clay, very sandy, no oil-water reaction, lightgrey, Hand auger
70		
	(30)	Clay, very sandy, slightly humous, no oil-water reaction, greybrown, Hand auger
100		
		Clay, moderately sandy, layers of sand, no oil-water reaction, neutralgrey, Hand auger
	(150)	
250		

Project leader: Alex Ooijvaar

Scale: 1: 50

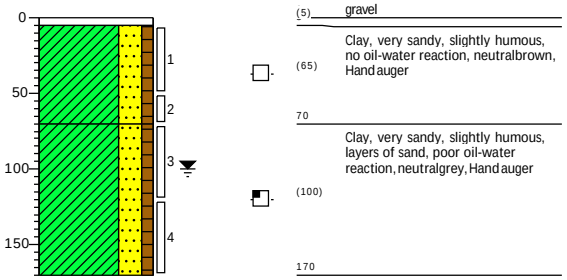
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 512

Date: 23-10-2020 GWL (cm -mv): 100



(5) gravel

Clay, very sandy, slightly humous, no oil-water reaction, neutralbrown, Hand auger

(65)

70

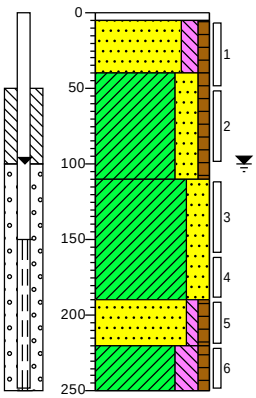
Clay, very sandy, slightly humous, layers of sand, poor oil-water reaction, neutralgrey, Hand auger

(100)

170

Borehole: 513

Date: 23-10-2020 GWL (cm -mv): 100



(5) gravel

(35) Sand, moderately fine, moderately silty, slightly humous, no oil-water reaction, lightbrown, Hand auger

40

Clay, very sandy, slightly humous, no oil-water reaction, lightbrown, Hand auger

(70)

110

Clay, very sandy, layers of sand, no oil-water reaction, neutralgrey, Hand auger

(80)

190

(30) Sand, moderately coarse, slightly silty, slightly humous, no oil-water reaction, darkgrey, Hand auger

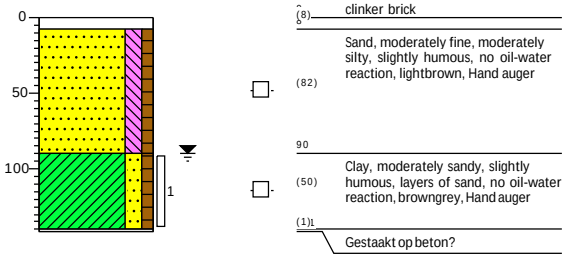
220

(30) Clay, very silty, slightly humous, no oil-water reaction, browngrey, Hand auger

250

Borehole: 514

Date: 23-10-2020 GWL (cm -mv): 90



(8) clinker brick

Sand, moderately fine, moderately silty, slightly humous, no oil-water reaction, lightbrown, Hand auger

(82)

90

Clay, moderately sandy, slightly humous, layers of sand, no oil-water reaction, browngrey, Hand auger

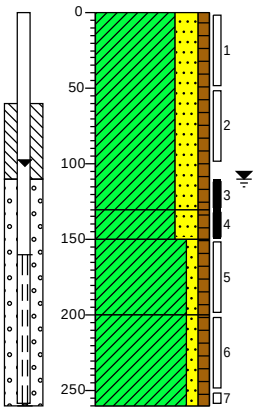
(50)

(1)1

Gestaakt op beton?

Borehole: 515

Date: 23-10-2020 GWL (cm -mv): 110



0 greenzone

Clay, very sandy, slightly humous, no oil-water reaction, pid (0 ppm), lightbrown, Hand auger

(130)

130

(20) Clay, very sandy, slightly humous, poor oil-water reaction, pid (0 ppm), darkgrey, Hand auger

150

(50) Clay, slightly sandy, slightly humous, poor oil-water reaction, pid (0 ppm), greybrown, Hand auger

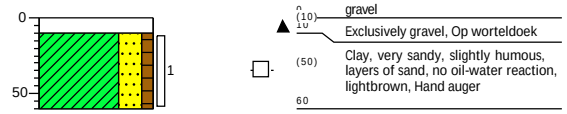
200

(60) Clay, slightly sandy, slightly humous, no oil-water reaction, pid (0 ppm), greybrown, Hand auger

260

Borehole: 516

Date: 4-11-2020



0 gravel

(10)

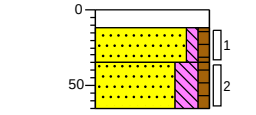
10 Exclusively gravel, Op worteldoek

(50) Clay, very sandy, slightly humous, layers of sand, no oil-water reaction, lightbrown, Hand auger

60

Borehole: 517

Date: 4-11-2020



0 Stelcon

(12)

12 Verwijderde stelcon plaat

(23) Sand, moderately coarse, slightly silty, slightly humous, no oil-water reaction, lightbrown, Hand auger

35

(30) Sand, fine, very silty, slightly humous, slightly clayey, no oil-water reaction, neutralgrey, Hand auger

65

Project leader: Alex Ooijvaar

Scale: 1: 50

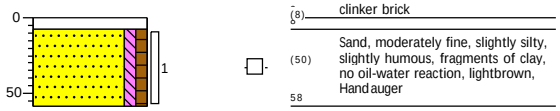
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

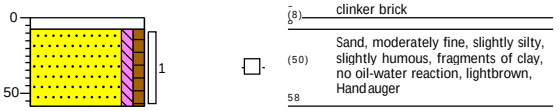
Borehole: 518

Date: 4-11-2020



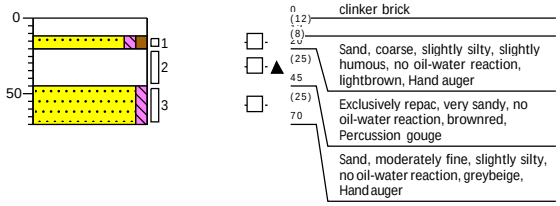
Borehole: 519

Date: 4-11-2020



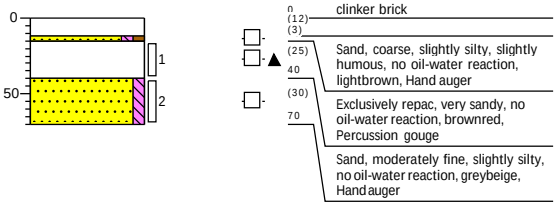
Borehole: 520

Date: 4-11-2020



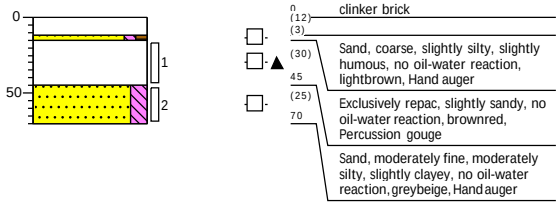
Borehole: 521

Date: 4-11-2020



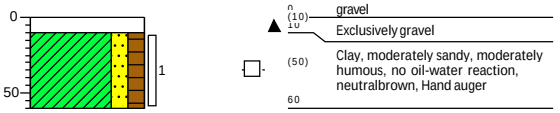
Borehole: 522

Date: 4-11-2020



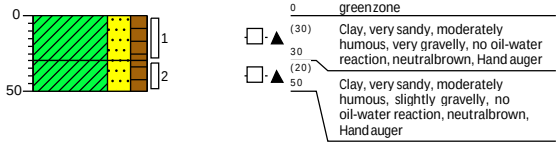
Borehole: 523

Date: 4-11-2020



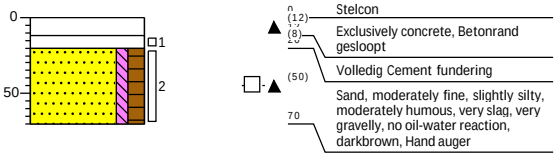
Borehole: 524

Date: 4-11-2020



Borehole: 525

Date: 4-11-2020



Project leader: Alex Ooijvaar

Scale: 1: 50

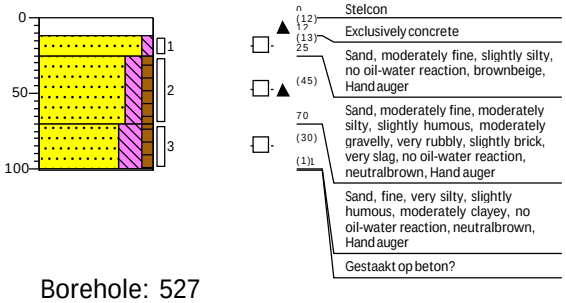
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

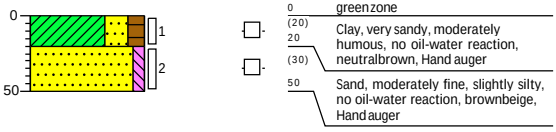
Borehole: 525a

Date: 18-11-2020



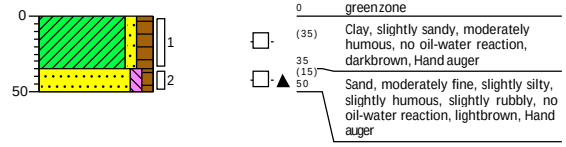
Borehole: 526

Date: 4-11-2020



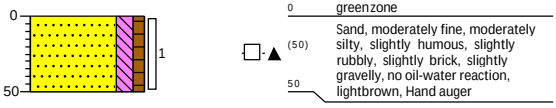
Borehole: 527

Date: 4-11-2020



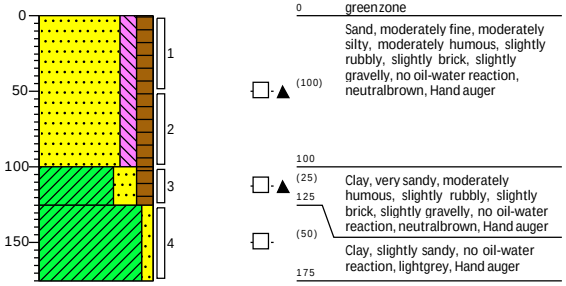
Borehole: 528

Date: 4-11-2020



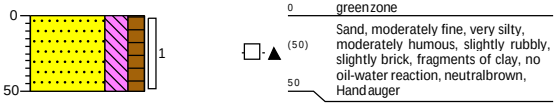
Borehole: 528a

Date: 18-11-2020



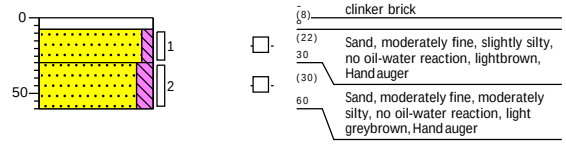
Borehole: 529

Date: 4-11-2020



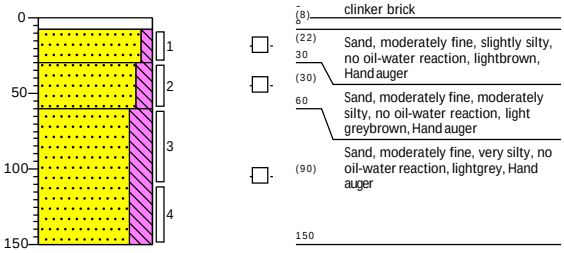
Borehole: 530

Date: 4-11-2020



Borehole: 530a

Date: 18-11-2020



Project leader: Alex Ooijvaar

Scale: 1: 50

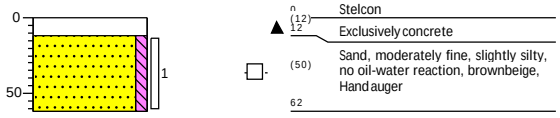
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

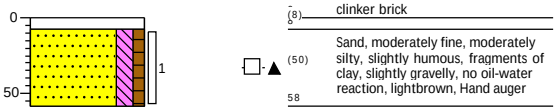
Borehole: 531

Date: 4-11-2020



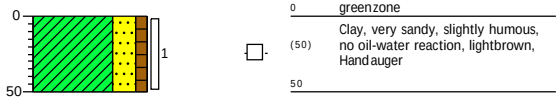
Borehole: 532

Date: 4-11-2020



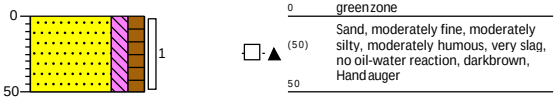
Borehole: 533

Date: 4-11-2020



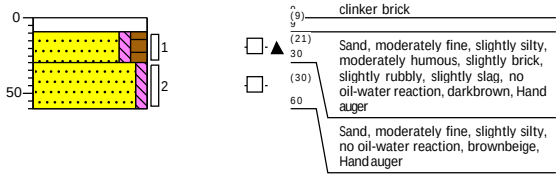
Borehole: 534

Date: 4-11-2020



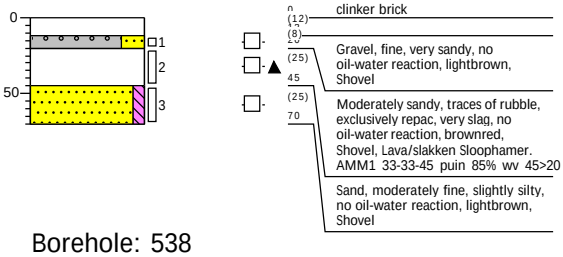
Borehole: 535

Date: 4-11-2020



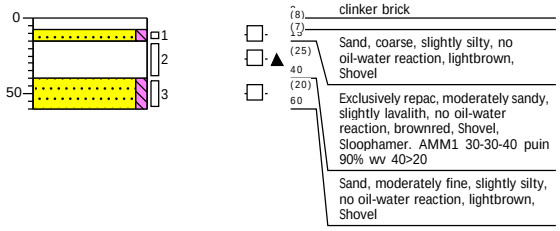
Borehole: 536

Date: 4-11-2020



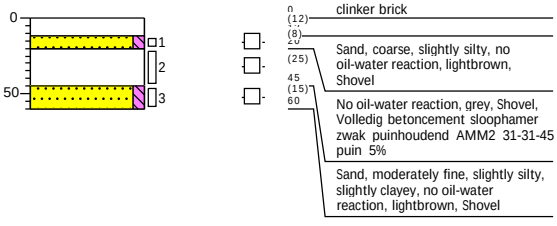
Borehole: 537

Date: 4-11-2020



Borehole: 538

Date: 4-11-2020



Project leader: Alex Ooijvaar

Scale: 1: 50

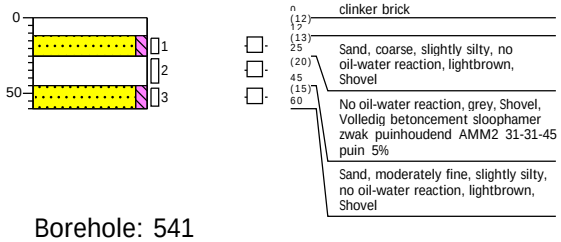
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

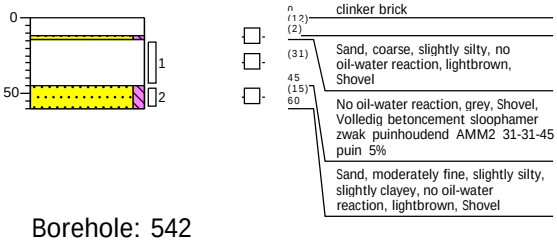
Borehole: 539

Date: 4-11-2020



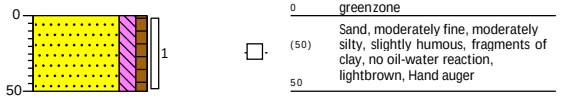
Borehole: 540

Date: 4-11-2020



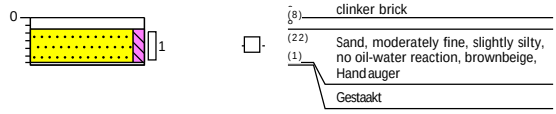
Borehole: 541

Date: 18-11-2020



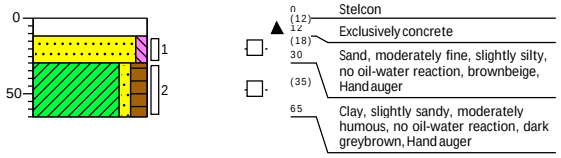
Borehole: 542

Date: 18-11-2020



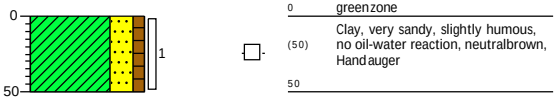
Borehole: 543

Date: 18-11-2020



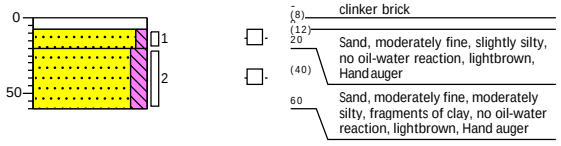
Borehole: 544

Date: 18-11-2020



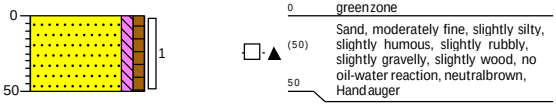
Borehole: 545

Date: 18-11-2020



Borehole: 547

Date: 18-11-2020



Project leader: Alex Ooijvaar

Scale: 1: 50

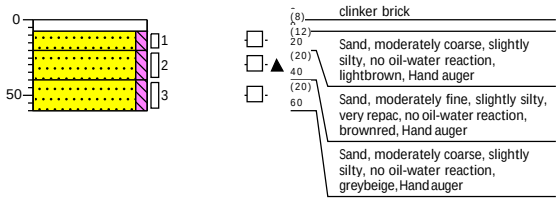
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

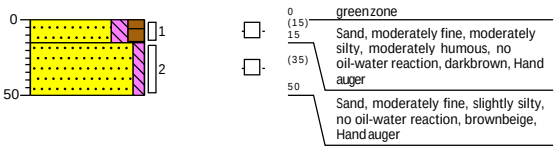
Borehole: 548

Date: 18-11-2020



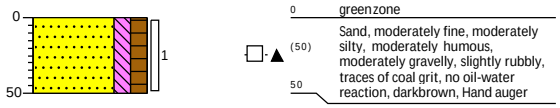
Borehole: 549

Date: 18-11-2020



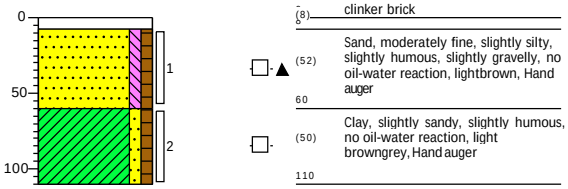
Borehole: 550

Date: 18-11-2020



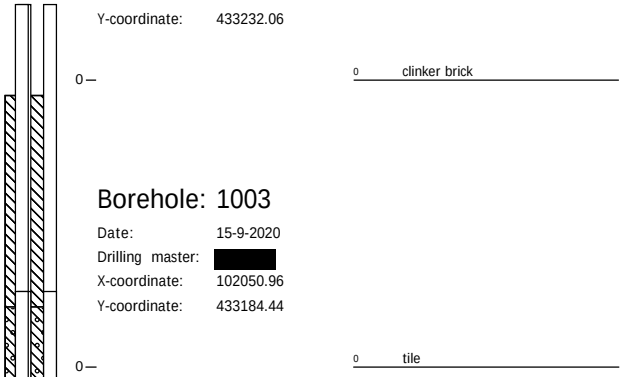
Borehole: 551

Date: 18-11-2020



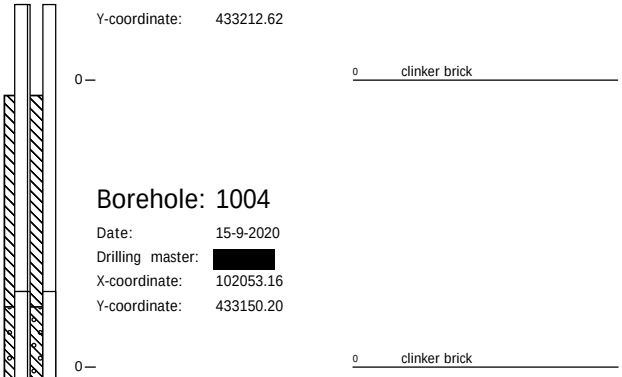
Borehole: 1001

Date: 15-9-2020
Drilling master: [redacted]
X-coordinate: 102044.48
Y-coordinate: 433232.06



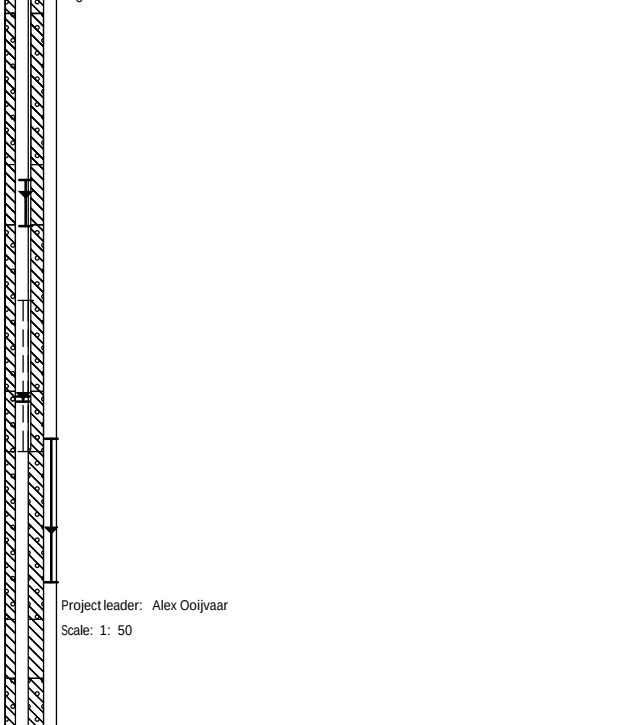
Borehole: 1002

Date: 15-9-2020
Drilling master: [redacted]
X-coordinate: 102013.53
Y-coordinate: 433212.62



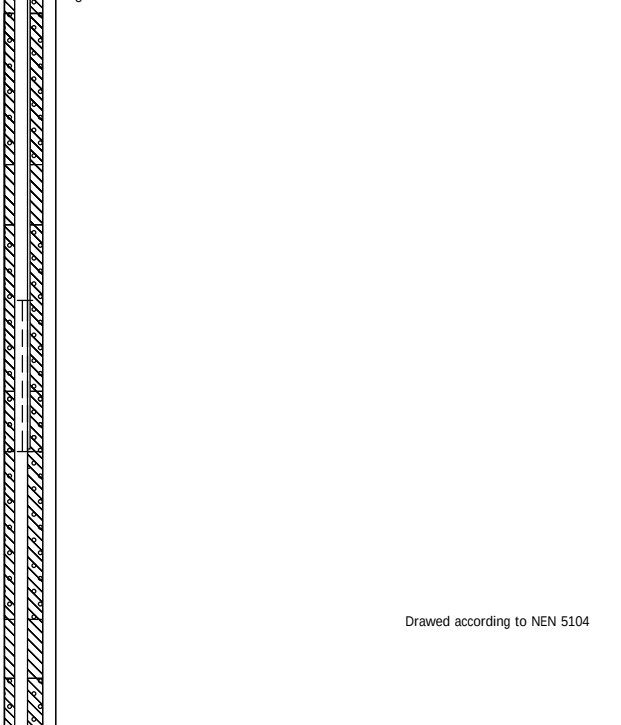
Borehole: 1003

Date: 15-9-2020
Drilling master: [redacted]
X-coordinate: 102050.96
Y-coordinate: 433184.44



Borehole: 1004

Date: 15-9-2020
Drilling master: [redacted]
X-coordinate: 102053.16
Y-coordinate: 433150.20



Project leader: Alex Ooijvaar
Scale: 1: 50

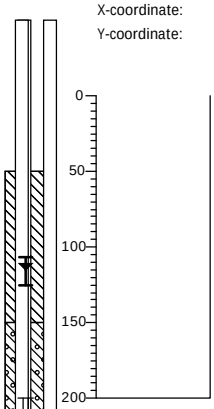
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 1005

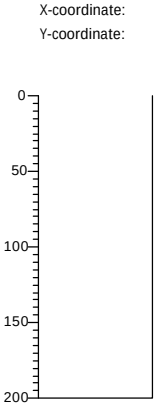
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102052.80
Y-coordinate: 433126.53



0 clinker brick

Borehole: 1006

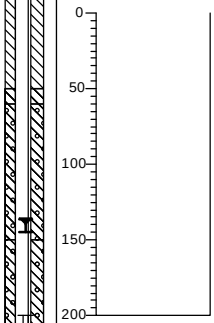
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102079.64
Y-coordinate: 433109.40



0 clinker brick

Borehole: 1007

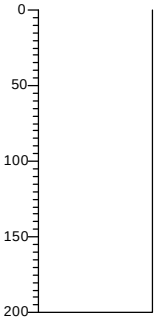
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102103.27
Y-coordinate: 433083.90



0 tile

Borehole: 1008

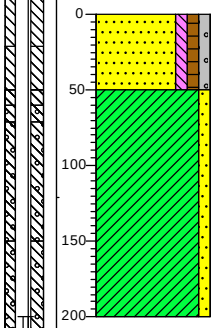
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102116.96
Y-coordinate: 433059.04



0 tile

Borehole: 1009

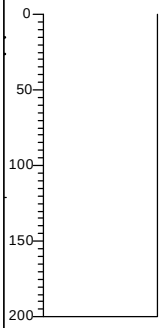
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102130.69
Y-coordinate: 433018.88



0 greenzone
(50) Sand, moderately coarse, slightly silty, slightly humous, slightly gravelly, neutralbrown, Hand auger
50 Clay, slightly sandy, neutralgrey, Hand auger
(150)
200

Borehole: 1010

Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102138.97
Y-coordinate: 433012.53



0 clinker brick

Project leader: Alex Ooijvaar
Scale: 1: 50

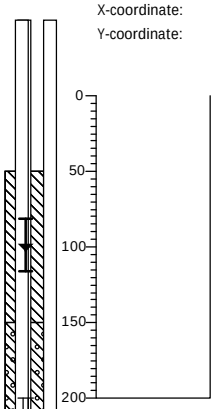
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 1011

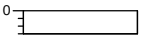
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102144.30
Y-coordinate: 433003.70



0 clinker brick

Borehole: 1012

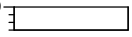
Date: 22-9-2020
Drilling master: [redacted]
X-coordinate: 102178.28
Y-coordinate: 433016.88



0 concrete
(15)
15 Sonic Drill

Borehole: 1013

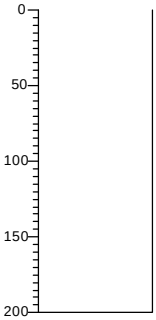
Date: 22-9-2020
Drilling master: [redacted]
X-coordinate: 102185.91
Y-coordinate: 433021.84



0 concrete
(15)
15 Sonic Drill

Borehole: 1014

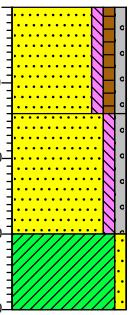
Date: 16-9-2020
Drilling master: [redacted]
X-coordinate: 102278.42
Y-coordinate: 433135.06



0 clinker brick

Borehole: 1015

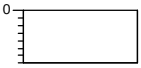
Date: 17-9-2020
Drilling master: [redacted]
X-coordinate: 102235.81
Y-coordinate: 433201.56



0 fallow
(70) Sand, moderately coarse, slightly silty, slightly humous, slightly gravelly, very rubbly, moderately ferrous, neutralbrown, Shovel
70
(80) Sand, moderately coarse, slightly silty, slightly gravelly, neutralbrown, Hand auger
150
(50) Clay, slightly sandy, neutralgrey, Hand auger
200

Borehole: 1016

Date: 30-9-2020
Drilling master: [redacted]



0 Asphalt
(35) Exclusively Asphalt, Hand auger
35

Project leader: Alex Ooijvaar
Scale: 1: 50

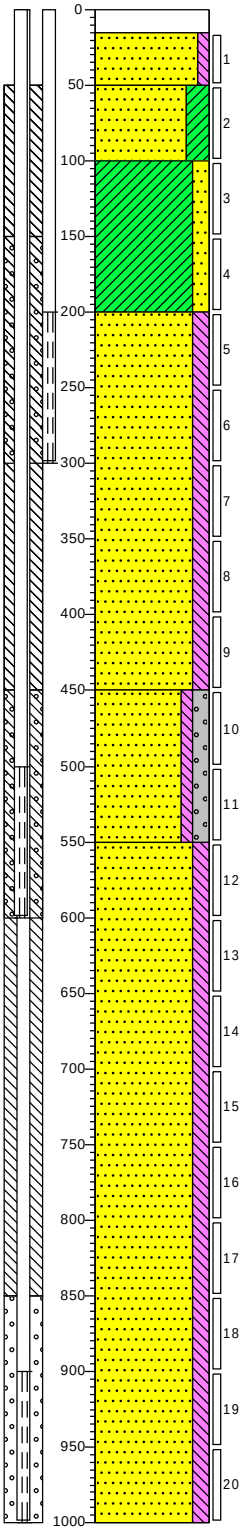
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 1017

Date: 4-11-2020
Drilling master: [redacted]
X-coordinate: 102212.06
Y-coordinate: 433037.88



0 (15) 15 concrete
Concrete drill

(35) 50 Sand, moderately coarse, slightly silty, neutralbrown, Hand auger, diameter=100

(50) 100 Sand, moderately coarse, clayey, neutral browngrey, Hand auger, diameter=100

Clay, moderately sandy, neutralgrey, Hand auger, diameter=100

(100) 200 Sand, moderately coarse, moderately silty, neutralgrey, Sonic Drill

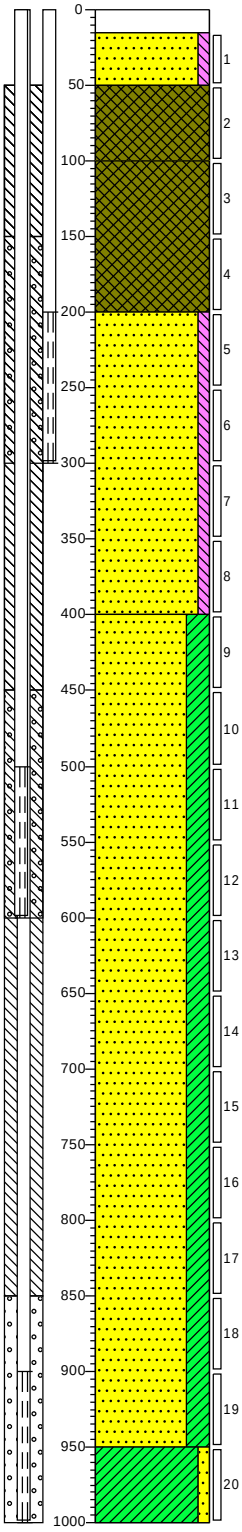
(250) 450 Sand, moderately coarse, slightly silty, moderately gravelly, neutral blackgrey, Sonic Drill

(100) 550 Sand, moderately coarse, moderately silty, neutralgrey, Sonic Drill

(450) 1000

Borehole: 1018

Date: 4-11-2020
Drilling master: [redacted]
X-coordinate: 102121.52
Y-coordinate: 433013.22



0 (15) 15 concrete
Concrete drill

(35) 50 Sand, moderately fine, slightly silty, neutral brownbeige, Hand auger, diameter=100

(50) 100 Alluvium, neutral browngrey, Hand auger, diameter=100

Alluvium, strong chemical odour, neutral bluegrey, Hand auger, diameter=100

(100) 200 Sand, moderately coarse, slightly silty, neutralgrey, Sonic Drill

(200) 400 Sand, moderately coarse, clayey, neutralgrey, Sonic Drill

(550) 950 Clay, slightly sandy, neutralgrey, Sonic Drill

(50) 1000

Project leader: Alex Ooijvaar
Scale: 1: 50

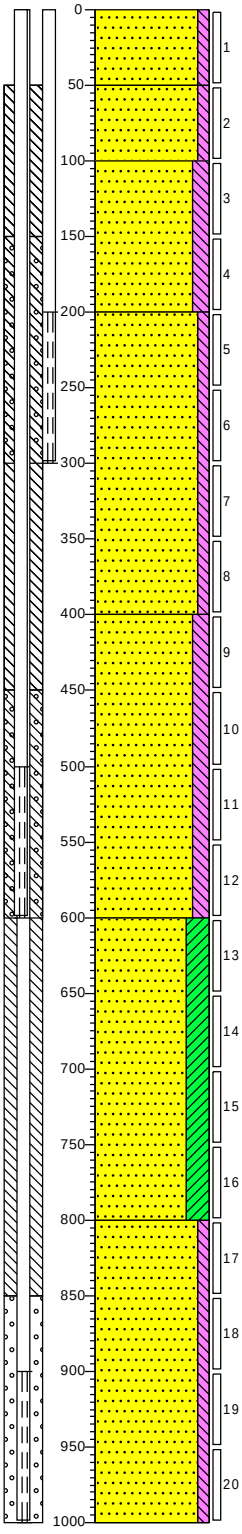
Drawed according to NEN 5104

Project name: Ringdijk 390, Ridderkerk

Projectnr. 0465250.100

Borehole: 1019

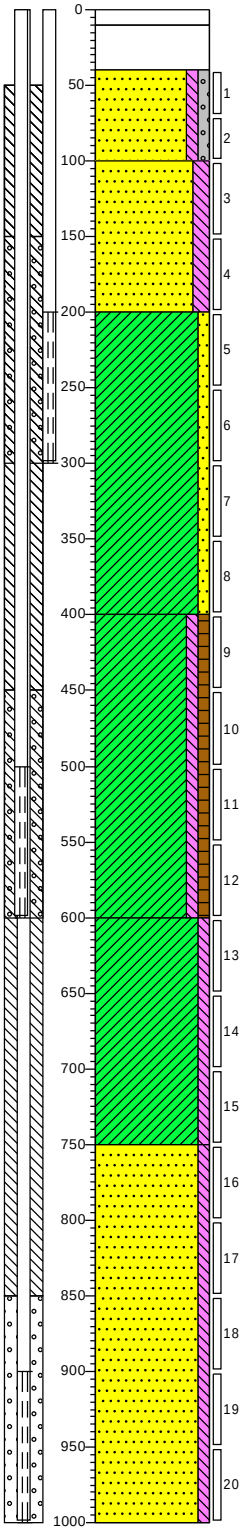
Date: 4-11-2020
Drilling master: [redacted]
X-coordinate: 102119.13
Y-coordinate: 433018.40



0 grass
(50) Sand, moderately fine, slightly silty, neutral beigebrown, Hand auger, diameter=100
50
(50) Sand, moderately fine, slightly silty, neutral greyblue, Hand auger, diameter=100
100
Sand, moderately fine, moderately silty, neutral greyblue, Hand auger, diameter=100
(100)
200
Sand, moderately coarse, slightly silty, neutralgrey, Sonic Drill
(200)
400
Sand, moderately coarse, moderately silty, neutralgrey, Sonic Drill
(200)
600
Sand, moderately coarse, clayey, neutralgrey, Sonic Drill
(200)
800
Sand, moderately coarse, slightly silty, neutralgrey, Sonic Drill
(200)
1000

Borehole: 1020

Date: 4-11-2020
Drilling master: [redacted]
X-coordinate: 102100.02
Y-coordinate: 433032.62



0 Asphalt
(10)
10 Concrete drill, Asfaltkern
(30) Exclusively rubble, Concrete drill
40
(60) Sand, moderately coarse, slightly silty, slightly gravelly, neutralgrey, Hand auger, diameter=100
100
Sand, moderately fine, moderately silty, neutralgrey, Hand auger, diameter=100
(100)
200
Clay, slightly sandy, neutralgrey, Sonic Drill
(200)
400
Clay, slightly silty, slightly humous, neutral browngrey, Sonic Drill
(200)
600
Clay, slightly silty, neutral browngrey, Sonic Drill
(150)
750
Sand, moderately coarse, slightly silty, neutralgrey, Sonic Drill
(250)
1000

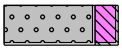
Project leader: Alex Ooijvaar
Scale: 1: 50

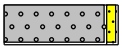
Drawed according to NEN 5104

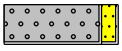
Project name: Ringdijk 390, Ridderkerk

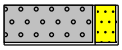
Legend (NEN 5104 compliant)

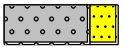
gravel


Gravel, silty

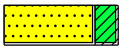

Gravel, slightly sandy

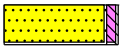

Gravel, moderately sandy

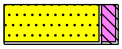

Gravel, very sandy


Gravel, extremely sandy

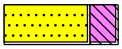
sand


Sand, clayey


Sand, slightly silty


Sand, moderately silty


Sand, very silty


Sand, extremely silty

peat


Peat, mineral deficient

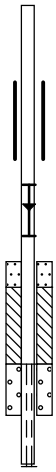

Peat, slightly clayey


Peat, very clayey


Peat, slightly sandy


Peat, very sandy

gauging tube


plain tube

casing

highest groundwater level
average groundwater level
lowest groundwater level

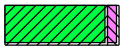
sand seal

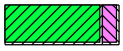
bentonite/mikolite/clay seal

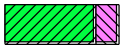
gravel seal

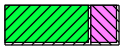
filter

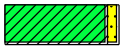
clay

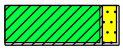

Clay, slightly silty

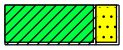

Clay, moderately silty


Clay, very silty


Clay, extremely silty


Clay, slightly sandy


Clay, moderately sandy

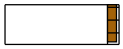

Clay, very sandy

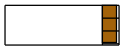
loam


Loam, slightly sandy

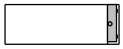

Loam, very sandy

other additives


slightly humous


moderately humous


very humous


slightly gravelly


moderately gravelly


very gravelly

odour

- None odour
- weak odour
- moderate odour
- strong odour
- extreme odour

oil

- no oil-water reaction
- poor oil-water reaction
- moderate oil-water reaction
- strong oil-water reaction
- extreme oil-water reaction

p.i.d. value

- >0
- >1
- >10
- >100
- >1000
- >10000

samples

disturbed sample

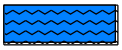
undisturbed sample

voluming

miscellaneous

- special compound
- Average highest groundwater level
- groundwater level
- Average lowest groundwater level


alluvium


water

Project leader: Alex Ooijvaar

Scale: 1: 50

Drawed according to NEN 5104

Appendix 3 Assessment of soil samples against the Soil Protection Act

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		500-2			501-2			502-2		
Boringnummer		500			501			502		
Monstertraject (m -mv)		0,60-1,00			0,60-1,10			0,60-1,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Voldoet aan achtergrondwaarde			Voldoet aan achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	77,00			85,00			82,70		
Lutum	% ds									
Organische stof	% ds	1,8			0,7			1,3		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	11(6)		< 3	11(6)	
Minerale olie C10 - C40	mg/kg ds	62	310	0,02	< 35	123	-0,01	< 35	123	-0,01
Minerale olie C12 - C16	mg/kg ds	5,3	26,500(6)		< 5	18(6)		< 5	18(6)	
Minerale olie C16 - C21	mg/kg ds	21	105(6)		< 5	18(6)		< 5	18(6)	
Minerale olie C21 - C30	mg/kg ds	25	125(6)		< 11	39(6)		< 11	39(6)	
Minerale olie C30 - C35	mg/kg ds	5,8	29(6)		< 5	18(6)		< 5	18(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)		< 6	21(6)		< 6	21(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		503-2			504-6			515-4		
Boringnummer		503			504			515		
Monstertraject (m -mv)		0,50-1,00			0,60-0,80			1,30-1,50		
Analysedatum		01-10-2020			01-10-2020			23-10-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding interventiewaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	80,20			84,10			77,30		
Lutum	% ds									
Organische stof	% ds	1,6			2,0			1,6		
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
naftaleen	mg/kg ds				< 0,01	0,010				
som (10) PAK	mg/kg					0,007(2)	-0,04			
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	11(6)		< 3	11(6)	
Minerale olie C10 - C40	mg/kg ds	< 35	123	-0,01	13000	65000	13,47	46	230	0,01
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)		14	70(6)		< 5	18(6)	
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)		420	2100(6)		5,2	26(6)	
Minerale olie C21 - C30	mg/kg ds	< 11	39(6)		9400	47000(6)		21	105(6)	
Minerale olie C30 - C35	mg/kg ds	< 5	18(6)		2700	13500(6)		12	60(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)		560	2800(6)		< 6	21(6)	
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	mg/kg ds							< 0,05	0,180	0,00
1,1,2-trichloorethaan	mg/kg ds							< 0,05	0,180	-0,01
1,1-dichloorethaan	mg/kg ds							< 0,02	0,070	-0,01
1,2-dichloorethaan	mg/kg ds							< 0,02	0,070	-0,02
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds							0,07		
chlooretheen	mg/kg ds							< 0,01	0,040	-(^)
cis-1,2-dichlooretheen	mg/kg ds							< 0,05	0,180	
CKW (som)	mg/kg ds							< 0,42		
dichloormethaan	mg/kg ds							< 0,05	0,180	0,02
som dichlooretheen-isomeren	mg/kg ds								0,350	0,07
tetrachlooretheen	mg/kg ds							0,025	0,125	0,00
tetrachloormethaan	mg/kg ds							< 0,05	0,180	-0,30
trans-1,2-dichlooretheen	mg/kg ds							< 0,05	0,180	
trichlooretheen	mg/kg ds							< 0,05	0,180	-0,03
trichloormethaan	mg/kg ds							< 0,02	0,070	-0,03

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
EOL
2: Enkele parameters ontbreken in de som
6: Heeft geen normwaarde

Analyseresultaten grond		503-2			504-6			515-4		
AROMATISCHE VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,2-xyleen	mg/kg ds				< 0,05	0,180				
benzeen	mg/kg ds				< 0,05	0,180	-0,02			
ethylbenzeen	mg/kg ds				< 0,05	0,180	0,00			
som (16) aromatische oplosmiddelen	mg/kg ds					0,880[(2)]				
som (3) xyleen	mg/kg ds					0,350	-0,01			
som 1,3- en 1,4-xyleen	mg/kg ds				< 0,05	0,180				
som monocyclische aromatische koolwaterstoffen (BTEX)	mg/kg ds				< 0,25					
tolueen	mg/kg ds				< 0,05	0,180	0,00			
Xylenen (som, 0.7 factor)	mg/kg ds				0,07					

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
2: Enkele parameters ontbreken in de som

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		515-6			505-3			505-4		
Boringnummer		515			505			505		
Monstertraject (m -mv)		2,00-2,50			1,10-1,30			1,30-1,80		
Analysedatum		23-10-2020			23-10-2020			23-10-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding interventiewaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	70,90			76,60			73,30		
Lutum	% ds									
Organische stof	% ds	4,9			3,7			0,7		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	62	127(6)		< 3	6(6)		< 3	11(6)	
Minerale olie C10 - C40	mg/kg ds	160	327	0,03	6300	17027	3,50	420	2100	0,40
Minerale olie C12 - C16	mg/kg ds	28	57(6)		29	78(6)		< 5	18(6)	
Minerale olie C16 - C21	mg/kg ds	16	33(6)		82	222(6)		11	55(6)	
Minerale olie C21 - C30	mg/kg ds	36	73(6)		3300	8919(6)		220	1100(6)	
Minerale olie C30 - C35	mg/kg ds	18	37(6)		2100	5676(6)		140	700(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	9(6)		780	2108(6)		51	255(6)	
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	mg/kg ds	< 0,05	0,070	-0,01						
1,1,2-trichloorethaan	mg/kg ds	< 0,05	0,070	-0,02						
1,1-dichloorethaan	mg/kg ds	< 0,02	0,030	-0,01						
1,2-dichloorethaan	mg/kg ds	< 0,02	0,030	-0,03						
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds	0,07								
chlooretheen	mg/kg ds	< 0,01	0,010	- (^)						
cis-1,2-dichlooretheen	mg/kg ds	< 0,05	0,070							
CKW (som)	mg/kg ds	< 0,42								
dichloormethaan	mg/kg ds	< 0,05	0,070	-0,01						
som dichlooretheen-isomeren	mg/kg ds		0,140	-0,23						
tetrachlooretheen	mg/kg ds	< 0,01	0,010	-0,02						
tetrachloormethaan	mg/kg ds	< 0,05	0,070	-0,57						
trans-1,2-dichlooretheen	mg/kg ds	< 0,05	0,070							
trichlooretheen	mg/kg ds	< 0,05	0,070	-0,08						
trichloormethaan	mg/kg ds	< 0,02	0,030	-0,04						

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
EOL
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		506-3			507-3			508-3		
Boringnummer		506			507			508		
Monstertraject (m -mv)		0,80-1,30			0,90-1,40			0,70-1,20		
Analysedatum		23-10-2020			23-10-2020			23-10-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	76,90			80,20			81,60		
Lutum	% ds									
Organische stof	% ds	2,1			1,7			2,2		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	10(6)		< 3	11(6)		< 3	10(6)	
Minerale olie C10 - C40	mg/kg ds	< 35	117	-0,02	65	325	0,03	43	195	0,00
Minerale olie C12 - C16	mg/kg ds	< 5	17(6)		< 5	18(6)		< 5	16(6)	
Minerale olie C16 - C21	mg/kg ds	5,5	26,200(6)		12	60(6)		6,7	30,500(6)	
Minerale olie C21 - C30	mg/kg ds	< 11	37(6)		27	135(6)		21	95(6)	
Minerale olie C30 - C35	mg/kg ds	< 5	17(6)		15	75(6)		8,5	38,600(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	20(6)		8,3	41,500(6)		< 6	19(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		509-3			510-4			511-4		
Boringnummer		509			510			511		
Monstertraject (m -mv)		1,20-1,70			1,20-1,70			1,00-1,50		
Analysedatum		23-10-2020			23-10-2020			23-10-2020		
Monsterconclusie Wbb		Overschrijding interventiewaarde			Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	77,90			71,20			73,30		
Lutum	% ds									
Organische stof	% ds	0,9			2,8			0,9		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	8(6)		4,2	21(6)	
Minerale olie C10 - C40	mg/kg ds	4200	21000	4,33	< 35	88	-0,02	40	200	0,00
Minerale olie C12 - C16	mg/kg ds	11	55(6)		< 5	13(6)		7,9	39,500(6)	
Minerale olie C16 - C21	mg/kg ds	60	300(6)		< 5	13(6)		8,5	42,500(6)	
Minerale olie C21 - C30	mg/kg ds	2300	11500(6)		< 11	28(6)		11	55(6)	
Minerale olie C30 - C35	mg/kg ds	1200	6000(6)		7,3	26,100(6)		6,6	33(6)	
Minerale olie C35 - C40	mg/kg ds	540	2700(6)		< 6	15(6)		< 6	21(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		513-3			516-1			518-1		
Boringnummer		513			516			518		
Monstertraject (m -mv)		1,10-1,60			0,10-0,60			0,08-0,58		
Analysedatum		23-10-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	80,50			82,20			85,40		
Lutum	% ds				7,9			3,5		
Organische stof	% ds	1,2			1,8			0,9		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds				50	112(6)		47	153(6)	
cadmium	mg/kg ds				0,34	0,540	0,00	0,45	0,760	0,01
kobalt	mg/kg ds				6,6	14,100	-0,01	5	15	0,00
koper	mg/kg ds				21	36	-0,03	11	22	-0,12
kwik	mg/kg ds				0,12	0,160	0,00	0,12	0,170	0,00
lood	mg/kg ds				43	61	0,02	16	25	-0,05
molybdeen	mg/kg ds				< 1,5	1,100	0,00	< 1,5	1,100	0,00
nikkel	mg/kg ds				14	27	-0,12	9,2	23,900	-0,17
zink	mg/kg ds				130	237	0,17	220	485	0,59
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds				0,34	0,340		< 0,05	0,040	
benzo(a)antraceen	mg/kg ds				0,47	0,470		0,12	0,120	
benzo(a)pyreen	mg/kg ds				0,57	0,570		0,11	0,110	
benzo(ghi)peryleen	mg/kg ds				0,49	0,490		0,082	0,082	
benzo(k)fluorantheen	mg/kg ds				0,27	0,270		0,086	0,086	
chryseen	mg/kg ds				0,49	0,490		0,13	0,130	
fenantreen	mg/kg ds				1,1	1,100		< 0,05	0,040	
fluorantheen	mg/kg ds				0,96	0,960		0,24	0,240	
indeno(1,2,3-cd)pyreen	mg/kg ds				0,53	0,530		0,11	0,110	
naftaleen	mg/kg ds				< 0,05	0,040		< 0,05	0,040	
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds				5,3			0,97		
som (10) PAK	mg/kg ds					5,300	0,10		0,980	-0,01
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	11(6)		< 3	11(6)	
Minerale olie C10 - C40	mg/kg ds	< 35	123	-0,01	160	800	0,13	< 35	123	-0,01
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)		< 5	18(6)		< 5	18(6)	
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)		7,8	39(6)		< 5	18(6)	
Minerale olie C21 - C30	mg/kg ds	< 11	39(6)		62	310(6)		< 11	39(6)	
Minerale olie C30 - C35	mg/kg ds	5,2	26(6)		56	280(6)		< 5	18(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)		35	175(6)		< 6	21(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		513-3			516-1			518-1		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds				0,0049			0,0076		
PCB 101	mg/kg ds				< 0,001	0,004		0,0011	0,006	
PCB 118	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
PCB 138	mg/kg ds				< 0,001	0,004		0,0014	0,007	
PCB 153	mg/kg ds				< 0,001	0,004		0,0016	0,008	
PCB 180	mg/kg ds				< 0,001	0,004		0,0014	0,007	
PCB 28	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
PCB 52	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
som (7) PCB	mg/kg ds					0,025	0,01		0,038	0,02

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		519-1			520-2			521-1		
Boringnummer		519			520			521		
Monstertraject (m -mv)		0,08-0,58			0,20-0,45			0,15-0,40		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	90,20			90,00			87,60		
Lutum	% ds									
Organische stof	% ds	0,8			1,2			1,9		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds	0,036			0,13			0,0085		
PCB 101	mg/kg ds	0,0023	0,012		0,015	0,075		< 0,001	0,004	
PCB 118	mg/kg ds	0,0011	0,006		0,0087	0,044		< 0,001	0,004	
PCB 138	mg/kg ds	0,009	0,045		0,035	0,175		0,0025	0,013	
PCB 153	mg/kg ds	0,012	0,060		0,04	0,200		0,0025	0,013	
PCB 180	mg/kg ds	0,0097	0,049		0,025	0,125		< 0,001	0,004	
PCB 28	mg/kg ds	< 0,001	0,004		< 0,001	0,004		< 0,001	0,004	
PCB 52	mg/kg ds	< 0,001	0,004		0,0018	0,009		< 0,001	0,004	
som (7) PCB	mg/kg ds		0,180	0,16		0,630	0,62		0,043	0,02

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		522-1			523-1			525-2		
Boringnummer		522			523			525		
Monstertraject (m -mv)		0,15-0,45			0,10-0,60			0,20-0,70		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	90,20			78,90			84,30		
Lutum	% ds							4,6		
Organische stof	% ds	1,1			2,2			2,4		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds							150	439(6)	
cadmium	mg/kg ds							4,7	7,600	0,56
kobalt	mg/kg ds							19	52	0,21
koper	mg/kg ds							180	338	1,99
kwik	mg/kg ds							0,13	0,180	0,00
lood	mg/kg ds							59	88	0,08
molybdeen	mg/kg ds							3,7	3,700	0,01
nikkel	mg/kg ds							58	139	1,60
zink	mg/kg ds							160	332	0,33
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds							0,063	0,063	
benzo(a)antraceen	mg/kg ds							0,15	0,150	
benzo(a)pyreen	mg/kg ds							0,11	0,110	
benzo(ghi)peryleen	mg/kg ds							0,099	0,099	
benzo(k)fluorantheen	mg/kg ds							0,064	0,064	
chryseen	mg/kg ds							0,16	0,160	
fenantreen	mg/kg ds							0,15	0,150	
fluorantheen	mg/kg ds							0,25	0,250	
indeno(1,2,3-cd)pyreen	mg/kg ds							0,1	0,100	
naftaleen	mg/kg ds							< 0,05	0,040	
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds							1,2		
som (10) PAK	mg/kg ds								1,200	-0,01
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds							< 3	9(6)	
Minerale olie C10 - C40	mg/kg ds							< 35	102	-0,02
Minerale olie C12 - C16	mg/kg ds							< 5	15(6)	
Minerale olie C16 - C21	mg/kg ds							< 5	15(6)	
Minerale olie C21 - C30	mg/kg ds							14	58(6)	
Minerale olie C30 - C35	mg/kg ds							6,5	27,100(6)	
Minerale olie C35 - C40	mg/kg ds							< 6	18(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		522-1			523-1			525-2		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds	0,042			0,0055			0,0052		
PCB 101	mg/kg ds	0,0051	0,026		< 0,001	0,003		< 0,001	0,003	
PCB 118	mg/kg ds	0,0028	0,014		< 0,001	0,003		< 0,001	0,003	
PCB 138	mg/kg ds	0,011	0,055		0,001	0,005		< 0,001	0,003	
PCB 153	mg/kg ds	0,013	0,065		0,001	0,005		0,001	0,004	
PCB 180	mg/kg ds	0,0093	0,047		< 0,001	0,003		< 0,001	0,003	
PCB 28	mg/kg ds	< 0,001	0,004		< 0,001	0,003		< 0,001	0,003	
PCB 52	mg/kg ds	< 0,001	0,004		< 0,001	0,003		< 0,001	0,003	
som (7) PCB	mg/kg ds		0,210	0,19		0,025	0,01		0,022	0,00

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

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Analyseresultaten grond		526-2			527-1			528-1		
Boringnummer		526			527			528		
Monstertraject (m -mv)		0,20-0,50			0,00-0,35			0,00-0,50		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Voldoet aan achtergrondwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	91,70			75,30			88,80		
Lutum	% ds	2,0			21,3			5,9		
Organische stof	% ds	1,0			7,1			2,3		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds	29	60	0,13	35	39	-0,01	130	235	1,30

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		529-1			531-1			532-1		
Boringnummer		529			531			532		
Monstertraject (m -mv)		0,00-0,50			0,12-0,62			0,08-0,58		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	83,90			85,90			84,90		
Lutum	% ds	7,4								
Organische stof	% ds	3,3			0,7			0,7		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds	84	141	0,67						
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds				0,0059			0,016		
PCB 101	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
PCB 118	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
PCB 138	mg/kg ds				< 0,001	0,004		0,0037	0,019	
PCB 153	mg/kg ds				0,0012	0,006		0,0051	0,026	
PCB 180	mg/kg ds				0,0012	0,006		0,0048	0,024	
PCB 28	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
PCB 52	mg/kg ds				< 0,001	0,004		< 0,001	0,004	
som (7) PCB	mg/kg ds					0,030	0,01		0,082	0,06

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		533-1			534-1			535-1		
Boringnummer		533			534			535		
Monstertraject (m -mv)		0,00-0,50			0,00-0,50			0,09-0,30		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	77,20			84,70			92,00		
Lutum	% ds	8,2			3,5			2,9		
Organische stof	% ds	1,5			1,9			2,1		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds							48	167[6]	
cadmium	mg/kg ds							0,54	0,910	0,03
kobalt	mg/kg ds							14	45	0,17
koper	mg/kg ds							260	520	3,20
kwik	mg/kg ds							0,11	0,160	0,00
lood	mg/kg ds							61	94	0,09
molybdeen	mg/kg ds							5,5	5,500	0,02
nikkel	mg/kg ds							44	119	1,29
zink	mg/kg ds	54	97	-0,07	130	287	0,25	150	340	0,34
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds							0,34	0,340	
benzo(a)antraceen	mg/kg ds							1,1	1,100	
benzo(a)pyreen	mg/kg ds							0,95	0,950	
benzo(ghi)peryleen	mg/kg ds							0,63	0,630	
benzo(k)fluorantheen	mg/kg ds							0,45	0,450	
chryseen	mg/kg ds							1	1	
fenantreen	mg/kg ds							0,93	0,930	
fluorantheen	mg/kg ds							2	2	
indeno(1,2,3-cd)pyreen	mg/kg ds							0,5	0,500	
naftaleen	mg/kg ds							< 0,05	0,040	
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds							8		
som (10) PAK	mg/kg ds								7,900	0,17
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds							< 3	10[6]	
Minerale olie C10 - C40	mg/kg ds							55	262	0,01
Minerale olie C12 - C16	mg/kg ds							< 5	17[6]	
Minerale olie C16 - C21	mg/kg ds							10	48[6]	
Minerale olie C21 - C30	mg/kg ds							27	129[6]	
Minerale olie C30 - C35	mg/kg ds							11	52[6]	
Minerale olie C35 - C40	mg/kg ds							< 6	20[6]	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		533-1			534-1			535-1		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds							0,0071		
PCB 101	mg/kg ds							< 0,001	0,003	
PCB 118	mg/kg ds							< 0,001	0,003	
PCB 138	mg/kg ds							0,0015	0,007	
PCB 153	mg/kg ds							0,0013	0,006	
PCB 180	mg/kg ds							0,0015	0,007	
PCB 28	mg/kg ds							< 0,001	0,003	
PCB 52	mg/kg ds							< 0,001	0,003	
som (7) PCB	mg/kg ds								0,034	0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

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Analyseresultaten grond		MM01			MM02			MM03		
Boringnummer		536, 537, 538			536, 537, 538			530		
Monstertraject (m -mv)		0,15-0,45			0,40-0,70			0,08-0,60		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	95,00			96,80			86,90		
Lutum	% ds	2,4			2,0					
Organische stof	% ds	1,1			0,7			0,7		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds	140	517(6)		36	140(6)				
cadmium	mg/kg ds	< 0,2	0,200	-0,03	0,36	0,620	0,00			
kobalt	mg/kg ds	10	34	0,11	4	14	-0,01			
koper	mg/kg ds	35	71	0,21	7,2	14,900	-0,17			
kwik	mg/kg ds	< 0,05	0,050	0,00	0,065	0,093	0,00			
lood	mg/kg ds	22	34	-0,03	16	25	-0,05			
molybdeen	mg/kg ds	1,8	1,800	0,00	< 1,5	1,100	0,00			
nikkel	mg/kg ds	26	73	0,58	8,7	25,400	-0,15			
zink	mg/kg ds	70	163	0,04	93	221	0,14			
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds	0,086	0,086		0,19	0,190				
benzo(a)antraceen	mg/kg ds	0,43	0,430		0,62	0,620				
benzo(a)pyreen	mg/kg ds	0,36	0,360		0,39	0,390				
benzo(ghi)peryleen	mg/kg ds	0,28	0,280		0,22	0,220				
benzo(k)fluorantheen	mg/kg ds	0,18	0,180		0,21	0,210				
chryseen	mg/kg ds	0,43	0,430		0,62	0,620				
fenantreen	mg/kg ds	0,35	0,350		0,83	0,830				
fluorantheen	mg/kg ds	0,81	0,810		1,2	1,200				
indeno(1,2,3-cd)pyreen	mg/kg ds	0,29	0,290		0,27	0,270				
naftaleen	mg/kg ds	< 0,05	0,040		< 0,05	0,040				
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds	3,3			4,6					
som (10) PAK	mg/kg ds		3,300	0,05		4,600	0,08			
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	11(6)				
Minerale olie C10 - C40	mg/kg ds	79	395	0,04	60	300	0,02			
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)		< 5	18(6)				
Minerale olie C16 - C21	mg/kg ds	10	50(6)		9,2	46(6)				
Minerale olie C21 - C30	mg/kg ds	28	140(6)		25	125(6)				
Minerale olie C30 - C35	mg/kg ds	21	105(6)		14	70(6)				
Minerale olie C35 - C40	mg/kg ds	15	75(6)		9,7	48,500(6)				

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
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Analyseresultaten grond		MM01			MM02			MM03		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds	0,06			0,0049			0,86		
PCB 101	mg/kg ds	0,0087	0,044		< 0,001	0,004		0,065	0,325	
PCB 118	mg/kg ds	0,0029	0,015		< 0,001	0,004		0,024	0,120	
PCB 138	mg/kg ds	0,015	0,075		< 0,001	0,004		0,21	1,050	
PCB 153	mg/kg ds	0,017	0,085		< 0,001	0,004		0,3	1,500	
PCB 180	mg/kg ds	0,013	0,065		< 0,001	0,004		0,26	1,300	
PCB 28	mg/kg ds	< 0,001	0,004		< 0,001	0,004		< 0,001	0,004	
PCB 52	mg/kg ds	0,0018	0,009		< 0,001	0,004		0,0043	0,022	
som (7) PCB	mg/kg ds		0,300	0,29		0,025	0,01		4,300	4,37

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		MM04			MM05			1016_N-4		
Boringnummer		524			517			1016_N		
Monstertraject (m -mv)		0,00-0,50			0,12-0,65			1,50-2,00		
Analysedatum		04-11-2020			04-11-2020			03-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	85,20			86,20			75,30		
Lutum	% ds	8,6			3,4					
Organische stof	% ds	1,6			0,8			1,9		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds	220	467(6)		< 20	46(6)				
cadmium	mg/kg ds	0,4	0,600	0,00	< 0,2	0,200	-0,03			
kobalt	mg/kg ds	7,2	14,700	0,00	3,9	11,900	-0,02			
koper	mg/kg ds	46	78	0,25	< 5	7	-0,22			
kwik	mg/kg ds	0,097	0,126	0,00	< 0,05	0,050	0,00			
lood	mg/kg ds	47	66	0,03	< 10	11	-0,08			
molybdeen	mg/kg ds	< 1,5	1,100	0,00	< 1,5	1,100	0,00			
nikkel	mg/kg ds	19	36	0,02	8,2	21,400	-0,21			
zink	mg/kg ds	140	249	0,19	40	89	-0,09			
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds	< 0,05	0,040		< 0,05	0,040				
benzo(a)antraceen	mg/kg ds	0,15	0,150		< 0,05	0,040				
benzo(a)pyreen	mg/kg ds	0,16	0,160		< 0,05	0,040				
benzo(ghi)peryleen	mg/kg ds	0,1	0,100		< 0,05	0,040				
benzo(k)fluorantheen	mg/kg ds	0,072	0,072		< 0,05	0,040				
chryseen	mg/kg ds	0,16	0,160		< 0,05	0,040				
fenantreen	mg/kg ds	0,1	0,100		< 0,05	0,040				
fluorantheen	mg/kg ds	0,24	0,240		< 0,05	0,040				
indeno(1,2,3-cd)pyreen	mg/kg ds	0,099	0,099		< 0,05	0,040				
naftaleen	mg/kg ds	< 0,05	0,040		< 0,05	0,040				
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds	1,2			0,35					
som (10) PAK	mg/kg ds		1,200	-0,01		0,350	-0,03			
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)		< 3	11(6)		310	1550(6)	
Minerale olie C10 - C40	mg/kg ds	< 35	123	-0,01	< 35	123	-0,01	810	4050	0,80
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)		< 5	18(6)		140	700(6)	
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)		< 5	18(6)		68	340(6)	
Minerale olie C21 - C30	mg/kg ds	13	65(6)		< 11	39(6)		190	950(6)	
Minerale olie C30 - C35	mg/kg ds	9,6	48(6)		< 5	18(6)		82	410(6)	
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)		< 6	21(6)		35	175(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		MM04			MM05			1016_N-4		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	mg/kg ds							< 0,05	0,180	0,00
1,1,2-trichloorethaan	mg/kg ds							< 0,05	0,180	-0,01
1,1-dichloorethaan	mg/kg ds							< 0,02	0,070	-0,01
1,2-dichloorethaan	mg/kg ds							< 0,02	0,070	-0,02
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds							0,07		
chlooretheen	mg/kg ds							< 0,01	0,040	- (^)
cis-1,2-dichlooretheen	mg/kg ds							< 0,05	0,180	
CKW (som)	mg/kg ds							< 0,42		
dichloormethaan	mg/kg ds							< 0,05	0,180	0,02
som dichlooretheen-isomeren	mg/kg ds								0,350	0,07
tetrachlooretheen	mg/kg ds							< 0,01	0,040	-0,01
tetrachloormethaan	mg/kg ds							< 0,05	0,180	-0,30
trans-1,2-dichlooretheen	mg/kg ds							< 0,05	0,180	
trichlooretheen	mg/kg ds							< 0,05	0,180	-0,03
trichloormethaan	mg/kg ds							< 0,02	0,070	-0,03

PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds	0,012			0,0049					
PCB 101	mg/kg ds	0,0012	0,006		< 0,001	0,004				
PCB 118	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
PCB 138	mg/kg ds	0,0029	0,015		< 0,001	0,004				
PCB 153	mg/kg ds	0,0031	0,016		< 0,001	0,004				
PCB 180	mg/kg ds	0,0026	0,013		< 0,001	0,004				
PCB 28	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
PCB 52	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
som (7) PCB	mg/kg ds		0,060	0,04		0,025	0,01			

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
EOL

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		1016_N-16			1017-19			1018-3		
Boringnummer		1016_N			1017			1018		
Monstertraject (m -mv)		7,50-8,00			9,00-9,50			1,00-1,50		
Analysedatum		04-11-2020			04-11-2020			03-11-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	76,60			73,00			79,20		
Lutum	% ds									
Organische stof	% ds	1,3			4,0			0,7		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds							< 3	11 (6)	
Minerale olie C10 - C40	mg/kg ds							54	270	0,02
Minerale olie C12 - C16	mg/kg ds							< 5	18 (6)	
Minerale olie C16 - C21	mg/kg ds							11	55 (6)	
Minerale olie C21 - C30	mg/kg ds							25	125 (6)	
Minerale olie C30 - C35	mg/kg ds							11	55 (6)	
Minerale olie C35 - C40	mg/kg ds							< 6	21 (6)	
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	mg/kg ds	< 0,05	0,180	0,00	< 0,05	0,090	-0,01	< 0,05	0,180	0,00
1,1,2-trichloorethaan	mg/kg ds	< 0,05	0,180	-0,01	< 0,05	0,090	-0,02	< 0,05	0,180	-0,01
1,1-dichloorethaan	mg/kg ds	< 0,02	0,070	-0,01	< 0,02	0,040	-0,01	< 0,02	0,070	-0,01
1,2-dichloorethaan	mg/kg ds	< 0,02	0,070	-0,02	< 0,02	0,040	-0,03	< 0,02	0,070	-0,02
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds	0,07			0,07			0,07		
chlooretheen	mg/kg ds	< 0,01	0,040	- (^)	< 0,01	0,020	- (^)	< 0,01	0,040	- (^)
cis-1,2-dichlooretheen	mg/kg ds	< 0,05	0,180		< 0,05	0,090		< 0,05	0,180	
CKW (som)	mg/kg ds	< 0,42			< 0,42			< 0,42		
dichloormethaan	mg/kg ds	< 0,05	0,180	0,02	< 0,05	0,090	0,00	< 0,05	0,180	0,02
som dichlooretheen-isomeren	mg/kg ds		0,350	0,07		0,180	-0,17		0,350	0,07
tetrachlooretheen	mg/kg ds	< 0,01	0,040	-0,01	< 0,01	0,020	-0,02	< 0,01	0,040	-0,01
tetrachloormethaan	mg/kg ds	< 0,05	0,180	-0,30	< 0,05	0,090	-0,52	< 0,05	0,180	-0,30
trans-1,2-dichlooretheen	mg/kg ds	< 0,05	0,180		< 0,05	0,090		< 0,05	0,180	
trichlooretheen	mg/kg ds	< 0,05	0,180	-0,03	< 0,05	0,090	-0,07	< 0,05	0,180	-0,03
trichloormethaan	mg/kg ds	< 0,02	0,070	-0,03	< 0,02	0,040	-0,04	< 0,02	0,070	-0,03

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
EOL
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		509-5			535-2			525a-3		
Boringnummer		509			535			525a		
Monstertraject (m -mv)		2,00-2,30			0,30-0,60			0,70-1,00		
Analysedatum		23-10-2020			04-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	71,40			94,30			82,10		
Lutum	% ds				2,0			3,8		
Organische stof	% ds	6,9			0,7			1,6		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds				< 20	54(6)				
cadmium	mg/kg ds				0,34	0,590	0,00			
kobalt	mg/kg ds				6,4	22,500	0,04			
koper	mg/kg ds				87	180	0,93	240	468	2,85
kwik	mg/kg ds				< 0,05	0,050	0,00			
lood	mg/kg ds				18	28	-0,05			
molybdeen	mg/kg ds				8,8	8,800	0,04			
nikkel	mg/kg ds				32	93	0,89			
zink	mg/kg ds				81	192	0,09	120	261	0,21
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 3	3(6)							
Minerale olie C10 - C40	mg/kg ds	67	97	-0,02						
Minerale olie C12 - C16	mg/kg ds	< 5	5(6)							
Minerale olie C16 - C21	mg/kg ds	8,7	12,600(6)							
Minerale olie C21 - C30	mg/kg ds	31	45(6)							
Minerale olie C30 - C35	mg/kg ds	21	30(6)							
Minerale olie C35 - C40	mg/kg ds	< 6	6(6)							

TOELICHTING

Wet bodembescherming (Wbb)

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- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
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Analyseresultaten grond		528a-2			528a-3			530a-3		
Boringnummer		528a			528a			530a		
Monstertraject (m -mv)		0,50-1,00			1,00-1,25			0,60-1,10		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Overschrijding interventiewaarde			Overschrijding interventiewaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	89,10			82,30			77,70		
Lutum	% ds	3,3			10,0					
Organische stof	% ds	1,7			1,3			0,7		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds	550	1089	6,99	790	1281	8,27			
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds							0,0059		
PCB 101	mg/kg ds							< 0,001	0,004	
PCB 118	mg/kg ds							< 0,001	0,004	
PCB 138	mg/kg ds							< 0,001	0,004	
PCB 153	mg/kg ds							0,0012	0,006	
PCB 180	mg/kg ds							0,0012	0,006	
PCB 28	mg/kg ds							< 0,001	0,004	
PCB 52	mg/kg ds							< 0,001	0,004	
som (7) PCB	mg/kg ds								0,030	0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
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- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		541-1			542-1			543-2		
Boringnummer		541			542			543		
Monstertraject (m -mv)		0,00-0,50			0,08-0,30			0,30-0,65		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	84,90			97,80			81,10		
Lutum	% ds							12,5		
Organische stof	% ds	0,7			0,7			3,9		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds							82	119	0,53
zink	mg/kg ds							120	180	0,07
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds	0,047			0,0064					
PCB 101	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
PCB 118	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
PCB 138	mg/kg ds	0,012	0,060		0,0011	0,006				
PCB 153	mg/kg ds	0,012	0,060		0,0011	0,006				
PCB 180	mg/kg ds	0,02	0,100		0,0014	0,007				
PCB 28	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
PCB 52	mg/kg ds	< 0,001	0,004		< 0,001	0,004				
som (7) PCB	mg/kg ds		0,230	0,21		0,032	0,01			

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		544-1			545			547-1		
Boringnummer		544			545			547		
Monstertraject (m -mv)		0,00-0,50			0,08-0,60			0,00-0,50		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	85,60			88,60			88,70		
Lutum	% ds	7,4			2,0			2,9		
Organische stof	% ds	2,2			0,7			1,6		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds	29	50	0,07	77	159	0,79	85	171	0,87
zink	mg/kg ds	190	352	0,37	80	190	0,09	93	211	0,12

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		548-2			550-1			551-1		
Boringnummer		548			550			551		
Monstertraject (m -mv)		0,20-0,40			0,00-0,50			0,08-0,58		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan achtergrondwaarde			Overschrijding interventiewaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Droge stof	%	89,00			88,10			97,50		
Lutum	% ds	2,0			4,4			2,0		
Organische stof	% ds	1,3			3,2			0,8		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
barium	mg/kg ds							29	112(6)	
cadmium	mg/kg ds							0,67	1,150	0,04
kobalt	mg/kg ds							4,5	15,800	0,00
koper	mg/kg ds	13	27	-0,09	120	221	1,21	120	248	1,39
kwik	mg/kg ds							0,12	0,170	0,00
lood	mg/kg ds							39	61	0,02
molybdeen	mg/kg ds							< 1,5	1,100	0,00
nikkel	mg/kg ds							14	41	0,09
zink	mg/kg ds							140	332	0,33
PAK	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
antraceen	mg/kg ds							< 0,05	0,040	
benzo(a)antraceen	mg/kg ds							< 0,05	0,040	
benzo(a)pyreen	mg/kg ds							< 0,05	0,040	
benzo(ghi)peryleen	mg/kg ds							< 0,05	0,040	
benzo(k)fluorantheen	mg/kg ds							< 0,05	0,040	
chryseen	mg/kg ds							< 0,05	0,040	
fenantreen	mg/kg ds							0,49	0,490	
fluorantheen	mg/kg ds							0,07	0,070	
indeno(1,2,3-cd)pyreen	mg/kg ds							< 0,05	0,040	
naftaleen	mg/kg ds							< 0,05	0,040	
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds							0,84		
som (10) PAK	mg/kg ds								0,840	-0,02
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds							7	35(6)	
Minerale olie C10 - C40	mg/kg ds							1000	5000	1,00
Minerale olie C12 - C16	mg/kg ds							65	325(6)	
Minerale olie C16 - C21	mg/kg ds							470	2350(6)	
Minerale olie C21 - C30	mg/kg ds							350	1750(6)	
Minerale olie C30 - C35	mg/kg ds							87	435(6)	
Minerale olie C35 - C40	mg/kg ds							35	175(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		548-2			550-1			551-1		
PCB`S	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
PCB (7) (som, 0.7 factor)	mg/kg ds							0,017		
PCB 101	mg/kg ds							< 0,001	0,004	
PCB 118	mg/kg ds							0,0026	0,013	
PCB 138	mg/kg ds							0,0029	0,015	
PCB 153	mg/kg ds							0,0033	0,017	
PCB 180	mg/kg ds							0,0029	0,015	
PCB 28	mg/kg ds							0,0038	0,019	
PCB 52	mg/kg ds							< 0,001	0,004	
som (7) PCB	mg/kg ds								0,085	0,07

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grond		Grit 1-1			Grit 2-1			549		
Boringnummer		Grit 1			Grit 2			549		
Monstertraject (m -mv)		0,00-0,01			0,00-0,01			0,00-0,50		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Overschrijding interventiewaarde			Overschrijding interventiewaarde			Overschrijding achtergrondwaarde		
BODEMKUNDIG										
Droge stof	%	99,60			97,50			90,90		
Lutum	% ds							2,7		
Organische stof	% ds							1,1		
METALEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
koper	mg/kg ds							40	81	0,27
zink	mg/kg ds							100	229	0,15
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	mg/kg ds	< 300	210(6)		330	330(6)				
Minerale olie C10 - C40	mg/kg ds	180000	180000	37,38	180000	180000	37,38			
Minerale olie C12 - C16	mg/kg ds	< 500	350(6)		580	580(6)				
Minerale olie C16 - C21	mg/kg ds	3600	3600(6)		7500	7500(6)				
Minerale olie C21 - C30	mg/kg ds	77000	77000(6)		140000	140000(6)				
Minerale olie C30 - C35	mg/kg ds	69000	69000(6)		30000	30000(6)				
Minerale olie C35 - C40	mg/kg ds	28000	28000(6)		6600	6600(6)				

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		528a-4		
Boringnummer		528a		
Monstertraject (m -mv)		1,25-1,75		
Analysedatum		18-11-2020		
Monsterconclusie Wbb		Overschrijding achtergrondwaarde		
BODEMKUNDIG				
Droge stof	%	69,60		
Lutum	% ds	8,1		
Organische stof	% ds	2,0		
METALEN	Eenheid	Meetw	GSSD	Index
koper	mg/kg ds	36	62	0,15

TOELICHTING

Wet bodembescherming (Wbb)

- Gehalte kleiner dan of gelijk aan de achtergrondwaarde
- Gehalte groter dan de achtergrondwaarde, maar index maximaal gelijk aan 0,5
- Gehalte groter dan de achtergrondwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Gehalte groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Appendix 4 Assessment of groundwater samples against the Soil Protection Act

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grondwater		1002-3-1-1			1002-1-1-1			1003-3-1-1		
Filter (m -mv)		9,00-10,00			2,00-3,00			9,00-10,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,71			1,85			2,76		
pH		6,50			7,10			6,90		
EC	µS/cm	2.500			1.050			1.940		
Troebelheid	NTU	621			27			247		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grondwater		1003-2-1-1			1003-1-1-1			1004-3-1-1		
Filter (m -mv)		5,00-6,00			2,00-3,00			9,00-10,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	2,58			1,38			3,25		
pH		7,00			7,30			6,80		
EC	µS/cm	1.310			970			1.450		
Troebelheid	NTU	229			207			126		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l							< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1004-2-1-1			1004-1-1-1			1005-3-1-1		
Filter (m -mv)		5,00-6,00			2,00-3,00			9,00-10,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,08			1,26			3,34		
pH		7,00			7,30			7,00		
EC	µS/cm	1.510			940			1.230		
Troebelheid	NTU	1.000			22			180		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02						
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grondwater		1005-2-1-1			1005-1-1-1			1006-3-1-1		
Filter (m -mv)		5,00-6,00			2,00-3,00			9,00-10,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Overschrijding streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,05			1,19			3,07		
pH		7,10			7,30			7,10		
EC	µS/cm	1.510			820			800		
Troebelheid	NTU	1.000			881			35		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,35			0,14		
chlooretheen	µg/l				0,34	0,340	0,07	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		0,28	0,280		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,350	0,02		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1006-2-1-1			1006-1-1-1			1007-1-1-1		
Filter (m -mv)		5,00-6,00			2,00-3,00			2,00-3,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,29			1,03			1,31		
pH		7,00			7,20			7,20		
EC	µS/cm	1.000			810			910		
Troebelheid	NTU	653			130			67		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02				< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1007-2-1-1			1007-3-1-1			1008-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,49			3,89			1,22		
pH		7,20			7,10			7,10		
EC	µS/cm	1.610			1.090			920		
Troebelheid	NTU	212			12			25		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,3		
chlooretheen	µg/l	< 0,1	0,100	0,02	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		0,23	0,230	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,300	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grondwater		1008-2-1-1			1008-3-1-1			1009-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,80			4,04			1,30		
pH		7,10			6,90			7,30		
EC	µS/cm	1.390			1.430			124		
Troebelheid	NTU	55			24			526		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l	0,17	0,170	0,03	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
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- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grondwater		1009-2-1-1			1009-3-1-1			1010-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Overschrijding interventiewaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,72			4,02			0,71		
pH		7,00			6,90			7,40		
EC	µS/cm	1.330			1.860			610		
Troebelheid	NTU	49			42			34		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	110	110	0,12	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			360			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02	500	500	100,20	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		360	360		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			460			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		360	18,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		0,24	0,240		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
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GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grondwater		1010-2-1-1			1010-3-1-1			1011-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		01-10-2020			01-10-2020			01-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	2,72			3,70			0,73		
pH		7,30			6,80			7,20		
EC	µS/cm	920			2.140			390		
Troebelheid	NTU	691			52			113		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	0,36	0,360	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
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Analyseresultaten grondwater		1011-2-1-1			1011-3-1-1			1012-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			5,00-6,00		
Analysedatum		05-10-2020			05-10-2020			05-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	2,69			3,73			3,29		
pH		6,90			6,60			6,80		
EC	µS/cm	880			2.140			1.380		
Troebelheid	NTU	1.000			14			1.000		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	1,8	1,800	-0,01	530	530	0,59
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			3600		
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		3600	3600	
CKW (som)	µg/l	< 1,6			1,8			4700		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		3612	180,69
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	370	370	9,25
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		12	12	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	250	250	0,47
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

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GSSD: Gestandaardiseerde meetwaarde

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Analyseresultaten grondwater		1012-1-1-2			1012-3-1-1			1013-1-1-1		
Filter (m -mv)		2,00-3,00			9,00-10,00			2,00-3,00		
Analysedatum		05-10-2020			05-10-2020			05-10-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Overschrijding interventiewaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,06			3,34			1,02		
pH		7,40			7,00			7,70		
EC	µS/cm	890			2.350			880		
Troebelheid	NTU	890			1.000			64		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	0,34	0,340	-0,01	14	14	0,01	4,1	4,100	0,00
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,88			770			160		
chlooretheen	µg/l							20	20	4,01
cis-1,2-dichlooretheen	µg/l	0,81	0,810		770	770		160	160	
CKW (som)	µg/l	16			790			260		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,880	0,04		771	38,57		160	8,00
tetrachlooretheen	µg/l	14	14	0,35	< 1	1[41]	0,02	40	40	1,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		0,5	0,500		0,49	0,490	
trichlooretheen	µg/l	1	1	-0,05	< 2	1[41]	-0,05	58	58	0,07
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

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Analyseresultaten grondwater		1013-2-1-1			1013-3-1-1			1014-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		05-10-2020			05-10-2020			05-10-2020		
Monsterconclusie Wbb		Overschrijding interventiewaarde			Overschrijding interventiewaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,37			3,60			1,58		
pH		0,00			7,10			7,20		
EC	µS/cm	0			1.690			670		
Troebelheid	NTU	0			1.000			120		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 2000	1400(41)	1,56	93	93	0,10	2,4	2,400	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	93000			23000			0,79		
chlooretheen	µg/l	6800	6800	1.362,72						
cis-1,2-dichlooretheen	µg/l	92000	92000		23000	23000		0,72	0,720	
CKW (som)	µg/l	370000			140000			3,5		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		92310	4.617,81		23170	1.159,08		0,790	0,04
tetrachlooretheen	µg/l	210000	210000	5.251,31	91000	91000	2.275,57	0,36	0,360	0,01
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	310	310		170	170		< 0,1	0,100	
trichlooretheen	µg/l	76000	76000	159,61	29000	29000	60,87	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

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GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grondwater		1014-2-1-1			1014-3-1-1			1015-1-1-1		
Filter (m -mv)		5,00-6,00			9,00-10,00			2,00-3,00		
Analysedatum		05-10-2020			05-10-2020			05-10-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Overschrijding streefwaarde			Overschrijding interventiewaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,36			3,54			2,15		
pH		6,90			6,90			7,50		
EC	µS/cm	1.030			1.220			670		
Troebelheid	NTU	618			463			404		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	0,25	0,250	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	0,25	0,250	-0,01	< 0,2	0,100	-0,01	1,5	1,500	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,41			1,7			5,7		
cis-1,2-dichlooretheen	µg/l	0,34	0,340		1,7	1,700		5,5	5,500	
CKW (som)	µg/l	10			20			92		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,410	0,02		1,800	0,09		5,600	0,28
tetrachlooretheen	µg/l	8,6	8,600	0,21	15	15	0,37	73	73	1,83
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		0,12	0,120	
trichlooretheen	µg/l	1	1	-0,05	3,5	3,500	-0,04	11	11	-0,03
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
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GSSD: Gestandaardiseerde meetwaarde

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Analyseresultaten grondwater		1015-2-1-1			1015-3-1-1			41-1-3		
Filter (m -mv)		5,00-6,00			9,00-10,00			-		
Analysedatum		05-10-2020			05-10-2020			23-10-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,40			3,60			1,17		
pH		7,10			7,00			6,98		
EC	µS/cm	930			1.070			698		
Troebelheid	NTU	297			362			9		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
1,1-dichloorethaan	µg/l	2,8	2,800	0,00	< 0,2	0,100	-0,01			
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02			
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14					
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100				
CKW (som)	µg/l	2,8			< 1,6					
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00			
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01			
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01			
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100				
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05			
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01			
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l							< 10	7(6)	
Minerale olie C10 - C40	µg/l							< 50	35	-0,03
Minerale olie C12 - C16	µg/l							< 10	7(6)	
Minerale olie C16 - C21	µg/l							< 10	7(6)	
Minerale olie C21 - C30	µg/l							< 15	11(6)	
Minerale olie C30 - C35	µg/l							< 10	7(6)	
Minerale olie C35 - C40	µg/l							< 10	7(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar
6: Heeft geen normwaarde

Additional soil research
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Analyseresultaten grondwater		501-1-1	Obas-1-1	502-1-1
Filter (m -mv)		1,90-2,90	-	1,90-2,90
Analysedatum		23-10-2020	23-10-2020	23-10-2020
Monsterconclusie Wbb		Overschrijding interventiewaarde	Voldoet aan streefwaarde	Voldoet aan streefwaarde
BODEMKUNDIG				
Grondwaterstand	m -mv	1,10	-	0,96
pH		6,81	-	6,95
EC	µS/cm	722	-	691
Troebelheid	NTU	9	-	9

GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l				< 0,1	0,100				
1,1,2-trichloorethaan	µg/l				< 0,1	0,100				
1,1-dichloorethaan	µg/l				< 0,2	0,100				
1,2-dichloorethaan	µg/l				< 0,2	0,100				
1.2-Dichloorethenen (som, 0.7 facto	µg/l				0,14					
chlooretheen	µg/l				< 0,1	0,100				
cis-1,2-dichlooretheen	µg/l				< 0,1	0,100				
CKW (som)	µg/l				< 1,6					
dichloormethaan	µg/l				< 0,2	0,100				
som dichlooretheen-isomeren	µg/l					0,140				
tetrachlooretheen	µg/l				< 0,1	0,100				
tetrachloormethaan	µg/l				< 0,1	0,100				
trans-1,2-dichlooretheen	µg/l				< 0,1	0,100				
trichlooretheen	µg/l				< 0,2	0,100				
trichloormethaan	µg/l				< 0,2	0,100				

OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l	530	530(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C10 - C40	µg/l	11000	11000	19,91	< 50	35		< 50	35	-0,03
Minerale olie C12 - C16	µg/l	3500	3500(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C16 - C21	µg/l	4700	4700(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C21 - C30	µg/l	2400	2400(6)		< 15	11(6)		< 15	11(6)	
Minerale olie C30 - C35	µg/l	72	72(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C35 - C40	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
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GSSD: Gestandaardiseerde meetwaarde
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Additional soil research
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Analyseresultaten grondwater		503-1-1			97-1-1			504-1-1		
Filter (m -mv)		-			-			1,20-2,20		
Analysedatum		23-10-2020			23-10-2020			23-10-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Voldoet aan streefwaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,12			0,90			1,25		
pH		6,93			7,05			7,32		
EC	µS/cm	708			676			554		
Troebelheid	NTU	31			16			9		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
1,1-dichloorethaan	µg/l	0,27	0,270	-0,01	< 0,2	0,100	-0,01			
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02			
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,48			0,14					
chlooretheen	µg/l	< 0,1	0,100	0,02	< 0,1	0,100	0,02			
cis-1,2-dichlooretheen	µg/l	0,41	0,410		< 0,1	0,100				
CKW (som)	µg/l	< 1,6			< 1,6					
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00			
som dichlooretheen-isomeren	µg/l		0,480	0,02		0,140	0,01			
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00			
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01			
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100				
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05			
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01			
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l	< 10	7(6)					< 10	7(6)	
Minerale olie C10 - C40	µg/l	< 50	35	-0,03				240	240	0,35
Minerale olie C12 - C16	µg/l	< 10	7(6)					< 10	7(6)	
Minerale olie C16 - C21	µg/l	< 10	7(6)					15	15(6)	
Minerale olie C21 - C30	µg/l	< 15	11(6)					160	160(6)	
Minerale olie C30 - C35	µg/l	< 10	7(6)					48	48(6)	
Minerale olie C35 - C40	µg/l	< 10	7(6)					10	10(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
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- Concentratie groter dan de interventiewaarde

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Additional soil research
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Analyseresultaten grondwater		506-1-1			508-1-1			507-1-1		
Filter (m -mv)		1,70-2,70			1,70-2,70			1,70-2,70		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Overschrijding streefwaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,21			0,97			1,00		
pH		7,26			7,58			7,34		
EC	µS/cm	656			422			570		
Troebelheid	NTU	39			8			29		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,26			0,14			0,36		
chlooretheen	µg/l	0,27	0,270	0,05	0,2	0,200	0,04	0,35	0,350	0,07
cis-1,2-dichlooretheen	µg/l	0,19	0,190		< 0,1	0,100		0,29	0,290	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,260	0,01		0,140	0,01		0,360	0,02
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C10 - C40	µg/l	100	100	0,09	< 50	35	-0,03			
Minerale olie C12 - C16	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C16 - C21	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C21 - C30	µg/l	56	56(6)		< 15	11(6)				
Minerale olie C30 - C35	µg/l	34	34(6)		< 10	7(6)				
Minerale olie C35 - C40	µg/l	12	12(6)		< 10	7(6)				

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		509-1-1			510-1-1			511-1-1		
Filter (m -mv)		1,70-2,70			1,70-2,70			1,50-2,50		
Analysedatum		04-11-2020			04-11-2020			04-11-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,15			1,12			1,02		
pH		7,21			7,68			7,31		
EC	µS/cm	783			659			779		
Troebelheid	NTU	41			34			42		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,3			0,14			0,14		
chlooretheen	µg/l	0,28	0,280	0,05	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	0,23	0,230		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,300	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C10 - C40	µg/l	< 50	35	-0,03	< 50	35	-0,03	< 50	35	-0,03
Minerale olie C12 - C16	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C16 - C21	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C21 - C30	µg/l	< 15	11(6)		< 15	11(6)		< 15	11(6)	
Minerale olie C30 - C35	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	
Minerale olie C35 - C40	µg/l	< 10	7(6)		< 10	7(6)		< 10	7(6)	

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

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Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		513-1-1			515-1-1			1020(10m)-1-1		
Filter (m -mv)		1,50-2,50			1,60-2,60			-		
Analysedatum		04-11-2020			04-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Overschrijding streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,00			1,02			4,06		
pH		7,54			7,41			6,73		
EC	µS/cm	511			899			1.764		
Troebelheid	NTU	9			11			226		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	0,15	0,150	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	0,8	0,800	-0,01	0,54	0,540	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,85			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		0,78	0,780		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			3,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,850	0,04		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	1,3	1,300	0,03	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	0,55	0,550	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
Minerale olie C10 - C12	µg/l	< 10	7(6)		12	12(6)				
Minerale olie C10 - C40	µg/l	< 50	35	-0,03	< 50	35	-0,03			
Minerale olie C12 - C16	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C16 - C21	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C21 - C30	µg/l	< 15	11(6)		< 15	11(6)				
Minerale olie C30 - C35	µg/l	< 10	7(6)		< 10	7(6)				
Minerale olie C35 - C40	µg/l	< 10	7(6)		< 10	7(6)				

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1020(6m)-1-1			1020(3m)-1-1			1018(3m)-1-1		
Filter (m -mv)		-			-			-		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,89			1,19			0,82		
pH		6,58			7,03			7,39		
EC	µS/cm	1.917			1.171			699		
Troebelheid	NTU	37			188			136		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1018(6m)-1-1			1018(10m)-1-1			1019(10m)-1-1		
Filter (m -mv)		-			-			-		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Overschrijding interventiewaarde			Voldoet aan streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	1,91			3,88			4,13		
pH		7,16			6,63			6,56		
EC	µS/cm	903			2.040			1.704		
Troebelheid	NTU	114			155			123		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	57	57	0,06	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			460			0,14		
chlooretheen	µg/l	< 0,1	0,100	0,02	1200	1200	240,48	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		460	460		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			510			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		460	23,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		0,19	0,190		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar

Additional soil research
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Analyseresultaten grondwater		1019(6m)-1-1			1019(3m)-1-1			1017(3m)-1-1		
Filter (m -mv)		-			-			-		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Voldoet aan streefwaarde			Voldoet aan streefwaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,78			1,10			1,12		
pH		6,99			6,96			7,31		
EC	µS/cm	1.292			2.695			560		
Troebelheid	NTU	27			21			210		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,23		
chlooretheen	µg/l	< 0,1	0,100	0,02	< 0,1	0,100	0,02	< 0,1	0,100	0,02
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		0,16	0,160	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,230	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grondwater		1017(10m)-1-1			1017(6m)-1-1			1016(10m)-1-1		
Filter (m -mv)		-			-			-		
Analysedatum		18-11-2020			18-11-2020			18-11-2020		
Monsterconclusie Wbb		Overschrijding streefwaarde			Voldoet aan streefwaarde			Overschrijding streefwaarde		
BODEMKUNDIG										
Grondwaterstand	m -mv	3,48			3,33			3,50		
pH		6,81			6,85			6,74		
EC	µS/cm	1.592			1.473			1.335		
Troebelheid	NTU	30			95			16		
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index	Meetw	GSSD	Index	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01	0,61	0,610	-0,01	0,29	0,290	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,14			0,14			0,14		
chlooretheen	µg/l	0,21	0,210	0,04	< 0,1	0,100	0,02	0,21	0,210	0,04
cis-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
CKW (som)	µg/l	< 1,6			< 1,6			< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00	< 0,2	0,100	0,00	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,140	0,01		0,140	0,01		0,140	0,01
tetrachlooretheen	µg/l	< 0,1	0,100	0,00	< 0,1	0,100	0,00	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01	< 0,1	0,100	0,01	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100		< 0,1	0,100		< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar

Additional soil research
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Analyseresultaten grondwater		1016(6m)-1-1
Filter (m -mv)		-
Analysedatum		18-11-2020
Monsterconclusie Wbb		Overschrijding streefwaarde

BODEMKUNDIG		
Grondwaterstand	m -mv	2,40
pH		7,06
EC	µS/cm	892
Troebelheid	NTU	60

GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Index
1,1,1-trichloorethaan	µg/l	< 0,1	0,100	0,00
1,1,2-trichloorethaan	µg/l	< 0,1	0,100	0,00
1,1-dichloorethaan	µg/l	< 0,2	0,100	-0,01
1,2-dichloorethaan	µg/l	< 0,2	0,100	-0,02
1.2-Dichloorethenen (som, 0.7 facto	µg/l	0,31		
chlooretheen	µg/l	0,17	0,170	0,03
cis-1,2-dichlooretheen	µg/l	0,24	0,240	
CKW (som)	µg/l	< 1,6		
dichloormethaan	µg/l	< 0,2	0,100	0,00
som dichlooretheen-isomeren	µg/l		0,310	0,02
tetrachlooretheen	µg/l	< 0,1	0,100	0,00
tetrachloormethaan	µg/l	< 0,1	0,100	0,01
trans-1,2-dichlooretheen	µg/l	< 0,1	0,100	
trichlooretheen	µg/l	< 0,2	0,100	-0,05
trichloormethaan	µg/l	< 0,2	0,100	-0,01

TOELICHTING

Wet bodembescherming (Wbb)

- Concentratie kleiner dan of gelijk aan de streefwaarde
- Concentratie groter dan de streefwaarde, maar index maximaal gelijk aan 0,5
- Concentratie groter dan de streefwaarde en index groter dan 0,5, maar maximaal gelijk aan 1
- Concentratie groter dan de interventiewaarde

GSSD: Gestandaardiseerde meetwaarde
-: Geen gegevens beschikbaar

Appendix 5 Assessment of soil samples against the Soil Quality Decree

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		500-2		501-2		502-2	
Boringnummer		500		501		502	
Monstertraject (m -mv)		0,60-1,00		0,60-1,10		0,60-1,00	
Analysedatum		01-10-2020		01-10-2020		01-10-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Voldoet aan achtergrondwaarde		Voldoet aan achtergrondwaarde	
BODEMKUNDIG							
Droge stof	%	77,00		85,00		82,70	
Lutum	% ds						
Organische stof	% ds	1,8		0,7		1,3	
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)	< 3	11(6)	< 3	11(6)
Minerale olie C10 - C40	mg/kg ds	62	310	< 35	123	< 35	123
Minerale olie C12 - C16	mg/kg ds	5,3	26,500(6)	< 5	18(6)	< 5	18(6)
Minerale olie C16 - C21	mg/kg ds	21	105(6)	< 5	18(6)	< 5	18(6)
Minerale olie C21 - C30	mg/kg ds	25	125(6)	< 11	39(6)	< 11	39(6)
Minerale olie C30 - C35	mg/kg ds	5,8	29(6)	< 5	18(6)	< 5	18(6)
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)	< 6	21(6)	< 6	21(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		503-2		504-6		515-4	
Boringnummer		503		504		515	
Monstertraject (m -mv)		0,50-1,00		0,60-0,80		1,30-1,50	
Analysedatum		01-10-2020		01-10-2020		23-10-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Niet toepasbaar > interventiewaarde		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	80,20		84,10		77,30	
Lutum	% ds						
Organische stof	% ds	1,6		2,0		1,6	
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
naftaleen	mg/kg ds			< 0,01	0,010		
som (10) PAK	mg/kg				0,007(2)		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)	< 3	11(6)	< 3	11(6)
Minerale olie C10 - C40	mg/kg ds	< 35	123	13000	65000	46	230
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)	14	70(6)	< 5	18(6)
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)	420	2100(6)	5,2	26(6)
Minerale olie C21 - C30	mg/kg ds	< 11	39(6)	9400	47000(6)	21	105(6)
Minerale olie C30 - C35	mg/kg ds	< 5	18(6)	2700	13500(6)	12	60(6)
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)	560	2800(6)	< 6	21(6)
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
1,1,1-trichloorethaan	mg/kg ds					< 0,05	0,180
1,1,2-trichloorethaan	mg/kg ds					< 0,05	0,180
1,1-dichloorethaan	mg/kg ds					< 0,02	0,070
1,2-dichloorethaan	mg/kg ds					< 0,02	0,070
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds					0,07	
chlooretheen	mg/kg ds					< 0,01	0,040
cis-1,2-dichlooretheen	mg/kg ds					< 0,05	0,180
CKW (som)	mg/kg ds					< 0,42	
dichloormethaan	mg/kg ds					< 0,05	0,180
som dichlooretheen-isomeren	mg/kg ds						0,350
tetrachlooretheen	mg/kg ds					0,025	0,125
tetrachloormethaan	mg/kg ds					< 0,05	0,180
trans-1,2-dichlooretheen	mg/kg ds					< 0,05	0,180
trichlooretheen	mg/kg ds					< 0,05	0,180
trichloormethaan	mg/kg ds					< 0,02	0,070

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
2: Enkele parameters ontbreken in de som
6: Heeft geen normwaarde

Analyseresultaten grond		503-2		504-6		515-4	
AROMATISCHE VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
1,2-xyleen	mg/kg ds			< 0,05	0,180		
benzeen	mg/kg ds			< 0,05	0,180		
ethylbenzeen	mg/kg ds			< 0,05	0,180		
som (16) aromatische oplosmiddelen	mg/kg ds				0,880[(2)]		
som (3) xyleen	mg/kg ds				0,350		
som 1,3- en 1,4-xyleen	mg/kg ds			< 0,05	0,180		
som monocyclische aromatische koolwaterstoffen (BTEX)	mg/kg ds			< 0,25			
tolueen	mg/kg ds			< 0,05	0,180		
Xylenen (som, 0.7 factor)	mg/kg ds			0,07			

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
2: Enkele parameters ontbreken in de som

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		515-6		505-3		505-4	
Boringnummer		515		505		505	
Monstertraject (m -mv)		2,00-2,50		1,10-1,30		1,30-1,80	
Analysedatum		23-10-2020		23-10-2020		23-10-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Niet toepasbaar > interventiewaarde		Niet toepasbaar > industrie	
BODEMKUNDIG							
Droge stof	%	70,90		76,60		73,30	
Lutum	% ds						
Organische stof	% ds	4,9		3,7		0,7	
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	62	127(6)	< 3	6(6)	< 3	11(6)
Minerale olie C10 - C40	mg/kg ds	160	327	6300	17027	420	2100
Minerale olie C12 - C16	mg/kg ds	28	57(6)	29	78(6)	< 5	18(6)
Minerale olie C16 - C21	mg/kg ds	16	33(6)	82	222(6)	11	55(6)
Minerale olie C21 - C30	mg/kg ds	36	73(6)	3300	8919(6)	220	1100(6)
Minerale olie C30 - C35	mg/kg ds	18	37(6)	2100	5676(6)	140	700(6)
Minerale olie C35 - C40	mg/kg ds	< 6	9(6)	780	2108(6)	51	255(6)
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
1,1,1-trichloorethaan	mg/kg ds	< 0,05	0,070				
1,1,2-trichloorethaan	mg/kg ds	< 0,05	0,070				
1,1-dichloorethaan	mg/kg ds	< 0,02	0,030				
1,2-dichloorethaan	mg/kg ds	< 0,02	0,030				
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds	0,07					
chlooretheen	mg/kg ds	< 0,01	0,010				
cis-1,2-dichlooretheen	mg/kg ds	< 0,05	0,070				
CKW (som)	mg/kg ds	< 0,42					
dichloormethaan	mg/kg ds	< 0,05	0,070				
som dichlooretheen-isomeren	mg/kg ds		0,140				
tetrachlooretheen	mg/kg ds	< 0,01	0,010				
tetrachloormethaan	mg/kg ds	< 0,05	0,070				
trans-1,2-dichlooretheen	mg/kg ds	< 0,05	0,070				
trichlooretheen	mg/kg ds	< 0,05	0,070				
trichloormethaan	mg/kg ds	< 0,02	0,030				

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		506-3		507-3		508-3	
Boringnummer		506		507		508	
Monstertraject (m -mv)		0,80-1,30		0,90-1,40		0,70-1,20	
Analysedatum		23-10-2020		23-10-2020		23-10-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Kwaliteitsklasse industrie		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	76,90		80,20		81,60	
Lutum	% ds						
Organische stof	% ds	2,1		1,7		2,2	
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	10(6)	< 3	11(6)	< 3	10(6)
Minerale olie C10 - C40	mg/kg ds	< 35	117	65	325	43	195
Minerale olie C12 - C16	mg/kg ds	< 5	17(6)	< 5	18(6)	< 5	16(6)
Minerale olie C16 - C21	mg/kg ds	5,5	26,200(6)	12	60(6)	6,7	30,500(6)
Minerale olie C21 - C30	mg/kg ds	< 11	37(6)	27	135(6)	21	95(6)
Minerale olie C30 - C35	mg/kg ds	< 5	17(6)	15	75(6)	8,5	38,600(6)
Minerale olie C35 - C40	mg/kg ds	< 6	20(6)	8,3	41,500(6)	< 6	19(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grond		509-3		510-4		511-4	
Boringnummer		509		510		511	
Monstertraject (m -mv)		1,20-1,70		1,20-1,70		1,00-1,50	
Analysedatum		23-10-2020		23-10-2020		23-10-2020	
Monsterconclusie Bbk		Niet toepasbaar > interventiewaarde		Voldoet aan achtergrondwaarde		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	77,90		71,20		73,30	
Lutum	% ds						
Organische stof	% ds	0,9		2,8		0,9	
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)	< 3	8(6)	4,2	21(6)
Minerale olie C10 - C40	mg/kg ds	4200	21000	< 35	88	40	200
Minerale olie C12 - C16	mg/kg ds	11	55(6)	< 5	13(6)	7,9	39,500(6)
Minerale olie C16 - C21	mg/kg ds	60	300(6)	< 5	13(6)	8,5	42,500(6)
Minerale olie C21 - C30	mg/kg ds	2300	11500(6)	< 11	28(6)	11	55(6)
Minerale olie C30 - C35	mg/kg ds	1200	6000(6)	7,3	26,100(6)	6,6	33(6)
Minerale olie C35 - C40	mg/kg ds	540	2700(6)	< 6	15(6)	< 6	21(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		513-3		516-1		518-1	
Boringnummer		513		516		518	
Monstertraject (m -mv)		1,10-1,60		0,10-0,60		0,08-0,58	
Analysedatum		23-10-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Niet toepasbaar > industrie		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	80,50		82,20		85,40	
Lutum	% ds			7,9		3,5	
Organische stof	% ds	1,2		1,8		0,9	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds			50	112(6)	47	153(6)
cadmium	mg/kg ds			0,34	0,540	0,45	0,760
kobalt	mg/kg ds			6,6	14,100	5	15
koper	mg/kg ds			21	36	11	22
kwik	mg/kg ds			0,12	0,160	0,12	0,170
lood	mg/kg ds			43	61	16	25
molybdeen	mg/kg ds			< 1,5	1,100	< 1,5	1,100
nikkel	mg/kg ds			14	27	9,2	23,900
zink	mg/kg ds			130	237	220	485
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds			0,34	0,340	< 0,05	0,040
benzo(a)antraceen	mg/kg ds			0,47	0,470	0,12	0,120
benzo(a)pyreen	mg/kg ds			0,57	0,570	0,11	0,110
benzo(ghi)peryleen	mg/kg ds			0,49	0,490	0,082	0,082
benzo(k)fluorantheen	mg/kg ds			0,27	0,270	0,086	0,086
chryseen	mg/kg ds			0,49	0,490	0,13	0,130
fenantreen	mg/kg ds			1,1	1,100	< 0,05	0,040
fluorantheen	mg/kg ds			0,96	0,960	0,24	0,240
indeno(1,2,3-cd)pyreen	mg/kg ds			0,53	0,530	0,11	0,110
naftaleen	mg/kg ds			< 0,05	0,040	< 0,05	0,040
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds			5,3		0,97	
som (10) PAK	mg/kg ds				5,300		0,980
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)	< 3	11(6)	< 3	11(6)
Minerale olie C10 - C40	mg/kg ds	< 35	123	160	800	< 35	123
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)	< 5	18(6)	< 5	18(6)
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)	7,8	39(6)	< 5	18(6)
Minerale olie C21 - C30	mg/kg ds	< 11	39(6)	62	310(6)	< 11	39(6)
Minerale olie C30 - C35	mg/kg ds	5,2	26(6)	56	280(6)	< 5	18(6)
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)	35	175(6)	< 6	21(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		513-3		516-1		518-1	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds			0,0049		0,0076	
PCB 101	mg/kg ds			< 0,001	0,004	0,0011	0,006
PCB 118	mg/kg ds			< 0,001	0,004	< 0,001	0,004
PCB 138	mg/kg ds			< 0,001	0,004	0,0014	0,007
PCB 153	mg/kg ds			< 0,001	0,004	0,0016	0,008
PCB 180	mg/kg ds			< 0,001	0,004	0,0014	0,007
PCB 28	mg/kg ds			< 0,001	0,004	< 0,001	0,004
PCB 52	mg/kg ds			< 0,001	0,004	< 0,001	0,004
som (7) PCB	mg/kg ds				0,025		0,038

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grond		519-1		520-2		521-1	
Boringnummer		519		520		521	
Monstertraject (m -mv)		0,08-0,58		0,20-0,45		0,15-0,40	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Niet toepasbaar > industrie		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	90,20		90,00		87,60	
Lutum	% ds						
Organische stof	% ds	0,8		1,2		1,9	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds	0,036		0,13		0,0085	
PCB 101	mg/kg ds	0,0023	0,012	0,015	0,075	< 0,001	0,004
PCB 118	mg/kg ds	0,0011	0,006	0,0087	0,044	< 0,001	0,004
PCB 138	mg/kg ds	0,009	0,045	0,035	0,175	0,0025	0,013
PCB 153	mg/kg ds	0,012	0,060	0,04	0,200	0,0025	0,013
PCB 180	mg/kg ds	0,0097	0,049	0,025	0,125	< 0,001	0,004
PCB 28	mg/kg ds	< 0,001	0,004	< 0,001	0,004	< 0,001	0,004
PCB 52	mg/kg ds	< 0,001	0,004	0,0018	0,009	< 0,001	0,004
som (7) PCB	mg/kg ds		0,180		0,630		0,043

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grond		522-1		523-1		525-2	
Boringnummer		522		523		525	
Monstertraject (m -mv)		0,15-0,45		0,10-0,60		0,20-0,70	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Kwaliteitsklasse wonen		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	90,20		78,90		84,30	
Lutum	% ds					4,6	
Organische stof	% ds	1,1		2,2		2,4	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds					150	439(6)
cadmium	mg/kg ds					4,7	7,600
kobalt	mg/kg ds					19	52
koper	mg/kg ds					180	338
kwik	mg/kg ds					0,13	0,180
lood	mg/kg ds					59	88
molybdeen	mg/kg ds					3,7	3,700
nikkel	mg/kg ds					58	139
zink	mg/kg ds					160	332
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds					0,063	0,063
benzo(a)antraceen	mg/kg ds					0,15	0,150
benzo(a)pyreen	mg/kg ds					0,11	0,110
benzo(ghi)peryleen	mg/kg ds					0,099	0,099
benzo(k)fluorantheen	mg/kg ds					0,064	0,064
chryseen	mg/kg ds					0,16	0,160
fenantreen	mg/kg ds					0,15	0,150
fluorantheen	mg/kg ds					0,25	0,250
indeno(1,2,3-cd)pyreen	mg/kg ds					0,1	0,100
naftaleen	mg/kg ds					< 0,05	0,040
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds					1,2	
som (10) PAK	mg/kg ds						1,200
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds					< 3	9(6)
Minerale olie C10 - C40	mg/kg ds					< 35	102
Minerale olie C12 - C16	mg/kg ds					< 5	15(6)
Minerale olie C16 - C21	mg/kg ds					< 5	15(6)
Minerale olie C21 - C30	mg/kg ds					14	58(6)
Minerale olie C30 - C35	mg/kg ds					6,5	27,100(6)
Minerale olie C35 - C40	mg/kg ds					< 6	18(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		522-1		523-1		525-2	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds	0,042		0,0055		0,0052	
PCB 101	mg/kg ds	0,0051	0,026	< 0,001	0,003	< 0,001	0,003
PCB 118	mg/kg ds	0,0028	0,014	< 0,001	0,003	< 0,001	0,003
PCB 138	mg/kg ds	0,011	0,055	0,001	0,005	< 0,001	0,003
PCB 153	mg/kg ds	0,013	0,065	0,001	0,005	0,001	0,004
PCB 180	mg/kg ds	0,0093	0,047	< 0,001	0,003	< 0,001	0,003
PCB 28	mg/kg ds	< 0,001	0,004	< 0,001	0,003	< 0,001	0,003
PCB 52	mg/kg ds	< 0,001	0,004	< 0,001	0,003	< 0,001	0,003
som (7) PCB	mg/kg ds		0,210		0,025		0,022

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
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Analyseresultaten grond		526-2		527-1		528-1	
Boringnummer		526		527		528	
Monstertraject (m -mv)		0,20-0,50		0,00-0,35		0,00-0,50	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Voldoet aan achtergrondwaarde		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	91,70		75,30		88,80	
Lutum	% ds	2,0		21,3		5,9	
Organische stof	% ds	1,0		7,1		2,3	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds	29	60	35	39	130	235

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		529-1		531-1		532-1	
Boringnummer		529		531		532	
Monstertraject (m -mv)		0,00-0,50		0,12-0,62		0,08-0,58	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Kwaliteitsklasse wonen		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	83,90		85,90		84,90	
Lutum	% ds	7,4					
Organische stof	% ds	3,3		0,7		0,7	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds	84	141				
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds			0,0059		0,016	
PCB 101	mg/kg ds			< 0,001	0,004	< 0,001	0,004
PCB 118	mg/kg ds			< 0,001	0,004	< 0,001	0,004
PCB 138	mg/kg ds			< 0,001	0,004	0,0037	0,019
PCB 153	mg/kg ds			0,0012	0,006	0,0051	0,026
PCB 180	mg/kg ds			0,0012	0,006	0,0048	0,024
PCB 28	mg/kg ds			< 0,001	0,004	< 0,001	0,004
PCB 52	mg/kg ds			< 0,001	0,004	< 0,001	0,004
som (7) PCB	mg/kg ds				0,030		0,082

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
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Analyseresultaten grond		533-1		534-1		535-1	
Boringnummer		533		534		535	
Monstertraject (m -mv)		0,00-0,50		0,00-0,50		0,09-0,30	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Kwaliteitsklasse industrie		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	77,20		84,70		92,00	
Lutum	% ds	8,2		3,5		2,9	
Organische stof	% ds	1,5		1,9		2,1	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds					48	167[6]
cadmium	mg/kg ds					0,54	0,910
kobalt	mg/kg ds					14	45
koper	mg/kg ds					260	520
kwik	mg/kg ds					0,11	0,160
lood	mg/kg ds					61	94
molybdeen	mg/kg ds					5,5	5,500
nikkel	mg/kg ds					44	119
zink	mg/kg ds	54	97	130	287	150	340
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds					0,34	0,340
benzo(a)antraceen	mg/kg ds					1,1	1,100
benzo(a)pyreen	mg/kg ds					0,95	0,950
benzo(ghi)peryleen	mg/kg ds					0,63	0,630
benzo(k)fluorantheen	mg/kg ds					0,45	0,450
chryseen	mg/kg ds					1	1
fenantreen	mg/kg ds					0,93	0,930
fluorantheen	mg/kg ds					2	2
indeno(1,2,3-cd)pyreen	mg/kg ds					0,5	0,500
naftaleen	mg/kg ds					< 0,05	0,040
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds					8	
som (10) PAK	mg/kg ds						7,900
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds					< 3	10[6]
Minerale olie C10 - C40	mg/kg ds					55	262
Minerale olie C12 - C16	mg/kg ds					< 5	17[6]
Minerale olie C16 - C21	mg/kg ds					10	48[6]
Minerale olie C21 - C30	mg/kg ds					27	129[6]
Minerale olie C30 - C35	mg/kg ds					11	52[6]
Minerale olie C35 - C40	mg/kg ds					< 6	20[6]

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		533-1		534-1		535-1	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds					0,0071	
PCB 101	mg/kg ds					< 0,001	0,003
PCB 118	mg/kg ds					< 0,001	0,003
PCB 138	mg/kg ds					0,0015	0,007
PCB 153	mg/kg ds					0,0013	0,006
PCB 180	mg/kg ds					0,0015	0,007
PCB 28	mg/kg ds					< 0,001	0,003
PCB 52	mg/kg ds					< 0,001	0,003
som (7) PCB	mg/kg ds						0,034

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		MM01		MM02		MM03	
Boringnummer		536, 537, 538		536, 537, 538		530	
Monstertraject (m -mv)		0,15-0,45		0,40-0,70		0,08-0,60	
Analysedatum		04-11-2020		04-11-2020		04-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Kwaliteitsklasse industrie		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	95,00		96,80		86,90	
Lutum	% ds	2,4		2,0			
Organische stof	% ds	1,1		0,7		0,7	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds	140	517[6]	36	140[6]		
cadmium	mg/kg ds	< 0,2	0,200	0,36	0,620		
kobalt	mg/kg ds	10	34	4	14		
koper	mg/kg ds	35	71	7,2	14,900		
kwik	mg/kg ds	< 0,05	0,050	0,065	0,093		
lood	mg/kg ds	22	34	16	25		
molybdeen	mg/kg ds	1,8	1,800	< 1,5	1,100		
nikkel	mg/kg ds	26	73	8,7	25,400		
zink	mg/kg ds	70	163	93	221		
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds	0,086	0,086	0,19	0,190		
benzo(a)antraceen	mg/kg ds	0,43	0,430	0,62	0,620		
benzo(a)pyreen	mg/kg ds	0,36	0,360	0,39	0,390		
benzo(ghi)peryleen	mg/kg ds	0,28	0,280	0,22	0,220		
benzo(k)fluorantheen	mg/kg ds	0,18	0,180	0,21	0,210		
chryseen	mg/kg ds	0,43	0,430	0,62	0,620		
fenantreen	mg/kg ds	0,35	0,350	0,83	0,830		
fluorantheen	mg/kg ds	0,81	0,810	1,2	1,200		
indeno(1,2,3-cd)pyreen	mg/kg ds	0,29	0,290	0,27	0,270		
naftaleen	mg/kg ds	< 0,05	0,040	< 0,05	0,040		
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds	3,3		4,6			
som (10) PAK	mg/kg ds		3,300		4,600		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11[6]	< 3	11[6]		
Minerale olie C10 - C40	mg/kg ds	79	395	60	300		
Minerale olie C12 - C16	mg/kg ds	< 5	18[6]	< 5	18[6]		
Minerale olie C16 - C21	mg/kg ds	10	50[6]	9,2	46[6]		
Minerale olie C21 - C30	mg/kg ds	28	140[6]	25	125[6]		
Minerale olie C30 - C35	mg/kg ds	21	105[6]	14	70[6]		
Minerale olie C35 - C40	mg/kg ds	15	75[6]	9,7	48,500[6]		

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
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Analyseresultaten grond		MM01		MM02		MM03	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds	0,06		0,0049		0,86	
PCB 101	mg/kg ds	0,0087	0,044	< 0,001	0,004	0,065	0,325
PCB 118	mg/kg ds	0,0029	0,015	< 0,001	0,004	0,024	0,120
PCB 138	mg/kg ds	0,015	0,075	< 0,001	0,004	0,21	1,050
PCB 153	mg/kg ds	0,017	0,085	< 0,001	0,004	0,3	1,500
PCB 180	mg/kg ds	0,013	0,065	< 0,001	0,004	0,26	1,300
PCB 28	mg/kg ds	< 0,001	0,004	< 0,001	0,004	< 0,001	0,004
PCB 52	mg/kg ds	0,0018	0,009	< 0,001	0,004	0,0043	0,022
som (7) PCB	mg/kg ds		0,300		0,025		4,300

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		MM04		MM05		1016_N-4	
Boringnummer		524		517		1016_N	
Monstertraject (m -mv)		0,00-0,50		0,12-0,65		1,50-2,00	
Analysedatum		04-11-2020		04-11-2020		03-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Voldoet aan achtergrondwaarde		Niet toepasbaar > industrie	
BODEMKUNDIG							
Droge stof	%	85,20		86,20		75,30	
Lutum	% ds	8,6		3,4			
Organische stof	% ds	1,6		0,8		1,9	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds	220	467(6)	< 20	46(6)		
cadmium	mg/kg ds	0,4	0,600	< 0,2	0,200		
kobalt	mg/kg ds	7,2	14,700	3,9	11,900		
koper	mg/kg ds	46	78	< 5	7		
kwik	mg/kg ds	0,097	0,126	< 0,05	0,050		
lood	mg/kg ds	47	66	< 10	11		
molybdeen	mg/kg ds	< 1,5	1,100	< 1,5	1,100		
nikkel	mg/kg ds	19	36	8,2	21,400		
zink	mg/kg ds	140	249	40	89		
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds	< 0,05	0,040	< 0,05	0,040		
benzo(a)antraceen	mg/kg ds	0,15	0,150	< 0,05	0,040		
benzo(a)pyreen	mg/kg ds	0,16	0,160	< 0,05	0,040		
benzo(ghi)peryleen	mg/kg ds	0,1	0,100	< 0,05	0,040		
benzo(k)fluorantheen	mg/kg ds	0,072	0,072	< 0,05	0,040		
chryseen	mg/kg ds	0,16	0,160	< 0,05	0,040		
fenantreen	mg/kg ds	0,1	0,100	< 0,05	0,040		
fluorantheen	mg/kg ds	0,24	0,240	< 0,05	0,040		
indeno(1,2,3-cd)pyreen	mg/kg ds	0,099	0,099	< 0,05	0,040		
naftaleen	mg/kg ds	< 0,05	0,040	< 0,05	0,040		
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds	1,2		0,35			
som (10) PAK	mg/kg ds		1,200		0,350		
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	11(6)	< 3	11(6)	310	1550(6)
Minerale olie C10 - C40	mg/kg ds	< 35	123	< 35	123	810	4050
Minerale olie C12 - C16	mg/kg ds	< 5	18(6)	< 5	18(6)	140	700(6)
Minerale olie C16 - C21	mg/kg ds	< 5	18(6)	< 5	18(6)	68	340(6)
Minerale olie C21 - C30	mg/kg ds	13	65(6)	< 11	39(6)	190	950(6)
Minerale olie C30 - C35	mg/kg ds	9,6	48(6)	< 5	18(6)	82	410(6)
Minerale olie C35 - C40	mg/kg ds	< 6	21(6)	< 6	21(6)	35	175(6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		MM04		MM05		1016_N-4	
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
1,1,1-trichloorethaan	mg/kg ds					< 0,05	0,180
1,1,2-trichloorethaan	mg/kg ds					< 0,05	0,180
1,1-dichloorethaan	mg/kg ds					< 0,02	0,070
1,2-dichloorethaan	mg/kg ds					< 0,02	0,070
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds					0,07	
chlooretheen	mg/kg ds					< 0,01	0,040
cis-1,2-dichlooretheen	mg/kg ds					< 0,05	0,180
CKW (som)	mg/kg ds					< 0,42	
dichloormethaan	mg/kg ds					< 0,05	0,180
som dichlooretheen-isomeren	mg/kg ds						0,350
tetrachlooretheen	mg/kg ds					< 0,01	0,040
tetrachloormethaan	mg/kg ds					< 0,05	0,180
trans-1,2-dichlooretheen	mg/kg ds					< 0,05	0,180
trichlooretheen	mg/kg ds					< 0,05	0,180
trichloormethaan	mg/kg ds					< 0,02	0,070
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds	0,012		0,0049			
PCB 101	mg/kg ds	0,0012	0,006	< 0,001	0,004		
PCB 118	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
PCB 138	mg/kg ds	0,0029	0,015	< 0,001	0,004		
PCB 153	mg/kg ds	0,0031	0,016	< 0,001	0,004		
PCB 180	mg/kg ds	0,0026	0,013	< 0,001	0,004		
PCB 28	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
PCB 52	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
som (7) PCB	mg/kg ds		0,060		0,025		

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
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Analyseresultaten grond		1016_N-16		1017-19		1018-3	
Boringnummer		1016_N		1017		1018	
Monstertraject (m -mv)		7,50-8,00		9,00-9,50		1,00-1,50	
Analysedatum		04-11-2020		04-11-2020		03-11-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Voldoet aan achtergrondwaarde		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	76,60		73,00		79,20	
Lutum	% ds						
Organische stof	% ds	1,3		4,0		0,7	
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds					< 3	11 (6)
Minerale olie C10 - C40	mg/kg ds					54	270
Minerale olie C12 - C16	mg/kg ds					< 5	18 (6)
Minerale olie C16 - C21	mg/kg ds					11	55 (6)
Minerale olie C21 - C30	mg/kg ds					25	125 (6)
Minerale olie C30 - C35	mg/kg ds					11	55 (6)
Minerale olie C35 - C40	mg/kg ds					< 6	21 (6)
GECHLOREERDE KOOLWATERSTOFFEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
1,1,1-trichloorethaan	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
1,1,2-trichloorethaan	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
1,1-dichloorethaan	mg/kg ds	< 0,02	0,070	< 0,02	0,040	< 0,02	0,070
1,2-dichloorethaan	mg/kg ds	< 0,02	0,070	< 0,02	0,040	< 0,02	0,070
1.2-Dichloorethenen (som, 0.7 facto	mg/kg ds	0,07		0,07		0,07	
chlooretheen	mg/kg ds	< 0,01	0,040	< 0,01	0,020	< 0,01	0,040
cis-1,2-dichlooretheen	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
CKW (som)	mg/kg ds	< 0,42		< 0,42		< 0,42	
dichloormethaan	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
som dichlooretheen-isomeren	mg/kg ds		0,350		0,180		0,350
tetrachlooretheen	mg/kg ds	< 0,01	0,040	< 0,01	0,020	< 0,01	0,040
tetrachloormethaan	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
trans-1,2-dichlooretheen	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
trichlooretheen	mg/kg ds	< 0,05	0,180	< 0,05	0,090	< 0,05	0,180
trichloormethaan	mg/kg ds	< 0,02	0,070	< 0,02	0,040	< 0,02	0,070

TOELICHTING

Besluit bodemkwaliteit (Bbk)
- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
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Analyseresultaten grond		509-5		535-2		525a-3	
Boringnummer		509		535		525a	
Monstertraject (m -mv)		2,00-2,30		0,30-0,60		0,70-1,00	
Analysedatum		23-10-2020		04-11-2020		18-11-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Kwaliteitsklasse industrie		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	71,40		94,30		82,10	
Lutum	% ds			2,0		3,8	
Organische stof	% ds	6,9		0,7		1,6	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds			< 20	54[6]		
cadmium	mg/kg ds			0,34	0,590		
kobalt	mg/kg ds			6,4	22,500		
koper	mg/kg ds			87	180	240	468
kwik	mg/kg ds			< 0,05	0,050		
lood	mg/kg ds			18	28		
molybdeen	mg/kg ds			8,8	8,800		
nikkel	mg/kg ds			32	93		
zink	mg/kg ds			81	192	120	261
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 3	3[6]				
Minerale olie C10 - C40	mg/kg ds	67	97				
Minerale olie C12 - C16	mg/kg ds	< 5	5[6]				
Minerale olie C16 - C21	mg/kg ds	8,7	12,600[6]				
Minerale olie C21 - C30	mg/kg ds	31	45[6]				
Minerale olie C30 - C35	mg/kg ds	21	30[6]				
Minerale olie C35 - C40	mg/kg ds	< 6	6[6]				

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		528a-2		528a-3		530a-3	
Boringnummer		528a		528a		530a	
Monstertraject (m -mv)		0,50-1,00		1,00-1,25		0,60-1,10	
Analysedatum		18-11-2020		18-11-2020		18-11-2020	
Monsterconclusie Bbk		Niet toepasbaar > interventiewaarde		Niet toepasbaar > interventiewaarde		Kwaliteitsklasse wonen	
BODEMKUNDIG							
Droge stof	%	89,10		82,30		77,70	
Lutum	% ds	3,3		10,0			
Organische stof	% ds	1,7		1,3		0,7	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds	550	1089	790	1281		
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds					0,0059	
PCB 101	mg/kg ds					< 0,001	0,004
PCB 118	mg/kg ds					< 0,001	0,004
PCB 138	mg/kg ds					< 0,001	0,004
PCB 153	mg/kg ds					0,0012	0,006
PCB 180	mg/kg ds					0,0012	0,006
PCB 28	mg/kg ds					< 0,001	0,004
PCB 52	mg/kg ds					< 0,001	0,004
som (7) PCB	mg/kg ds						0,030

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Analyseresultaten grond		541-1		542-1		543-2	
Boringnummer		541		542		543	
Monstertraject (m -mv)		0,00-0,50		0,08-0,30		0,30-0,65	
Analysedatum		18-11-2020		18-11-2020		18-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Kwaliteitsklasse wonen		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	84,90		97,80		81,10	
Lutum	% ds					12,5	
Organische stof	% ds	0,7		0,7		3,9	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds					82	119
zink	mg/kg ds					120	180
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds	0,047		0,0064			
PCB 101	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
PCB 118	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
PCB 138	mg/kg ds	0,012	0,060	0,0011	0,006		
PCB 153	mg/kg ds	0,012	0,060	0,0011	0,006		
PCB 180	mg/kg ds	0,02	0,100	0,0014	0,007		
PCB 28	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
PCB 52	mg/kg ds	< 0,001	0,004	< 0,001	0,004		
som (7) PCB	mg/kg ds		0,230		0,032		

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		544-1		545		547-1	
Boringnummer		544		545		547	
Monstertraject (m -mv)		0,00-0,50		0,08-0,60		0,00-0,50	
Analysedatum		18-11-2020		18-11-2020		18-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie		Kwaliteitsklasse industrie		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	85,60		88,60		88,70	
Lutum	% ds	7,4		2,0		2,9	
Organische stof	% ds	2,2		0,7		1,6	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds	29	50	77	159	85	171
zink	mg/kg ds	190	352	80	190	93	211

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		548-2		550-1		551-1	
Boringnummer		548		550		551	
Monstertraject (m -mv)		0,20-0,40		0,00-0,50		0,08-0,58	
Analysedatum		18-11-2020		18-11-2020		18-11-2020	
Monsterconclusie Bbk		Voldoet aan achtergrondwaarde		Niet toepasbaar > interventiewaarde		Niet toepasbaar > interventiewaarde	
BODEMKUNDIG							
Droge stof	%	89,00		88,10		97,50	
Lutum	% ds	2,0		4,4		2,0	
Organische stof	% ds	1,3		3,2		0,8	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
barium	mg/kg ds					29	112 (6)
cadmium	mg/kg ds					0,67	1,150
kobalt	mg/kg ds					4,5	15,800
koper	mg/kg ds	13	27	120	221	120	248
kwik	mg/kg ds					0,12	0,170
lood	mg/kg ds					39	61
molybdeen	mg/kg ds					< 1,5	1,100
nikkel	mg/kg ds					14	41
zink	mg/kg ds					140	332
PAK	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
antraceen	mg/kg ds					< 0,05	0,040
benzo(a)antraceen	mg/kg ds					< 0,05	0,040
benzo(a)pyreen	mg/kg ds					< 0,05	0,040
benzo(ghi)peryleen	mg/kg ds					< 0,05	0,040
benzo(k)fluorantheen	mg/kg ds					< 0,05	0,040
chryseen	mg/kg ds					< 0,05	0,040
fenantreen	mg/kg ds					0,49	0,490
fluorantheen	mg/kg ds					0,07	0,070
indeno(1,2,3-cd)pyreen	mg/kg ds					< 0,05	0,040
naftaleen	mg/kg ds					< 0,05	0,040
Pak-totaal (10 van VROM) (0.7 facto	mg/kg ds					0,84	
som (10) PAK	mg/kg ds						0,840
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds					7	35 (6)
Minerale olie C10 - C40	mg/kg ds					1000	5000
Minerale olie C12 - C16	mg/kg ds					65	325 (6)
Minerale olie C16 - C21	mg/kg ds					470	2350 (6)
Minerale olie C21 - C30	mg/kg ds					350	1750 (6)
Minerale olie C30 - C35	mg/kg ds					87	435 (6)
Minerale olie C35 - C40	mg/kg ds					35	175 (6)

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Analyseresultaten grond		548-2		550-1		551-1	
PCB`S	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
PCB (7) (som, 0.7 factor)	mg/kg ds					0,017	
PCB 101	mg/kg ds					< 0,001	0,004
PCB 118	mg/kg ds					0,0026	0,013
PCB 138	mg/kg ds					0,0029	0,015
PCB 153	mg/kg ds					0,0033	0,017
PCB 180	mg/kg ds					0,0029	0,015
PCB 28	mg/kg ds					0,0038	0,019
PCB 52	mg/kg ds					< 0,001	0,004
som (7) PCB	mg/kg ds						0,085

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		Grit 1-1		Grit 2-1		549	
Boringnummer		Grit 1		Grit 2		549	
Monstertraject (m -mv)		0,00-0,01		0,00-0,01		0,00-0,50	
Analysedatum		18-11-2020		18-11-2020		18-11-2020	
Monsterconclusie Bbk		Niet toepasbaar > interventiewaarde		Niet toepasbaar > interventiewaarde		Kwaliteitsklasse industrie	
BODEMKUNDIG							
Droge stof	%	99,60		97,50		90,90	
Lutum	% ds					2,7	
Organische stof	% ds					1,1	
METALEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
koper	mg/kg ds					40	81
zink	mg/kg ds					100	229
OVERIGE (ORG.) VERBINDINGEN	Eenheid	Meetw	GSSD	Meetw	GSSD	Meetw	GSSD
Minerale olie C10 - C12	mg/kg ds	< 300	210(6)	330	330(6)		
Minerale olie C10 - C40	mg/kg ds	180000	180000	180000	180000		
Minerale olie C12 - C16	mg/kg ds	< 500	350(6)	580	580(6)		
Minerale olie C16 - C21	mg/kg ds	3600	3600(6)	7500	7500(6)		
Minerale olie C21 - C30	mg/kg ds	77000	77000(6)	140000	140000(6)		
Minerale olie C30 - C35	mg/kg ds	69000	69000(6)	30000	30000(6)		
Minerale olie C35 - C40	mg/kg ds	28000	28000(6)	6600	6600(6)		

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde
6: Heeft geen normwaarde

Additional soil research
Ringdijk in Ridderkerk
projectnumber 0465250.100
december 2020, revision 00

Analyseresultaten grond		528a-4	
Boringnummer		528a	
Monstertraject (m -mv)		1,25-1,75	
Analysedatum		18-11-2020	
Monsterconclusie Bbk		Kwaliteitsklasse industrie	
BODEMKUNDIG			
Droge stof	%	69,60	
Lutum	% ds	8,1	
Organische stof	% ds	2,0	
METALEN	Eenheid	Meetw	GSSD
koper	mg/kg ds	36	62

TOELICHTING

Besluit bodemkwaliteit (Bbk)

- Voldoet aan achtergrondwaarde (altijd toepasbaar)
- Kwaliteitsklasse wonen
- Kwaliteitsklasse industrie
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > industrie)
- Overschrijding kwaliteitsklasse industrie (niet toepasbaar > interventiewaarde)

GSSD: Gestandaardiseerde meetwaarde

Appendix 6 Standards of soil and groundwater Soil Protection Act

Achtergrondwaarden en interventiewaarden grond[9] (gehalten in mg/kg ds)

Stof	Achtergrond-waarde	Interventie-waarde
1. Metalen		
Antimoon	4,0*	22
Arseen	20	76
Barium	-	-[8]
Cadmium	0,60	13
Chroom III	55	180
Chroom VI	-	78
Kobalt	15	190
Koper	40	190
Kwik (anorganisch)	0,15	36
Kwik (organisch)	-	4
Lood	50	530
Molybdeen	1,5*	190
Nikkel	35	100
Zink	140	720
Beryllium	-	30#
Seleen	-	100#
Tellurium	-	600#
Thallium	-	15#
Tin	6,5	900#
Vanadium	80	250#
Zilver	-	15#
2. Overige organische stoffen		
Chloride[13]	-	-
Cyanide (vrij)[5]	3,0	20
Cyanide (complex)[6]	5,5	50
Thiocyanaat	6,0	20
3. Aromatische verbindingen		
Benzeen	0,20*	1,1
Ethylbenzeen	0,20*	110
Tolueen	0,20*	32
Xylenen (som)[1]	0,45*	17
Styreen (vinylbenzeen)	0,25*	86
Fenol	0,25	14
Cresolen (som)[1]	0,30*	13
Dodecylbenzeen	0,35*	1000#
Aromatische oplosmiddelen[1, 7]	2,5*	200#
Dihydroxybenzenen (som)[12]	-	8#
4. Polycyclische aromatische koolwaterstoffen (PAK)		
PAK's (totaal) (som 10)[1]	1,5	40
5. Gechloreerde koolwaterstoffen		
A. (Vluchtige koolwaterstoffen)		
Monochlooretheen (Vinylchloride)[2]	0,10*	0,1
Dichloormethaan	0,10	3,9
1,1-dichloorethaan	0,20*	15
1,2-dichloorethaan	0,20*	6,4
1,1-dichlooretheen[2]	0,30*	0,3
1,2-dichlooretheen (som)[1]	0,30*	1
Dichloorpropanen (som)[1]	0,80*	2
Trichloormethaan (chloroform)	0,25*	5,6
1,1,1-trichloorethaan	0,25*	15
1,1,2-trichloorethaan	0,30*	10
Trichlooretheen (Tri)	0,25*	2,5
Tetrachloormethaan (Tetra)	0,30*	0,7
Tetrachlooretheen (Per)	0,15	8,8
B. Chloorbenzenen		
Monochloorbenzeen	0,20*	15
Dichloorbenzenen (som)[1]	2,0*	19
Trichloorbenzenen (som)[1]	0,015*	11
Tetrachloorbenzenen (som)[1]	0,0090*	2,2
Pentachloorbenzenen	0,0025	6,7
Hexachloorbenzeen	0,0085	2
C. Chloorfenolen		
Monochloorfenolen (som)[1]	0,045	5,4
Dichloorfenolen (som)[1]	0,20*	22
Trichloorfenolen (som)[1]	0,0030*	22
Tetrachloorfenolen (som)[1]	0,015*	21
Pentachloorfenol	0,0030*	12

Stof	Achtergrond-waarde	Interventie-waarde
D. Polychloorbifenylen (PCB's)		
PCB's (som 7)[1]	0,020	1
E. Overige gechloreerde koolwaterstoffen		
Monochlooranilinen (som)[1]	0,20*	50
Dioxine (som TEQ)[1]	0,000055*	0,00018
Chloornaftaleen (som)[1]	0,070*	23
Dichlooranilinen	-	50#
Trichlooranilinen	-	10#
Tetrachlooranilinen	-	30#
Pentachlooranilinen	0,15*	10#
6. Bestrijdingsmiddelen		
A. Organochloor-bestrijdingsmiddelen		
Chloordaan (som)[1]	0,0020	4
DDT (som)[1]	0,20	1,7
DDE (som)[1]	0,10	2,3
DDD (som)[1]	0,020	34
Aldrin	-	0,32
Drins (som)[1]	0,015	4
α-endosulfan	0,00090	4
α-HCH	0,0010	17
β-HCH	0,0020	1,6
γ-HCH (lindaan)	0,0030	1,2
Heptachloor	0,00070	4
Heptachloorepoxide (som)[1]	0,0020	4
Hexachloorbutadieen	0,003*	-
organochloorhoudende bestrijdingsmiddelen (som landbodem)	0,40	-
B.Organofsforpesticiden		
Azinfosmethyl	0,0075*	2#
C. Organotinbestrijdingsmiddelen		
Organotinverbindingen (som)[1, 10]	0,15	2,5
tributyltin (TBT)[10]	0,065	-
D. Chloorfenoxy-azijnzuur herbiciden		
MCPA	0,55*	4
E. Overige bestrijdingsmiddelen		
Atrazine	0,035*	0,71
Carbaryl	0,15*	0,45
Carbofuran[2]	0,017*	0,017
4-chloormethylfenolen	0,60*	15#
Organostikstof- en organofosfor bestrijdingsmiddelen (som)	0,090*	-
Maneb	-	22#
7. Overige stoffen		
Asbest[3]	-	100
Cyclohexanon	2,0*	150
Dimethyl ftalaat[11]	0,045*	82
Diethyl ftalaat[11]	0,045*	53
Di-isobutyl ftalaat[11]	0,045*	17
Dibutyl ftalaat[11]	0,070*	36
Butyl benzylftalaat[11]	0,070*	48
Dihexyl ftalaat[11]	0,070*	220
Di(2-ethylhexyl)ftalaat[11]	0,045*	60
Minerale olie[4]	190	5000
Pyridine	0,15*	11
Tetrahydrofuran	0,45	7
Tetrahydrothiofeen	1,5*	8,8
Tribroommethaan (bromoform)	0,20*	75
Acrylonitril	0,1*	0,1#
Butanol (1-butanol)	2,0*	30#
1,2 butylacetaat	2,0*	200#
Ethylacetaat	2,0*	75#
Diethyleen glycol	8,0	270#
Ethyleen glycol	5,0	100#
Formaldehyde	0,1*	0,1#
Isopropanol (2-propanol)	0,75	220#
Methanol	3,0	30#
Methylethylketon	2,0*	35#
Methyl-tert-buthyl ether (MTBE)	0,20*	100#

Toelichting:

* *Achtergrondwaarde is gebaseerd op de bepalingsgrens (intralaboratorium reproduceerbaarheid), omdat onvoldoende data beschikbaar zijn om een betrouwbare P95 af te leiden.*

\# Voor deze stof is geen interventiewaarde vastgesteld, het gehalte betreft een niveau voor ernstige verontreiniging (INEV).

[1] Voor de samenstelling van de somparameters wordt verwezen naar bijlage N van de Regeling bodemkwaliteit.
Voor de berekening van de som TEQ voor dioxine wordt verwezen naar bijlage B van de Regeling Bodemkwaliteit. Voor het optellen van meetwaarden beneden de bepalingsgrens wordt verwezen naar bijlage G onderdeel IV van de Regeling bodemkwaliteit.

[2] De interventiewaarde voor grond voor deze stof is gelijk of kleiner dan de bepalingsgrens (intralaboratorium reproduceerbaarheid). Indien de stof wordt aangetoond moeten de risico's nader worden onderzocht. Bij het aantreffen van vinylchloride of 1,1-dichlooretheen in grond moet tevens het grondwater worden onderzocht.

[3] Gewogen norm (concentratie serpentijn asbest + 10 x concentratie amfibool asbest). Deze eis bedraagt 0 mg/kg ds indien niet is voldaan aan artikel 2, onder b, van het Productenbesluit Asbest.

[4] De definitie van minerale olie wordt beschreven bij de analysenorm. Indien er sprake is van een verontreiniging met mengsels (bijvoorbeeld benzine of huisbrandolie) dan dient naast het alkaangehalte ook het gehalte aan aromatische en/of polycyclische aromatische koolwaterstoffen bepaald te worden. Met deze somparameter is om praktische redenen volstaan. Nadere toxicologische en chemische differentiatie worden bestudeerd.

[5] Bij gehalten die de achtergrondwaarden overschrijden moet rekening worden gehouden met de mogelijkheid van uitdamping. Wanneer uitdamping naar binnenlucht zou kunnen optreden, moet bij overschrijding van de achtergrondwaarde worden gemeten in de bodemlucht en moet worden getoetst aan de TCL (Toxicologisch Toelaatbare Concentratie in Lucht).

[6] Het gehalte cyanide-complex is gelijk aan het gehalte cyanide-totaal minus het gehalte cyanide-vrij, bepaald conform NEN-EN-ISO 14403-1:2012, NEN-EN-ISO 14403-2:2012 en NEN-ISO 17380:2013. Indien geen cyanide-vrij wordt verwacht, mag het gehalte cyanide-complex gelijk worden gesteld aan het gehalte cyanide-totaal (en hoeft dus alleen het gehalte cyanide-totaal te worden gemeten).

[7] De achtergrondwaarde van deze somparameter gaat uit van de aanwezigheid van meerdere van de 16 componenten, die tot deze somparameter worden gerekend (zie bijlage N van de Regeling bodemkwaliteit). De hoogte van de achtergrondwaarde is gebaseerd op de som van de bepalingsgrenzen vermenigvuldigd met 0,7. Sommige componenten zijn tevens individueel genormeerd. Binnen de somparameter mag de achtergrondwaarde van de individueel genormeerde componenten niet worden overschreden. Voor de componenten, die niet individueel zijn genormeerd, geldt per component een maximum gehalte van 0,45 mg/kg ds voor de achtergrondwaarde.

[8] De norm voor barium is tijdelijk ingetrokken. Gebleken is dat de interventiewaarde voor barium lager was dan het gehalte dat van nature in de bodem voorkomt. Indien er sprake is van verhoogde bariumgehalten ten opzichte van de natuurlijke achtergrond als gevolg van een antropogene bron, kan dit gehalte worden beoordeeld op basis van de voormalige interventiewaarde voor barium van 920 mg/kg. Deze voormalige interventiewaarde is op dezelfde manier onderbouwd als de interventiewaarde voor de meeste andere metalen en is voor barium inclusief een natuurlijk achtergrondgehalte van 190 mg/kg ds.

[9] Voor het omgaan met meetwaarden beneden de bepalingsgrens van het laboratorium wordt verwezen naar bijlage G onderdeel IV van de Regeling bodemkwaliteit.

[10] De eenheid voor organotinverbindingen is mg Sn/kg ds.

[11] Het is onzeker of de achtergrondwaarden voor ftalaten meetbaar zijn. Toekomstige ervaringen moeten uitwijzen of sprake is van een knelpunt.

[12] Onder dihydroxybenzenen (som) wordt verstaan: de som van catechol, resorcinol en hydrochinon

[13] Voor het toepassen van zeezand geldt de norm van 200 mg/kg ds. Bij het toepassen van zeezand op plaatsen waar een direct contact is of mogelijk is met brak water of zeewater met van nature een chloride-concentratie van meer dan 5.000 mg/l, geldt voor chloride geen maximale waarde.

Appendix 7 Explanation of standard values for the Soil Quality Decree

Streefwaarden en interventiewaarden grondwater[9] (concentraties in µg/l)

Stof	Streefwaarde[7]		Interventie-waarde
	Ondiep (< 10 m -mv.)	Diep (> 10 m -mv.)	
1. Metalen			
Antimoon	-	0,15*	20
Arseen	10	7,2	60
Barium	50	200	625
Cadmium	0,4	0,06*	6
Chroom	1	2,5	30
Kobalt	20	0,7*	100
Koper	15	1,3*	75
Kwik	0,05	0,01*	0,3
Lood	15	1,7*	75
Molybdeen	5	3,6	300
Nikkel	15	2,1*	75
Zink	65	24	800
Beryllium	-	0,05 *	15#
Seleen	-	0,07	160#
Tellurium	-	–	70#
Thallium	-	2*	7#
Tin	-	2,2*	50#
Vanadium	-	1,2*	70#
Zilver	-	–	40#
2. Overige organische stoffen			
Chloride	100000		-
Cyanide (vrij)	5		1500
Cyanide (complex)	10		1500
Thiocyanaat	-		1500
3. Aromatische verbindingen			
Benzeen	0,2 *		30
Ethylbenzeen	4		150
Tolueen	7		1000
Xylenen (som)[1]	0,2 *		70
Styreen (vinylbenzeen)	6		300
Fenol	0,2		2000
Cresolen (som)[1]	0,2		200
Dodecylbenzeen	-		0,02#
Aromatische oplosmiddelen[1]	-		150#
Catechol (o-dihydroxybenzeen)	0,2		1250#
Resorcinol (m-dihydroxybenzeen)	0,2		600#
Hydrochinon (p-dihydroxybenzeen)	0,2		800#
4. Polycyclische aromatische koolwaterstoffen (PAK)[5]			
Naftaleen	0,01*		70
Fenantreen	0,003*		5
Antraceen	0,0007*		5
Fluorantheen	0,003*		1
Chryseen	0,003*		0,2
Benzo(a)antraceen	0,0001*		0,5
Benzo(a)pyreen	0,0005*		0,05
Benzo(k)fluorantheen	0,0004*		0,05
Indeno(1,2,3cd)pyreen	0,0004*		0,05
Benzo(ghi)peryleen	0,0003*		0,05
5. Gechloreerde koolwaterstoffen			
A. (Vluchtige koolwaterstoffen)			
Monochlooretheen (Vinylchloride)	0,01*		5
Dichloormethaan	0,01*		1000
1,1-dichloorethaan	7		900
1,2-dichloorethaan	7		400
1,1-dichlooretheen	0,01*		10
1,2-dichlooretheen (som)[1]	0,01*		20
Dichloorpropanen (som)[1]	0,8*		80
Trichloormethaan (chloroform)	6		400
1,1,1-trichloorethaan	0,01*		300
1,1,2-trichloorethaan	0,01*		130
Trichlooretheen (Tri)	24		500
Tetrachloormethaan (Tetra)	0,01*		10
Tetrachlooretheen (Per)	0,01*		40
B. Chloorbenzenen[5]			
Monochloorbenzeen	7		180
Dichloorbenzenen (som)[1]	3		50
Trichloorbenzenen (som)[1]	0,01*		10
Tetrachloorbenzenen (som)[1]	0,01*		2,5
Pentachloorbenzenen	0,003*		1
Hexachloorbenzeen	0,00009*		0,5

Stof	Streefwaarde[7]	Interventie-waarde
C. Chloorfenolen[5]		
Monochloorfenolen (som)[1]	0,3	100
Dichloorfenolen (som)[1]	0,2	30
Trichloorfenolen (som)[1]	0,03	10
Tetrachloorfenolen (som)[1]	0,01	10
Pentachloorfenol	0,04	3
D. Polychloorbifenylen (PCB's)		
PCB's (som 7)[1]	0,01*	0,01
E. Overige gechloreerde koolwaterstoffen		
Monochlooranilinen (som)[1]	-	30
Chloornaftaleen (som)[1]	-	6
Dichlooranilinen	-	100#
Trichlooranilinen	-	10#
Tetrachlooranilinen	-	10#
Pentachlooranilinen	-	1#
4-chloormethylfenolen	-	350#
Dioxine (som TEQ)[1]	-	0,000001#
6. Bestrijdingsmiddelen		
A. Organochloor-bestrijdingsmiddelen		
Chloordaan (som)[1]	0,00002*	0,2
DDT (som)[1]	-	-
DDE (som)[1]	-	-
DDD (som)[1]	-	-
DDT/DDE/DDD (som)[1]	0,000004*	0,01
Aldrin	0,000009*	-
Dieldrin	0,0001*	-
Endrin	0,00004*	-
Drins (som)[1]	-	0,1
α-endosulfan	0,0002*	5
α-HCH	0,033	-
β-HCH	0,008*	-
γ-HCH (lindaan)	0,009*	-
HCH-verbindingen (som)[1]	0,05	1
Heptachloor	0,000005*	0,3
Heptachloorepoxide (som)[1]	0,000005*	3
C. Organotinbestrijdingsmiddelen		
Organotinverbindingen (som)[1]	0,00005 - 0,016	0,7
D. Chloorfenoxy-azijnzuur herbiciden		
MCPA	0,02	50
E. Overige bestrijdingsmiddelen		
Atrazine	0,029	150
Carbaryl	0,002	60
Carbofuran	0,009	100
Azinfosmethyl	0,0001	2#
Maneb	0,00005	0,1#
7. Overige stoffen		
Cyclohexanon	0,5	15000
Dimethyl ftalaat	-	-
Diethyl ftalaat	-	-
Di-isobutyl ftalaat	-	-
Dibutyl ftalaat	-	-
Butyl benzylftalaat	-	-
Dihexyl ftalaat	-	-
Di(2-ethylhexyl)ftalaat	-	-
Ftalaten (som)[1]	0,5	5
Minerale olie[4]	50 *	600
Pyridine	0,5	30
Tetrahydrofuran	0,5	300
Tetrahydrothiofeen	0,5	5000
Tribroommethaan (bromoform)	-	630
Acrylonitril	0,08	5#
Butanol	-	5600#
1,2 butylacetaat	-	6300#
Ethylacetaat	-	15000#
Diethyleen glycol	-	13000#
Ethyleen glycol	-	5500#
Formaldehyde	-	50#
Isopropanol	-	31000#
Methanol	-	24000#
Methylethylketon	-	6000#
Methyl-tert-buthyl ether (MTBE)	-	9400#

Toelichting:

[#] Voor deze stof is geen interventiewaarde vastgesteld, de concentratie betreft een niveau voor ernstige verontreiniging (INEV).

[1] Voor de samenstelling van de somparameters wordt verwezen naar bijlage N van de Regeling bodemkwaliteit.
Voor de berekening van de som TEQ voor dioxine wordt verwezen naar bijlage B van de Regeling Bodemkwaliteit. Voor het optellen van meetwaarden beneden de bepalingsgrens wordt verwezen naar bijlage G onderdeel IV van de Regeling bodemkwaliteit.

[4] De definitie van minerale olie wordt beschreven bij de analysenorm. Indien er sprake is van een verontreiniging met mengsels (bijvoorbeeld benzine of huisbrandolie) dan dient naast de alkaanconcentratie ook de concentratie aan aromatische en/of polycyclische aromatische koolwaterstoffen bepaald te worden. Met deze somparameter is om praktische redenen volstaan. Nadere toxicologische en chemische differentiatie worden bestudeerd.

[5] Voor grondwater zijn de effecten van PAK's, chloorbenzenen en chloorfenolen indirect, als fractie van de individuele interventiewaarde, optelbaar (dat wil zeggen 0,5 x interventiewaarde stof A heeft evenveel effect als 0,5 x interventiewaarde stof B). Dit betekent dat een somformule moet worden gebruikt om te beoordelen of van overschrijding van de interventiewaarde sprake is. Er is sprake van overschrijding van de interventiewaarde voor de som van een groep stoffen indien $\Sigma(Ci/Ii) > 1$, waarbij Ci= gemeten concentratie van een stof uit de betreffende groep en Ii= interventiewaarde voor de betreffende stof uit de betreffende groep.

[7] De streefwaarde grondwater voor een aantal stoffen **(gemarkeerd met *)** is lager dan of gelijk aan de vereiste rapportagegrens in bijlage G onderdeel IV van de Regeling bodemkwaliteit. Voor het beoordelen van meetwaarden beneden de rapportagegrens, wordt verwezen naar bijlage G.

[9] Voor het omgaan met meetwaarden beneden de bepalingsgrens van het laboratorium wordt verwezen naar bijlage G onderdeel IV van de Regeling bodemkwaliteit.

Appendix 8 Certificates of Analysis

Antea Group
[redacted]
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020179440/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	11-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Eurofins Analytico B.V.

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020179440/1
Your project name	Ringdijk 390, Ridderkerk	Start date	11-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C
		Page	1/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	0.19	0.29	<0.10	0.23	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L	0.27	0.35	0.20	0.28	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.26	0.36	0.14 [1)]	0.30	0.14 [1)]

No.	Your sample description	Specified sample matrix	Sample nr.
1	506-1-1 506 (170-270)	Water, AS3000	11694856
2	507-1-1 507 (170-270)	Water, AS3000	11694857
3	508-1-1 508 (170-270)	Water, AS3000	11694858
4	509-1-1 509 (170-270)	Water, AS3000	11694859
5	510-1-1 510 (170-270)	Water, AS3000	11694860

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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RvA L010

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020179440/1
Your project name	Ringdijk 390, Ridderkerk	Start date	11-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C
		Page	2/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8
	Volatile halogenated Hydrocarbons				
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	0.55
S	Tetrachloroethene	µg/L	<0.10	<0.10	1.3
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	0.80
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	0.15
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	0.78
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	3.6
S	Vinyl chloride	µg/L	<0.10	<0.10	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 [1)]	0.14 [1)]	0.85

No.	Your sample description	Specified sample matrix	Sample nr.
6	511-1-1 511 (150-250)	Water, AS3000	11694861
7	513-1-1 513 (150-250)	Water, AS3000	11694862
8	515-1-1 515 (160-260)	Water, AS3000	11694863

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified
ASM

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020179440/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11694856	506-1-1 506 (170-270)				
0692021845	506	170	270	04-Nov-2020	1
0670316016	506	170	270	04-Nov-2020	2
11694857	507-1-1 507 (170-270)				
0692054641	507	170	270	04-Nov-2020	1
0670316011	507	170	270	04-Nov-2020	2
11694858	508-1-1 508 (170-270)				
0692054630	508	170	270	04-Nov-2020	1
0670316036	508	170	270	04-Nov-2020	2
11694859	509-1-1 509 (170-270)				
0670316067	509	170	270	04-Nov-2020	2
0692054670	509	170	270	04-Nov-2020	1
11694860	510-1-1 510 (170-270)				
0670316032	510	170	270	04-Nov-2020	2
0692054645	510	170	270	04-Nov-2020	1
11694861	511-1-1 511 (150-250)				
0377858YA	511	150	250	04-Nov-2020	1
0670316000	511	150	250	04-Nov-2020	2
11694862	513-1-1 513 (150-250)				
0377852YA	513	150	250	04-Nov-2020	1
0670316088	513	150	250	04-Nov-2020	2
11694863	515-1-1 515 (160-260)				
0377837YA	515	160	260	04-Nov-2020	1
0670316089	515	160	260	04-Nov-2020	2

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Annex (B) concerning remarks referring to certificate of analysis 2020179440/1

Remark 1)

The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020179440/1

Analysis	Method	Technique	Method reference
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Vinyl chloride	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

[redacted]

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Antea Group
[redacted]
P0 Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020185683/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	19-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020185683/1
Your project name	Ringdijk 390, Ridderkerk	Start date	19-Nov-2020
Your order number		End date analysis	27-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C,D
		Page	1/3

Project agreement 3400 - Antea - Project Stedin/Vitens

	Analysis	Unit	1	2	3	4	5
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	0.29	<0.20	0.61	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	0.24	<0.10	0.16	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L	0.17	0.21	<0.10	<0.10	0.21
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.31	0.14 1)	0.23	0.14 1)	0.14 1)

No.	Your sample description	Specified sample matrix	Sample nr.
1	1016(6m)-1-1 1016(6m)	Water, AS3000	11713912
2	1016(10m)-1-1 1016(10m)	Water, AS3000	11713913
3	1017(3m)-1-1 1017(3m)	Water, AS3000	11713914
4	1017(6m)-1-1 1017(6m)	Water, AS3000	11713915
5	1017(10m)-1-1 1017(10m)	Water, AS3000	11713916

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A: AP04 accredited test
S: AS SIKB recognized test
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W: Walloon region recognized test

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BTW/VAT No. NL 8043.14.883.B01

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020185683/1
Your project name	Ringdijk 390, Ridderkerk	Start date	19-Nov-2020
Your order number		End date analysis	27-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C,D
		Page	2/3
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	57	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	460	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	0.19	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	510	<1.6	<1.6
S	Vinyl chloride	µg/L	<0.10	<0.10	1200	<0.10	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 1)	0.14 1)	460	0.14 1)	0.14 1)

No.	Your sample description	Specified sample matrix	Sample nr.
6	1018(3m)-1-1 1018(3m)	Water, AS3000	11713917
7	1018(6m)-1-1 1018(6m)	Water, AS3000	11713918
8	1018(10m)-1-1 1018(10m)	Water, AS3000	11713919
9	1019(3m)-1-1 1019(3m)	Water, AS3000	11713920
10	1019(6m)-1-1 1019(6m)	Water, AS3000	11713921

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BNP Paribas S.A. 227 9245 25
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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020185683/1
Your project name	Ringdijk 390, Ridderkerk	Start date	19-Nov-2020
Your order number		End date analysis	27-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C,D
		Page	3/3
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14
	Volatile halogenated Hydrocarbons					
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	0.54
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L	<0.10	<0.10	<0.10	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 [1)]	0.14 [1)]	0.14 [1)]	0.14 [1)]

No.	Your sample description	Specified sample matrix	Sample nr.
11	1019(10m)-1-1 1019(10m)	Water, AS3000	11713922
12	1020(3m)-1-1 1020(3m)	Water, AS3000	11713923
13	1020(6m)-1-1 1020(6m)	Water, AS3000	11713924
14	1020(10m)-1-1 1020(10m)	Water, AS3000	11713925

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020185683/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11713912	1016(6m)-1-1 1016(6m)				
0692066102	1016(6m)			18-Nov-2020	1
0670316080	1016(6m)			18-Nov-2020	2
11713913	1016(10m)-1-1 1016(10m)				
0692066116	1016(10m)			18-Nov-2020	1
0670316087	1016(10m)			18-Nov-2020	2
11713914	1017(3m)-1-1 1017(3m)				
0692066135	1017(3m)			18-Nov-2020	1
0670316055	1017(3m)			18-Nov-2020	2
11713915	1017(6m)-1-1 1017(6m)				
0692066109	1017(6m)			18-Nov-2020	1
0670316046	1017(6m)			18-Nov-2020	2
11713916	1017(10m)-1-1 1017(10m)				
0670316086	1017(10m)			18-Nov-2020	2
0692066141	1017(10m)			18-Nov-2020	1
11713917	1018(3m)-1-1 1018(3m)				
0692066139	1018(3m)			18-Nov-2020	1
11713918	1018(6m)-1-1 1018(6m)				
0692066124	1018(6m)			18-Nov-2020	1
11713919	1018(10m)-1-1 1018(10m)				
0692066133	1018(10m)			18-Nov-2020	1
11713920	1019(3m)-1-1 1019(3m)				
0692066101	1019(3m)			18-Nov-2020	1
11713921	1019(6m)-1-1 1019(6m)				
0692066134	1019(6m)			18-Nov-2020	1
11713922	1019(10m)-1-1 1019(10m)				
0692066140	1019(10m)			18-Nov-2020	1
11713923	1020(3m)-1-1 1020(3m)				
0692066103	1020(3m)			18-Nov-2020	1
11713924	1020(6m)-1-1 1020(6m)				
0692066126	1020(6m)			18-Nov-2020	1
11713925	1020(10m)-1-1 1020(10m)				
0692066118	1020(10m)			18-Nov-2020	1

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Annex (B) concerning remarks referring to certificate of analysis 2020185683/1

Remark 1)

The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020185683/1

Analysis	Method	Technique	Method reference
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Vinyl chloride	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020185683/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
During sample acceptance was established that the pH of the sample was not in accordance with the requirements.	
Volatiles (HS) preparation	11713914

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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020187449/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	23-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020187449/1
Your project name	Ringdijk 390, Ridderkerk	Start date	23-Nov-2020
Your order number		End date analysis	01-Dec-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	1/4
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
S	Dry matter	% (w/w)	82.1	89.1	82.3	77.7	84.9
S	Organic matter	% (w/w) dm	1.6	1.7	1.3	<0.7 [1)]	<0.7 [1)]
	Residue on ignition	% (w/w) dm	98	98	98	100	99
S	Fraction < 2 µm (Clay)	% (w/w) dm	3.8	3.3	10.0		
	Metals						
S	Copper (Cu)	mg/kg dm	240	550	790		
S	Zinc (Zn)	mg/kg dm	120				
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm				<0.0010	<0.0010
S	PCB 52	mg/kg dm				<0.0010	<0.0010
S	PCB 101	mg/kg dm				<0.0010	<0.0010
S	PCB 118	mg/kg dm				<0.0010	<0.0010
S	PCB 138	mg/kg dm				<0.0010	0.012 [4)]
S	PCB 153	mg/kg dm				0.0012	0.012
S	PCB 180	mg/kg dm				0.0012	0.020
S	PCB (som 7) (factor 0,7)	mg/kg dm				0.0059	0.047

No.	Your sample description	Specified sample matrix	Sample nr.
1	525a-3 525a (70-100)	Soil, AS3000	11719173
2	528a-2 528a (50-100)	Soil, AS3000	11719174
3	528a-3 528a (100-125)	Soil, AS3000	11719175
4	530a-3 530a (60-110)	Soil, AS3000	11719176
5	541-1 541 (0-50)	Soil, AS3000	11719177

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020187449/1
Your project name	Ringdijk 390, Ridderkerk	Start date	23-Nov-2020
Your order number		End date analysis	01-Dec-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	2/4
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
S	Dry matter	% (w/w)	97.8	81.1	85.6	88.6	88.7
S	Organic matter	% (w/w) dm	<0.7 1)	3.9	2.2	0.7	1.6
	Residue on ignition	% (w/w) dm	99	95	97	99	98
S	Fraction < 2 µm (Clay)	% (w/w) dm		12.5	7.4	<2.0	2.9
	Metals						
S	Copper (Cu)	mg/kg dm		82	29	77	85
S	Zinc (Zn)	mg/kg dm		120	190	80	93
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm	<0.0010				
S	PCB 52	mg/kg dm	<0.0010				
S	PCB 101	mg/kg dm	<0.0010				
S	PCB 118	mg/kg dm	<0.0010				
S	PCB 138	mg/kg dm	0.0011 4)				
S	PCB 153	mg/kg dm	0.0011				
S	PCB 180	mg/kg dm	0.0014				
S	PCB (som 7) (factor 0,7)	mg/kg dm	0.0064				

No.	Your sample description	Specified sample matrix	Sample nr.
6	542-1 542 (8-30)	Soil, AS3000	11719178
7	543-2 543 (30-65)	Soil, AS3000	11719179
8	544-1 544 (0-50)	Soil, AS3000	11719180
9	545 545 (8-20) 545 (20-60)	Soil, AS3000	11719181
10	547-1 547 (0-50)	Soil, AS3000	11719182

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020187449/1
Your project name	Ringdijk 390, Ridderkerk	Start date	23-Nov-2020
Your order number		End date analysis	01-Dec-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	3/4
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14	15
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
S	Dry matter	% (w/w)	89.0	88.1	97.5	99.6	97.5
S	Organic matter	% (w/w) dm	1.3	3.2	0.8		
	Residue on ignition	% (w/w) dm	99	97	99		
S	Fraction < 2 µm (Clay)	% (w/w) dm	<2.0	4.4	<2.0		
	Metals						
S	Barium (Ba)	mg/kg dm			29		
S	Cadmium (Cd)	mg/kg dm			0.67		
S	Cobalt (Co)	mg/kg dm			4.5		
S	Copper (Cu)	mg/kg dm	13	120	120		
S	Mercury (Hg)	mg/kg dm			0.12		
S	Molybdenum (Mo)	mg/kg dm			<1.5		
S	Nickel (Ni)	mg/kg dm			14		
S	Lead (Pb)	mg/kg dm			39		
S	Zinc (Zn)	mg/kg dm			140		
	Petroleum Hydrocarbons						
	EPH (C10-C12)	mg/kg dm			7.0	<300 [2)]	330
	EPH (C12-C16)	mg/kg dm			65	<500 [2)]	580
	EPH (C16-C21)	mg/kg dm			470	3600	7500
	EPH (C21-C30)	mg/kg dm			350	77000	140000
	EPH (C30-C35)	mg/kg dm			87	69000	30000
	EPH (C35-C40)	mg/kg dm			35	28000	6600
S	EPH Sum (C10-C40)	mg/kg dm			1000	180000	180000
	Chromatogram TPH (GC)				See annex	See annex	See annex
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm			0.0038 [3)]		
S	PCB 52	mg/kg dm			<0.0010		
S	PCB 101	mg/kg dm			<0.0010		

No.	Your sample description	Specified sample matrix	Sample nr.
11	548-2 548 (20-40)	Soil, AS3000	11719183
12	550-1 550 (0-50)	Soil, AS3000	11719184
13	551-1 551 (8-58)	Soil, AS3000	11719185
14	Grit 1-1 Grit 1 (0-1)	Soil, AS3000	11719186
15	Grit 2-1 Grit 2 (0-1)	Soil, AS3000	11719187

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020187449/1
Your project name	Ringdijk 390, Ridderkerk	Start date	23-Nov-2020
Your order number		End date analysis	01-Dec-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	4/4
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14	15
S	PCB 118	mg/kg dm			0.0026		
S	PCB 138	mg/kg dm			0.0029 [4)]		
S	PCB 153	mg/kg dm			0.0033		
S	PCB 180	mg/kg dm			0.0029		
S	PCB (som 7) (factor 0,7)	mg/kg dm			0.017		
	Polycyclic Aromatic Hydrocarbons, PAH						
S	Naphtalene	mg/kg dm			<0.050		
S	Phenanthrene	mg/kg dm			0.49		
S	Anthracene	mg/kg dm			<0.050		
S	Fluoranthene	mg/kg dm			0.070		
S	Benzo(a)anthracene	mg/kg dm			<0.050		
S	Chrysene	mg/kg dm			<0.050		
S	Benzo(k)fluoranthene	mg/kg dm			<0.050		
S	Benzo(a)pyrene	mg/kg dm			<0.050		
S	Benzo(ghi)perylene	mg/kg dm			<0.050		
S	Indeno(123cd)pyrene	mg/kg dm			<0.050		
S	PAK VROM (10) (factor 0,7)	mg/kg dm			0.84		

No.	Your sample description	Specified sample matrix	Sample nr.
11	548-2 548 (20-40)	Soil, AS3000	11719183
12	550-1 550 (0-50)	Soil, AS3000	11719184
13	551-1 551 (8-58)	Soil, AS3000	11719185
14	Grit 1-1 Grit 1 (0-1)	Soil, AS3000	11719186
15	Grit 2-1 Grit 2 (0-1)	Soil, AS3000	11719187

Verified

ASM

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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RvA L010

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IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020187449/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11719173	525a-3 525a (70-100)				
3731555AA	525a	70	100	18-Nov-2020	3
11719174	528a-2 528a (50-100)				
3731591AA	528a	50	100	18-Nov-2020	2
11719175	528a-3 528a (100-125)				
3731577AA	528a	100	125	18-Nov-2020	3
11719176	530a-3 530a (60-110)				
3731587AA	530a	60	110	18-Nov-2020	3
11719177	541-1 541 (0-50)				
3731580AA	541	0	50	18-Nov-2020	1
11719178	542-1 542 (8-30)				
3731550AA	542	8	30	18-Nov-2020	1
11719179	543-2 543 (30-65)				
3731548AA	543	30	65	18-Nov-2020	2
11719180	544-1 544 (0-50)				
3731586AA	544	0	50	18-Nov-2020	1
11719181	545 545 (8-20) 545 (20-60)				
3731576AA	545	20	60	18-Nov-2020	2
3731543AA	545	8	20	18-Nov-2020	1
11719182	547-1 547 (0-50)				
3731583AA	547	0	50	18-Nov-2020	1
11719183	548-2 548 (20-40)				
3731541AA	548	20	40	18-Nov-2020	2
11719184	550-1 550 (0-50)				
3731578AA	550	0	50	18-Nov-2020	1
11719185	551-1 551 (8-58)				
3731520AA	551	8	58	18-Nov-2020	1
11719186	Grit 1-1 Grit 1 (0-1)				
3731557AA	Grit 1	0	1	18-Nov-2020	1
11719187	Grit 2-1 Grit 2 (0-1)				
3731523AA	Grit 2	0	1	18-Nov-2020	1

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Annex (B) concerning remarks referring to certificate of analysis 2020187449/1

Remark 1)
The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

Remark 2)
Reporting limit increased due to dilution of sample.

Remark 3)
PCB 28 could be affected by PCB 31.

Remark 4)
PCB 138 could be influenced by PCB 163.

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Annex (C) method references belonging to certificate of analysis 2020187449/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Grainsize < 2 µm (clay)	W0171	Sedimentation	pb 3010-4 & NEN 5753
Metals			
Barium (Ba)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cadmium (Cd)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cobalt (Co)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Copper (Cu)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Mercury (Hg)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Molybdenum (Mo)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Nickel (Ni)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Lead (Pb)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Zinc (Zn)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703
Polychlorinated Biphenyl			
PCB (7)	W0271	GC-MS	pb 3010-8 & NEN 6980
Polycyclic Aromatic Hydrocarbons, PAH			
PAK som AS3000/AP04	W0271	GC-MS	pb. 3010-6 & NEN-ISO 18287
PAH (10) (VROM)	W0271	GC-MS	pb. 3010-6 & NEN-ISO 18287

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020187449/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
The preservation term for this parameter has been expired.	
TPH (pretreatment)	11719186
	11719187

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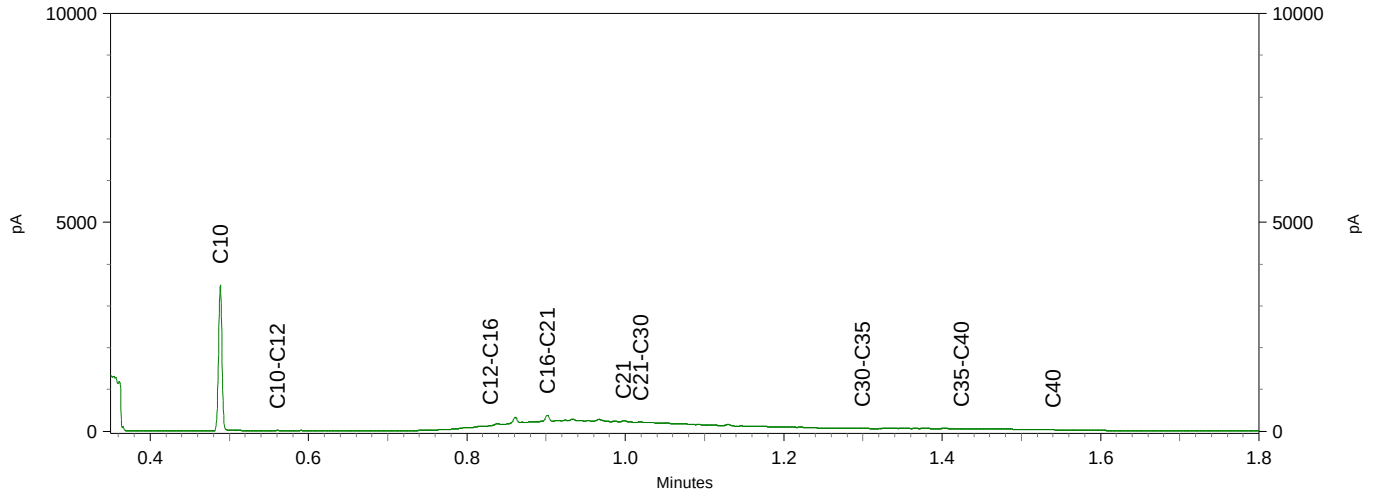
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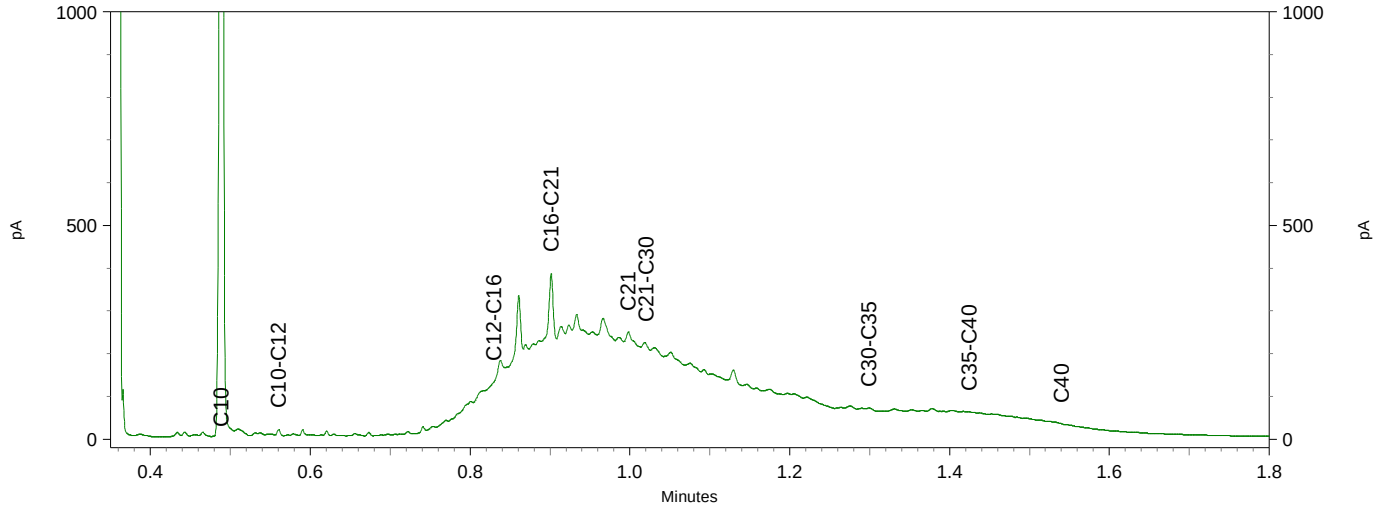
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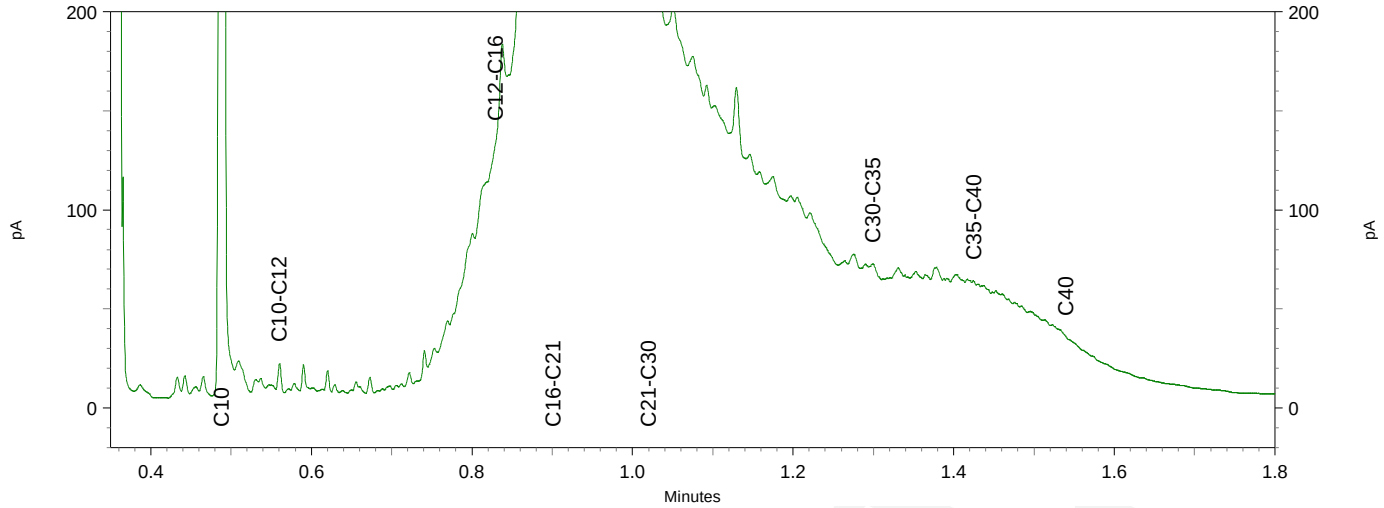
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11719185
Certificate no.:2020187449
Sample description.: 551-1 551 (8-58)
V



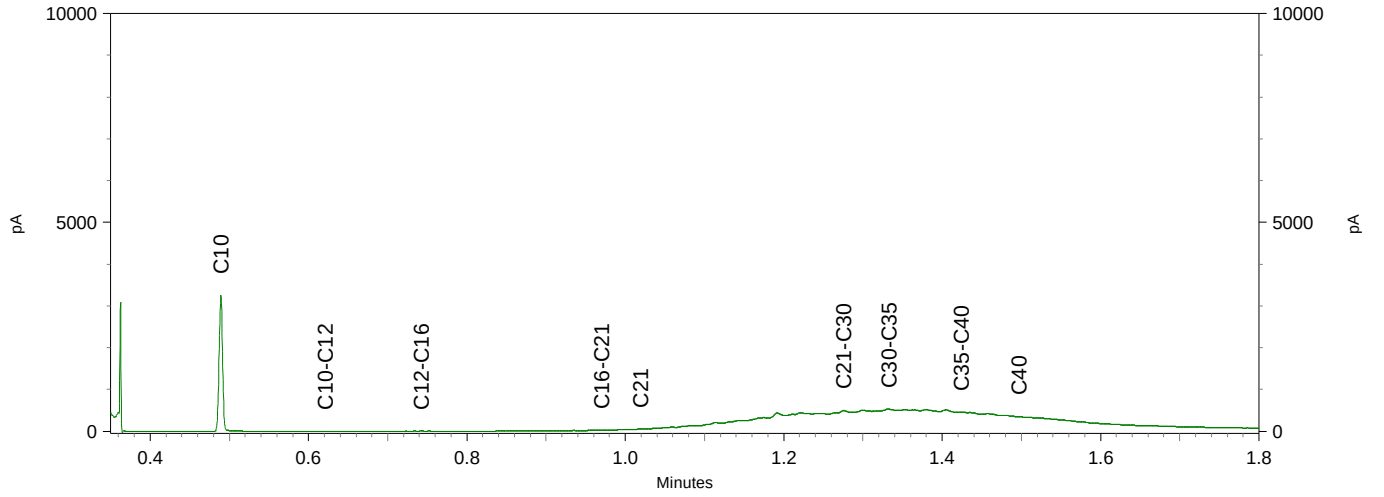


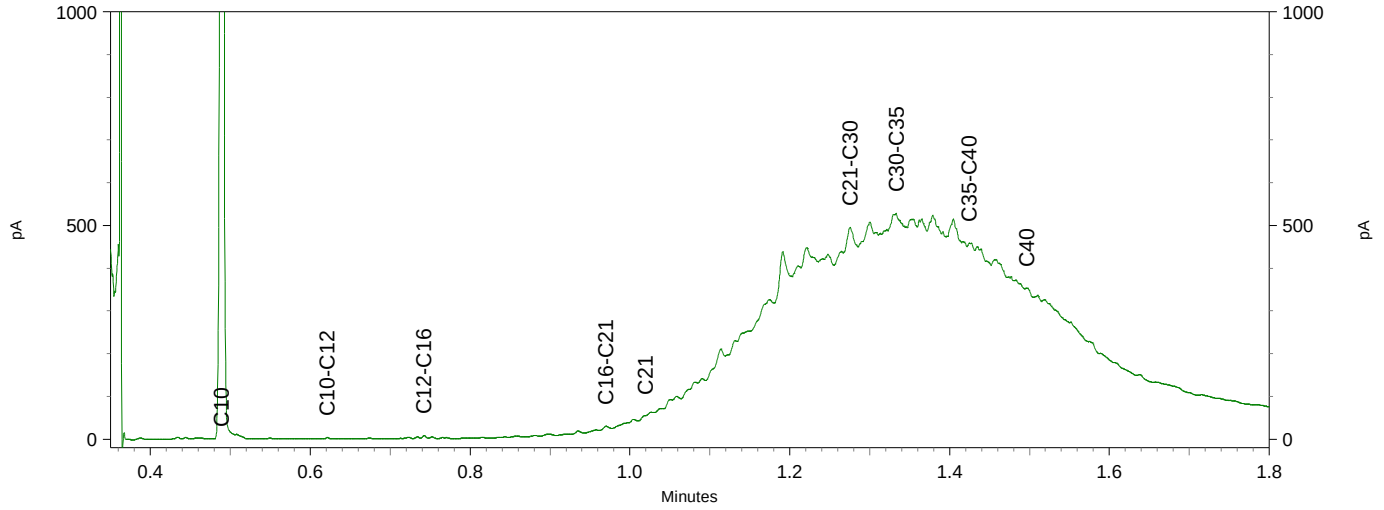


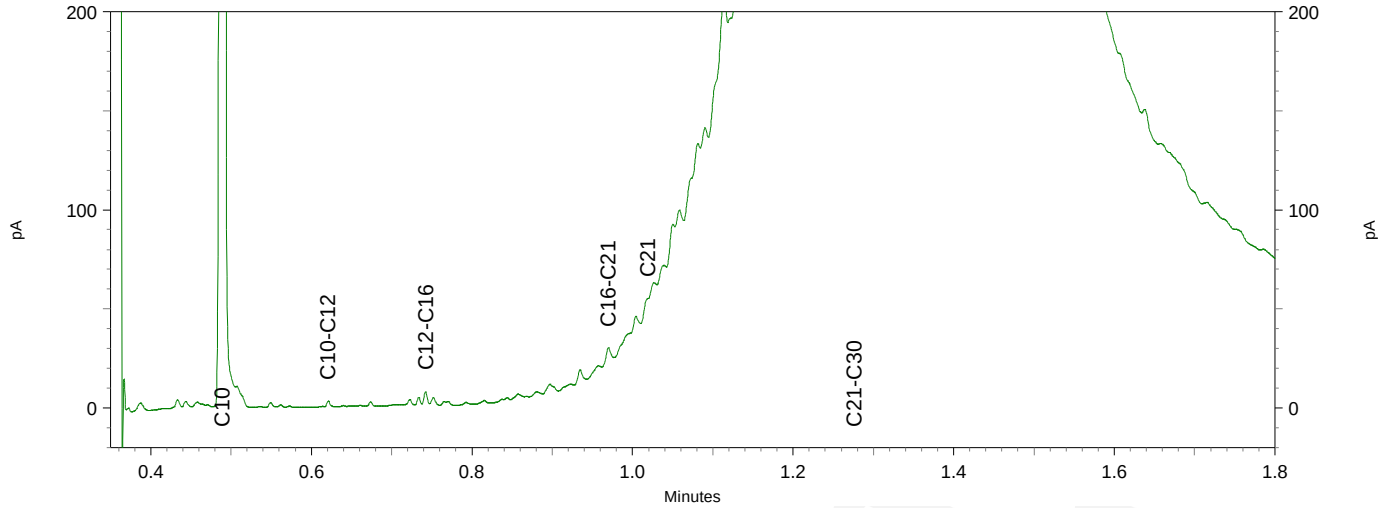
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11719186 I2 100VV
Certificate no.:2020187449
Sample description.: Grit 1-1 Grit 1 (0-1)
V



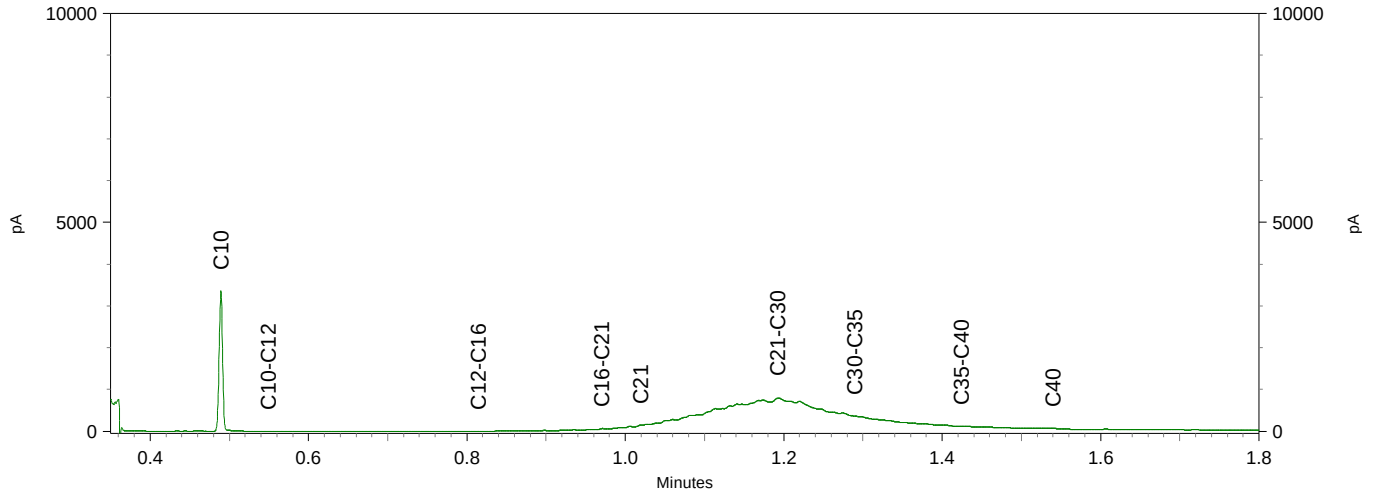


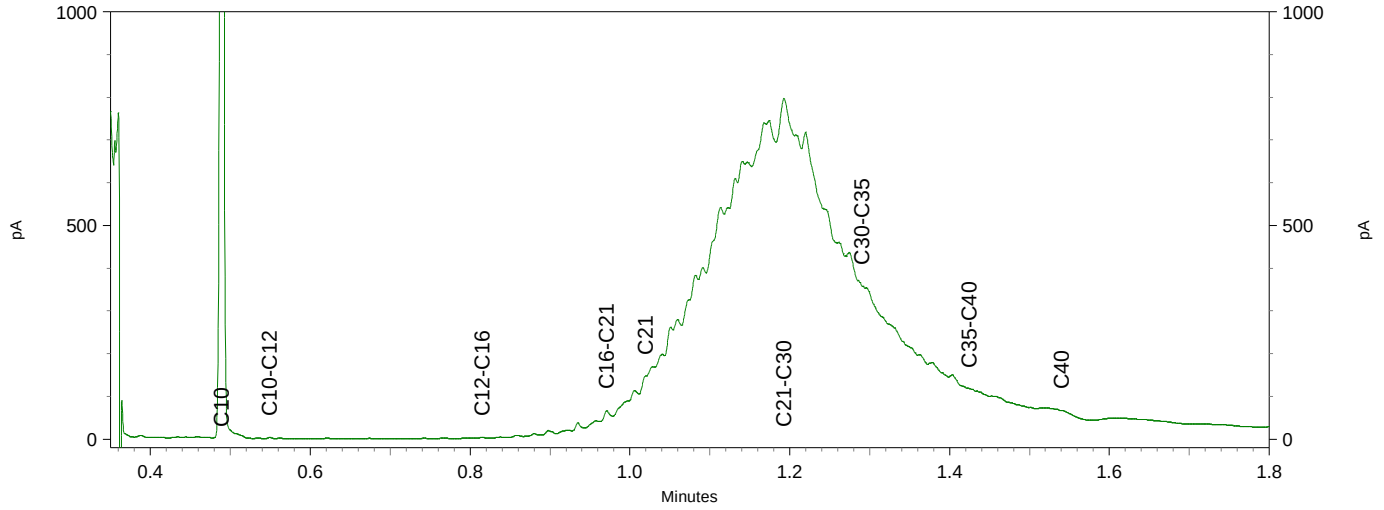


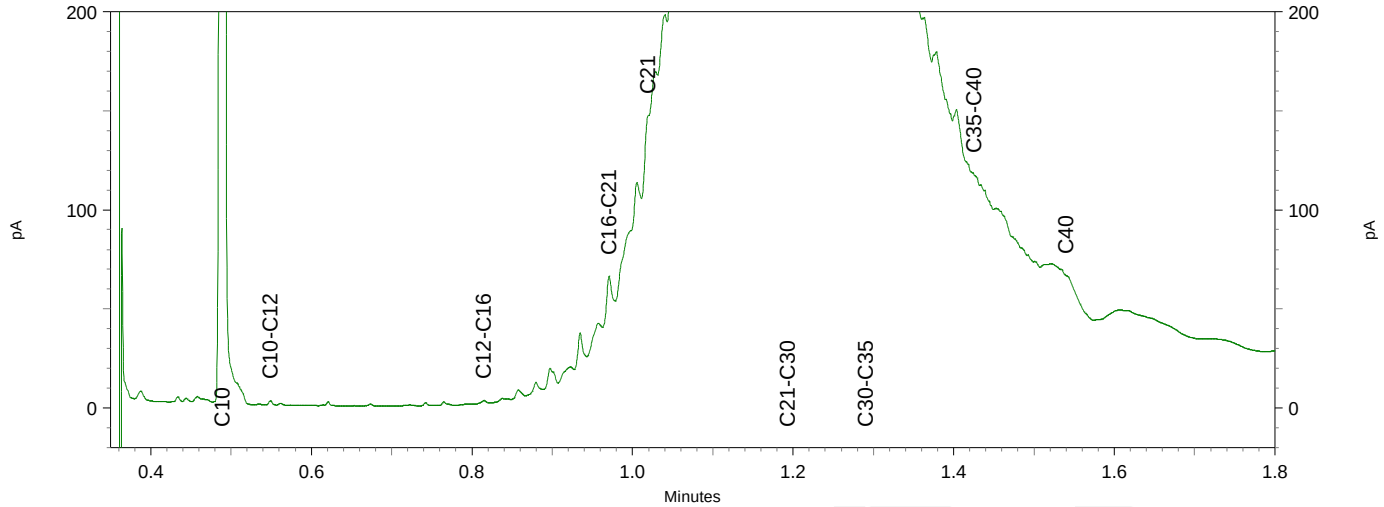
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11719187 I2 100VV
Certificate no.:2020187449
Sample description.: Grit 2-1 Grit 2 (0-1)
V







Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020182169/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	16-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020182169/1
Your project name	Ringdijk 390, Ridderkerk	Start date	16-Nov-2020
Your order number		End date analysis	19-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2
	Sample Pre-treatment			
	Preperation AS3000		Executed	Executed
	Characteristics			
S	Dry matter	% (w/w)	71.4	94.3
S	Organic matter	% (w/w) dm	6.9 [1)]	<0.7
	Residue on ignition	% (w/w) dm	93	100
S	Fraction < 2 µm (Clay)	% (w/w) dm		<2.0
	Metals			
S	Barium (Ba)	mg/kg dm		<20
S	Cadmium (Cd)	mg/kg dm		0.34
S	Cobalt (Co)	mg/kg dm		6.4
S	Copper (Cu)	mg/kg dm		87
S	Mercury (Hg)	mg/kg dm		<0.050
S	Molybdenum (Mo)	mg/kg dm		8.8
S	Nickel (Ni)	mg/kg dm		32
S	Lead (Pb)	mg/kg dm		18
S	Zinc (Zn)	mg/kg dm		81
	Petroleum Hydrocarbons			
	EPH (C10-C12)	mg/kg dm	<3.0	
	EPH (C12-C16)	mg/kg dm	<5.0	
	EPH (C16-C21)	mg/kg dm	8.7	
	EPH (C21-C30)	mg/kg dm	31	
	EPH (C30-C35)	mg/kg dm	21	
	EPH (C35-C40)	mg/kg dm	<6.0	
S	EPH Sum (C10-C40)	mg/kg dm	67	
	Chromatogram TPH (GC)		See annex	

No.	Your sample description	Specified sample matrix	Sample nr.
1	509-5 509 (200-230)	Soil, AS3000	11702987
2	535-2 535 (30-60)	Soil, AS3000	11702988

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A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified ASM

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020182169/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11702987	509-5 509 (200-230)				
3707253AA	509	200	230	23-Oct-2020	5
11702988	535-2 535 (30-60)				
3705506AA	535	30	60	04-Nov-2020	2

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Annex (B) concerning remarks referring to certificate of analysis 2020182169/1

Remark 1)

The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

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Annex (C) method references belonging to certificate of analysis 2020182169/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Grainsize < 2 µm (clay)	W0171	Sedimentation	pb 3010-4 & NEN 5753
Metals			
Barium (Ba)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cadmium (Cd)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cobalt (Co)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Copper (Cu)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Mercury (Hg)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Molybdenum (Mo)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Nickel (Ni)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Lead (Pb)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Zinc (Zn)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020182169/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
The preservation term for this parameter has been expired.	
TPH (pretreatment)	11702987

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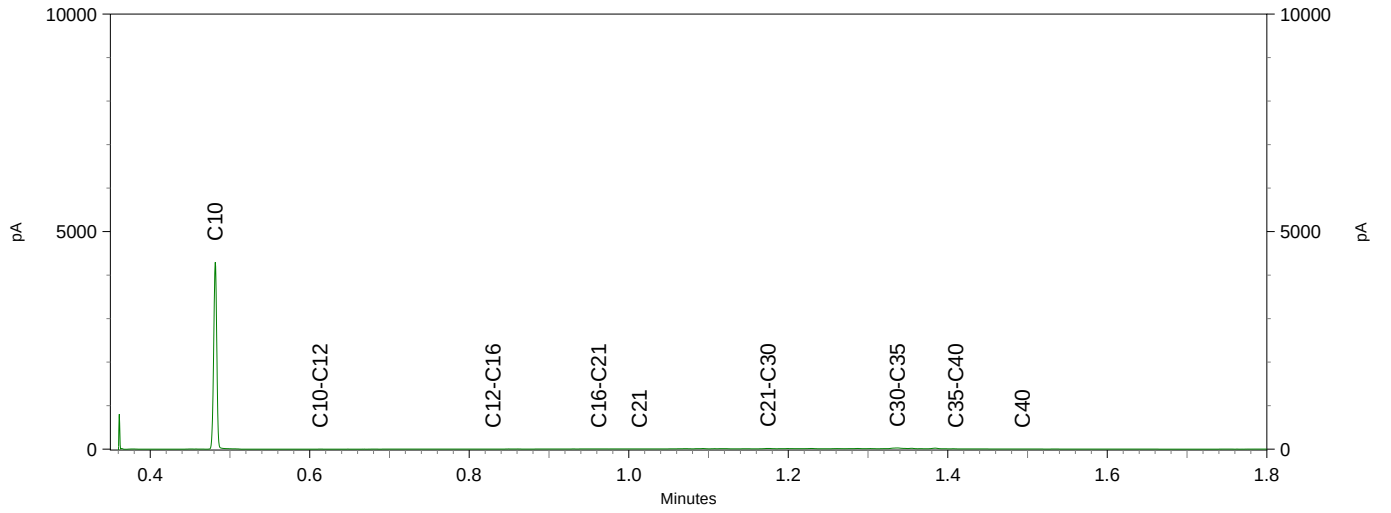
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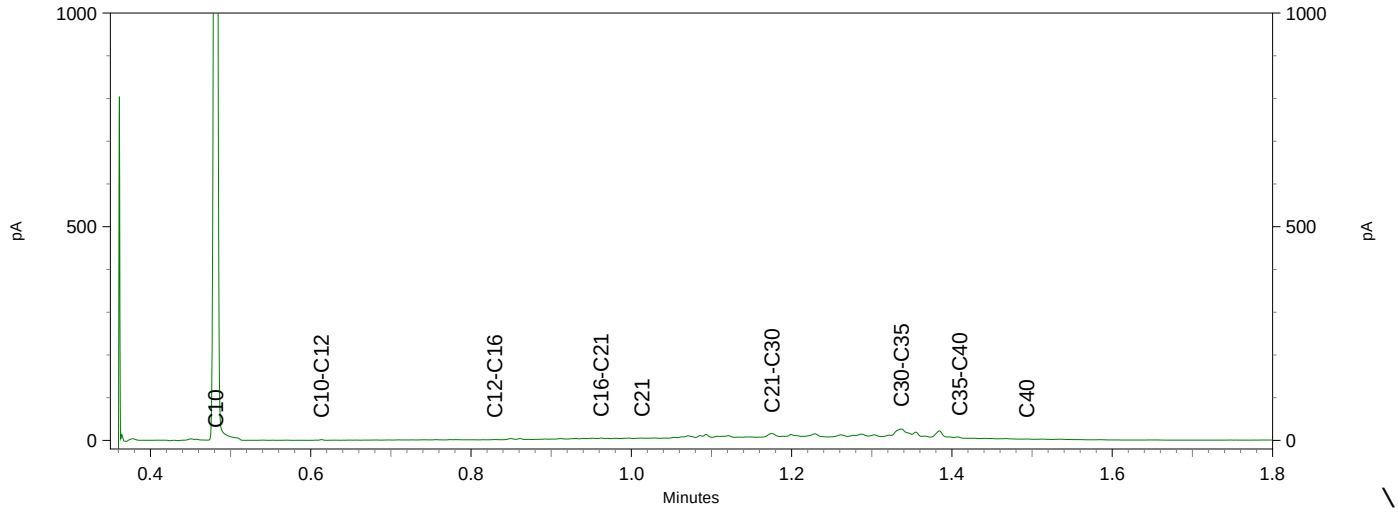
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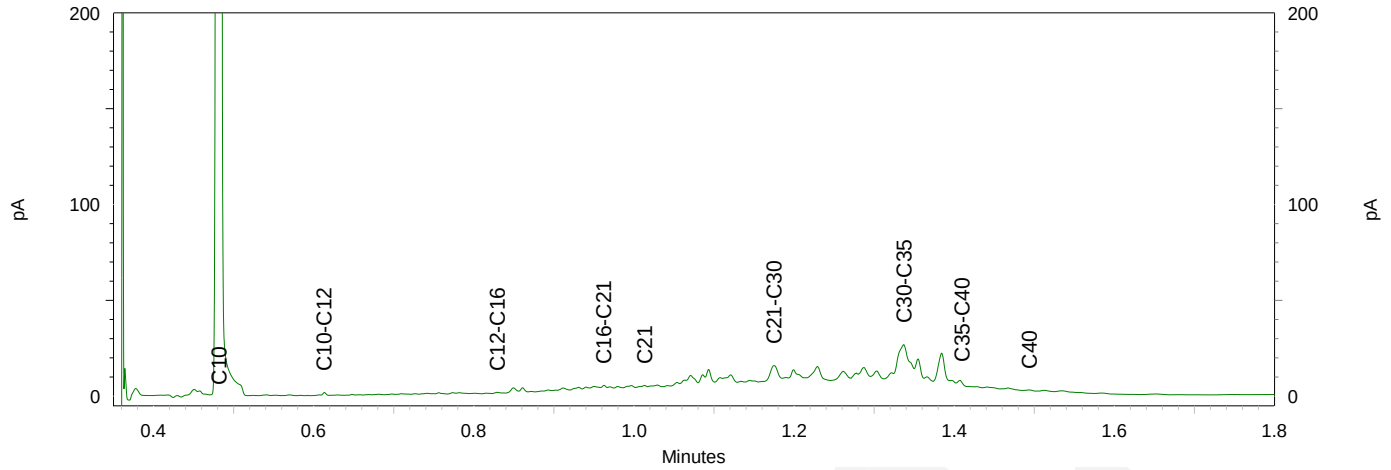
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11702987
Certificate no.: 2020182169
Sample description.: 509-5 509 (200-230)
V







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Antea Group
[redacted]
P0 Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020168300/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	26-Oct-2020

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Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020168300/1
Your project name	Ringdijk 390, Ridderkerk	Start date	26-Oct-2020
Your order number		End date analysis	27-Oct-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C,D
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2
	Sample Pre-treatment			
	Preperation AS3000		Executed	Executed
	Characteristics			
S	Dry matter	% (w/w)	77.3	70.9
S	Organic matter	% (w/w) dm	1.6 1)	4.9 1)
	Residue on ignition	% (w/w) dm	98	95
	Volatile halogenated Hydrocarbons			
S	Dichloromethane	mg/kg dm	<0.050	<0.050
S	Trichloromethane	mg/kg dm	<0.020	<0.020
S	Tetrachloromethane	mg/kg dm	<0.050	<0.050
S	Trichloroethene	mg/kg dm	<0.050	<0.050
S	Tetrachloroethene	mg/kg dm	0.025	<0.010
S	1,1-Dichloroethane	mg/kg dm	<0.020	<0.020
S	1,2-Dichloroethane	mg/kg dm	<0.020	<0.020
S	1,1,1-Trichloroethane	mg/kg dm	<0.050	<0.050
S	1,1,2-Trichloroethane	mg/kg dm	<0.050	<0.050
S	cis1,2-Dichloroethene	mg/kg dm	<0.050	<0.050
S	trans 1,2-Dichloroethene	mg/kg dm	<0.050	<0.050
	Chlorinated Hydrocarbons (sum)	mg/kg dm	<0.42	<0.42
S	Vinyl chloride	mg/kg dm	<0.010	<0.010
S	1,2-Dichloorethenen (som) (factor 0,7)	mg/kg dm	0.070 2)	0.070 2)
	Petroleum Hydrocarbons			
	EPH (C10-C12)	mg/kg dm	<3.0	62
	EPH (C12-C16)	mg/kg dm	<5.0	28
	EPH (C16-C21)	mg/kg dm	5.2	16
	EPH (C21-C30)	mg/kg dm	21	36
	EPH (C30-C35)	mg/kg dm	12	18
	EPH (C35-C40)	mg/kg dm	<6.0	<6.0
S	EPH Sum (C10-C40)	mg/kg dm	46	160
	Chromatogram TPH (GC)		See annex	See annex

No.	Your sample description	Specified sample matrix	Sample nr.
1	515-4 515 (130-150)	Soil, AS3000	11660240
2	515-6 515 (200-250)	Soil, AS3000	11660241

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified ASM

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020168300/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11660240	515-4 515 (130-150)				
0550280437	515	130	150	23-Oct-2020	4
11660241	515-6 515 (200-250)				
3707249AA	515	200	250	23-Oct-2020	6

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Annex (B) concerning remarks referring to certificate of analysis 2020168300/1

Remark 1)
The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

Remark 2)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020168300/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Vinyl chloride	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3030-2 & NEN-EN-ISO 22155
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020168300/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
Monsterhouder voor vluchtige stoffen ongeschikt en/of mengmonster uit ongeschikte monsterhouder genomen.	11660241

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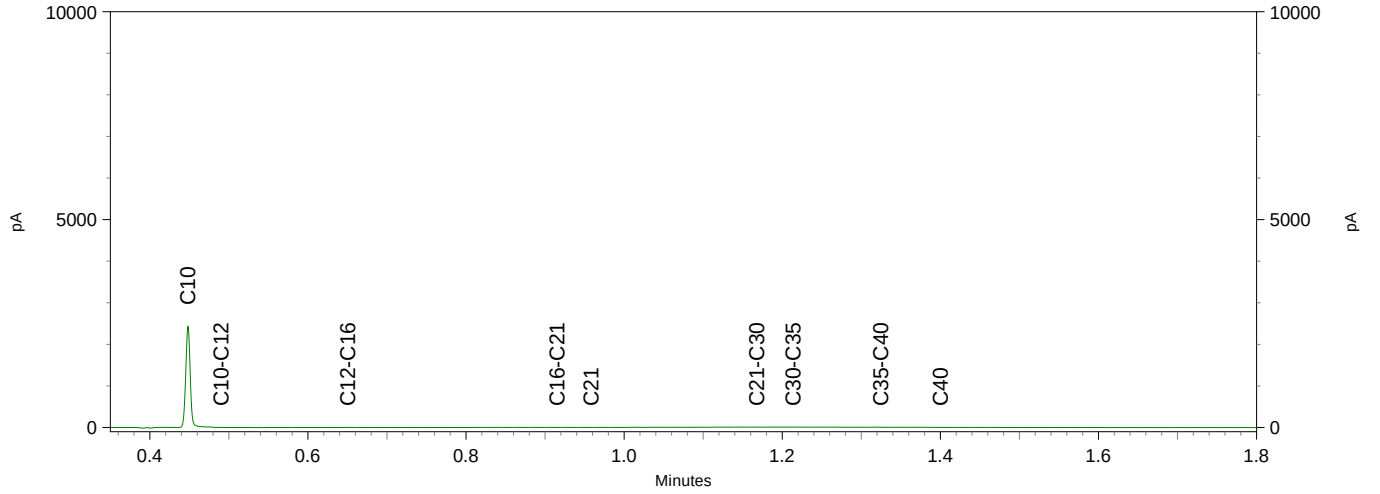
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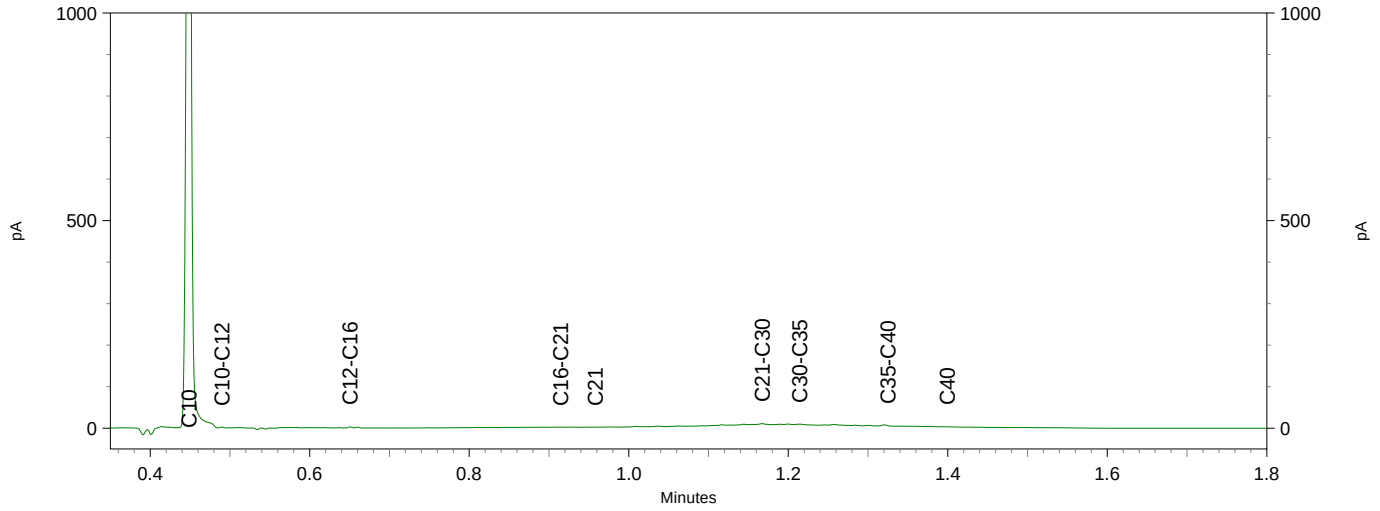
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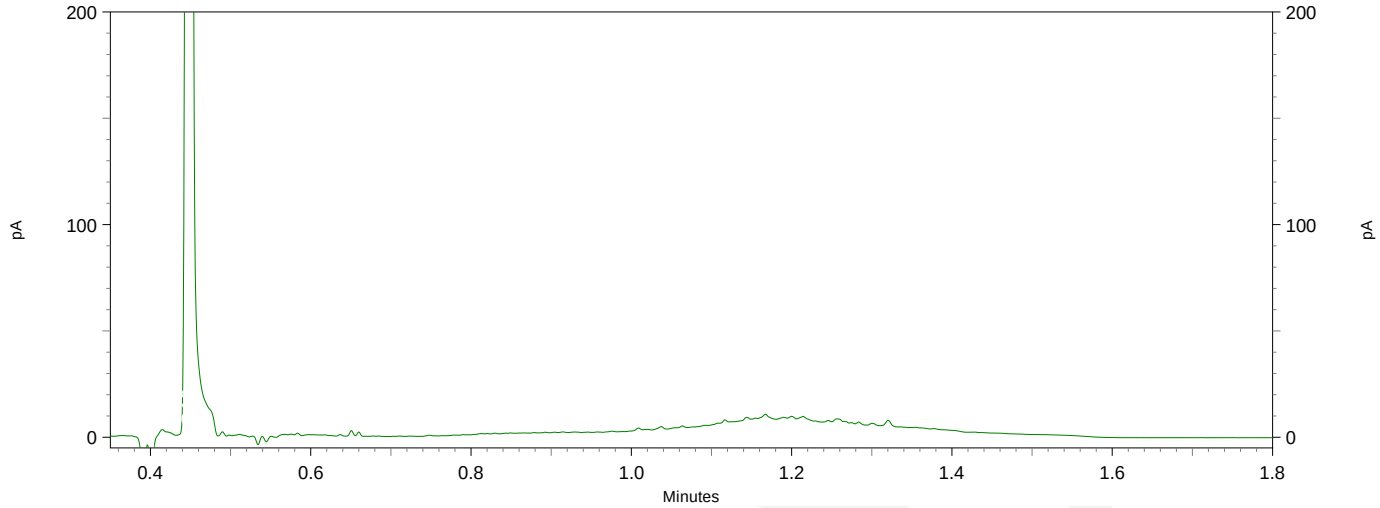
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660240
Certificate no.:2020168300
Sample description.: 515-4 515 (130-150)
V



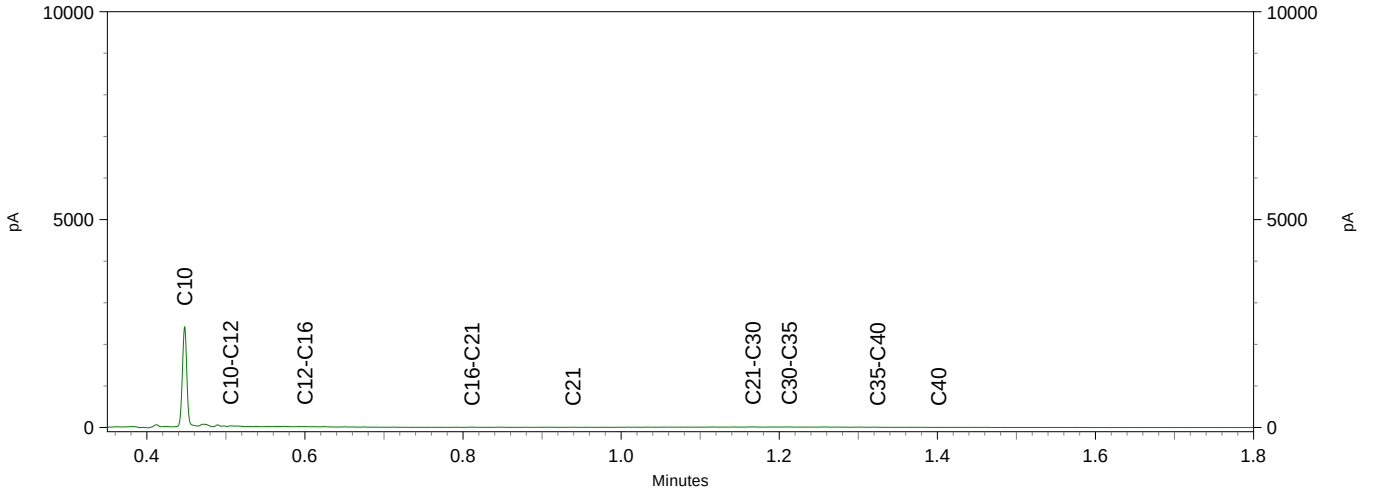


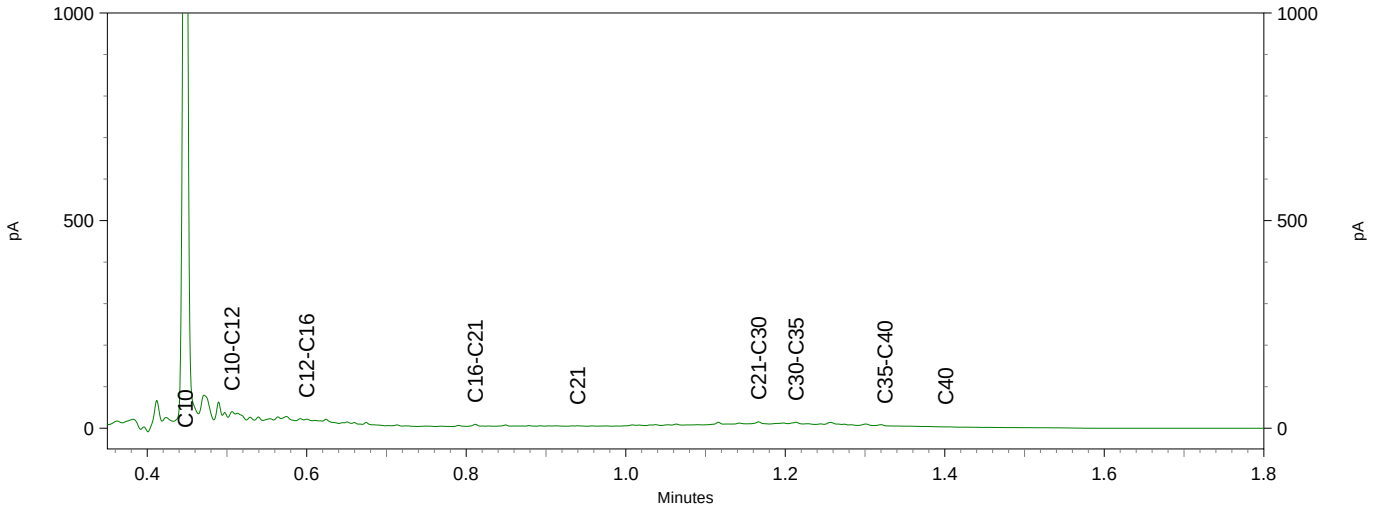


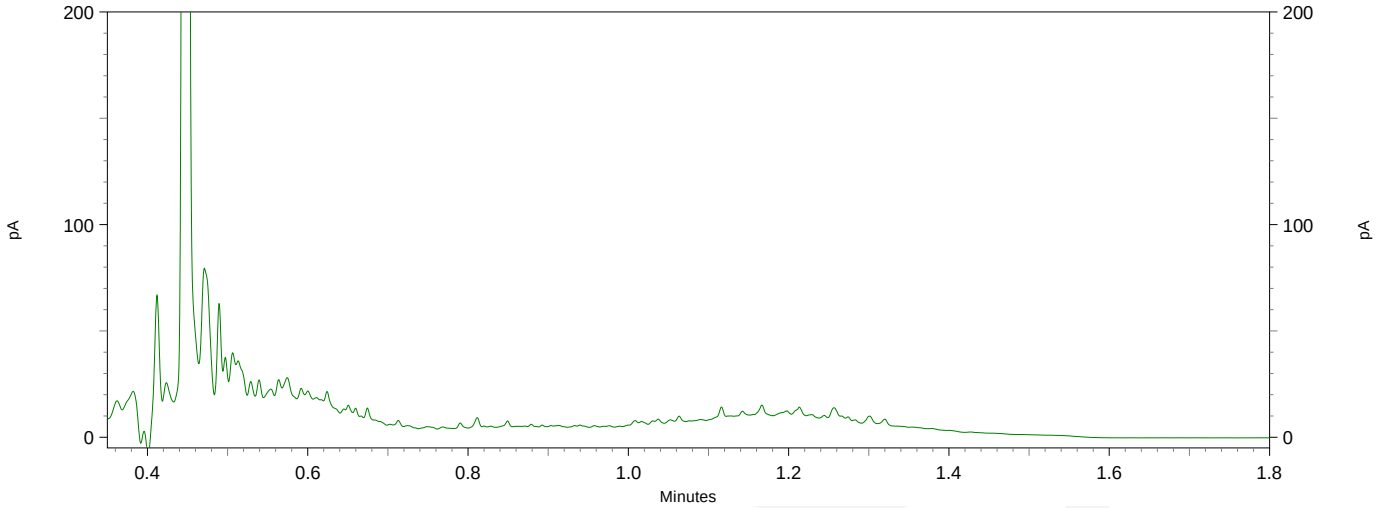
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660241
Certificate no.:2020168300
Sample description.: 515-6 515 (200-250)
V







Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020175751/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	05-Nov-2020

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The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020175751/1
Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	1/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
	Grinding					Executed	
S	Dry matter	% (w/w)	82.2	85.4	90.2	90.0	87.6
S	Organic matter	% (w/w) dm	1.8	0.9	0.8 1)	1.2 1)	1.9 1)
	Residue on ignition	% (w/w) dm	98	99	99	98	98
S	Fraction < 2 µm (Clay)	% (w/w) dm	7.9	3.5			
	Metals						
S	Barium (Ba)	mg/kg dm	50	47			
S	Cadmium (Cd)	mg/kg dm	0.34	0.45			
S	Cobalt (Co)	mg/kg dm	6.6	5.0			
S	Copper (Cu)	mg/kg dm	21	11			
S	Mercury (Hg)	mg/kg dm	0.12	0.12			
S	Molybdenum (Mo)	mg/kg dm	<1.5	<1.5			
S	Nickel (Ni)	mg/kg dm	14	9.2			
S	Lead (Pb)	mg/kg dm	43	16			
S	Zinc (Zn)	mg/kg dm	130	220			
	Petroleum Hydrocarbons						
	EPH (C10-C12)	mg/kg dm	<3.0	<3.0			
	EPH (C12-C16)	mg/kg dm	<5.0	<5.0			
	EPH (C16-C21)	mg/kg dm	7.8	<5.0			
	EPH (C21-C30)	mg/kg dm	62	<11			
	EPH (C30-C35)	mg/kg dm	56	<5.0			
	EPH (C35-C40)	mg/kg dm	35	<6.0			
S	EPH Sum (C10-C40)	mg/kg dm	160	<35			
	Chromatogram TPH (GC)		See annex				
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
S	PCB 52	mg/kg dm	<0.0010	<0.0010	<0.0010	0.0018	<0.0010

No.	Your sample description	Specified sample matrix	Sample nr.
1	516-1 516 (10-60)	Soil, AS3000	11683751
2	518-1 518 (8-58)	Soil, AS3000	11683752
3	519-1 519 (8-58)	Soil, AS3000	11683753
4	520-2 520 (20-45)	Soil, AS3000	11683754
5	521-1 521 (15-40)	Soil, AS3000	11683755

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A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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BTW/VAT No. NL 8043.14.883.B01

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020175751/1
Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	2/9

Project agreement 3400 - Antea - Project Stedin/Vitens

	Analysis	Unit	1	2	3	4	5
S	PCB 101	mg/kg dm	<0.0010	0.0011	0.0023	0.015	<0.0010
S	PCB 118	mg/kg dm	<0.0010	<0.0010	0.0011	0.0087	<0.0010
S	PCB 138	mg/kg dm	<0.0010	0.0014 3)	0.0090 3)	0.035 3)	0.0025 3)
S	PCB 153	mg/kg dm	<0.0010	0.0016	0.012	0.040	0.0025
S	PCB 180	mg/kg dm	<0.0010	0.0014	0.0097	0.025	<0.0010
S	PCB (som 7) (factor 0,7)	mg/kg dm	0.0049 2)	0.0076	0.036	0.13	0.0085
	Polycyclic Aromatic Hydrocarbons, PAH						
S	Naphtalene	mg/kg dm	<0.050	<0.050			
S	Phenanthrene	mg/kg dm	1.1	<0.050			
S	Anthracene	mg/kg dm	0.34	<0.050			
S	Fluoranthene	mg/kg dm	0.96	0.24			
S	Benzo(a)anthracene	mg/kg dm	0.47	0.12			
S	Chrysene	mg/kg dm	0.49	0.13			
S	Benzo(k)fluoranthene	mg/kg dm	0.27	0.086			
S	Benzo(a)pyrene	mg/kg dm	0.57	0.11			
S	Benzo(ghi)perylene	mg/kg dm	0.49	0.082			
S	Indeno(123cd)pyrene	mg/kg dm	0.53	0.11			
S	PAK VROM (10) (factor 0,7)	mg/kg dm	5.3	0.97			

No.	Your sample description	Specified sample matrix	Sample nr.
1	516-1 516 (10-60)	Soil, AS3000	11683751
2	518-1 518 (8-58)	Soil, AS3000	11683752
3	519-1 519 (8-58)	Soil, AS3000	11683753
4	520-2 520 (20-45)	Soil, AS3000	11683754
5	521-1 521 (15-40)	Soil, AS3000	11683755

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020175751/1
Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	3/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
	Grinding		Executed		Executed		
S	Dry matter	% (w/w)	90.2	78.9	84.3	91.7	75.3
S	Organic matter	% (w/w) dm	1.1 [1)]	2.2 [1)]	2.4	1.0	7.1
	Residue on ignition	% (w/w) dm	99	97	97	99	91
S	Fraction < 2 µm (Clay)	% (w/w) dm			4.6	<2.0	21.3
	Metals						
S	Barium (Ba)	mg/kg dm			150		
S	Cadmium (Cd)	mg/kg dm			4.7		
S	Cobalt (Co)	mg/kg dm			19		
S	Copper (Cu)	mg/kg dm			180	29	35
S	Mercury (Hg)	mg/kg dm			0.13		
S	Molybdenum (Mo)	mg/kg dm			3.7		
S	Nickel (Ni)	mg/kg dm			58		
S	Lead (Pb)	mg/kg dm			59		
S	Zinc (Zn)	mg/kg dm			160		
	Petroleum Hydrocarbons						
	EPH (C10-C12)	mg/kg dm			<3.0		
	EPH (C12-C16)	mg/kg dm			<5.0		
	EPH (C16-C21)	mg/kg dm			<5.0		
	EPH (C21-C30)	mg/kg dm			14		
	EPH (C30-C35)	mg/kg dm			6.5		
	EPH (C35-C40)	mg/kg dm			<6.0		
S	EPH Sum (C10-C40)	mg/kg dm			<35		
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm	<0.0010	<0.0010	<0.0010		
S	PCB 52	mg/kg dm	<0.0010	<0.0010	<0.0010		
S	PCB 101	mg/kg dm	0.0051	<0.0010	<0.0010		

No.	Your sample description	Specified sample matrix	Sample nr.
6	522-1 522 (15-45)	Soil, AS3000	11683756
7	523-1 523 (10-60)	Soil, AS3000	11683757
8	525-2 525 (20-70)	Soil, AS3000	11683758
9	526-2 526 (20-50)	Soil, AS3000	11683759
10	527-1 527 (0-35)	Soil, AS3000	11683760

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IBAN: NL71BNPA0227924525
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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020175751/1
Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	4/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
S	PCB 118	mg/kg dm	0.0028	<0.0010	<0.0010		
S	PCB 138	mg/kg dm	0.011 3)	0.0010 3)	<0.0010		
S	PCB 153	mg/kg dm	0.013	0.0010	0.0010		
S	PCB 180	mg/kg dm	0.0093	<0.0010	<0.0010		
S	PCB (som 7) (factor 0,7)	mg/kg dm	0.042	0.0055	0.0052		
	Polycyclic Aromatic Hydrocarbons, PAH						
S	Naphtalene	mg/kg dm			<0.050		
S	Phenanthrene	mg/kg dm			0.15		
S	Anthracene	mg/kg dm			0.063		
S	Fluoranthene	mg/kg dm			0.25		
S	Benzo(a)anthracene	mg/kg dm			0.15		
S	Chrysene	mg/kg dm			0.16		
S	Benzo(k)fluoranthene	mg/kg dm			0.064		
S	Benzo(a)pyrene	mg/kg dm			0.11		
S	Benzo(ghi)perylene	mg/kg dm			0.099		
S	Indeno(123cd)pyrene	mg/kg dm			0.10		
S	PAK VROM (10) (factor 0,7)	mg/kg dm			1.2		

No.	Your sample description	Specified sample matrix	Sample nr.
6	522-1 522 (15-45)	Soil, AS3000	11683756
7	523-1 523 (10-60)	Soil, AS3000	11683757
8	525-2 525 (20-70)	Soil, AS3000	11683758
9	526-2 526 (20-50)	Soil, AS3000	11683759
10	527-1 527 (0-35)	Soil, AS3000	11683760

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020175751/1
Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	5/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14	15
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
S	Dry matter	% (w/w)	88.8	83.9	85.9	84.9	77.2
S	Organic matter	% (w/w) dm	2.3	3.3	<0.7 1)	<0.7 1)	1.5
	Residue on ignition	% (w/w) dm	97	96	100	99	98
S	Fraction < 2 µm (Clay)	% (w/w) dm	5.9	7.4			8.2
	Metals						
S	Copper (Cu)	mg/kg dm	130	84			
S	Zinc (Zn)	mg/kg dm					54
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm			<0.0010	<0.0010	
S	PCB 52	mg/kg dm			<0.0010	<0.0010	
S	PCB 101	mg/kg dm			<0.0010	<0.0010	
S	PCB 118	mg/kg dm			<0.0010	<0.0010	
S	PCB 138	mg/kg dm			<0.0010	0.0037 3)	
S	PCB 153	mg/kg dm			0.0012	0.0051	
S	PCB 180	mg/kg dm			0.0012	0.0048	
S	PCB (som 7) (factor 0,7)	mg/kg dm			0.0059	0.016	

No.	Your sample description	Specified sample matrix	Sample nr.
11	528-1 528 (0-50)	Soil, AS3000	11683761
12	529-1 529 (0-50)	Soil, AS3000	11683762
13	531-1 531 (12-62)	Soil, AS3000	11683763
14	532-1 532 (8-58)	Soil, AS3000	11683764
15	533-1 533 (0-50)	Soil, AS3000	11683765

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Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
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	Analysis	Unit	16	17	18	19	20
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
	Grinding				Executed		
S	Dry matter	% (w/w)	84.7	92.0	95.0	96.8	86.9
S	Organic matter	% (w/w) dm	1.9	2.1	1.1	<0.7	<0.7 1)
	Residue on ignition	% (w/w) dm	98	98	99	99	99
S	Fraction < 2 µm (Clay)	% (w/w) dm	3.5	2.9	2.4	<2.0	
	Metals						
S	Barium (Ba)	mg/kg dm		48	140	36	
S	Cadmium (Cd)	mg/kg dm		0.54	<0.20	0.36	
S	Cobalt (Co)	mg/kg dm		14	10.0	4.0	
S	Copper (Cu)	mg/kg dm		260	35	7.2	
S	Mercury (Hg)	mg/kg dm		0.11	<0.050	0.065	
S	Molybdenum (Mo)	mg/kg dm		5.5	1.8	<1.5	
S	Nickel (Ni)	mg/kg dm		44	26	8.7	
S	Lead (Pb)	mg/kg dm		61	22	16	
S	Zinc (Zn)	mg/kg dm	130	150	70	93	
	Petroleum Hydrocarbons						
	EPH (C10-C12)	mg/kg dm		<3.0	<3.0	<3.0	
	EPH (C12-C16)	mg/kg dm		<5.0	<5.0	<5.0	
	EPH (C16-C21)	mg/kg dm		10	10	9.2	
	EPH (C21-C30)	mg/kg dm		27	28	25	
	EPH (C30-C35)	mg/kg dm		11	21	14	
	EPH (C35-C40)	mg/kg dm		<6.0	15	9.7	
S	EPH Sum (C10-C40)	mg/kg dm		55	79	60	
	Chromatogram TPH (GC)			See annex	See annex	See annex	
	Polychlorinated Biphenyl						
S	PCB 28	mg/kg dm		<0.0010	<0.0010	<0.0010	<0.0010
S	PCB 52	mg/kg dm		<0.0010	0.0018	<0.0010	0.0043

No.	Your sample description	Specified sample matrix	Sample nr.
16	534-1 534 (0-50)	Soil, AS3000	11683766
17	535-1 535 (9-30)	Soil, AS3000	11683767
18	MM01 536 (20-45) 537 (15-40) 538 (20-45)	Soil, AS3000	11683768
19	MM02 536 (45-70) 537 (40-60) 538 (45-60)	Soil, AS3000	11683769
20	MM03 530 (8-30) 530 (30-60)	Soil, AS3000	11683770

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Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	7/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	16	17	18	19	20
S	PCB 101	mg/kg dm		<0.0010	0.0087	<0.0010	0.065
S	PCB 118	mg/kg dm		<0.0010	0.0029	<0.0010	0.024
S	PCB 138	mg/kg dm		0.0015 3)	0.015 3)	<0.0010	0.21 3)
S	PCB 153	mg/kg dm		0.0013	0.017	<0.0010	0.30
S	PCB 180	mg/kg dm		0.0015	0.013	<0.0010	0.26
S	PCB (som 7) (factor 0,7)	mg/kg dm		0.0071	0.060	0.0049 2)	0.86
	Polycyclic Aromatic Hydrocarbons, PAH						
S	Naphtalene	mg/kg dm		<0.050	<0.050	<0.050	
S	Phenanthrene	mg/kg dm		0.93	0.35	0.83	
S	Anthracene	mg/kg dm		0.34	0.086	0.19	
S	Fluoranthene	mg/kg dm		2.0	0.81	1.2	
S	Benzo(a)anthracene	mg/kg dm		1.1	0.43	0.62	
S	Chrysene	mg/kg dm		1.0	0.43	0.62	
S	Benzo(k)fluoranthene	mg/kg dm		0.45	0.18	0.21	
S	Benzo(a)pyrene	mg/kg dm		0.95	0.36	0.39	
S	Benzo(ghi)perylene	mg/kg dm		0.63	0.28	0.22	
S	Indeno(123cd)pyrene	mg/kg dm		0.50	0.29	0.27	
S	PAK VROM (10) (factor 0,7)	mg/kg dm		8.0	3.3	4.6	

No.	Your sample description	Specified sample matrix	Sample nr.
16	534-1 534 (0-50)	Soil, AS3000	11683766
17	535-1 535 (9-30)	Soil, AS3000	11683767
18	MM01 536 (20-45) 537 (15-40) 538 (20-45)	Soil, AS3000	11683768
19	MM02 536 (45-70) 537 (40-60) 538 (45-60)	Soil, AS3000	11683769
20	MM03 530 (8-30) 530 (30-60)	Soil, AS3000	11683770

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Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
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	Analysis	Unit	21	22
	Sample Pre-treatment			
	Preperation AS3000		Executed	Executed
	Characteristics			
S	Dry matter	% (w/w)	85.2	86.2
S	Organic matter	% (w/w) dm	1.6	0.8
	Residue on ignition	% (w/w) dm	98	99
S	Fraction < 2 µm (Clay)	% (w/w) dm	8.6	3.4
	Metals			
S	Barium (Ba)	mg/kg dm	220	<20
S	Cadmium (Cd)	mg/kg dm	0.40	<0.20
S	Cobalt (Co)	mg/kg dm	7.2	3.9
S	Copper (Cu)	mg/kg dm	46	<5.0
S	Mercury (Hg)	mg/kg dm	0.097	<0.050
S	Molybdenum (Mo)	mg/kg dm	<1.5	<1.5
S	Nickel (Ni)	mg/kg dm	19	8.2
S	Lead (Pb)	mg/kg dm	47	<10
S	Zinc (Zn)	mg/kg dm	140	40
	Petroleum Hydrocarbons			
	EPH (C10-C12)	mg/kg dm	<3.0	<3.0
	EPH (C12-C16)	mg/kg dm	<5.0	<5.0
	EPH (C16-C21)	mg/kg dm	<5.0	<5.0
	EPH (C21-C30)	mg/kg dm	13	<11
	EPH (C30-C35)	mg/kg dm	9.6	<5.0
	EPH (C35-C40)	mg/kg dm	<6.0	<6.0
S	EPH Sum (C10-C40)	mg/kg dm	<35	<35
	Polychlorinated Biphenyl			
S	PCB 28	mg/kg dm	<0.0010	<0.0010
S	PCB 52	mg/kg dm	<0.0010	<0.0010
S	PCB 101	mg/kg dm	0.0012	<0.0010
S	PCB 118	mg/kg dm	<0.0010	<0.0010

No.	Your sample description	Specified sample matrix	Sample nr.
21	MM04 524 (0-30) 524 (30-50)	Soil, AS3000	11683771
22	MM05 517 (12-35) 517 (35-65)	Soil, AS3000	11683772

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Your project name	Ringdijk 390, Ridderkerk	Start date	05-Nov-2020
Your order number		End date analysis	12-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:19
		Annex	A,B,C
		Page	9/9
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	21	22
S	PCB 138	mg/kg dm	0.0029 3)	<0.0010
S	PCB 153	mg/kg dm	0.0031	<0.0010
S	PCB 180	mg/kg dm	0.0026	<0.0010
S	PCB (som 7) (factor 0,7)	mg/kg dm	0.012	0.0049 2)
	Polycyclic Aromatic Hydrocarbons, PAH			
S	Naphtalene	mg/kg dm	<0.050	<0.050
S	Phenanthrene	mg/kg dm	0.10	<0.050
S	Anthracene	mg/kg dm	<0.050	<0.050
S	Fluoranthene	mg/kg dm	0.24	<0.050
S	Benzo(a)anthracene	mg/kg dm	0.15	<0.050
S	Chrysene	mg/kg dm	0.16	<0.050
S	Benzo(k)fluoranthene	mg/kg dm	0.072	<0.050
S	Benzo(a)pyrene	mg/kg dm	0.16	<0.050
S	Benzo(ghi)perylene	mg/kg dm	0.10	<0.050
S	Indeno(123cd)pyrene	mg/kg dm	0.099	<0.050
S	PAK VROM (10) (factor 0,7)	mg/kg dm	1.2	0.35 2)

No.	Your sample description	Specified sample matrix	Sample nr.
21	MM04 524 (0-30) 524 (30-50)	Soil, AS3000	11683771
22	MM05 517 (12-35) 517 (35-65)	Soil, AS3000	11683772

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020175751/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11683751	516-1 516 (10-60)				
3705708AA	516	10	60	04-Nov-2020	1
11683752	518-1 518 (8-58)				
3705536AA	518	8	58	04-Nov-2020	1
11683753	519-1 519 (8-58)				
3705711AA	519	8	58	04-Nov-2020	1
11683754	520-2 520 (20-45)				
3705547AA	520	20	45	04-Nov-2020	2
11683755	521-1 521 (15-40)				
0538518011	521	15	40	04-Nov-2020	1
11683756	522-1 522 (15-45)				
0538517995	522	15	45	04-Nov-2020	1
11683757	523-1 523 (10-60)				
3705722AA	523	10	60	04-Nov-2020	1
11683758	525-2 525 (20-70)				
3705715AA	525	20	70	04-Nov-2020	2
11683759	526-2 526 (20-50)				
3705723AA	526	20	50	04-Nov-2020	2
11683760	527-1 527 (0-35)				
3705703AA	527	0	35	04-Nov-2020	1
11683761	528-1 528 (0-50)				
3705702AA	528	0	50	04-Nov-2020	1
11683762	529-1 529 (0-50)				
3705718AA	529	0	50	04-Nov-2020	1
11683763	531-1 531 (12-62)				
3705710AA	531	12	62	04-Nov-2020	1
11683764	532-1 532 (8-58)				
3705716AA	532	8	58	04-Nov-2020	1
11683765	533-1 533 (0-50)				
3705713AA	533	0	50	04-Nov-2020	1
11683766	534-1 534 (0-50)				
3705706AA	534	0	50	04-Nov-2020	1

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020175751/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11683767	535-1 535 (9-30)				
3705704AA	535	9	30	04-Nov-2020	1
11683768	MM01 536 (20-45) 537 (15-40) 538 (20-45)				
3705517AA	536	20	45	04-Nov-2020	2
3705508AA	537	15	40	04-Nov-2020	2
3705649AA	538	20	45	04-Nov-2020	2
11683769	MM02 536 (45-70) 537 (40-60) 538 (45-60)				
3705514AA	536	45	70	04-Nov-2020	3
3705511AA	537	40	60	04-Nov-2020	3
3705512AA	538	45	60	04-Nov-2020	3
11683770	MM03 530 (8-30) 530 (30-60)				
3705709AA	530	8	30	04-Nov-2020	1
3705720AA	530	30	60	04-Nov-2020	2
11683771	MM04 524 (0-30) 524 (30-50)				
3705701AA	524	0	30	04-Nov-2020	1
3543278AA	524	30	50	04-Nov-2020	2
11683772	MM05 517 (12-35) 517 (35-65)				
3705700AA	517	12	35	04-Nov-2020	1
3705544AA	517	35	65	04-Nov-2020	2

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Annex (B) concerning remarks referring to certificate of analysis 2020175751/1

Remark 1)
The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

Remark 2)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

Remark 3)
PCB 138 could be influenced by PCB 163.

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BNP Paribas S.A. 227 9245 25
IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Annex (C) method references belonging to certificate of analysis 2020175751/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Grinding jaw crusher (1 kg)	W0101	Pre-treatment	EN 16179
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Grainsize < 2 µm (clay)	W0171	Sedimentation	pb 3010-4 & NEN 5753
Metals			
Barium (Ba)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cadmium (Cd)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Cobalt (Co)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Copper (Cu)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Mercury (Hg)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Molybdenum (Mo)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Nickel (Ni)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Lead (Pb)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Zinc (Zn)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703
Polychlorinated Biphenyl			
PCB (7)	W0271	GC-MS	pb 3010-8 & NEN 6980
Polycyclic Aromatic Hydrocarbons, PAH			
PAH (10) (VROM)	W0271	GC-MS	pb. 3010-6 & NEN-ISO 18287
PAK som AS3000/AP04	W0271	GC-MS	pb. 3010-6 & NEN-ISO 18287

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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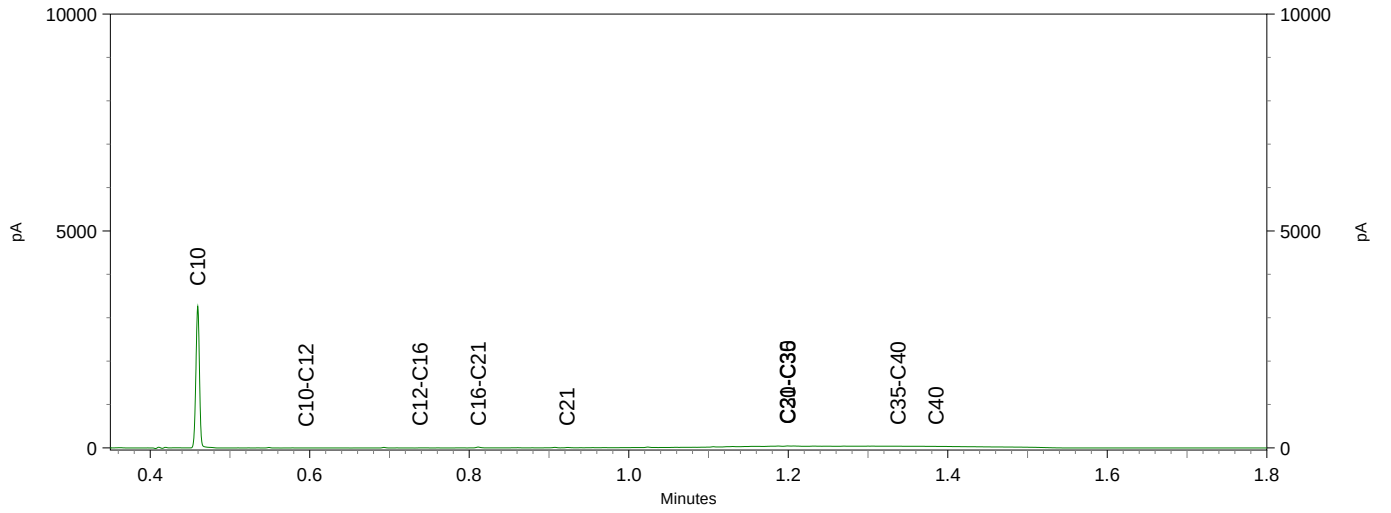
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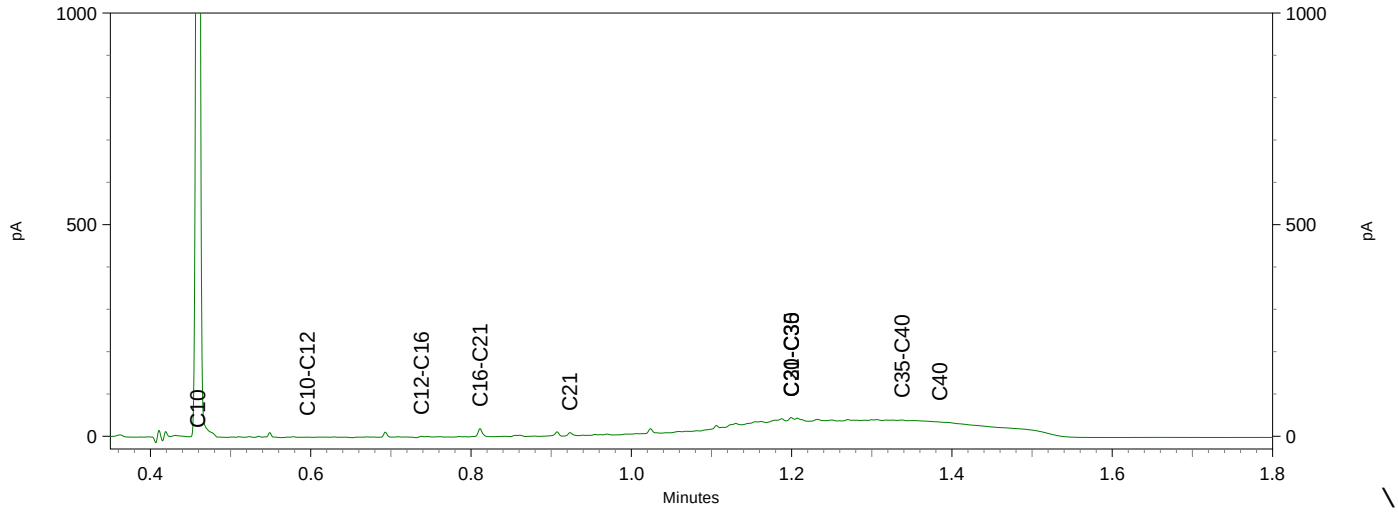
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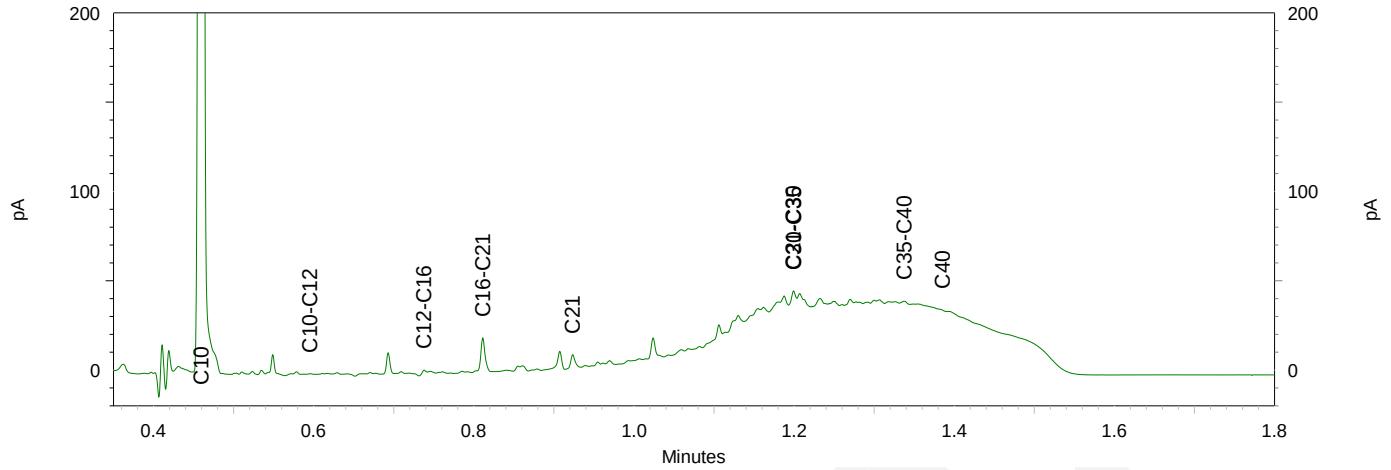
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11683751
Certificate no.: 2020175751
Sample description.: 516-1 516 (10-60)
V



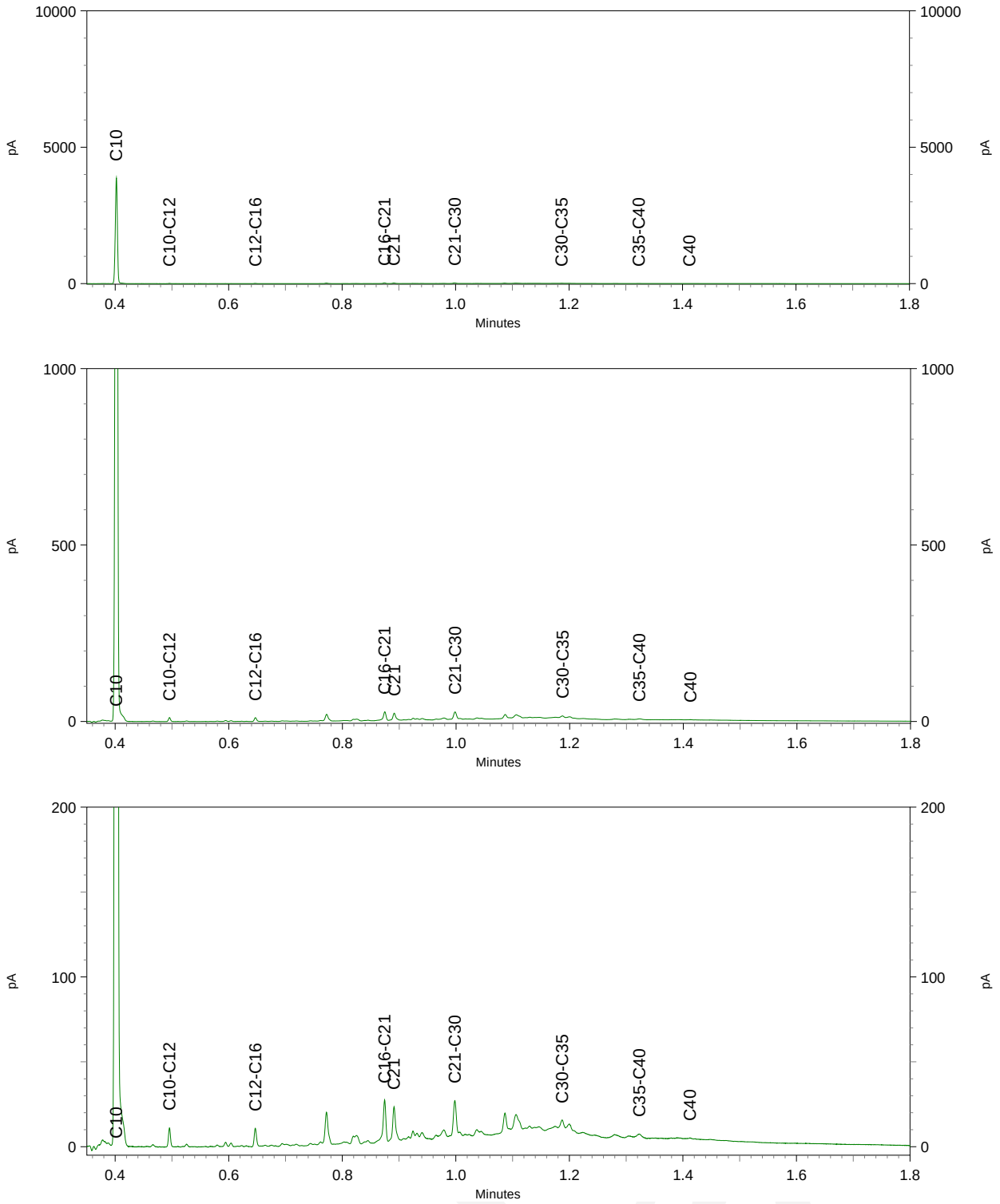




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Chromatogram TPH/ Mineral Oil

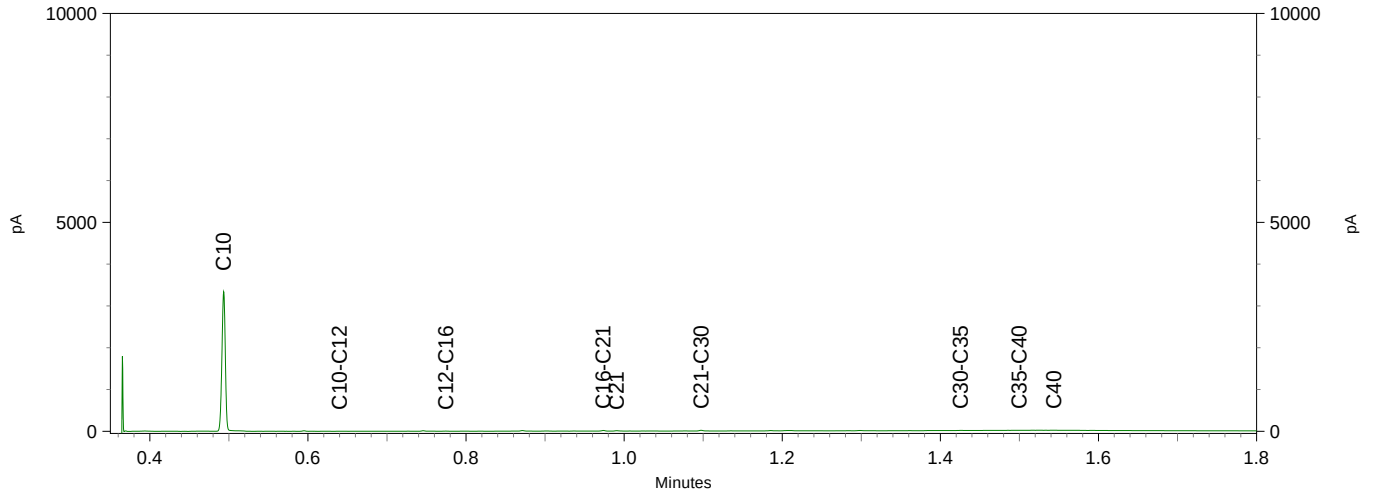
Sample ID.: 11683767
Certificate no.: 2020175751
Sample description.: 535-1 535 (9-30)
V

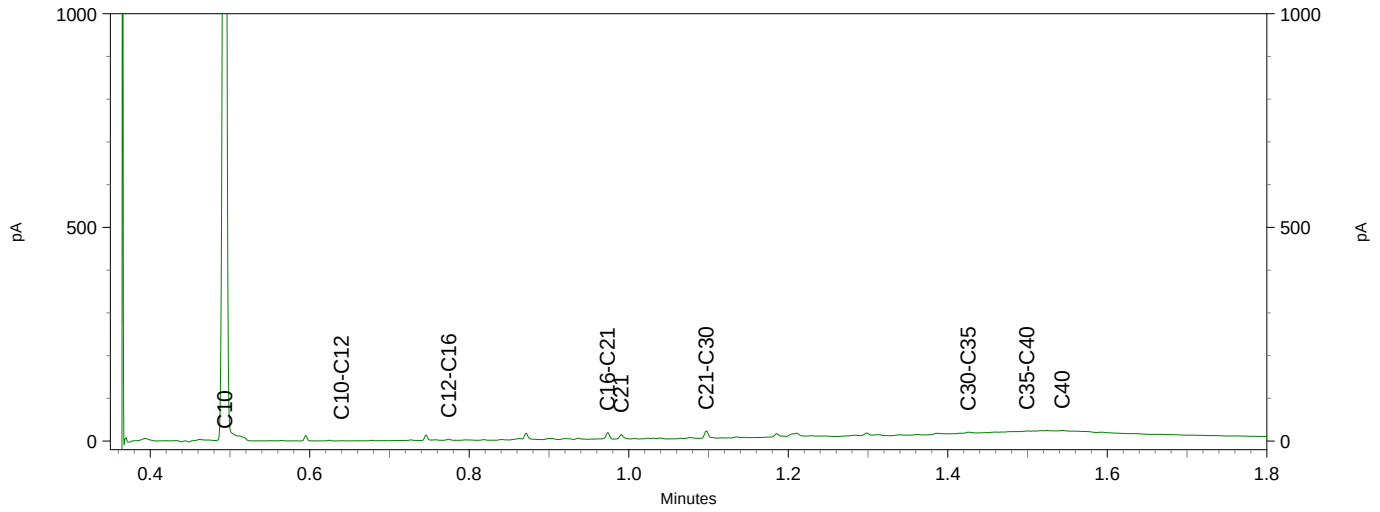


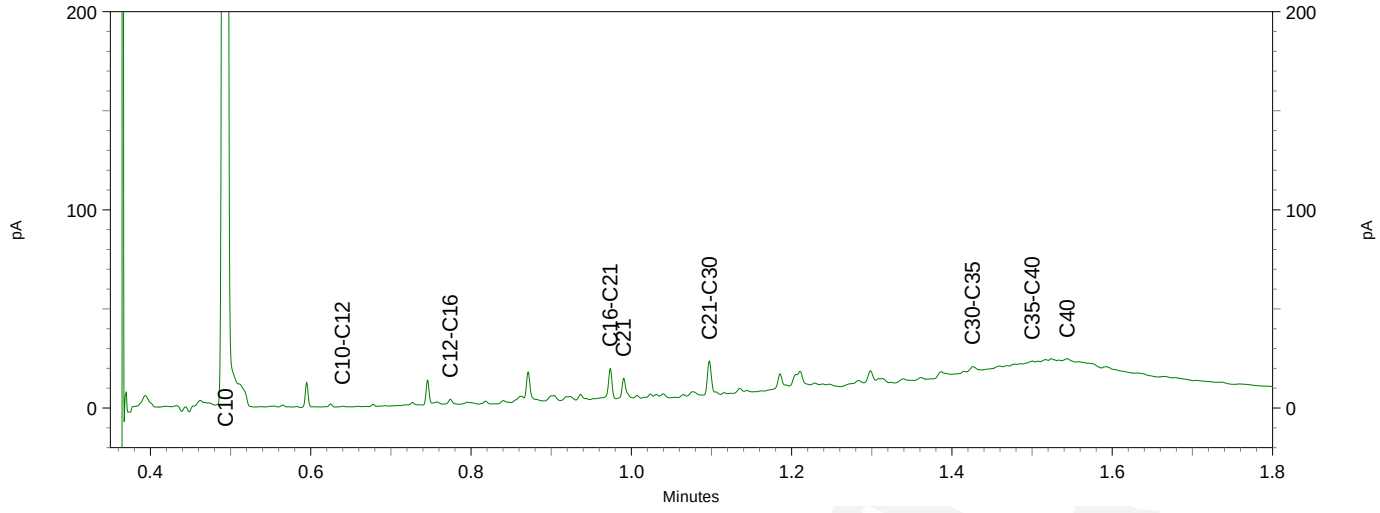
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11683768
Certificate no.:2020175751
Sample description.: MM01 536 (20-45) 537 (15-40) 538 (20-45)
V



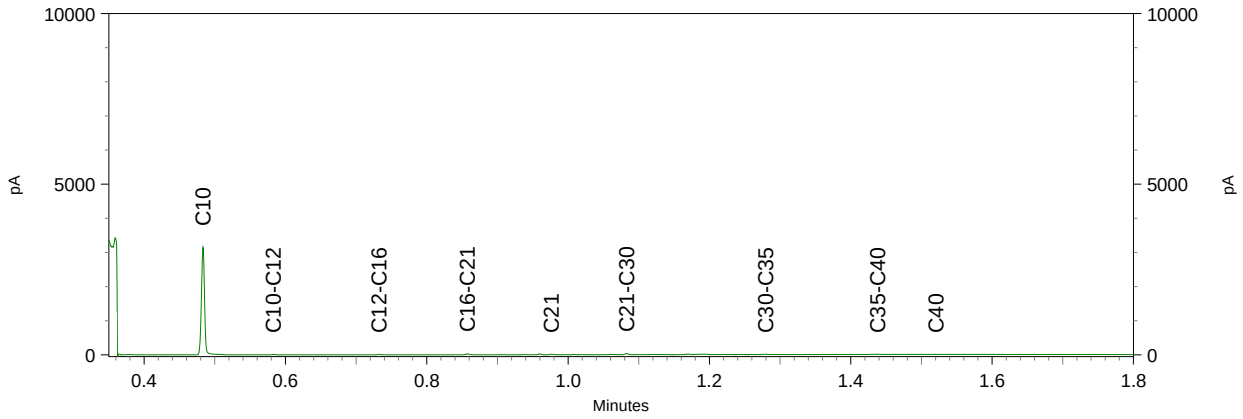


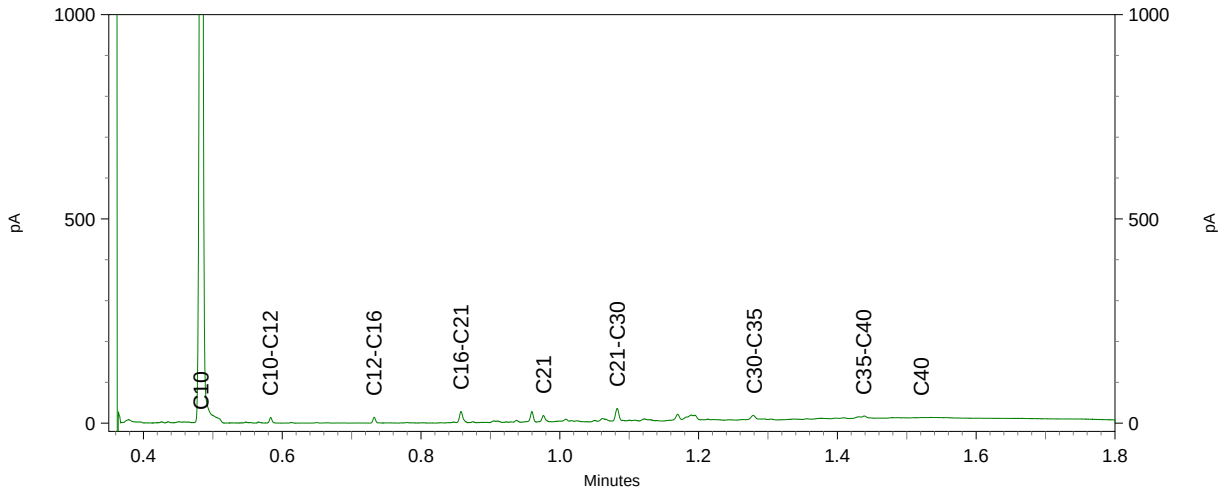


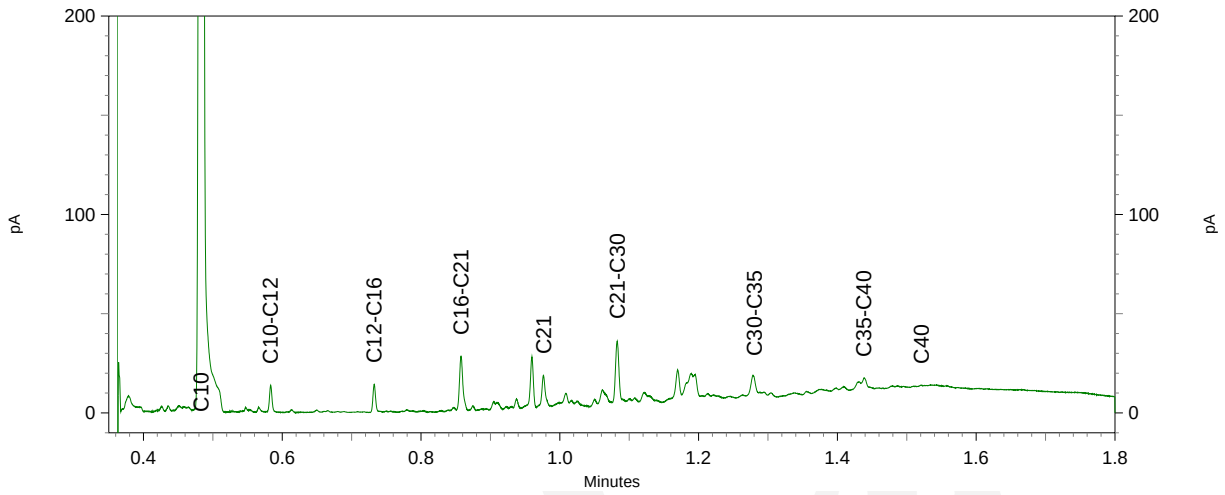
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11683769
Certificate no.: 2020175751
Sample description.: MM02 536 (45-70) 537 (40-60) 538 (45-60)
V







Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020168308/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	26-Oct-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020168308/1
Your project name	Ringdijk 390, Ridderkerk	Start date	26-Oct-2020
Your order number		End date analysis	29-Oct-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C
		Page	1/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Sample Pre-treatment						
	Preperation AS3000		Executed	Executed	Executed	Executed	Executed
	Characteristics						
S	Dry matter	% (w/w)	76.6	73.3	76.9	80.2	81.6
S	Organic matter	% (w/w) dm	3.7 1)	<0.7 1)	2.1 1)	1.7 1)	2.2 1)
	Residue on ignition	% (w/w) dm	96	99	97	98	97
	Petroleum Hydrocarbons						
	EPH (C10-C12)	mg/kg dm	<3.0	<3.0	<3.0	<3.0	<3.0
	EPH (C12-C16)	mg/kg dm	29	<5.0	<5.0	<5.0	<5.0
	EPH (C16-C21)	mg/kg dm	82	11	5.5	12	6.7
	EPH (C21-C30)	mg/kg dm	3300	220	<11	27	21
	EPH (C30-C35)	mg/kg dm	2100	140	<5.0	15	8.5
	EPH (C35-C40)	mg/kg dm	780	51	<6.0	8.3	<6.0
S	EPH Sum (C10-C40)	mg/kg dm	6300	420	<35	65	43
	Chromatogram TPH (GC)		See annex	See annex		See annex	See annex

No.	Your sample description	Specified sample matrix	Sample nr.
1	505-3 505 (110-130)	Soil, AS3000	11660259
2	505-4 505 (130-180)	Soil, AS3000	11660260
3	506-3 506 (80-130)	Soil, AS3000	11660261
4	507-3 507 (90-140)	Soil, AS3000	11660262
5	508-3 508 (70-120)	Soil, AS3000	11660263

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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TESTING
RvA L010

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020168308/1
Your project name	Ringdijk 390, Ridderkerk	Start date	26-Oct-2020
Your order number		End date analysis	29-Oct-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:17
		Annex	A,B,C
		Page	2/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9
	Sample Pre-treatment					
	Preperation AS3000		Executed	Executed	Executed	Executed
	Characteristics					
S	Dry matter	% (w/w)	77.9	71.2	73.3	80.5
S	Organic matter	% (w/w) dm	0.9 1)	2.8 1)	0.9 1)	1.2 1)
	Residue on ignition	% (w/w) dm	99	97	99	98
	Petroleum Hydrocarbons					
	EPH (C10-C12)	mg/kg dm	<3.0	<3.0	4.2	<3.0
	EPH (C12-C16)	mg/kg dm	11	<5.0	7.9	<5.0
	EPH (C16-C21)	mg/kg dm	60	<5.0	8.5	<5.0
	EPH (C21-C30)	mg/kg dm	2300	<11	11	<11
	EPH (C30-C35)	mg/kg dm	1200	7.3	6.6	5.2
	EPH (C35-C40)	mg/kg dm	540	<6.0	<6.0	<6.0
S	EPH Sum (C10-C40)	mg/kg dm	4200	<35	40	<35
	Chromatogram TPH (GC)		See annex		See annex	

No.	Your sample description	Specified sample matrix	Sample nr.
6	509-3 509 (120-170)	Soil, AS3000	11660264
7	510-4 510 (120-170)	Soil, AS3000	11660265
8	511-4 511 (100-150)	Soil, AS3000	11660266
9	513-3 513 (110-160)	Soil, AS3000	11660267

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified
ASM

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BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020168308/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11660259	505-3 505 (110-130)				
3706708AA	505	110	130	23-Oct-2020	3
11660260	505-4 505 (130-180)				
3706716AA	505	130	180	23-Oct-2020	4
11660261	506-3 506 (80-130)				
3706699AA	506	80	130	23-Oct-2020	3
11660262	507-3 507 (90-140)				
3707702AA	507	90	140	23-Oct-2020	3
11660263	508-3 508 (70-120)				
3706719AA	508	70	120	23-Oct-2020	3
11660264	509-3 509 (120-170)				
3706863AA	509	120	170	23-Oct-2020	3
11660265	510-4 510 (120-170)				
3707257AA	510	120	170	23-Oct-2020	4
11660266	511-4 511 (100-150)				
3707261AA	511	100	150	23-Oct-2020	4
11660267	513-3 513 (110-160)				
3706804AA	513	110	160	23-Oct-2020	3

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Annex (B) concerning remarks referring to certificate of analysis 2020168308/1

Remark 1)

The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

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Annex (C) method references belonging to certificate of analysis 2020168308/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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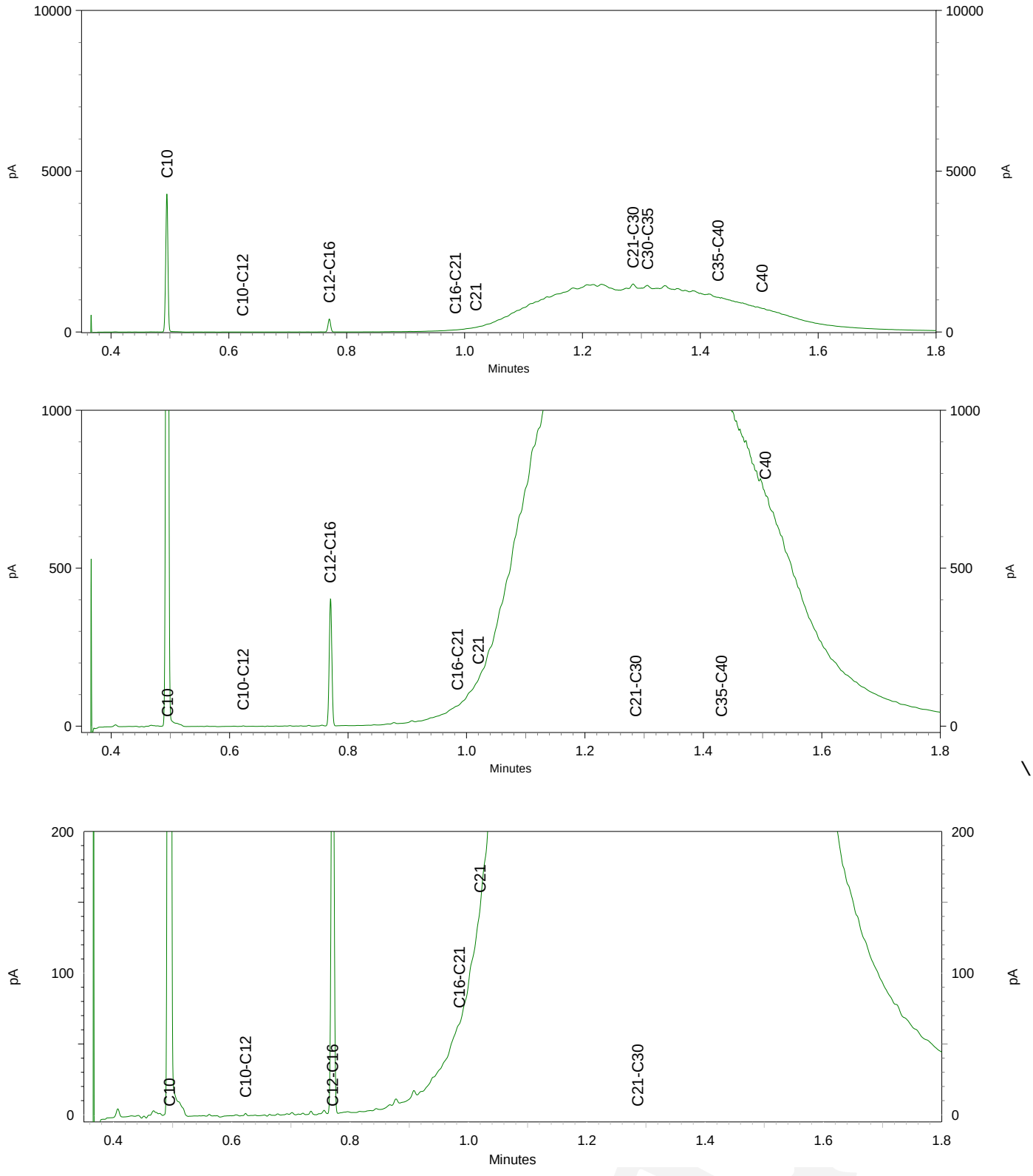
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Chromatogram TPH/ Mineral Oil

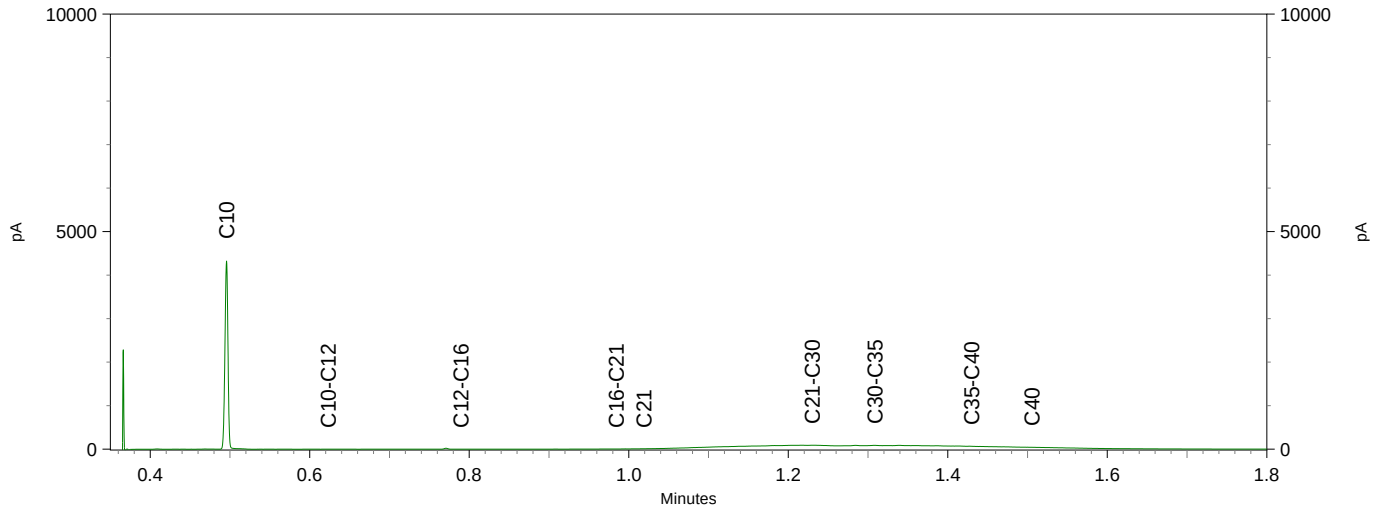
Sample ID.: 11660259
Certificate no.: 2020168308
Sample description.: 505-3 505 (110-130)
V

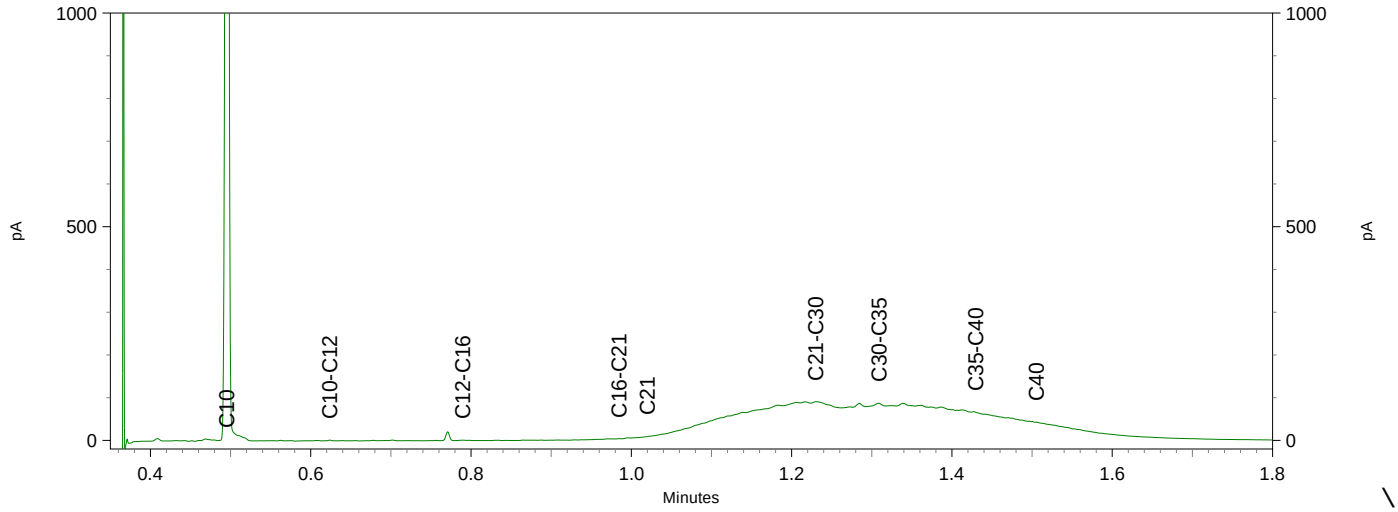


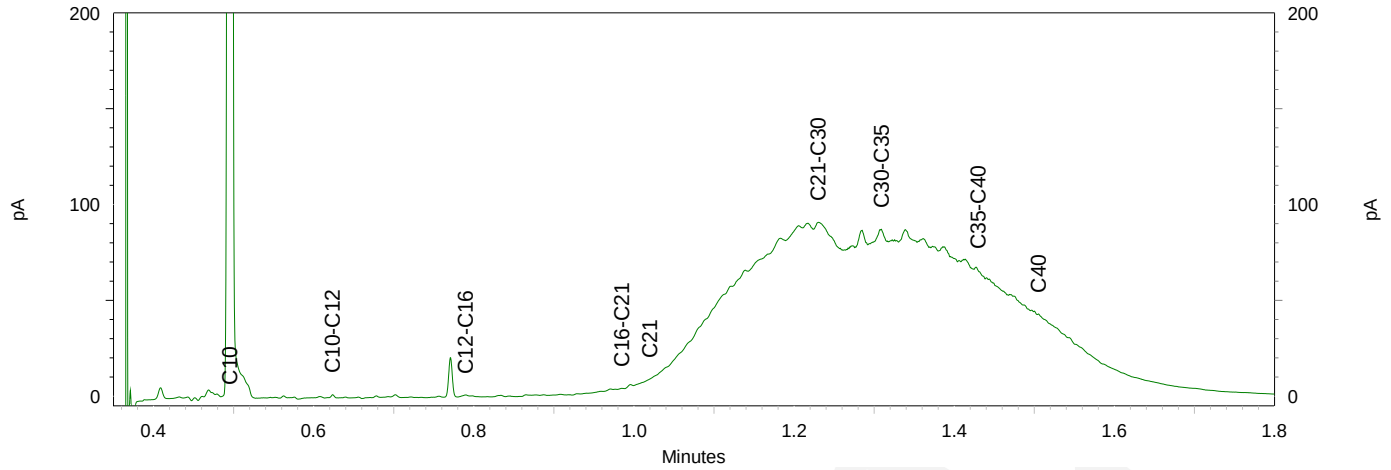
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660260
Certificate no.: 2020168308
Sample description.: 505-4 505 (130-180)
V



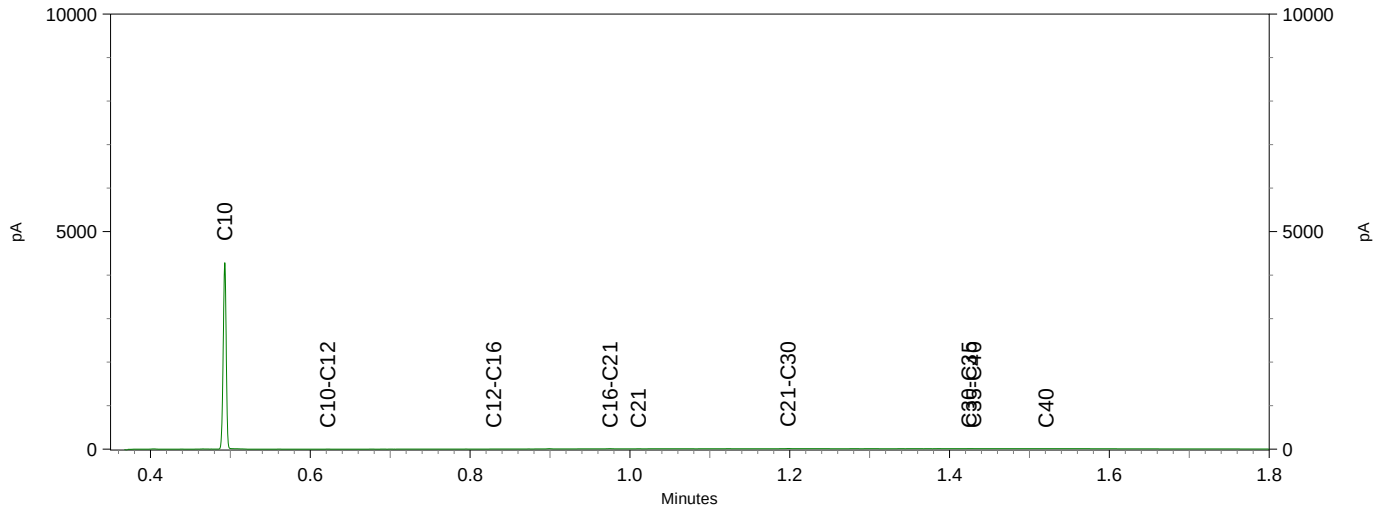


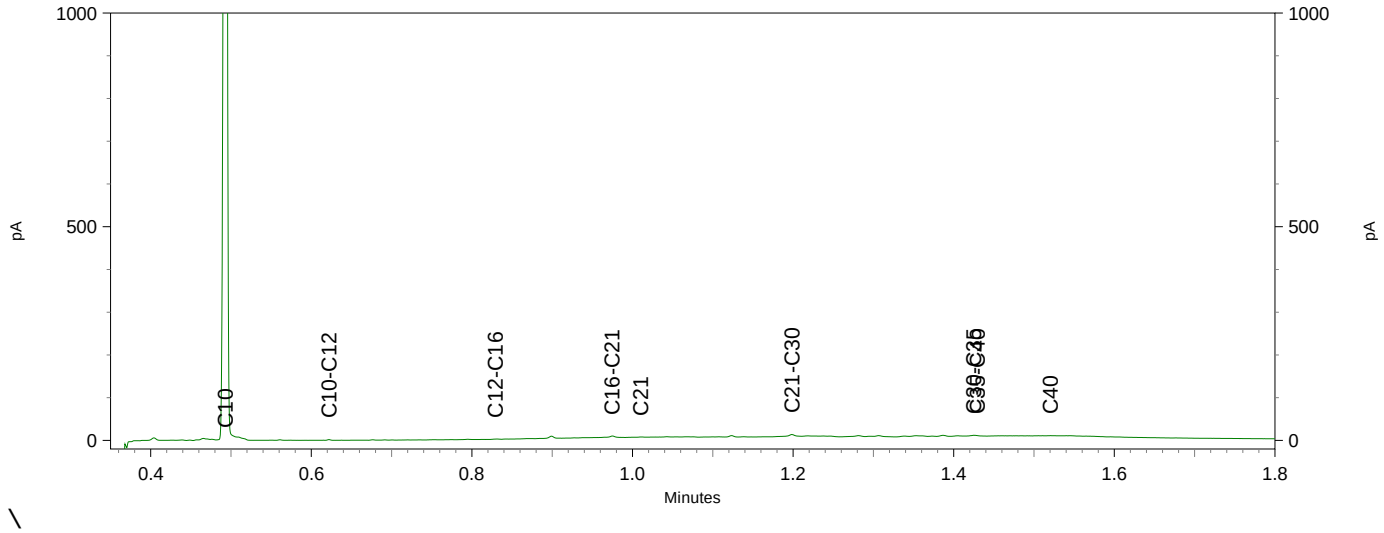


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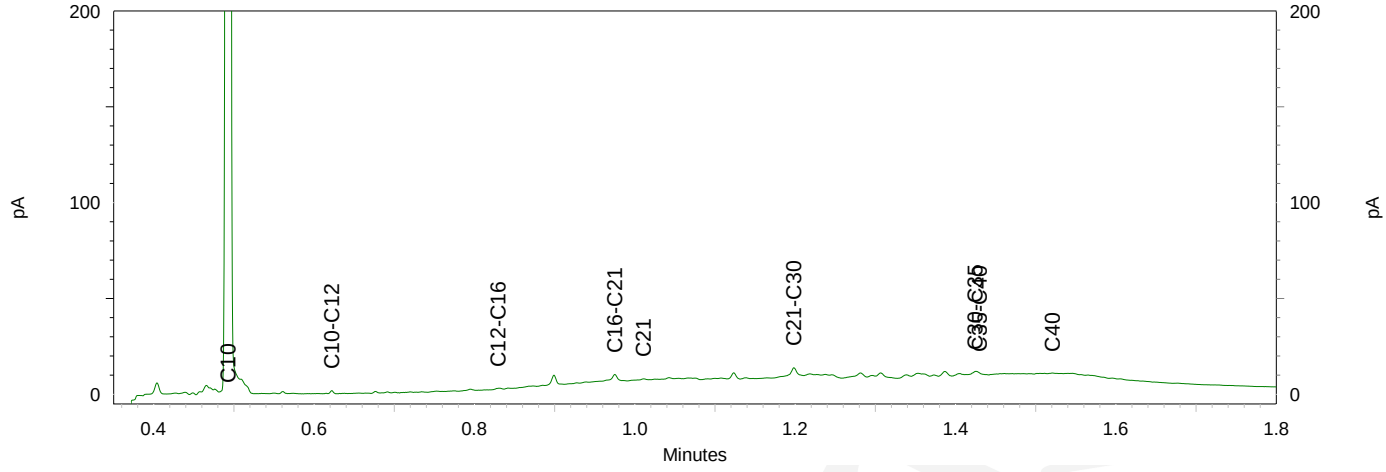
Chromatogram TPH/ Mineral Oil

Sample ID.: 11660262
Certificate no.: 2020168308
Sample description.: 507-3 507 (90-140)
V





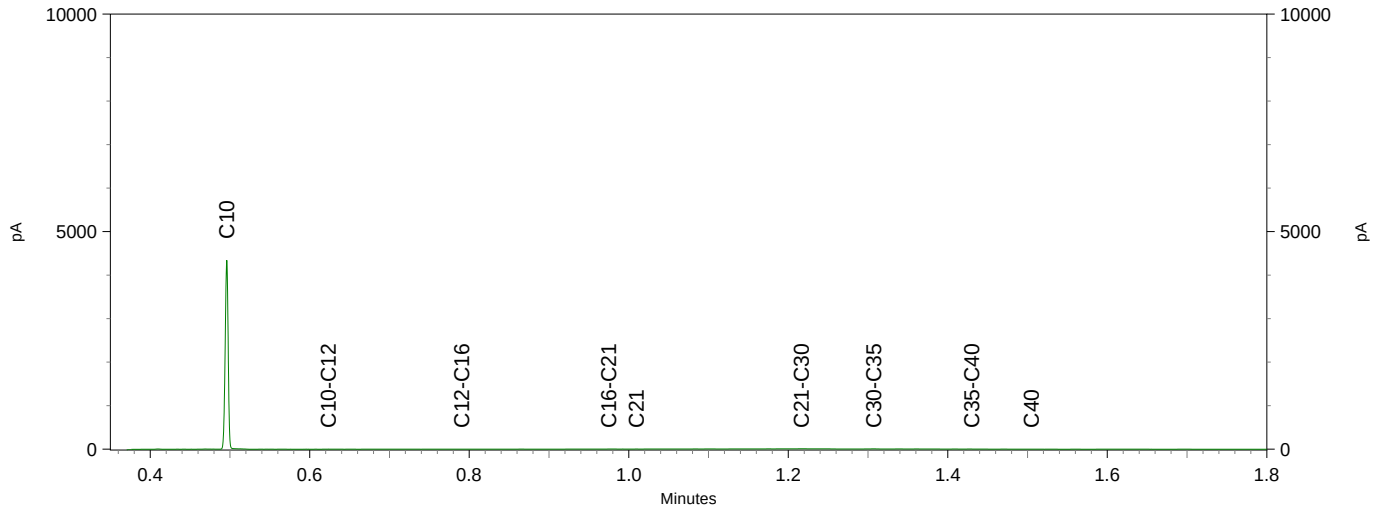
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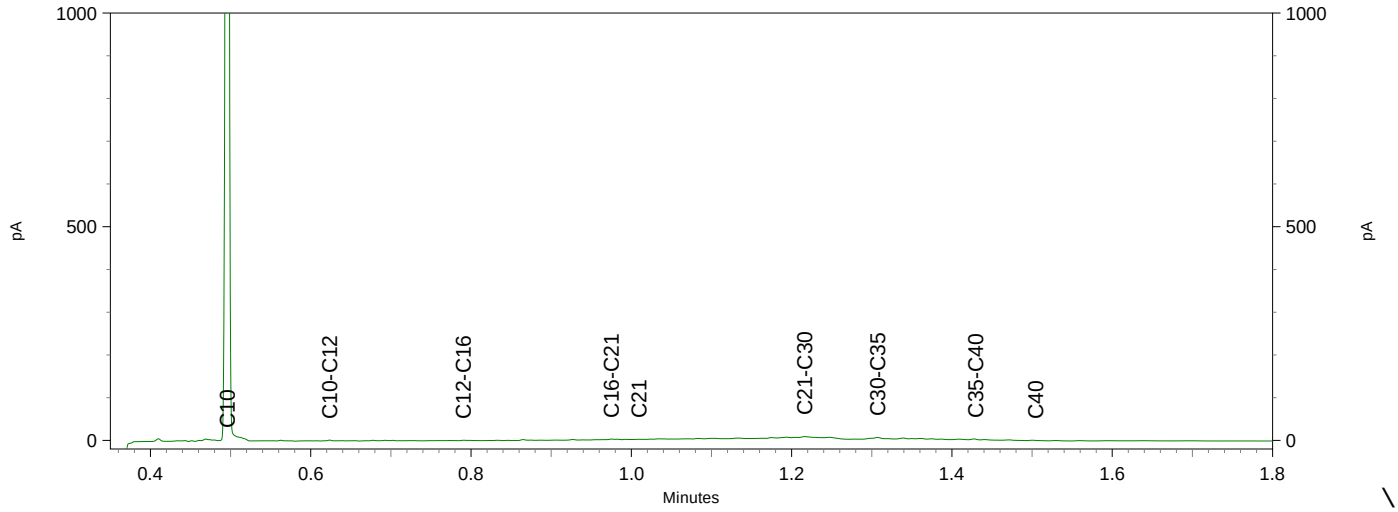


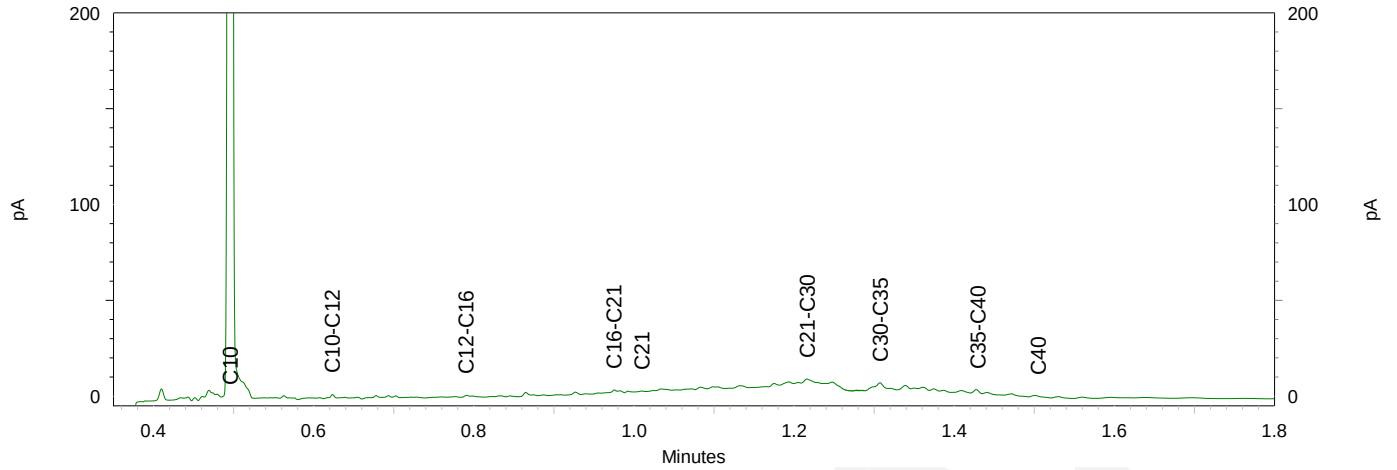
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660263
Certificate no.: 2020168308
Sample description.: 508-3 508 (70-120)
V



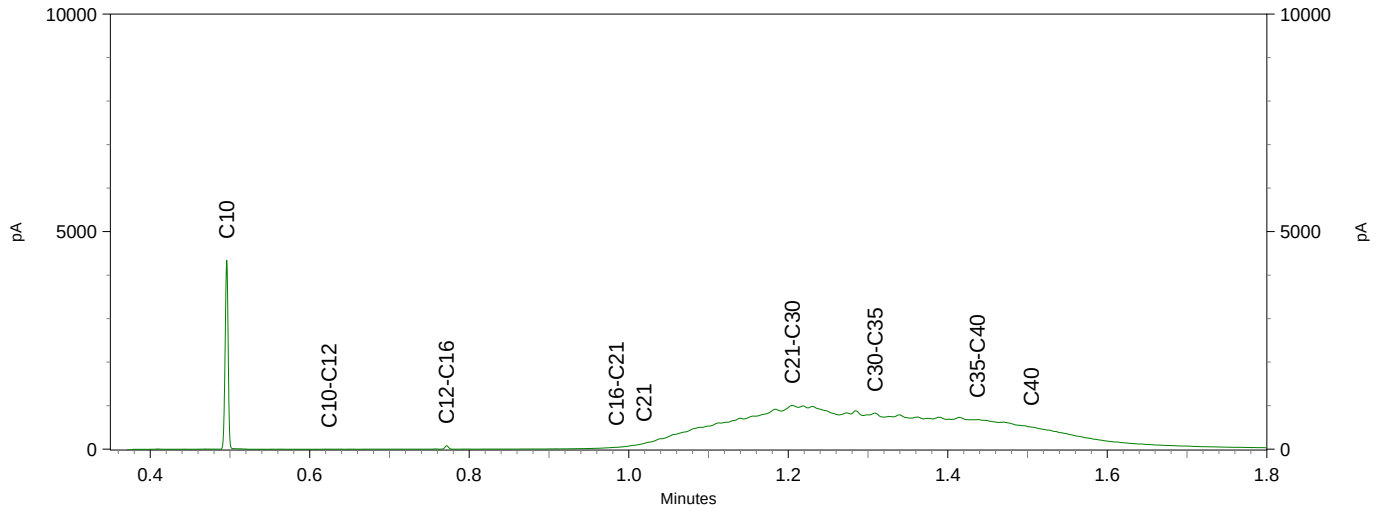


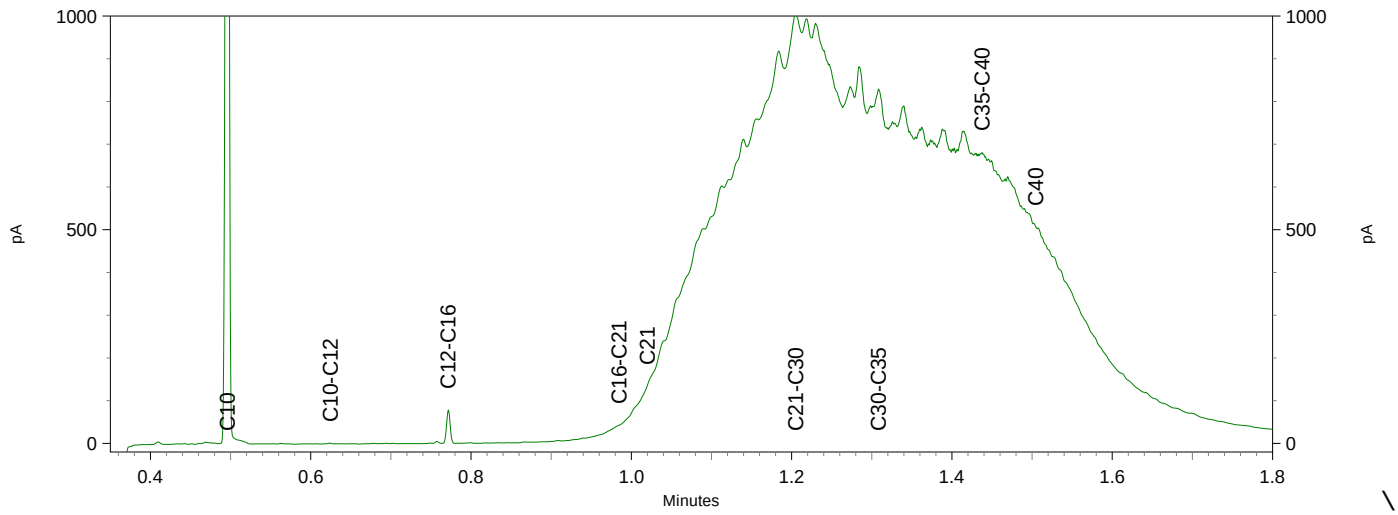


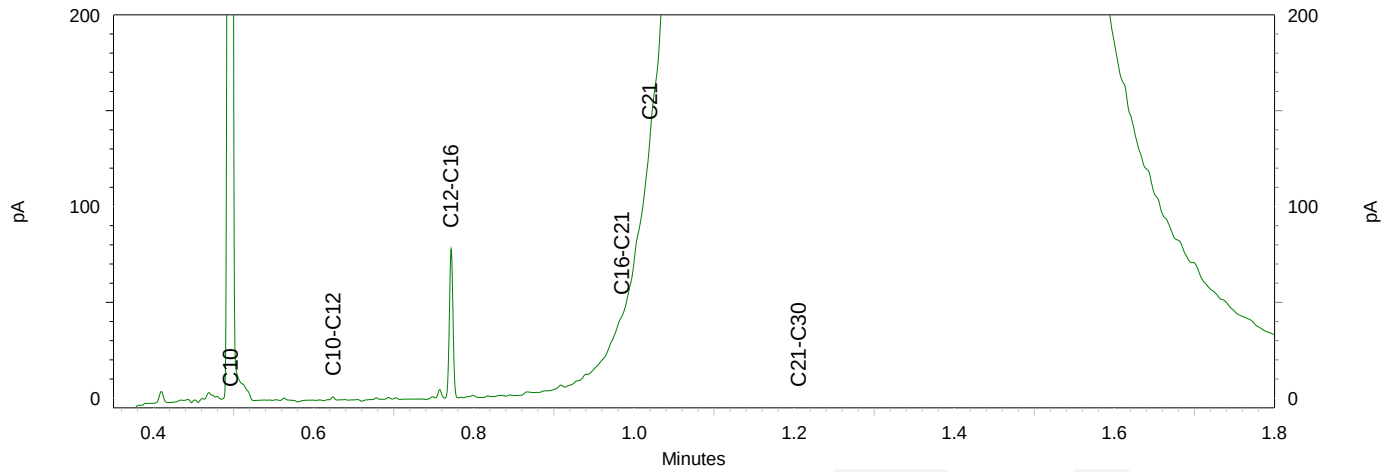
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660264
Certificate no.: 2020168308
Sample description.: 509-3 509 (120-170)
V



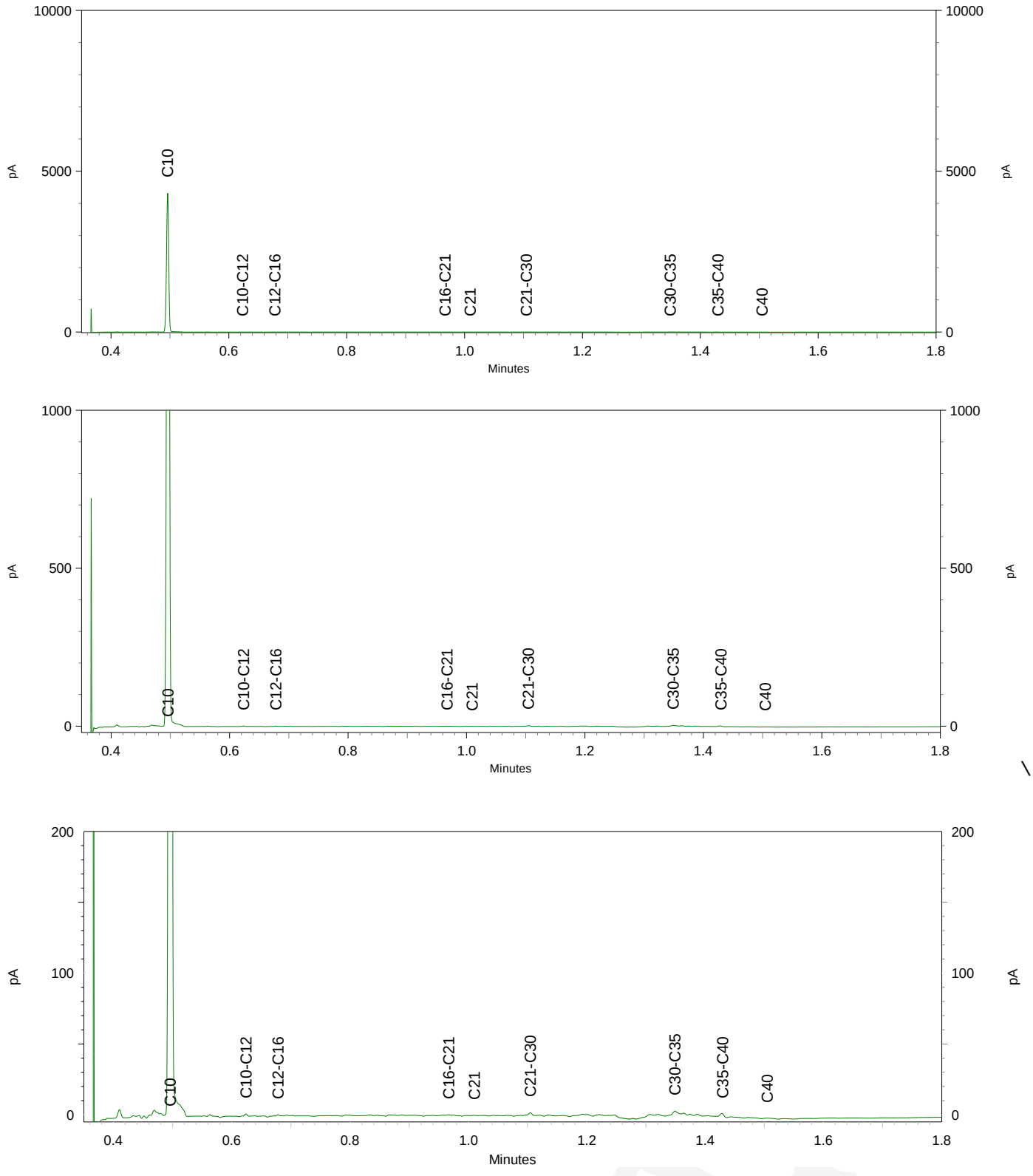




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Chromatogram TPH/ Mineral Oil

Sample ID.: 11660266
Certificate no.: 2020168308
Sample description.: 511-4 511 (100-150)
V



Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020167984/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	26-Oct-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020167984/1
Your project name	Ringdijk 390, Ridderkerk	Start date	26-Oct-2020
Your order number		End date analysis	28-Oct-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C
		Page	1/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/l		<0.20			<0.20
S	Trichloromethane	µg/l		<0.20			<0.20
S	Tetrachloromethane	µg/l		<0.10			<0.10
S	Trichloroethene	µg/l		<0.20			<0.20
S	Tetrachloroethene	µg/l		<0.10			<0.10
S	1,1-Dichloroethane	µg/l		<0.20			0.27
S	1,2-Dichloroethane	µg/l		<0.20			<0.20
S	1,1,1-Trichloroethane	µg/l		<0.10			<0.10
S	1,1,2-Trichloroethane	µg/l		<0.10			<0.10
S	cis1,2-Dichloroethene	µg/l		<0.10			0.41
S	trans 1,2-Dichloroethene	µg/l		<0.10			<0.10
	Chlorinated Hydrocarbons (sum)	µg/l		<1.6			<1.6
S	Vinyl chloride	µg/l		<0.10			<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/l		0.14 [1)]			0.48
	Petroleum Hydrocarbons						
	TPH (C10-C12)	µg/l	<10		530	<10	<10
	TPH (C12-C16)	µg/l	<10		3500	<10	<10
	TPH (C16-C21)	µg/l	<10		4700	<10	<10
	TPH (C21-C30)	µg/l	<15		2400	<15	<15
	TPH (C30-C35)	µg/l	<10		72	<10	<10
	TPH (C35-C40)	µg/l	<10		<10	<10	<10
S	TPH Sum (C10-C40)	µg/l	<50		11000 [2)]	<50	<50
	Chromatogram				See annex		

No.	Your sample description	Specified sample matrix	Sample nr.
1	41-1-3 42	Water, AS3000	11659305
2	97-1-1 97	Water, AS3000	11659306
3	501-1-1 501 (190-290)	Water, AS3000	11659307
4	502-1-1 502 (190-290)	Water, AS3000	11659308
5	503-1-1 503	Water, AS3000	11659309

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020167984/1
Your project name	Ringdijk 390, Ridderkerk	Start date	26-Oct-2020
Your order number		End date analysis	28-Oct-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:18
		Annex	A,B,C
		Page	2/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7
	Volatile halogenated Hydrocarbons			
S	Dichloromethane	µg/l		<0.20
S	Trichloromethane	µg/l		<0.20
S	Tetrachloromethane	µg/l		<0.10
S	Trichloroethene	µg/l		<0.20
S	Tetrachloroethene	µg/l		<0.10
S	1,1-Dichloroethane	µg/l		<0.20
S	1,2-Dichloroethane	µg/l		<0.20
S	1,1,1-Trichloroethane	µg/l		<0.10
S	1,1,2-Trichloroethane	µg/l		<0.10
S	cis1,2-Dichloroethene	µg/l		<0.10
S	trans 1,2-Dichloroethene	µg/l		<0.10
	Chlorinated Hydrocarbons (sum)	µg/l		<1.6
S	Vinyl chloride	µg/l		<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/l		0.14 1)
	Petroleum Hydrocarbons			
	TPH (C10-C12)	µg/l	<10	<10
	TPH (C12-C16)	µg/l	<10	<10
	TPH (C16-C21)	µg/l	15	<10
	TPH (C21-C30)	µg/l	160	<15
	TPH (C30-C35)	µg/l	48	<10
	TPH (C35-C40)	µg/l	10	<10
S	TPH Sum (C10-C40)	µg/l	240	<50
	Chromatogram		See annex	

No.	Your sample description	Specified sample matrix	Sample nr.
6	504-1-1 504 (120-220)	Water, AS3000	11659310
7	0bas-1-1 0bas	Water, AS3000	11659311

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified ASM

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IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020167984/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11659305	41-1-3 42				
0692054643	42			23-Oct-2020	1
0670316010	42			23-Oct-2020	2
11659306	97-1-1 97				
0692054640	97			23-Oct-2020	1
0670316077	97			23-Oct-2020	2
11659307	501-1-1 501 (190-290)				
0692054628	501	190	290	23-Oct-2020	1
0670316026	501	190	290	23-Oct-2020	2
11659308	502-1-1 502 (190-290)				
0692054644	502	190	290	23-Oct-2020	1
0670316085	502	190	290	23-Oct-2020	2
11659309	503-1-1 503				
0670316081	503			23-Oct-2020	2
0692054657	503			23-Oct-2020	1
11659310	504-1-1 504 (120-220)				
0692054627	504	120	220	23-Oct-2020	1
0670316083	504	120	220	23-Oct-2020	2
11659311	0bas-1-1 0bas				
0692054655	0bas			23-Oct-2020	1
0670316079	0bas			23-Oct-2020	2

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Annex (B) concerning remarks referring to certificate of analysis 2020167984/1

Remark 1)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

Remark 2)
Volatile oil fraction present.

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Annex (C) method references belonging to certificate of analysis 2020167984/1

Analysis	Method	Technique	Method reference
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Vinyl chloride	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1
Petroleum Hydrocarbons			
EPH (C10-C40)	W0215	GC/FID	pb 3110-5
Chromatogram oil (GC)	W0215	GC/FID	In house method

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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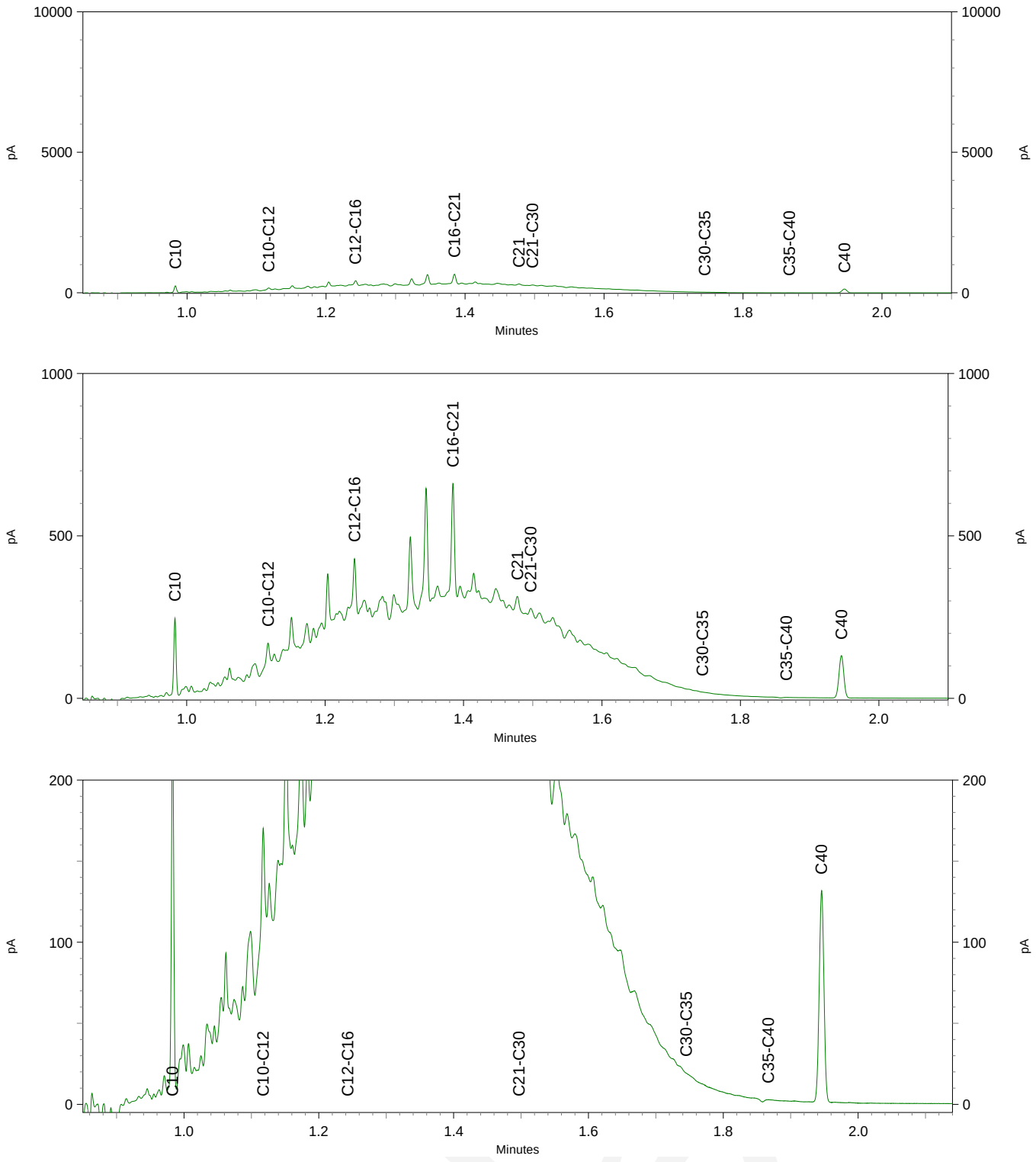
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Chromatogram TPH/ Mineral Oil

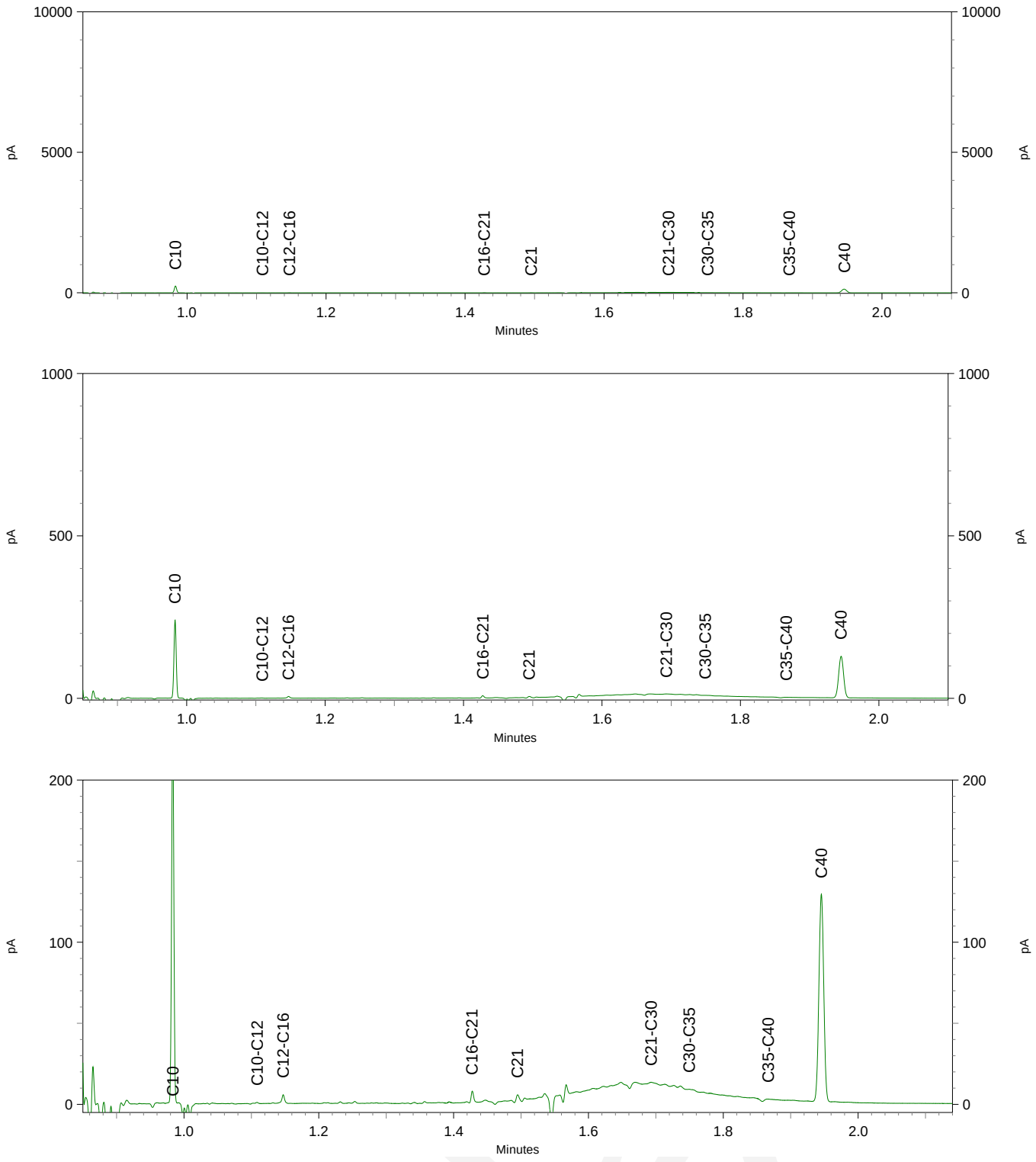
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Certificate no.: 2020167984
Sample description.: 501-1-1 501 (190-290)
V



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Chromatogram TPH/ Mineral Oil

Sample ID.: 11659310
Certificate no.: 2020167984
Sample description.: 504-1-1 504 (120-220)
V



Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020153093/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	02-Oct-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020153093/1
Your project name	Ringdijk 390, Ridderkerk	Start date	02-Oct-2020
Your order number		End date analysis	06-Oct-2020
Your sample taker		Report date	18-Dec-2020/12:17
		Annex	A,B,C
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	
	Sample Pre-treatment			
	Preperation AS3000		Executed	
	Characteristics			
S	Dry matter	% (w/w)	84.1	
S	Organic matter	% (w/w) dm	2.0	1)
	Residue on ignition	% (w/w) dm	98	
	Mono Aromatic Hydrocarbons			
S	Benzene	mg/kg dm	<0.050	
S	Toluene	mg/kg dm	<0.050	
S	Ethylbenzene	mg/kg dm	<0.050	
S	o-Xylene	mg/kg dm	<0.050	
S	m,p-Xylene	mg/kg dm	<0.050	
S	Xylenen (som) (factor 0,7)	mg/kg dm	0.070	2)
	BTEX (sum)	mg/kg dm	<0.25	
S	Naphtalene	mg/kg dm	<0.010	
	Petroleum Hydrocarbons			
	EPH (C10-C12)	mg/kg dm	<3.0	
	EPH (C12-C16)	mg/kg dm	14	
	EPH (C16-C21)	mg/kg dm	420	
	EPH (C21-C30)	mg/kg dm	9400	
	EPH (C30-C35)	mg/kg dm	2700	
	EPH (C35-C40)	mg/kg dm	560	
S	EPH Sum (C10-C40)	mg/kg dm	13000	
	Chromatogram TPH (GC)		See annex	

No.	Your sample description	Specified sample matrix	Sample nr.
1	504-6 504 (60-80)	Soil, AS3000 [redacted]	11612917

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020153093/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11612917	504-6 504 (60-80)				
0550286026	504	60	80	01-Oct-2020	6

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Annex (B) concerning remarks referring to certificate of analysis 2020153093/1

Remark 1)
The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

Remark 2)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020153093/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Mono Aromatic Hydrocarbons			
Xylenen som AS/AP	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Aromatics (BTEXN)	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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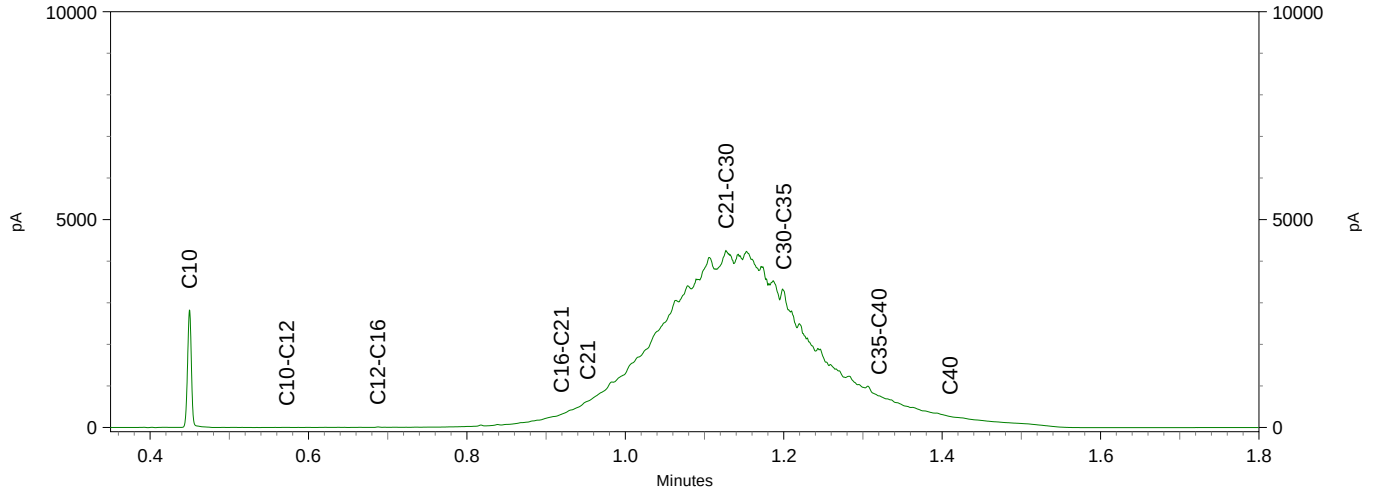
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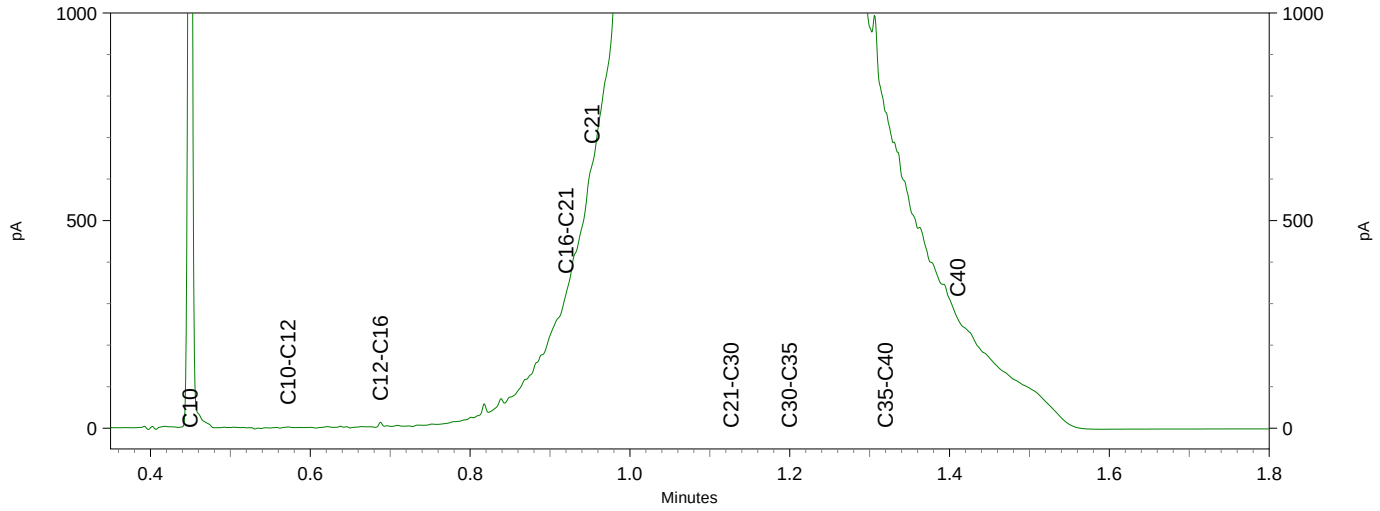
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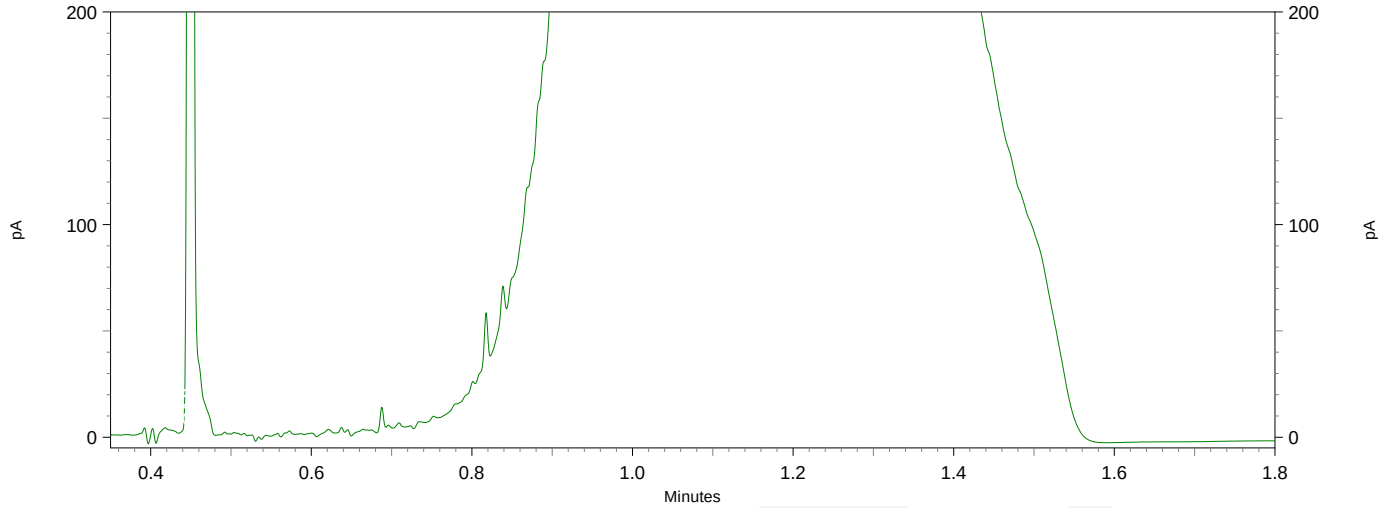
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11612917
Certificate no.:2020153093
Sample description.: 504-6 504 (60-80)
V







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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020155317/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	06-Oct-2020

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Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020155317/1
Your project name	Ringdijk 390, Ridderkerk	Start date	06-Oct-2020
Your order number		End date analysis	13-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	1/3
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/l	<0.20	<0.20	250	1.0	<2.0 [1)]
S	Tetrachloroethene	µg/l	<0.10	<0.10	370	14	<1.0 [1)]
S	1,1-Dichloroethane	µg/l	<0.20	1.8	530	0.34	14
S	1,2-Dichloroethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/l	<0.10	<0.10	3600	0.81	770
S	trans 1,2-Dichloroethene	µg/l	<0.10	<0.10	12	<0.10	0.50
	Chlorinated Hydrocarbons (sum)	µg/l	<1.6	1.8	4700	16	790
S	cis+trans 1,2-Dichloroethenes (sum)	µg/l	0.14 [2)]	0.14 [2)]	3600	0.88	770

No.	Your sample description	Specified sample matrix	Sample nr.
1	1011-2-1-1 1011-2 (500-600)	Water, AS3000	11619381
2	1011-3-1-1 1011-3 (900-1000)	Water, AS3000	11619382
3	1012-1-1-1 1012-2 (500-600)	Water, AS3000	11619383
4	1012-1-1-2 1012-1 (200-300)	Water, AS3000	11619384
5	1012-3-1-1 1012-3 (900-1000)	Water, AS3000	11619385

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A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020155317/1
Your project name	Ringdijk 390, Ridderkerk	Start date	06-Oct-2020
Your order number		End date analysis	13-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	2/3
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/l	58	76000	29000	<0.20	1.0
S	Tetrachloroethene	µg/l	40	210000	91000	0.36	8.6
S	1,1-Dichloroethane	µg/l	4.1	<2000 [1)]	93	2.4	0.25
S	1,2-Dichloroethane	µg/l	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/l	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/l	160	92000	23000	0.72	0.34
S	trans 1,2-Dichloroethene	µg/l	0.49	310	170	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/l	260	370000	140000	3.5	10
S	Vinyl chloride	µg/l	20	6800			
S	cis+trans 1,2-Dichloroethenes (sum)	µg/l	160	93000	23000	0.79	0.41

No.	Your sample description	Specified sample matrix	Sample nr.
6	1013-1-1-1 1013-1 (200-300)	Water, AS3000	11619386
7	1013-2-1-1 1013-2 (500-600)	Water, AS3000	11619387
8	1013-3-1-1 1013-3 (900-1000)	Water, AS3000	11619388
9	1014-1-1-1 1014-1 (200-300)	Water, AS3000	11619389
10	1014-2-1-1 1014-2 (500-600)	Water, AS3000	11619390

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020155317/1
Your project name	Ringdijk 390, Ridderkerk	Start date	06-Oct-2020
Your order number		End date analysis	13-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:17
		Annex	A,B,C,D
		Page	3/3
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14
	Volatile halogenated Hydrocarbons					
S	Dichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/l	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/l	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/l	3.5	11	<0.20	<0.20
S	Tetrachloroethene	µg/l	15	73	<0.10	<0.10
S	1,1-Dichloroethane	µg/l	<0.20	1.5	2.8	<0.20
S	1,2-Dichloroethane	µg/l	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/l	<0.10	0.25	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/l	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/l	1.7	5.5	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/l	<0.10	0.12	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/l	20	92	2.8	<1.6
S	cis+trans 1,2-Dichloroethenes (sum)	µg/l	1.7	5.7	0.14 [2)]	0.14 [2)]

No.	Your sample description	Specified sample matrix	Sample nr.
11	1014-3-1-1 1014-3 (900-1000)	Water, AS3000	11619391
12	1015-1-1-1 1015-1 (200-300)	Water, AS3000	11619392
13	1015-2-1-1 1015-2 (500-600)	Water, AS3000	11619393
14	1015-3-1-1 1015-3 (900-1000)	Water, AS3000	11619394

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020155317/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11619381	1011-2-1-1 1011-2 (500-600)				
0692004097	1011-2	500	600	05-Oct-2020	1
11619382	1011-3-1-1 1011-3 (900-1000)				
0692004090	1011-3	900	1000	05-Oct-2020	1
11619383	1012-1-1-1 1012-2 (500-600)				
0692004113	1012-2	500	600	05-Oct-2020	1
11619384	1012-1-1-2 1012-1 (200-300)				
0692004128	1012-1	200	300	05-Oct-2020	1
11619385	1012-3-1-1 1012-3 (900-1000)				
0692004096	1012-3	900	1000	05-Oct-2020	1
11619386	1013-1-1-1 1013-1 (200-300)				
0692004091	1013-1	200	300	05-Oct-2020	1
11619387	1013-2-1-1 1013-2 (500-600)				
0692004105	1013-2	500	600	05-Oct-2020	1
11619388	1013-3-1-1 1013-3 (900-1000)				
0692004121	1013-3	900	1000	05-Oct-2020	1
11619389	1014-1-1-1 1014-1 (200-300)				
0692004124	1014-1	200	300	05-Oct-2020	1
11619390	1014-2-1-1 1014-2 (500-600)				
0692004116	1014-2	500	600	05-Oct-2020	1
11619391	1014-3-1-1 1014-3 (900-1000)				
0692004106	1014-3	900	1000	05-Oct-2020	1
11619392	1015-1-1-1 1015-1 (200-300)				
0692004100	1015-1	200	300	05-Oct-2020	1
11619393	1015-2-1-1 1015-2 (500-600)				
0692004117	1015-2	500	600	05-Oct-2020	1
11619394	1015-3-1-1 1015-3 (900-1000)				
0692004125	1015-3	900	1000	05-Oct-2020	1

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Annex (B) concerning remarks referring to certificate of analysis 2020155317/1

Remark 1)
Reporting limit increased due to dilution of sample.

Remark 2)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020155317/1

Analysis	Method	Technique	Method reference
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Vinyl chloride	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020155317/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
During sample acceptance was established that the pH of the sample was not in accordance with the requirements.	
Volatiles (HS) preparation	11619385

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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020152882/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	02-Oct-2020

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Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	1/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 2)	0.14 2)	0.14 2)	0.14 2)	0.14 2)

No.	Your sample description	Specified sample matrix	Sample nr.
1	1002-1-1-1 1002-1 (200-300)	Water, AS3000	11612066
2	1002-3-1-1 1002-3 (900-1000)	Water, AS3000	11612067
3	1003-1-1-1 1003-1 (200-300)	Water, AS3000	11612068
4	1003-2-1-1 1003-2 (500-600)	Water, AS3000	11612069
5	1003-3-1-1 1003-3 (900-1000)	Water, AS3000	11612070

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	2/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7	8	9	10
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	0.28	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L		<0.10	<0.10	0.34	
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 2)	0.14 2)	0.14 2)	0.35	0.14 2)

No.	Your sample description	Specified sample matrix	Sample nr.
6	1004-1-1-1 1004-1 (200-300)	Water, AS3000	11612071
7	1004-2-1-1 1004-2 (500-600)	Water, AS3000	11612072
8	1004-3-1-1 1004-3 (900-1000)	Water, AS3000	11612073
9	1005-1-1-1 1005-1 (200-300)	Water, AS3000	11612074
10	1005-2-1-1 1005-2 (500-600)	Water, AS3000	11612075

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BNP Paribas S.A. 227 9245 25
IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

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TESTING
RvA L010

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	3/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	11	12	13	14	15
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L			<0.10	<0.10	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 [2)]	0.14 [2)]	0.14 [2)]	0.14 [2)]	0.14 [2)]

No.	Your sample description	Specified sample matrix	Sample nr.
11	1005-3-1-1 1005-3 (900-1000)	Water, AS3000	11612076
12	1006-1-1-1 1006-1 (200-300)	Water, AS3000	11612077
13	1006-2-1-1 1006-2 (500-600)	Water, AS3000	11612078
14	1006-3-1-1 1006-3 (900-1000)	Water, AS3000	11612079
15	1007-1-1-1 1007-1 (200-300)	Water, AS3000	11612080

Q: Dutch Accreditation Council (RvA) accredited test
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TESTING
RvA L010

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	4/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	16	17	18	19	20
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	0.23	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	<1.6	<1.6
S	Vinyl chloride	µg/L	<0.10	<0.10	<0.10	0.17	<0.10
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 2)	0.14 2)	0.30	0.14 2)	0.14 2)

No.	Your sample description	Specified sample matrix	Sample nr.
16	1007-2-1-1 1007-2 (500-600)	Water, AS3000	11612081
17	1007-3-1-1 1007-3 (900-1000)	Water, AS3000	11612082
18	1008-1-1-1 1008-1 (200-300)	Water, AS3000	11612083
19	1008-2-1-1 1008-2 (500-600)	Water, AS3000	11612084
20	1008-3-1-1 1008-3 (900-1000)	Water, AS3000	11612085

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TESTING
RvA L010

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KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	5/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	21	22	23	24	25
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	<0.20	<0.20	110	<0.20	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	360	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	0.24	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	460	<1.6	<1.6
S	Vinyl chloride	µg/L	<0.10	<0.10	>500 [1)]	<0.10	
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 [2)]	0.14 [2)]	360	0.14 [2)]	0.14 [2)]

No.	Your sample description	Specified sample matrix	Sample nr.
21	1009-1-1-1 1009-1 (200-300)	Water, AS3000	11612086
22	1009-2-1-1 1009-2 (500-600)	Water, AS3000	11612087
23	1009-3-1-1 1009-3 (900-1000)	Water, AS3000	11612088
24	1010-1-1-1 1010-1 (200-300)	Water, AS3000	11612089
25	1010-2-1-1 1010-2 (500-600)	Water, AS3000	11612090

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152882/1
Your project name	Ringdijk 390, Ridderkerk	Start date	08-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker	pam	Report date	18-Dec-2020/12:13
		Annex	A,B,C
		Page	6/6
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	26	27
	Volatile halogenated Hydrocarbons			
S	Dichloromethane	µg/L	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10
S	1,1-Dichloroethane	µg/L	0.36	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 2)	0.14 2)

No.	Your sample description	Specified sample matrix	Sample nr.
26	1010-3-1-1 1010-3 (900-1000)	Water, AS3000	11612091
27	1011-1-1-1 1011-1 (200-300)	Water, AS3000	11612092

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Verified ASM NV

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TESTING RvA L010

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020152882/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11612066	1002-1-1-1 1002-1 (200-300)				
0692004085	1002-1	200	300	01-Oct-2020	1
11612067	1002-3-1-1 1002-3 (900-1000)				
0692004093	1002-3	900	1000	01-Oct-2020	1
11612068	1003-1-1-1 1003-1 (200-300)				
0692004102	1003-1	200	300	01-Oct-2020	1
11612069	1003-2-1-1 1003-2 (500-600)				
0692004094	1003-2	500	600	01-Oct-2020	1
11612070	1003-3-1-1 1003-3 (900-1000)				
0692004101	1003-3	900	1000	01-Oct-2020	1
11612071	1004-1-1-1 1004-1 (200-300)				
0692004095	1004-1	200	300	01-Oct-2020	1
11612072	1004-2-1-1 1004-2 (500-600)				
0692004111	1004-2	500	600	01-Oct-2020	1
11612073	1004-3-1-1 1004-3 (900-1000)				
0692004110	1004-3	900	1000	01-Oct-2020	1
11612074	1005-1-1-1 1005-1 (200-300)				
0692004118	1005-1	200	300	01-Oct-2020	1
11612075	1005-2-1-1 1005-2 (500-600)				
0692004103	1005-2	500	600	01-Oct-2020	1
11612076	1005-3-1-1 1005-3 (900-1000)				
0692004109	1005-3	900	1000	01-Oct-2020	1
11612077	1006-1-1-1 1006-1 (200-300)				
0692004119	1006-1	200	300	01-Oct-2020	1
11612078	1006-2-1-1 1006-2 (500-600)				
0692004099	1006-2	500	600	01-Oct-2020	1
11612079	1006-3-1-1 1006-3 (900-1000)				
0692004107	1006-3	900	1000	01-Oct-2020	1
11612080	1007-1-1-1 1007-1 (200-300)				
0692004114	1007-1	200	300	01-Oct-2020	1
11612081	1007-2-1-1 1007-2 (500-600)				
0692004115	1007-2	500	600	01-Oct-2020	1

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020152882/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11612082	1007-3-1-1 1007-3 (900-1000)				
0692004108	1007-3	900	1000	01-Oct-2020	1
11612083	1008-1-1-1 1008-1 (200-300)				
0692004127	1008-1	200	300	01-Oct-2020	1
11612084	1008-2-1-1 1008-2 (500-600)				
0692054605	1008-2	500	600	01-Oct-2020	1
11612085	1008-3-1-1 1008-3 (900-1000)				
0692054620	1008-3	900	1000	01-Oct-2020	1
11612086	1009-1-1-1 1009-1 (200-300)				
0692054611	1009-1	200	300	01-Oct-2020	1
11612087	1009-2-1-1 1009-2 (500-600)				
0692054599	1009-2	500	600	01-Oct-2020	1
11612088	1009-3-1-1 1009-3 (900-1000)				
0692004122	1009-3	900	1000	01-Oct-2020	1
11612089	1010-1-1-1 1010-1 (200-300)				
0692054586	1010-1	200	300	01-Oct-2020	1
11612090	1010-2-1-1 1010-2 (500-600)				
0692004112	1010-2	500	600	01-Oct-2020	1
11612091	1010-3-1-1 1010-3 (900-1000)				
0692004120	1010-3	900	1000	01-Oct-2020	1
11612092	1011-1-1-1 1011-1 (200-300)				
0692004104	1011-1	200	300	01-Oct-2020	1

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Annex (B) concerning remarks referring to certificate of analysis 2020152882/1

Remark 1)

The mentioned result is the upper limit of the method of analysis. The real value is higher.

Remark 2)

The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

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Annex (C) method references belonging to certificate of analysis 2020152882/1

Analysis	Method	Technique	Method reference
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Vinyl chloride	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020152900/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	02-Oct-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020152900/1
Your project name	Ringdijk 390, Ridderkerk	Start date	02-Oct-2020
Your order number		End date analysis	07-Oct-2020
Your sample taker		Report date	18-Dec-2020/12:14
		Annex	A,B,C
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4
	Sample Pre-treatment					
	Preperation AS3000		Executed	Executed	Executed	Executed
	Characteristics					
S	Dry matter	% (w/w)	77.0	85.0	82.7	80.2
S	Organic matter	% (w/w) dm	1.8 1)	<0.7 1)	1.3 1)	1.6 1)
	Residue on ignition	% (w/w) dm	98	100	98	98
	Petroleum Hydrocarbons					
	EPH (C10-C12)	mg/kg dm	<3.0	<3.0	<3.0	<3.0
	EPH (C12-C16)	mg/kg dm	5.3	<5.0	<5.0	<5.0
	EPH (C16-C21)	mg/kg dm	21	<5.0	<5.0	<5.0
	EPH (C21-C30)	mg/kg dm	25	<11	<11	<11
	EPH (C30-C35)	mg/kg dm	5.8	<5.0	<5.0	<5.0
	EPH (C35-C40)	mg/kg dm	<6.0	<6.0	<6.0	<6.0
S	EPH Sum (C10-C40)	mg/kg dm	62	<35	<35	<35
	Chromatogram TPH (GC)		See annex			

No.	Your sample description	Specified sample matrix	Sample nr.
1	500-2 500 (60-100)	Soil, AS3000	11612151
2	501-2 501 (60-110)	Soil, AS3000	11612152
3	502-2 502 (60-100)	Soil, AS3000	11612153
4	503-2 503 (50-100)	Soil, AS3000	11612154

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020152900/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11612151	500-2 500 (60-100)				
0538370820	500	60	100	01-Oct-2020	2
11612152	501-2 501 (60-110)				
0538370828	501	60	110	01-Oct-2020	2
11612153	502-2 502 (60-100)				
0538370829	502	60	100	01-Oct-2020	2
11612154	503-2 503 (50-100)				
0538370869	503	50	100	01-Oct-2020	2

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Annex (B) concerning remarks referring to certificate of analysis 2020152900/1

Remark 1)

The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

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Annex (C) method references belonging to certificate of analysis 2020152900/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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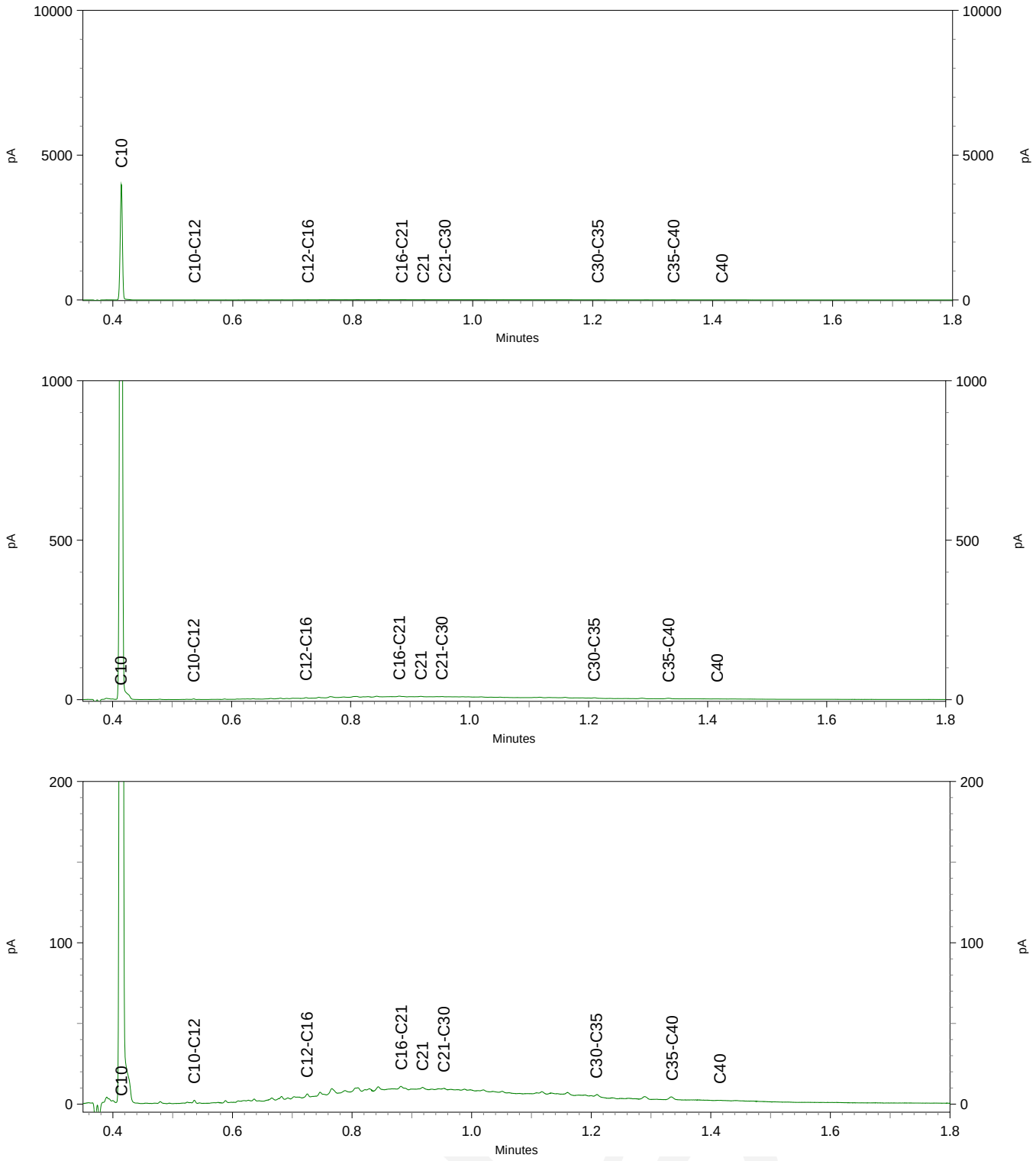
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11612151
Certificate no.: 2020152900
Sample description.: 500-2 500 (60-100)
V



Antea Group
T.a.v. Robin Koning
Postbus 10044
1301 AA ALMERE-STAD

Analysecertificaat

Datum: 09-Nov-2020

Hierbij ontvangt u de resultaten van het navolgende laboratoriumonderzoek.

Certificaatnummer/Versie	2020175760/1
Uw project/verslagnummer	0465250.100
Uw projectnaam	Ringdijk 390, Ridderkerk
Uw ordernummer	
Monster(s) ontvangen	05-Nov-2020

Dit certificaat mag uitsluitend in zijn geheel worden gereproduceerd.
De analyse resultaten hebben alleen betrekking op het beproefde object.

De grondmonsters worden tot 4 weken na datum ontvangst bewaard en watermonsters tot 2 weken na datum ontvangst. Zonder tegenbericht worden de monsters nadien afgevoerd.
Indien de monsters langer bewaard dienen te blijven verzoeken wij U dit exemplaar uiterlijk 1 werkdag voor afloop van de standaardbewaarperiode ondertekend aan ons te retourneren. Voor de kosten van het langer bewaren van monsters verwijzen wij naar de prijslijst.

Bewaren tot:
Datum: Naam: Handtekening:

Wij vertrouwen erop uw opdracht hiermee naar verwachting te hebben uitgevoerd, mocht U naar aanleiding van dit analysecertificaat nog vragen hebben verzoeken wij U contact op te nemen met de afdeling Verkoop en Advies.

Met vriendelijke groet,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Eurofins Analytico B.V.

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Analysecertificaat

Uw project/verslagnummer	0465250.100	Certificaatnummer/Versie	2020175760/1
Uw projectnaam	Ringdijk 390, Ridderkerk	Startdatum analyse	05-Nov-2020
Uw ordernummer		Datum einde analyse	09-Nov-2020
Uw monsternemer		Rapportagedatum	09-Nov-2020/14:37
		Bijlage	A,B,C
		Pagina	1/1

Projectcode 3400 - Antea - Project Stedin/Vitens

Analyse	Eenheid	1
Extern / Overig onderzoek		
Droge stof (Extern)	% (m/m)	93.3 1)
In behandeling genomen hoeveelheid	kg	66.8 2)
Asbest fractie 0,5-1mm	mg	0.0 2)
Asbest fractie 1-2mm	mg	0.0 2)
Asbest fractie 2-4mm	mg	0.0 2)
Asbest fractie 4-8mm	mg	0.0 2)
Asbest fractie 8-20mm	mg	0.0 2)
Asbest fractie >20mm	mg	0.0 2)
Asbest (som)	mg	<13.3 2)
Asbest in puin	mg/kg ds	<0.3 2)
Gemeten Asbestconcentratie	mg/kg ds	<0.3 2)
Gemeten concentratie Chrysotiel	mg/kg ds	<0.3 2)
Gemeten concentratie Amfibool	mg/kg ds	0.0 2)
Totaal asbest hechtgebonden	mg/kg ds	0.0 2)
Totaal asbest niet hechtgebonden	mg/kg ds	0.0 2)

Nr.	Uw monsteromschrijving	Opgegeven monstermatrix	Monster nr.
1	AMM01 AMM1 (15-45) AMM2 (14-45)	Asbestverdachte grond [redacted]	11683805

Q: door RvA geaccrediteerde verrichting
A: AP04 erkende en geaccrediteerde verrichting
S: AS SIKB erkende en geaccrediteerde verrichting
V: VLAREL erkende verrichting
W: Waals Gewest erkende verrichting

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VA

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Bijlage (A) met de opgegeven deelmonsterinformatie behorende bij het analysecertificaat. 2020175760/1

Monster nr.	Uw monsteromschrijving				
Barcode	Boornr	Van	Tot	Uw datum monstername	Monsteromsch./Monstername ID
11683805	AMM01 AMM1 (15-45) AMM2 (14-45)				
1638340MG	AMM2	14	45	04-Nov-2020	1
1633167MG	AMM2	14	45	04-Nov-2020	1
1638339MG	AMM1	15	45	04-Nov-2020	1
1638338MG	AMM1	15	45	04-Nov-2020	1

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Bijlage (B) met opmerkingen behorende bij analysecertificaat 2020175760/1

Opmerking 1)
Deze bepaling is uitgevoerd bij Eurofins Omegam (L086).

Opmerking 2)

Deze bepaling is uitbesteed en uitgevoerd onder accreditatie L086.

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Bijlage (C) met methodeverwijzingen behorende bij analysecertificaat 2020175760/1

Analyse	Methode	Techniek	Methode referentie
Extern / Overig onderzoek			
Droge stof (uitbesteed)	W0004	Extern	Uitbesteding
Asbest Puin NEN5898 2016	W0004	Microscopie	NEN 5898

Nadere informatie over de toegepaste onderzoeksmethoden alsmede een classificatie van de meetonzekerheid staan vermeld in ons overzicht "Specificaties analysemethoden", versie juni 2020.

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ANALYSECERTIFICAAT

Projectcode : **1110335**
Uw project omschrijving : **2020175760-0465250.100**
Opdrachtgever : **Eurofins Analytico B.V.**

Monstercode : **6512847**
Uw referentie : **AMM01 AMM1 (15-45) AMM2 (14-45)**
Opgegeven bemonsteringsdatum : **04/11/2020**

Asbestonderzoek

Initialen analist : R.L.
Datum geanalyseerd : 09-11-2020

Analyse is uitgevoerd conform NEN 5898 (**Q**).

Massa aangeleverde monster : 66840 g
Droge massa aangeleverde monster : 62362 g
Percentage droogrest : **93,3** **m/m %**
Type zeving : nat

zeeffractie (mm)	massa zeeffractie (gram)	percentage zeeffractie (m/m %)	massa onderzocht (gram)	percentage onderzocht (m/m %)	aantal asbest (deeltjes)	massa asbest-houdend materiaal (mg)
<0,5 mm	56280,7	90,7	18,2	0,03	n.v.t.	n.v.t.
0,5-1 mm	290,0	0,5	84,0	28,97	0	0,0
1-2 mm	678,4	1,1	224,8	33,14	0	0,0
2-4 mm	843,8	1,4	441,2	52,29	0	0,0
4-8 mm	1496,6	2,4	1496,6	100,00	0	0,0
8-20 mm	2443,0	3,9	2443,0	100,00	0	0,0
>20 mm	2,7	0,0	2,7	100,00	0	0,0
Totaal	**62035,2**	**100,0**	**4710,5**		**0**	**0,0**

	asbest totaal			serpentijn asbest			amfibool asbest		
zeeffractie (mm)	gehalte asbest (mg/kg ds)	ondergrens (mg/kg ds)	bovengrens (mg/kg ds)	gehalte asbest (mg/kg ds)	ondergrens (mg/kg ds)	bovengrens (mg/kg ds)	gehalte asbest (mg/kg ds)	ondergrens (mg/kg ds)	bovengrens (mg/kg ds)
<0,5 mm	-								
0,5-1 mm	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1-2 mm	0,0	0,0	0,1	0,0	0,0	0,1	0,0	0,0	0,1
2-4 mm	0,0	0,0	0,3	0,0	0,0	0,1	0,0	0,0	0,1
4-8 mm	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
8-20 mm	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
>20 mm	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Totaal	**<0,3**	**0,0**	**0,4**	**<0,3**	**0,0**	**0,2**	**0,0**	**0,0**	**0,2**

Aangetroffen type asbest : Geen
Bijzonderheden waargenomen : Geen

Serpentijn asbest is chrysotiel.
Amfibool asbest is amosiet, crocidoliet, actinoliet, anthophylliet en tremoliet.

De bepalingsgrens is bepaald voor de zeeffracties kleiner dan 4 mm. De totale bepalingsgrens is verkregen door de bepalingsgrenzen van de afzonderlijke zeeffracties te sommeren.
Het materiaal is middels polarisatiemicroscopie onderzocht, de analyse is uitgevoerd conform NEN 5896.

gebondenheid	serpentijn asbest	amfibool asbest	totaal afgerond
hecht	0,0	0,0	0,0
niet hecht	0,0	0,0	0,0
totaal afgerond	0,0	0,0	

Gewogen concentratie (serpentijnasbestconcentratie vermeerderd met 10 maal de amfiboolasbestconcentratie) is: **<0,3 mg/kg ds**

De gewogen asbestconcentratie wordt berekend uit de niet-afgeronde gehalten aan serpentijn en amfibool asbest. De weergegeven resultaten zijn afgerond.

Verklaring kwalitatief onderzoek zeeffractie <0,5 mm:
- : geen asbest waargenomen

Dit analyse-certificaat, inclusief voorblad en eventuele bijlage(n), mag niet anders dan in zijn geheel worden gereproduceerd.
- De met een 'Q' gemerkte analyses zijn door RvA geaccrediteerd (registratienummer L086).

A N A L Y S E C E R T I F I C A A T

Projectcode	:	**1110335**
Uw project omschrijving	:	**2020175760-0465250.100**
Opdrachtgever	:	**Eurofins Analytico B.V.**

Opmerkingen m.b.t. analyses

Opmerking(en) algemeen

De volgende informatie is indien van toepassing verstrekt door de opdrachtgever:
Project omschrijving, Monsterreferentie(s), Opgegeven bemonsteringsdatum, Matrix, Monsterdiepte, Potnr (Barcode), Veldgegevens, Veldwaarnemingen en Bemonsteringsdata. De opgegeven bemonsteringsdatum kan van invloed zijn op de geldigheid van de resultaten.

Asbest
Individuele monsters van dit project zijn als asbest verdacht gekwalificeerd. De analysedeelmonsters zijn met beschermende maatregelen in het laboratorium in behandeling genomen.

Opmerking bij project:	- Eurofins Omegam heeft het asbestonderzoek in dit/deze monster(s) uitgevoerd volgens de NEN 5898, en zoals beschreven in een aparte bijlage als onderdeel van dit analysecertificaat. Voor de analyseresultaten van het asbestonderzoek geldt dat Eurofins Omegam de analyse heeft uitgevoerd in de monsters die de opdrachtgever, zoals deze staan vermeld in de koptekst van dit analysecertificaat, zelf heeft genomen of laten nemen en aan Eurofins Omegam heeft aangeboden. Eurofins Omegam draagt geen verantwoordelijkheid inzake de herkomst en representativiteit alsmede de veiligheid tijdens de monsterneming.

Dit analyse-certificaat, inclusief voorblad en eventuele bijlage(n), mag niet anders dan in zijn geheel worden gereproduceerd.

A N A L Y S E C E R T I F I C A A T

Projectcode	:	**1110335**
Uw project omschrijving	:	**2020175760-0465250.100**
Opdrachtgever	:	**Eurofins Analytico B.V.**

Barcodeschema's

Monstercode	*Uw referentie*	*uw monsterref.*	*uw diepte*	*uw barcode*
6512847	AMM01 AMM1 (15-45) AMM2 (14-45)	AMM2	.14-.45	1638340MG
		AMM2	.14-.45	1633167MG
		AMM1	.15-.45	1638339MG
		AMM1	.15-.45	1638338MG

Dit analyse-certificaat, inclusief voorblad en eventuele bijlage(n), mag niet anders dan in zijn geheel worden gereproduceerd.

A N A L Y S E C E R T I F I C A A T

Projectcode	:	**1110335**
Uw project omschrijving	:	**2020175760-0465250.100**
Opdrachtgever	:	**Eurofins Analytico B.V.**

Analysemethoden in Puin

In dit analysecertificaat zijn de met 'Q' gemerkte analyses uitgevoerd volgens de onderstaande analysemethoden. De matrix puin is representatief voor bouw- en sloopafval, puin en granulaat. Deze analyses zijn vastgelegd in het geldende accreditatie-certificaat met bijbehorende verrichtingenlijst L086 van Eurofins Omegam BV.

Asbestonderzoek	:	Conform NEN 5898

Dit analyse-certificaat, inclusief voorblad en eventuele bijlage(n), mag niet anders dan in zijn geheel worden gereproduceerd.

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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020195661/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	03-Dec-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020195661/1
Your project name	Ringdijk 390, Ridderkerk	Start date	03-Dec-2020
Your order number		End date analysis	09-Dec-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:23
		Annex	A,C
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1
	Sample Pre-treatment		
	Preperation AS3000		Executed
	Characteristics		
S	Dry matter	% (w/w)	69.6
S	Organic matter	% (w/w) dm	2.0
	Residue on ignition	% (w/w) dm	97
S	Fraction < 2 µm (Clay)	% (w/w) dm	8.1
	Metals		
S	Copper (Cu)	mg/kg dm	36

No.	Your sample description	Specified sample matrix	Sample nr.
1	528a-4 528a (125-175)	Soil, AS3000 [redacted]	11745728

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

Verified
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BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020195661/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11745728	528a-4 528a (125-175)				
3731579AA	528a	125	175	18-Nov-2020	4

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Annex (C) method references belonging to certificate of analysis 2020195661/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Grainsize < 2 µm (clay)	W0171	Sedimentation	pb 3010-4 & NEN 5753
Metals			
Copper (Cu)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Antea Group
[redacted]
P0 Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020188078/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	24-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020188078/1
Your project name	Ringdijk 390, Ridderkerk	Start date	24-Nov-2020
Your order number		End date analysis	26-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:23
		Annex	A,C
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1
	Sample Pre-treatment		
	Preperation AS3000		Executed
	Characteristics		
S	Dry matter	% (w/w)	90.9
S	Organic matter	% (w/w) dm	1.1
	Residue on ignition	% (w/w) dm	99
S	Fraction < 2 µm (Clay)	% (w/w) dm	2.7
	Metals		
S	Copper (Cu)	mg/kg dm	40
S	Zinc (Zn)	mg/kg dm	100

No.	Your sample description	Specified sample matrix	Sample nr.
1	549 549 (0-15) 549 (15-50)	Soil, AS3000 [redacted]	11721506

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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ASM

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020188078/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11721506	549 549 (0-15) 549 (15-50)				
3731558AA	549	0	15	18-Nov-2020	1
3731575AA	549	15	50	18-Nov-2020	2

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Annex (C) method references belonging to certificate of analysis 2020188078/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Grainsize < 2 µm (clay)	W0171	Sedimentation	pb 3010-4 & NEN 5753
Metals			
Copper (Cu)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2
Zinc (Zn)	W0423	ICP-MS	pb 3010-5 & NEN-EN-ISO 17294-2

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Antea Group
[redacted]
PO Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020143350/1
Your project number	460838.100
Your project name	Ringdijk 390
Your order number	
Samples received on	17-Sep-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	460838.100	Certificate number/Version	2020143350/1
Your project name	Ringdijk 390	Start date	17-Sep-2020
Your order number		End date analysis	23-Sep-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:30
		Annex	A,B,C,D
		Page	1/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Sample Pre-treatment						
	Filtration 0.45 µm		Executed	Executed	Executed	Executed	Executed
	Metals						
	Iron (Fe)	mg/L	64	21	30	0.14	5.1
	Iron (II)	mg/L	61	19	30	0.15	5.0
	Iron (III)	mg/L	2.9	2.4	<0.050	<0.050	0.053
Q	Manganese (Mn)	mg/L	1.8	2.3	1.6	0.060	2.0
	S-total (S)	mg S/L	2.6	1.9	<1.0	13	2.0
	S-total (S04)	mg S04/L	7.9	5.6	<3.0	38	6.0
	Volatile halogenated Hydrocarbons						
S	Dichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Trichloromethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	Tetrachloromethane	µg/L	<0.10	<0.10	<0.10	0.21	<0.10
S	Trichloroethene	µg/L	<0.20	<0.20	<0.20	2.0	<0.20
S	Tetrachloroethene	µg/L	<0.10	<0.10	<0.10	17	0.56
S	1,1-Dichloroethane	µg/L	0.71	<0.20	<0.20	1.3	<0.20
S	1,2-Dichloroethane	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
S	1,1,1-Trichloroethane	µg/L	<0.10	<0.10	<0.10	1.5	<0.10
S	1,1,2-Trichloroethane	µg/L	<0.10	<0.10	<0.10	0.25	<0.10
S	cis1,2-Dichloroethene	µg/L	<0.10	<0.10	0.11	4.9	1.6
S	trans 1,2-Dichloroethene	µg/L	<0.10	<0.10	<0.10	0.25	<0.10
	Chlorinated Hydrocarbons (sum)	µg/L	<1.6	<1.6	<1.6	28	2.2
S	cis+trans 1,2-Dichloroethenes (sum)	µg/L	0.14 [1)]	0.14 [1)]	0.18	5.2	1.7
	Physical and chemical analyses						
	Dissolved Organic Carbon (DOC)	mg/L	21	16	12	6.4	4.0
	Inorganic Compounds						
	Sulphide free	mg/L	<0.050	<0.050	0.58 [2)]	<0.050	<0.050
	Inorganic Compounds						
S	Chloride	mg/L	230	230	8.4	7.3	9.1
S	Nitrate equivalent N03-N	mg N/L	1.6	<0.40	<0.40	0.42	<0.40

No.	Your sample description	Specified sample matrix	Sample nr.
1	009-1-2 009 (500-600)	Water, AS3000	11581366
2	019-1-2 019 (200-300)	Water, AS3000	11581367
3	041a-1-2 041a (180-280)	Water, AS3000	11581368
4	154-1-2 154 (80-280)	Water, AS3000	11581369
5	a4-1-2 a4 (200-300)	Water, AS3000	11581370

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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Certificate of analysis

Your project number	460838.100	Certificate number/Version	2020143350/1
Your project name	Ringdijk 390	Start date	17-Sep-2020
Your order number		End date analysis	23-Sep-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:30
		Annex	A,B,C,D
		Page	2/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
S	Nitrate (N03)	mg/L	6.9	<0.90	<0.90	1.9	<0.90
Q	Nitrite as N02-N	mg N/L	0.043	<0.010 [2)]	0.74	<0.010	<0.010
Q	Nitrite (N02)	mg/L	0.14	<0.030 [2)]	2.4	<0.030	<0.030
	Miscellaneous Organic compounds						
	Methane	µg/L	4500	1900	1400	<2	1300
	Ethane	µg/L	870	<2	<2	<2	10
	Ethene	µg/L	370	<2	<2	<2	<2

No.	Your sample description	Specified sample matrix	Sample nr.
1	009-1-2 009 (500-600)	Water, AS3000	11581366
2	019-1-2 019 (200-300)	Water, AS3000	11581367
3	041a-1-2 041a (180-280)	Water, AS3000	11581368
4	154-1-2 154 (80-280)	Water, AS3000	11581369
5	a4-1-2 a4 (200-300)	Water, AS3000	11581370

Verified

ASM

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Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020143350/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11581366	009-1-2 009 (500-600)				
0630140172	009	500	600	14-Sep-2020	1
0692004028	009	500	600	14-Sep-2020	2
0620381366	009	500	600	14-Sep-2020	3
0680428207	009	500	600	14-Sep-2020	4
0680428208	009	500	600	14-Sep-2020	5
0800873730	009	500	600	14-Sep-2020	6
11581367	019-1-2 019 (200-300)				
0680476748	019	200	300	16-Sep-2020	4
0620381335	019	200	300	16-Sep-2020	5
0800873572	019	200	300	16-Sep-2020	6
0692004006	019	200	300	16-Sep-2020	1
0630140190	019	200	300	16-Sep-2020	2
0680476745	019	200	300	16-Sep-2020	3
11581368	041a-1-2 041a (180-280)				
0692004005	041a	180	280	16-Sep-2020	1
0630140188	041a	180	280	16-Sep-2020	2
0680428215	041a	180	280	16-Sep-2020	3
0680428203	041a	180	280	16-Sep-2020	4
0800873556	041a	180	280	16-Sep-2020	5
0620381369	041a	180	280	16-Sep-2020	6
11581369	154-1-2 154 (80-280)				
0630140189	154	80	280	16-Sep-2020	1
0692004020	154	80	280	16-Sep-2020	2
0620381360	154	80	280	16-Sep-2020	3
0680428202	154	80	280	16-Sep-2020	4
0680428196	154	80	280	16-Sep-2020	5
0800873563	154	80	280	16-Sep-2020	6
11581370	a4-1-2 a4 (200-300)				
0630140177	a4	200	300	14-Sep-2020	1
0680428201	a4	200	300	14-Sep-2020	2
0692004033	a4	200	300	14-Sep-2020	3
0680428214	a4	200	300	14-Sep-2020	4
0620381349	a4	200	300	14-Sep-2020	5
0800873622	a4	200	300	14-Sep-2020	6

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Annex (B) concerning remarks referring to certificate of analysis 2020143350/1

Remark 1)

The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

Remark 2)

Indicative value(s) due to interfering matrix.

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Annex (C) method references belonging to certificate of analysis 2020143350/1

Analysis	Method	Technique	Method reference
Metals			
Iron (II)	W0566	Spectrometry	NEN-ISO 15923-1
Iron (III)	W0510	Calculation	NEN 6482
Manganese (Mn)	W0421	ICP-MS	NEN-EN-ISO 17294-2
Sulphate total (analysed as S)	W0421	ICP-MS	NEN-EN-ISO 17294-2
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3130-1
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3130-1
Physical and chemical analyses			
DOC	W0590	Element analysis	NEN-EN 1484
Inorganic Compounds			
Sulphide free	W0564	Spectrometry	NEN 6608
Inorganic Compounds			
Chloride	W0566	Spectrometry	Cf. pb 3140-2 en cf.NEN-ISO 15923-1
Nitrate	W0566	Spectrometry	Cf. pb 3140-2 en cf.NEN-ISO 15923-1
Nitrite	W0566	Spectrometry	NEN-ISO 15923-1
Miscellaneous Organic compounds			
Methane, ethane and ethene	W7204	GC/FID	In house method

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020143350/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
The preservation term for this parameter has been expired.	
Nitrate (N03)	11581366
	11581368
	11581370
Nitrite (N02)	11581366
	11581368
	11581370
Iron (II)	11581366

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[redacted]
P0 Box 10044
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Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020182483/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	16-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

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The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020182483/1
Your project name	Ringdijk 390, Ridderkerk	Start date	16-Nov-2020
Your order number		End date analysis	17-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:58
		Annex	A,C
		Page	1/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4	5
	Petroleum Hydrocarbons						
	TPH (C10-C12)	µg/l	<10	<10	<10	<10	<10
	TPH (C12-C16)	µg/l	<10	<10	<10	<10	<10
	TPH (C16-C21)	µg/l	<10	<10	<10	<10	<10
	TPH (C21-C30)	µg/l	56	<15	<15	<15	<15
	TPH (C30-C35)	µg/l	34	<10	<10	<10	<10
	TPH (C35-C40)	µg/l	12	<10	<10	<10	<10
S	TPH Sum (C10-C40)	µg/l	100	<50	<50	<50	<50
	Chromatogram		See annex				

No.	Your sample description	Specified sample matrix	Sample nr.
1	506-1-1 506 (170-270)	Water, AS3000	11703651
2	508-1-1 508 (170-270)	Water, AS3000	11703652
3	509-1-1 509 (170-270)	Water, AS3000	11703653
4	510-1-1 510 (170-270)	Water, AS3000	11703654
5	511-1-1 511 (150-250)	Water, AS3000	11703655

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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BNP Paribas S.A. 227 9245 25
IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020182483/1
Your project name	Ringdijk 390, Ridderkerk	Start date	16-Nov-2020
Your order number		End date analysis	17-Nov-2020
Your sample taker	[redacted]	Report date	18-Dec-2020/12:58
		Annex	A,C
		Page	2/2
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	6	7
	Petroleum Hydrocarbons			
	TPH (C10-C12)	µg/l	<10	12
	TPH (C12-C16)	µg/l	<10	<10
	TPH (C16-C21)	µg/l	<10	<10
	TPH (C21-C30)	µg/l	<15	<15
	TPH (C30-C35)	µg/l	<10	<10
	TPH (C35-C40)	µg/l	<10	<10
S	TPH Sum (C10-C40)	µg/l	<50	<50

No.	Your sample description	Specified sample matrix	Sample nr.
6	513-1-1 513 (150-250)	Water, AS3000	11703656
7	515-1-1 515 (160-260)	Water, AS3000	11703657

Q: Dutch Accreditation Council (RvA) accredited test
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S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020182483/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11703651	506-1-1 506 (170-270)				
0692021845	506	170	270	04-Nov-2020	1
0670316016	506	170	270	04-Nov-2020	2
11703652	508-1-1 508 (170-270)				
0692054630	508	170	270	04-Nov-2020	1
0670316036	508	170	270	04-Nov-2020	2
11703653	509-1-1 509 (170-270)				
0692054670	509	170	270	04-Nov-2020	1
0670316067	509	170	270	04-Nov-2020	2
11703654	510-1-1 510 (170-270)				
0692054645	510	170	270	04-Nov-2020	1
0670316032	510	170	270	04-Nov-2020	2
11703655	511-1-1 511 (150-250)				
0670316000	511	150	250	04-Nov-2020	2
0377858YA	511	150	250	04-Nov-2020	1
11703656	513-1-1 513 (150-250)				
0377852YA	513	150	250	04-Nov-2020	1
0670316088	513	150	250	04-Nov-2020	2
11703657	515-1-1 515 (160-260)				
0377837YA	515	160	260	04-Nov-2020	1
0670316089	515	160	260	04-Nov-2020	2

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Annex (C) method references belonging to certificate of analysis 2020182483/1

Analysis	Method	Technique	Method reference
Petroleum Hydrocarbons			
EPH (C10-C40)	W0215	GC/FID	pb 3110-5
Chromatogram oil (GC)	W0215	GC/FID	In house method

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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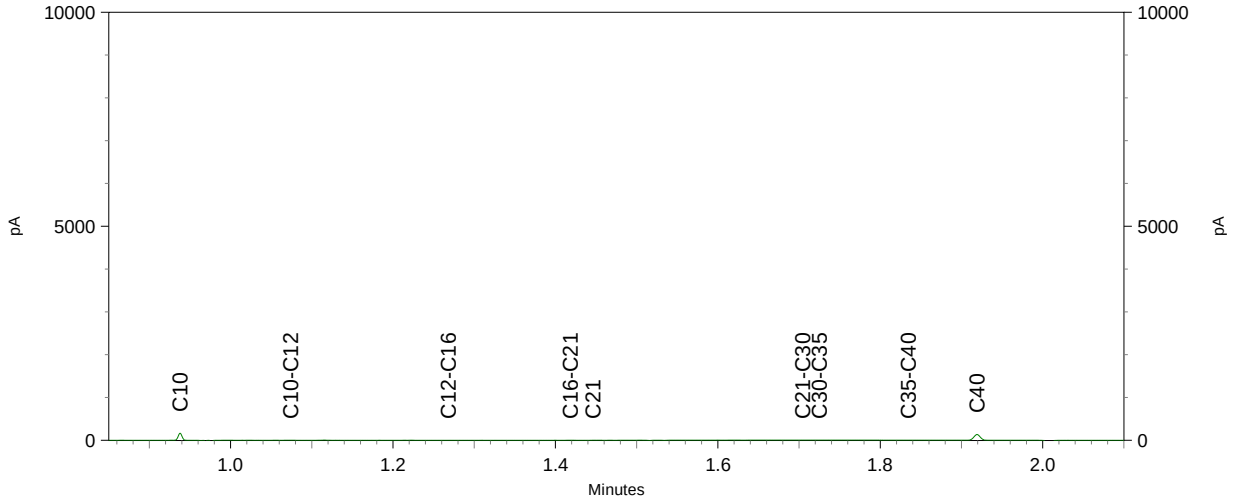
BNP Paribas S.A. 227 9245 25
IBAN: NL71BNPA0227924525
BIC: BNPANL2A
KvK/CoC No. 09088623
BTW/VAT No. NL 8043.14.883.B01

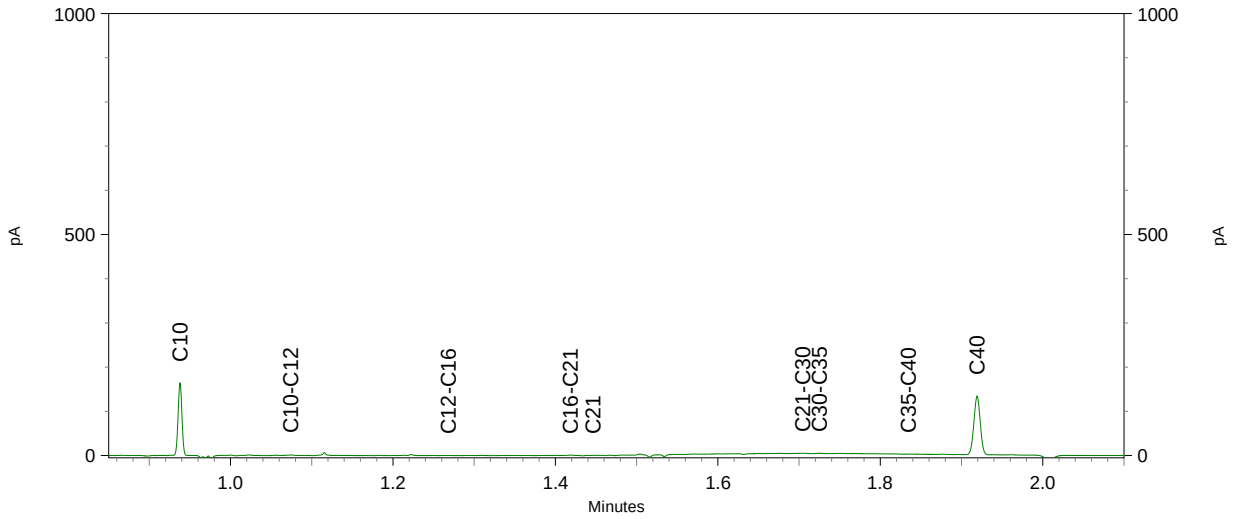
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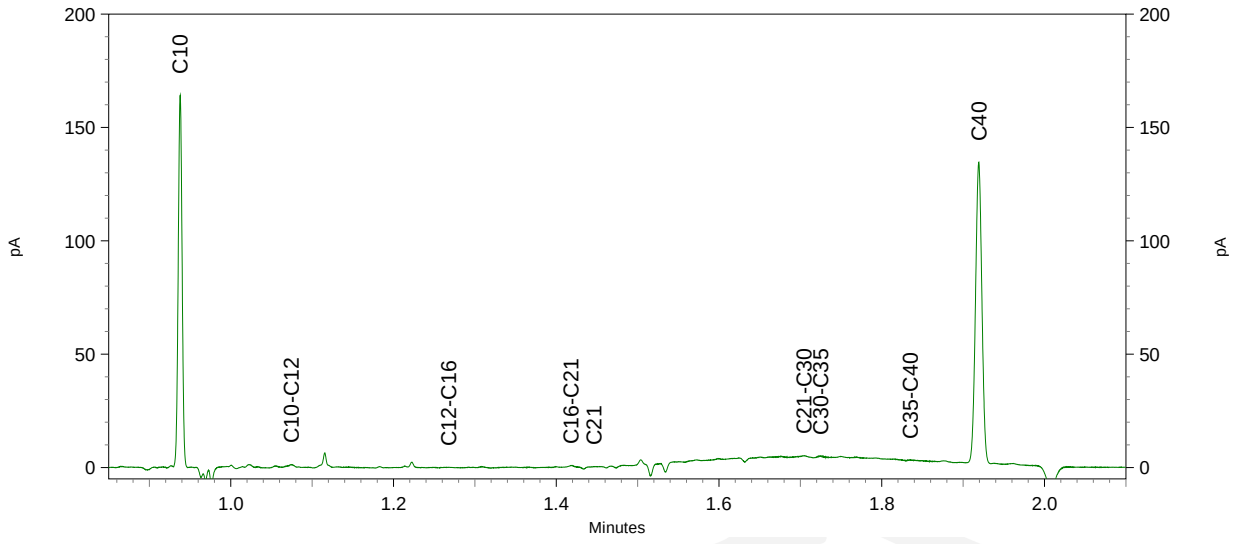
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11703651
Certificate no.: 2020182483
Sample description.: 506-1-1 506 (170-270)
V







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Antea Group
[redacted]
P0 Box 10044
1301 AA ALMERE

Certificate of analysis

Date: 18-Dec-2020

Please find enclosed the analytical results of the test carried out for the project.

Certificate number/Version	2020176498/1
Your project number	0465250.100
Your project name	Ringdijk 390, Ridderkerk
Your order number	
Samples received on	06-Nov-2020

This Certificate of Analysis shall not be reproduced except in full, without written approval of the laboratory. Interpretations and opinions are outside the scope of our accreditation, and all results relate only to samples supplied.

Soil samples will be stored for a period of 4 weeks and water samples for a period of 2 weeks after receipt of the samples at our laboratory. Without any additional request, samples will be disposed when the above mentioned periods have expired. If you require Eurofins Analytico to store the samples for a longer period, please complete this page and return it to Eurofins Analytico at least one businessday before the period is due to expire.
The costs of prolonged storage periods may be found in our pricelist.

Storage period:
Date: Name: Signature:

We are confident that we have performed the order in accordance with your expectations. If you have any remaining questions concerning this Certificate of Analysis, please don't hesitate to contact our Customer Service.

Yours sincerely,

Eurofins Analytico B.V.

Ing. [redacted]
Technical Manager

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Certificate of analysis

Your project number	0465250.100	Certificate number/Version	2020176498/1
Your project name	Ringdijk 390, Ridderkerk	Start date	06-Nov-2020
Your order number		End date analysis	09-Nov-2020
Your sample taker	V Hoogendoorn	Report date	18-Dec-2020/12:59
		Annex	A,B,C,D
		Page	1/1
Project agreement	3400 - Antea - Project Stedin/Vitens		

	Analysis	Unit	1	2	3	4
	Sample Pre-treatment					
	Preperation AS3000		Executed			Executed
	Characteristics					
S	Dry matter	% (w/w)	75.3	76.6	73.0	79.2
S	Organic matter	% (w/w) dm	1.9 1)	1.3 1)	4.0 1)	<0.7 1)
	Residue on ignition	% (w/w) dm	98	98	96	99
	Volatile halogenated Hydrocarbons					
S	Dichloromethane	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	Trichloromethane	mg/kg dm	<0.020	<0.020	<0.020	<0.020
S	Tetrachloromethane	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	Trichloroethene	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	Tetrachloroethene	mg/kg dm	<0.010	<0.010	<0.010	<0.010
S	1,1-Dichloroethane	mg/kg dm	<0.020	<0.020	<0.020	<0.020
S	1,2-Dichloroethane	mg/kg dm	<0.020	<0.020	<0.020	<0.020
S	1,1,1-Trichloroethane	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	1,1,2-Trichloroethane	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	cis1,2-Dichloroethene	mg/kg dm	<0.050	<0.050	<0.050	<0.050
S	trans 1,2-Dichloroethene	mg/kg dm	<0.050	<0.050	<0.050	<0.050
	Chlorinated Hydrocarbons (sum)	mg/kg dm	<0.42	<0.42	<0.42	<0.42
S	Vinyl chloride	mg/kg dm	<0.010	<0.010	<0.010	<0.010
S	1,2-Dichloorethenen (som) (factor 0,7)	mg/kg dm	0.070 2)	0.070 2)	0.070 2)	0.070 2)
	Petroleum Hydrocarbons					
	EPH (C10-C12)	mg/kg dm	310			<3.0
	EPH (C12-C16)	mg/kg dm	140			<5.0
	EPH (C16-C21)	mg/kg dm	68			11
	EPH (C21-C30)	mg/kg dm	190			25
	EPH (C30-C35)	mg/kg dm	82			11
	EPH (C35-C40)	mg/kg dm	35			<6.0
S	EPH Sum (C10-C40)	mg/kg dm	810 3)			54
	Chromatogram TPH (GC)		See annex			See annex

No.	Your sample description	Specified sample matrix	Sample nr.
1	1016_N-4 1016_N (150-200)	Soil, AS3000	11686400
2	1016_N-16 1016_N (750-800)	Soil, AS3000	11686401
3	1017-19 1017 (900-950)	Soil, AS3000	11686402
4	1018-3 1018 (100-150)	Soil, AS3000	11686403

Q: Dutch Accreditation Council (RvA) accredited test
A: AP04 accredited test
S: AS SIKB recognized test
V: VLAREL recognized test
W: Walloon region recognized test

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RvA L010

Appendix (A) with the specified sub-sample information belonging to the analysis certificate. 2020176498/

Sample nr.	Your sample description				
Barcode	Drill-#	From	To	Your sampling date	Sample description/Sampling ID
11686400	1016_N-4 1016_N (150-200)				
0538412963	1016_N	150	200	04-Nov-2020	4
11686401	1016_N-16 1016_N (750-800)				
0538441983	1016_N	750	800	05-Nov-2020	16
11686402	1017-19 1017 (900-950)				
0538441916	1017	900	950	05-Nov-2020	19
11686403	1018-3 1018 (100-150)				
0538412955	1018	100	150	04-Nov-2020	3

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Annex (B) concerning remarks referring to certificate of analysis 2020176498/1

Remark 1)
The organic matter content is corrected for the clay content of 5.4 % m/m (SIKB 3010 pb 3).

Remark 2)
The reported value for the limit check is the sum of 0.7 times the reporting limits of the individual components.

Remark 3)
Volatile oil fraction present.

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Annex (C) method references belonging to certificate of analysis 2020176498/1

Analysis	Method	Technique	Method reference
Sample Pre-treatment			
Preparation Samplemate	W0106	Pre-treatment	AS3000
Characteristics			
Dry matter	W0104	Gravimetry	pb 3010-2 en NEN-EN 15934
Volatile halogenated Hydrocarbons			
VOC (11)	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Vinyl chloride	W0254	HS-GC/MS	pb 3030-1 & NEN-EN-ISO 22155
Sum 1,2-Dichloroethenes	W0254	HS-GC/MS	pb 3030-2 & NEN-EN-ISO 22155
Petroleum Hydrocarbons			
EPH (C10-C40)	W0202	GC/FID	pb 3010-7 & to NEN-EN-ISO 16703
Chromatogram TPH (GC)	W0202	GC/FID	NEN-EN-ISO 16703

Additional information about the applied methods as well as the classification of the accuracy, are listed in our supplement: "Specification of methods of analyses", version June 2020.

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Annex (D) remarks concerning the sampling and preservation period 2020176498/1

Non compliance(s) of the criteria is(are) observed that may have influenced the accuracy of the test results of samples mentioned below.

Analysis	Sample nr.
Monsterhouder voor vluchtige stoffen ongeschikt en/of mengmonster uit ongeschikte monsterhouder genomen.	11686400
	11686401
	11686402
	11686403

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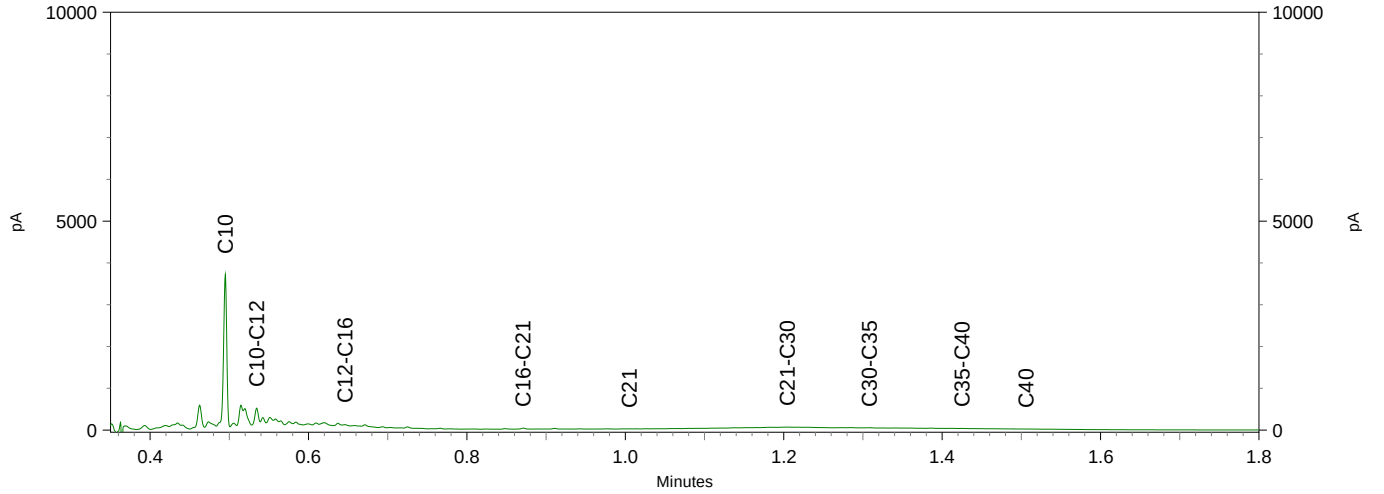
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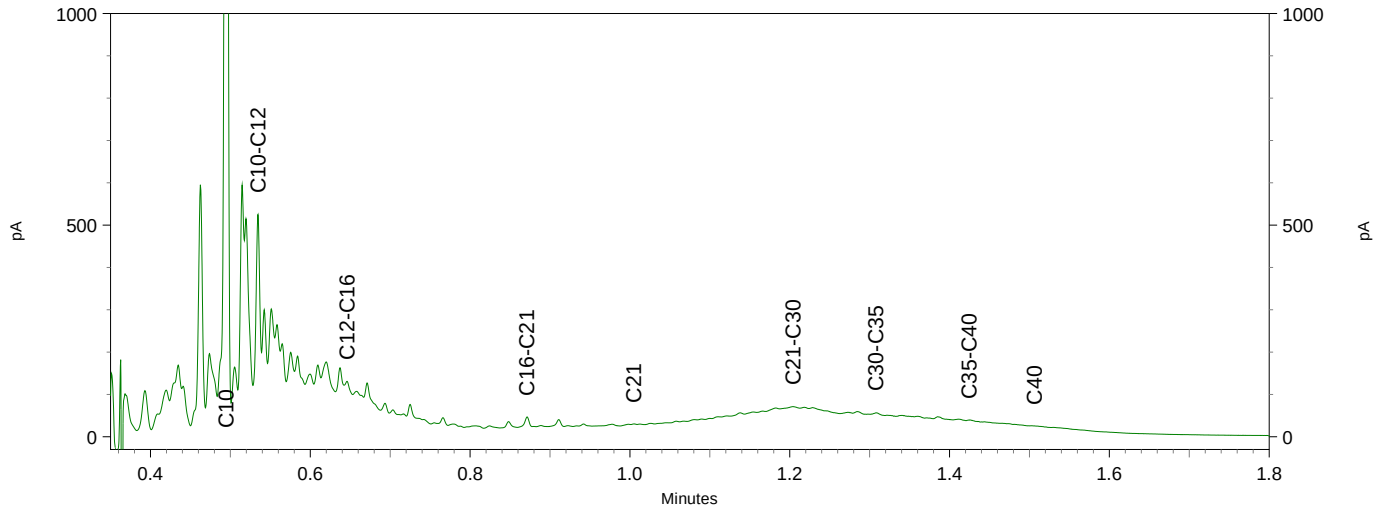
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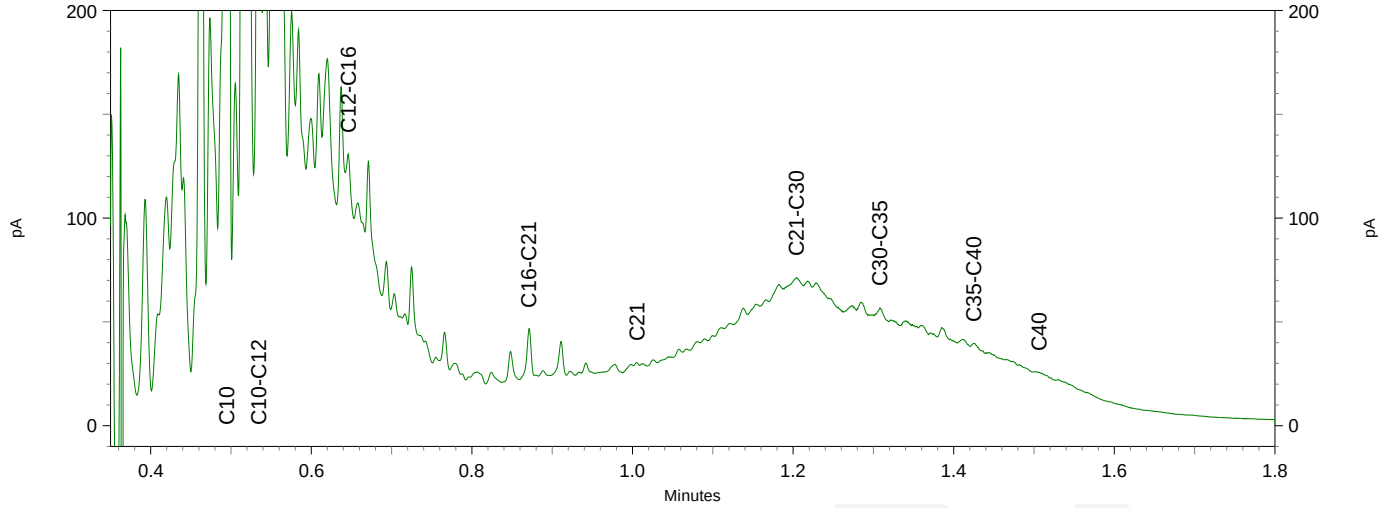
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Chromatogram TPH/ Mineral Oil

Sample ID.: 11686400
Certificate no.: 2020176498
Sample description.: 1016_N-4 1016_N (150-200)
V

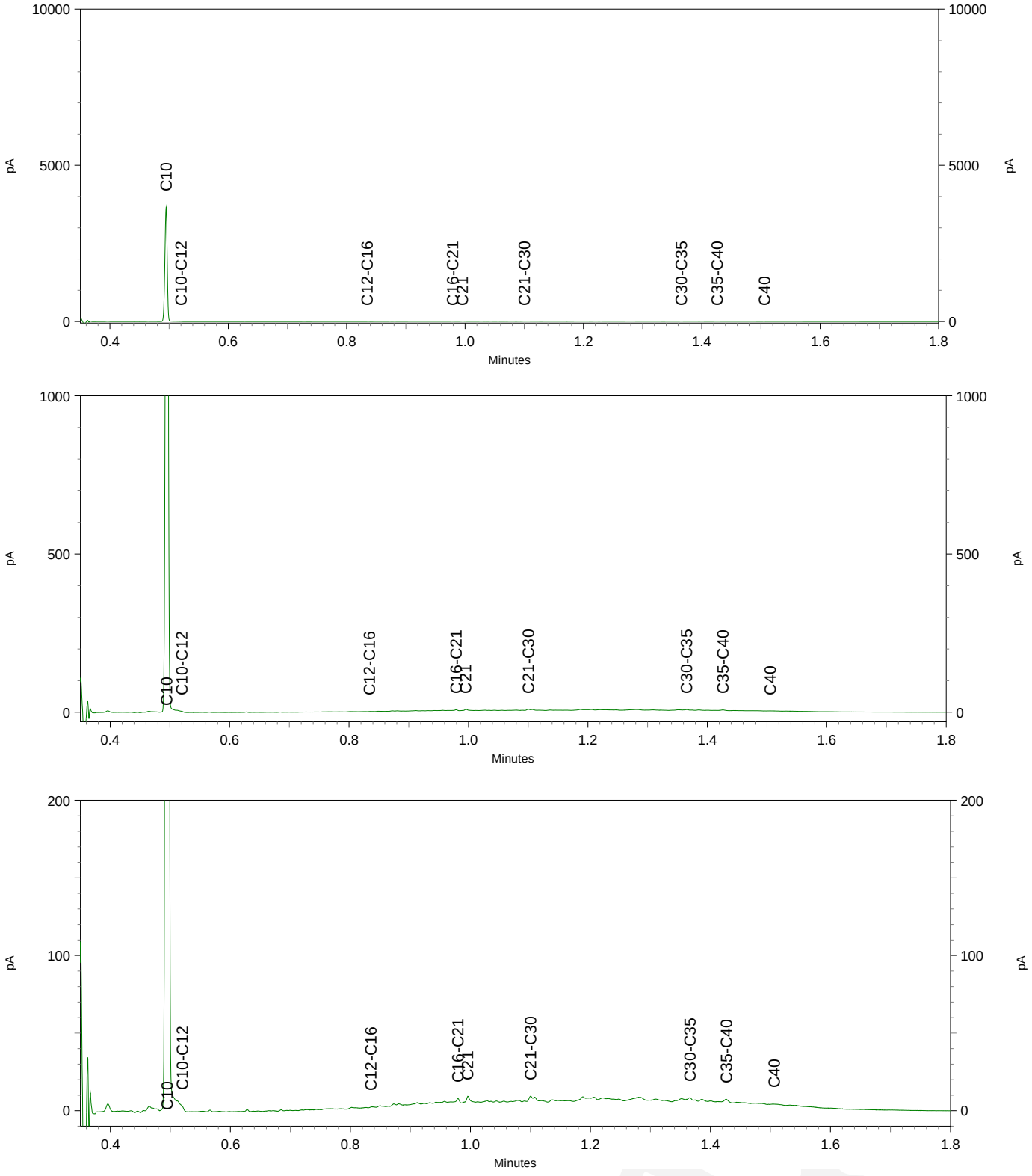






Chromatogram TPH/ Mineral Oil

Sample ID.: 11686403
Certificate no.: 2020176498
Sample description.: 1018-3 1018 (100-150)
V



Appendix 9 Accountability for implemenatation of BRL 2000

Colofon

Verantwoording	
Project:	Aanvullend onderzoek Ringdijk 390
Projectnummer:	460838

Het onderzoek is uitgevoerd volgens certificatiesschema BRL SIKB 2000. De uitvoerende organisatie is hiervoor gecertifceerd volgens het procescertificaat 'Veldwerk bij milieuhygienisch bodemonderzoek'.

Bij het onderzoek zijn de volgende protocollen gevolgd *(aankruisen door projectleider/projectmedewerker):*

☐ Plaatsen van handboringen en peilbuizen (protocol 2001)

☐ Nemen van grondwatermonsters (protocol 2002)

☐ Milieuhygiënisch onderzoek waterbodems (protocol 2003)

☐ Maaiveldinspectie en monsterneming van asbest in bodem (protocol 2018)

Verklaring functiescheiding
Ik verklaar dat het veldwerk onafhankelijk van de opdrachtgever is uitgevoerd conform de eisen van de BRL 2000 en het vermelde protocol

Protocol	Datum/Periode	Naam veldwerker*	Naam veldwerkbureau**	Handtekening
2002	16-9-20	[redacted]	Bureau: Cert.nr.***:	[redacted]
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	

* Naam invullen van de eerstverantwoordelijke veldwerker die op de betreffende datum/periode de werkzaamheden heeft uitgevoerd.

** Alleen invullen als het veldwerk niet door Antea Group is uitgevoerd.

*** Het veldwerkbureau dient hier het nummer van het BRL2000-certificaat te noteren, zoals vermeld op de site van Bodemplus

Colofon

Verantwoording				
Project: Aanvullend onderzoek Ringdijk 390				
Projectnummer: 465250				
Het onderzoek is uitgevoerd volgens certificatiesschema BRL SIKB 2000. De uitvoerende organisatie is hiervoor gecertifceerd volgens het procescertificaat 'Veldwerk bij milieuhygienisch bodemonderzoek'.				
Bij het onderzoek zijn de volgende protocollen gevolgd *(aankruisen door projectleider/projectmedewerker):* ☒ Plaatsen van handboringen en peilbuizen (protocol 2001) ☒ Nemen van grondwatermonsters (protocol 2002) ☐ Milieuhygiënisch onderzoek waterbodems (protocol 2003) ☐ Maaiveldinspectie en monsterneming van asbest in bodem (protocol 2018)				
Verklaring functiescheiding Ik verklaar dat het veldwerk onafhankelijk van de opdrachtgever is uitgevoerd conform de eisen van de BRL 2000 en het vermelde protocol				
Protocol	Datum/Periode	Naam veldwerker*	Naam veldwerkbureau**	Handtekening
2001	18-11-2021	[redacted]	Bureau: Bmlu Cert.nr.***: VB-07616	[redacted]
2002	18-11-202		Bureau: Bmlu Cert.nr.***: VB-07616	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	

* Naam invullen van de eerstverantwoordelijke veldwerker die op de betreffende datum/periode de werkzaamheden heeft uitgevoerd.

** Alleen invullen als het veldwerk niet door Antea Group is uitgevoerd.

*** Het veldwerkbureau dient hier het nummer van het BRL2000-certificaat te noteren, zoals vermeld op de site van Bodemplus

Colofon

Verantwoording	
Project:	Aanvullend onderzoek Ringdijk 390
Projectnummer:	465250

Het onderzoek is uitgevoerd volgens certificatiesschema BRL SIKB 2000. De uitvoerende organisatie is hiervoor gecertifceerd volgens het procescertificaat 'Veldwerk bij milieuhygienisch bodemonderzoek'.

Bij het onderzoek zijn de volgende protocollen gevolgd *(aankruisen door projectleider/projectmedewerker):*

- [x] Plaatsen van handboringen en peilbuizen (protocol 2001)
- [ ] Nemen van grondwatermonsters (protocol 2002)
- [ ] Milieuhygiënisch onderzoek waterbodems (protocol 2003)
- [ ] Maaiveldinspectie en monsterneming van asbest in bodem (protocol 2018)

Verklaring functiescheiding
Ik verklaar dat het veldwerk onafhankelijk van de opdrachtgever is uitgevoerd conform de eisen van de BRL 2000 en het vermelde protocol

Protocol	Datum/Periode	Naam veldwerker*	Naam veldwerkbureau**	Handtekening
2001	5/11/20	[redacted]	Bureau: S-R Cert.nr.***: K41104/09	[redacted]
2100	5-11-20		Bureau: Ground Research Cert.nr.***: K41104-09	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	

* Naam invullen van de eerstverantwoordelijke veldwerker die op de betreffende datum/periode de werkzaamheden heeft uitgevoerd.

** Alleen invullen als het veldwerk niet door Antea Group is uitgevoerd.

*** Het veldwerkbureau dient hier het nummer van het BRL2000-certificaat te noteren, zoals vermeld op de site van Bodemplus

Colofon

Verantwoording

Project: Aanvullend onderzoek Ringdijk 390

Projectnummer: 465250

Het onderzoek is uitgevoerd volgens certificatiesschema BRL SIKB 2000. De uitvoerende organisatie is hiervoor gecertifceerd volgens het procescertificaat 'Veldwerk bij milieuhygienisch bodemonderzoek'.

Bij het onderzoek zijn de volgende protocollen gevolgd *(aankruisen door projectleider/projectmedewerker):*

- ☐ Plaatsen van handboringen en peilbuizen (protocol 2001)
- ☐ Nemen van grondwatermonsters (protocol 2002)
- ☐ Milieuhygiënisch onderzoek waterbodems (protocol 2003)
- ☐ Maaiveldinspectie en monsterneming van asbest in bodem (protocol 2018)

Verklaring functiescheiding

Ik verklaar dat het veldwerk onafhankelijk van de opdrachtgever is uitgevoerd conform de eisen van de BRL 2000 en het vermelde protocol

Protocol	Datum/Periode	Naam veldwerker*	Naam veldwerkbureau**	[redacted]
BRL2100	14-9-2020	[redacted]	Bureau: Ground Research Cert.nr.***: K56942/10	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
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			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	
			Bureau: Cert.nr.***:	

* Naam invullen van de eerstverantwoordelijke veldwerker die op de betreffende datum/periode de werkzaamheden heeft uitgevoerd.

** Alleen invullen als het veldwerk niet door Antea Group is uitgevoerd.

*** Het veldwerkbureau dient hier het nummer van het BRL2000-certificaat te noteren, zoals vermeld op de site van Bodemplus

Appendix 12 Drawings

Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1988 (IGF)
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek oktober 2019 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

0 10 20 30 40m

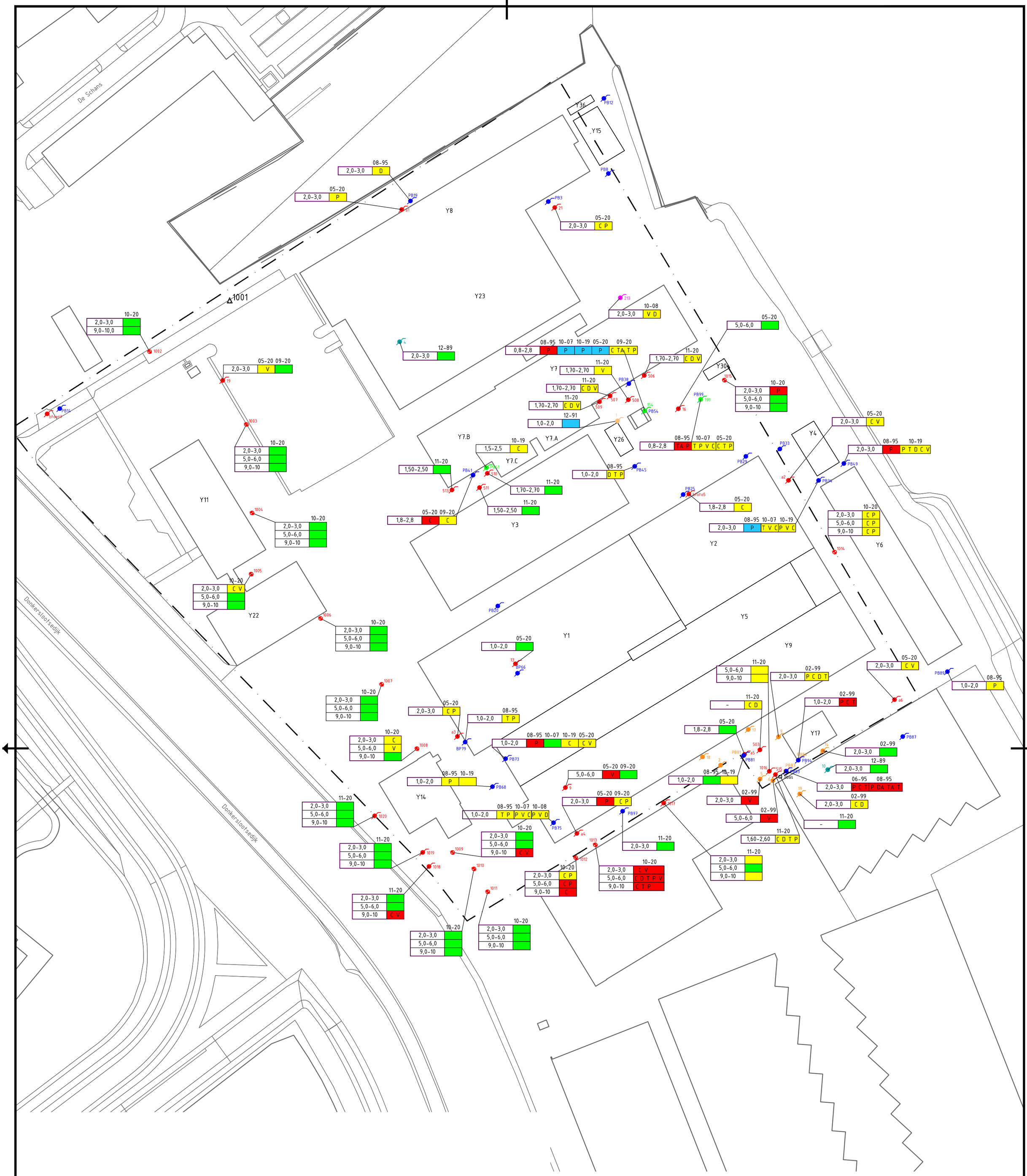
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C0	08-12-2020	CONCEPT	-

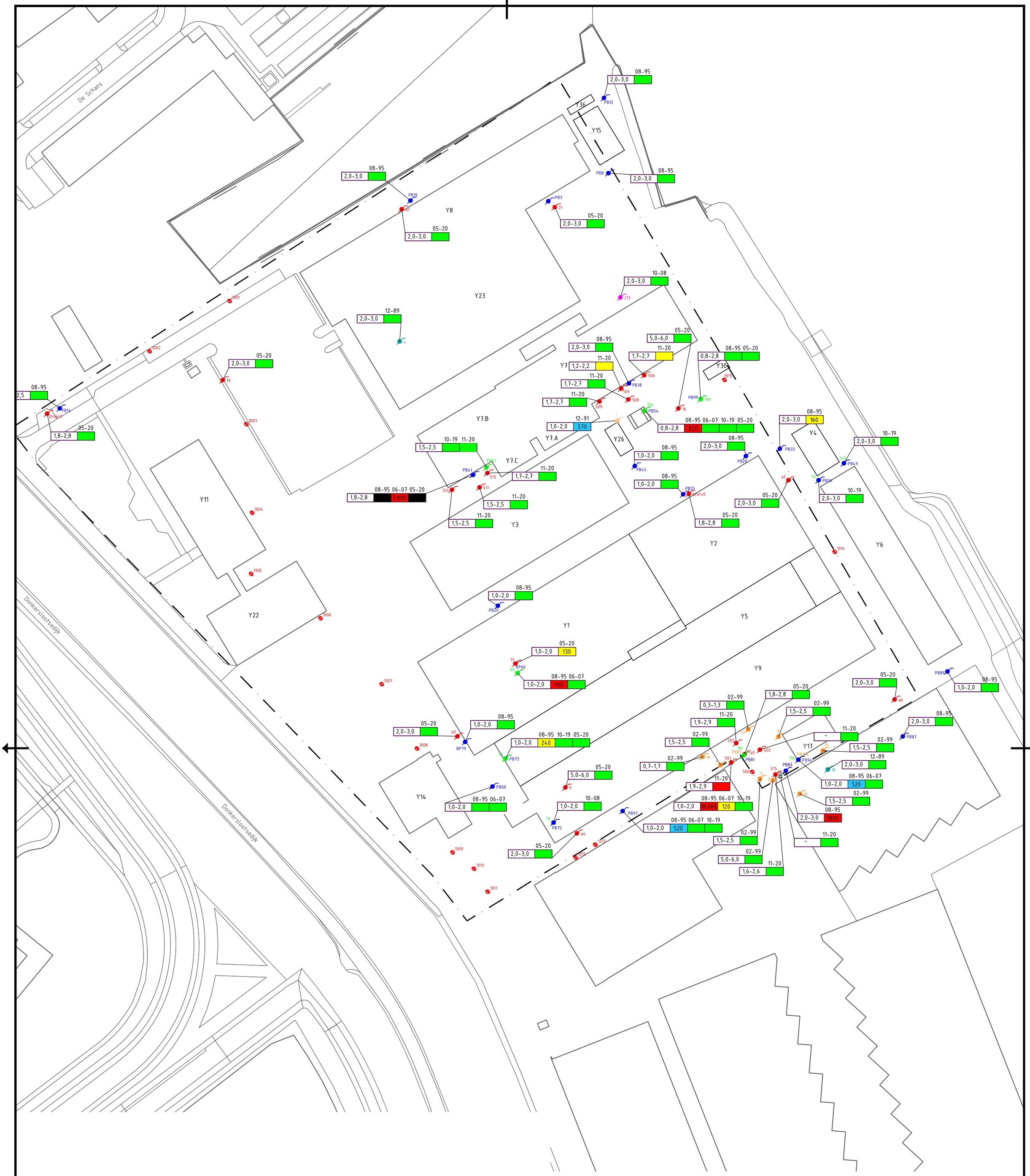
Panattoni

Overzicht boringen en peilbuizen

Schaal 1:1000
Formaat A2
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Status INTERN
Wijz.nr. C0
www.anteagroup.nl
Tekeningnummer 0465250.100-S1

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De Schans
Donkerslootsedijk
Donkerslootsedijk
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1008
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Y7.B
Y7.C
Y8
Y9
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Y33
Y34
Y35
Y36
08-95 2,0-3,0 D
05-20 2,0-3,0 P
05-20 2,0-3,0 C P
08-95 10-07 10-19 05-20 09-20 0,8-2,8 P P P P C TA T P
11-20 1,70-2,70 C D V
11-20 1,70-2,70 V
11-20 1,70-2,70 C D V
11-20 1,70-2,70 C D V
12-91 1,0-2,0
10-19 1,5-2,5 C
11-20 1,50-2,50
11-20 1,70-2,70
11-20 1,50-2,50
05-20 09-20 1,8-2,8 C C
08-95 1,0-2,0 D T P
05-20 1,8-2,8 C
08-95 10-07 10-19 2,0-3,0 P T V C P V C
08-95 10-07 05-20 0,8-2,8 TA P T P V C C T P
05-20 5,0-6,0
10-20 2,0-3,0 P
5,0-6,0
9,0-10
05-20 2,0-3,0 C V
08-95 10-19 2,0-3,0 P P T D C V
10-20 2,0-3,0 C P
5,0-6,0 C P
9,0-10 C P
10-08 2,0-3,0 V D
12-89 2,0-3,0
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5,0-6,0
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10-20 2,0-3,0 C P
5,0-6,0 C P
9,0-10 C
10-20 2,0-3,0 C V
5,0-6,0 C D T P V
9,0-10 C T P
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5,0-6,0
9,0-10 C V
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5,0-6,0
9,0-10
11-20 5,0-6,0
9,0-10
11-20 - C D
11-20 1,60-2,60 C D T P
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5,0-6,0
9,0-10
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02-99 2,0-3,0
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02-99 2,0-3,0 C D
06-95 08-95 2,0-3,0 P C T P DA TA T
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11-20 2,0-3,0
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11-20 2,0-3,0
5,0-6,0
9,0-10 C V
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10-20 2,0-3,0
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9,0-10
10-20 2,0-3,0
5,0-6,0
9,0-10



Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

	datum
filterdiepte	800

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated
- Floating layer
- 800 Concentration (ug/l)

0 10 20 30 40m

NR	DATUM	WIJZIGING	
C0	08-12-2020	CONCEPT	M.H.

Panattoni

Tekenaar [redacted]

Schaal 1:1000

Formaat A2

1 IN 1

Overview groundwater contaminations with mineral oil

Status INTERN

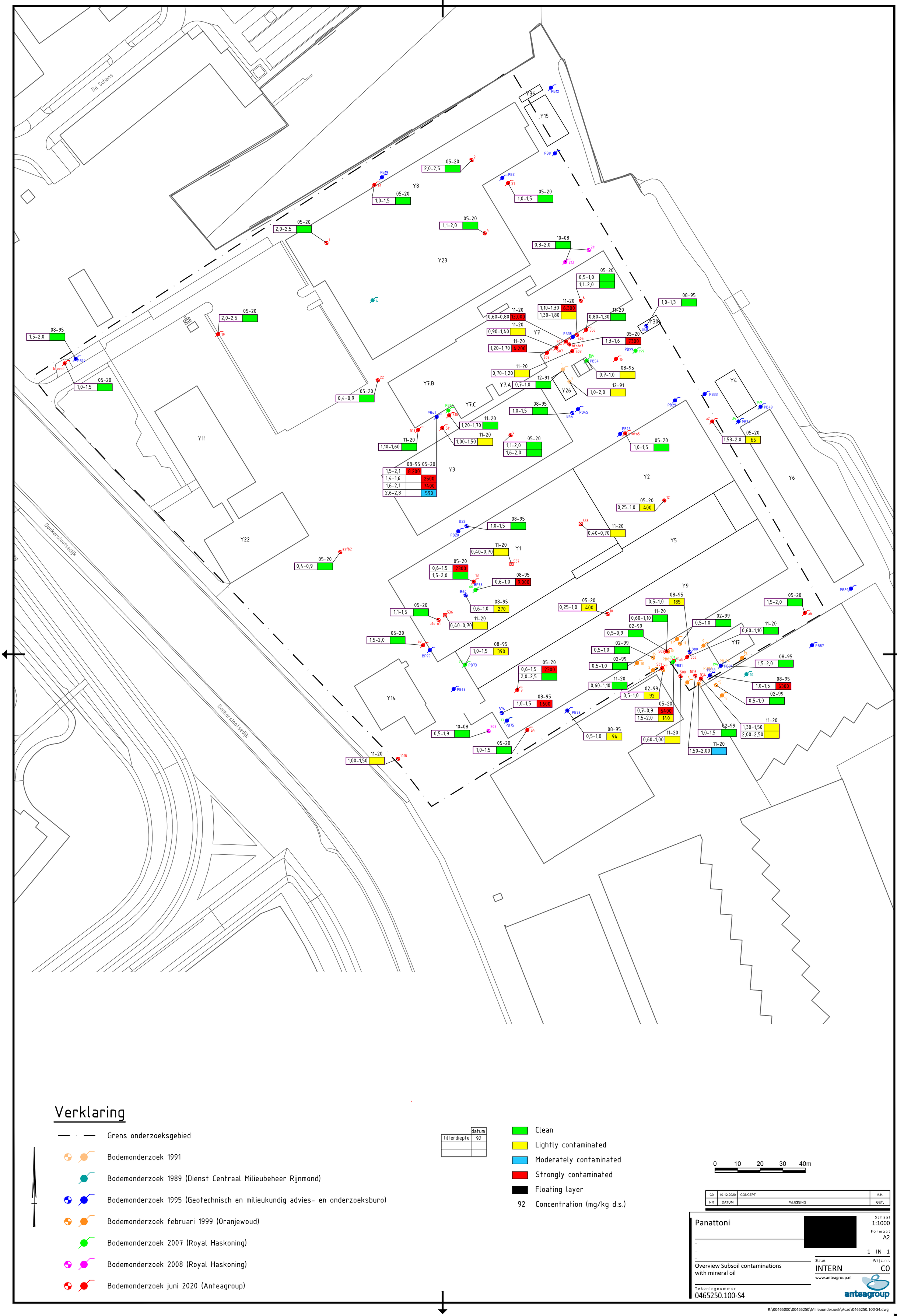
Wijz.nr. C0

www.anteagroup.nl

Tekeningnummer 0465250.100-S3

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1991
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

	datum
filterdiepte	92

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated
- Floating layer
- 92 Concentration (mg/kg d.s.)

0 10 20 30 40m

C0	10-12-2020	CONCEPT	M.H.
NR	DATUM	WIJZIGING	GET.

Panattoni

Overview Subsoil contaminations with mineral oil

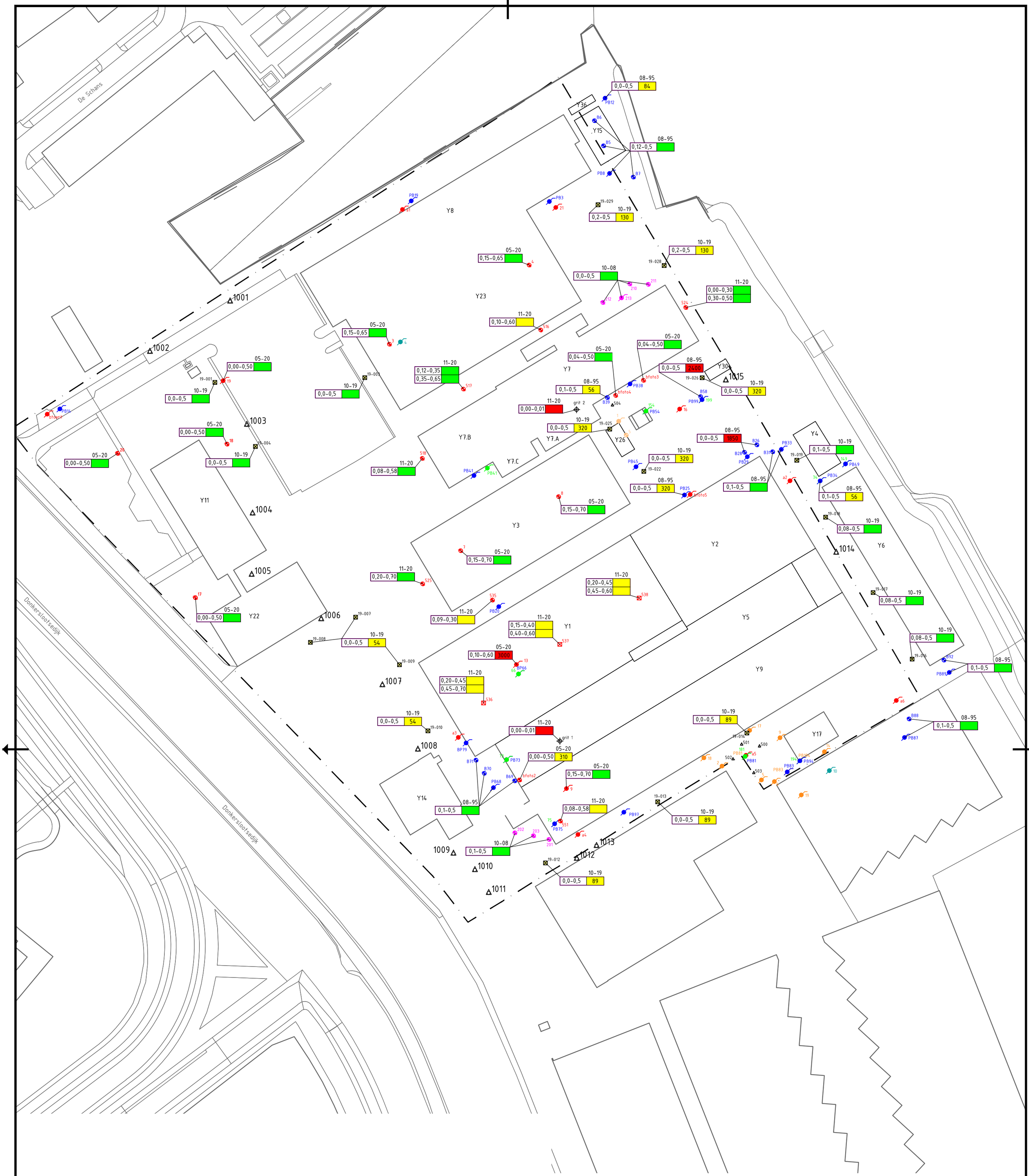
Tekeningnummer
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Schaal 1:1000
Formaat A2
1 IN 1
Status INTERN
Wijz.nr. C0

www.anteagroup.nl

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek oktober 2019 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

	datum
filterdiepte	2400

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated
- Floating layer
- 2400 Concentration (mg/kg d.s.)

0 10 20 30 40m

C0	08-12-2020	CONCEPT	M.H.
NR	DATUM	WIJZIGING	GET.

Panattoni

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Schaal 1:1000

Formaat A2

1 IN 1

Status INTERN

Wijz.nr. C0

Topsoil contaminations with mineral oil

www.anteagroup.nl

Tekeningnummer 0465250.100-S5

anteagroup

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De Schans

Donkerslootsedijk

Donkerslootsedijk

Y36 Y15 Y8 Y23 Y7 Y30 Y7.B Y7.A Y7.C Y26 Y4 Y11 Y3 Y2 Y6 Y22 Y1 Y5 Y9 Y17 Y14

PB12 PB8 PB19 PB3 PB14 PB38 PB99 PB54 PB33 PB49 PB41 PB45 PB29 PB34 PB25 PB20 PB66 PB89 PB73 PB68 PB87 PB81 PB94 PB83 PB75 PB97

05-20 2,0-2,5 — 19
05-20 1,0-1,5 — 31
05-20 1,5-2,0 P — 21
05-20 1,3-1,6 P — bfoto3
05-20 1,5-2,0 — 16
05-20 1,5-2,0 P — 5,0-5,5
05-20 1,6-2,1 — PB41
05-20 1,6-2,0 — 8
05-20 1,58-2,0 P — a2
05-20 1,5-2,0 — 13 BP66
05-20 1,1-1,5 P — bfoto1
05-20 1,5-2,0 — a3 BP79
08-95 1,0-1,5 P=21
05-20 2,0-2,5 — 5,0-5,5 — 9
05-20 1,0-1,5 P — a4
11-20 1,00-1,50 — 1018
05-20 0,7-0,9 P — 1,5-2,0
11-20 1,50-2,00 — 7,50-8,00
11-20 9,00-9,50 — 1017
05-20 1,5-2,0 P — a6
08-95 1,0-1,5 T=80 P=195
11-20 1,30-1,50 — 2,00-2,50

Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

	datum
filterdiepte	2400

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated
- Floating layer
- 2400 Concentration (mg/kg d.s.)

0 10 20 30 40m

C0	18-11-2020	CONCEPT	M.H.
NR	DATUM	WIJZIGING	GET.

Panattoni

Overview Subsoil contaminations with VOCL

Tekeningnummer
0465250.100-S6

Schaal 1:1000
Formaat A2
1 IN 1
Status INTERN
Wijz.nr. C0

www.anteagroup.nl

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

	datum
filterdiepte	X

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated
- Floating layer
- X Xylenen

0 10 20 30 40m

C0	22-10-2020	CONCEPT	M.H.
NR	DATUM	WIJZIGING	GET.

Panattoni

Tekenaar: [redacted]

Schaal 1:1000

Formaat A2

1 IN 1

Overview subsoil contaminations with BTEXN

Status INTERN

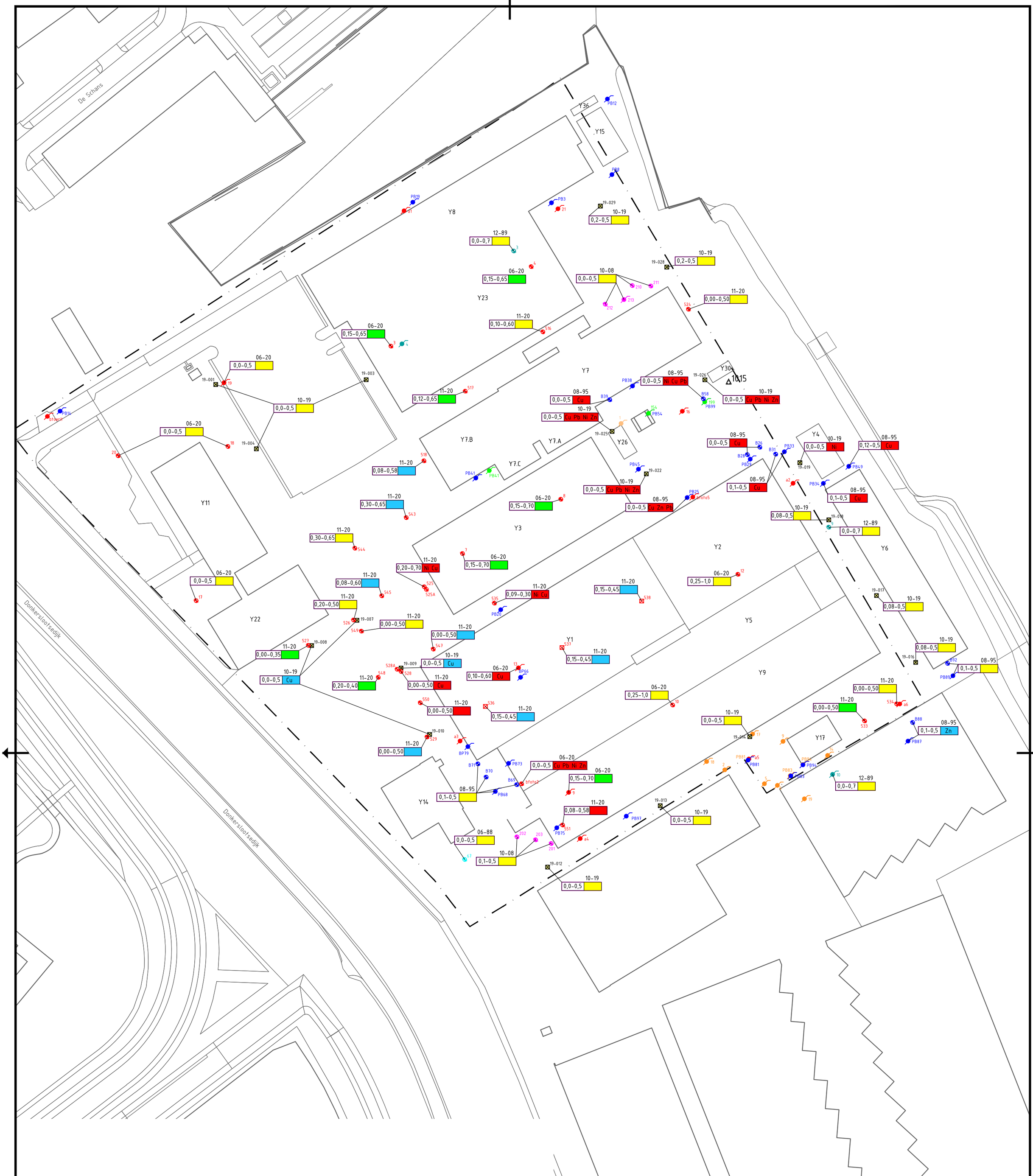
Wijz.nr. C0

www.anteagroup.nl

Tekeningnummer 0465250.100-S7

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1988 (IGF)
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek oktober 2019 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

datum	
filterdiepte	Cu

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated

Cu Koper
Pb Lood
Ni Nikkel
Zn Zink

0 10 20 30 40m

C0	08-12-2020	CONCEPT	M.H.
NR	DATUM	WIJZIGING	GET.

Panattoni

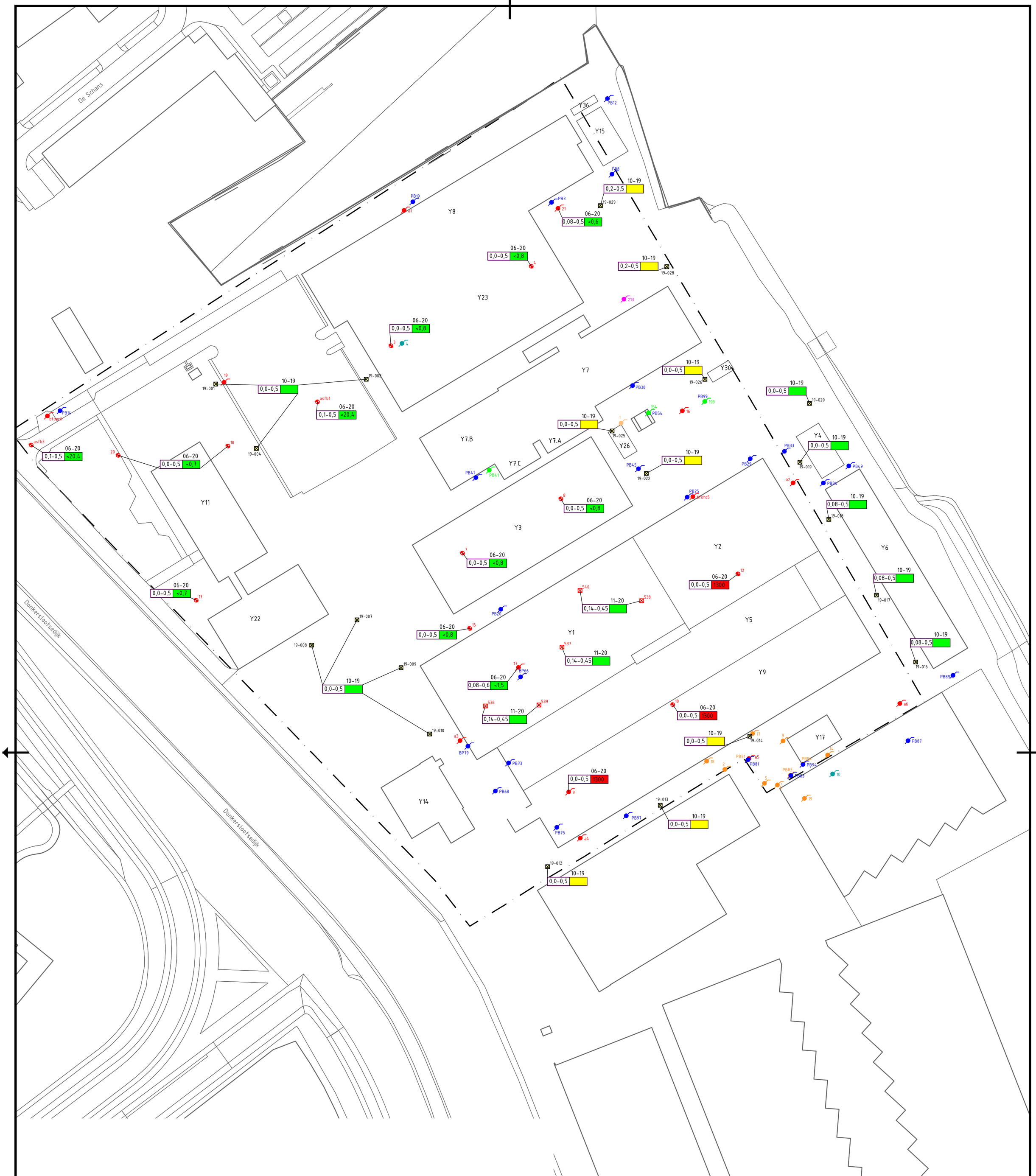
Overview Topsoil contaminations with metals

Tekeningnummer
0465250.100-S8

Schaal 1:1000
Formaat A2
1 IN 1
Status INTERN
Wijz.nr. C0
www.anteagroup.nl

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek oktober 2019 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

datum	
filterdiepte	

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated

0 10 20 30 40m

NR	DATUM	WIJZIGING	GET.
C0	17-11-2020	CONCEPT	M.H.

Panattoni

Overview Soil contaminations with asbestos

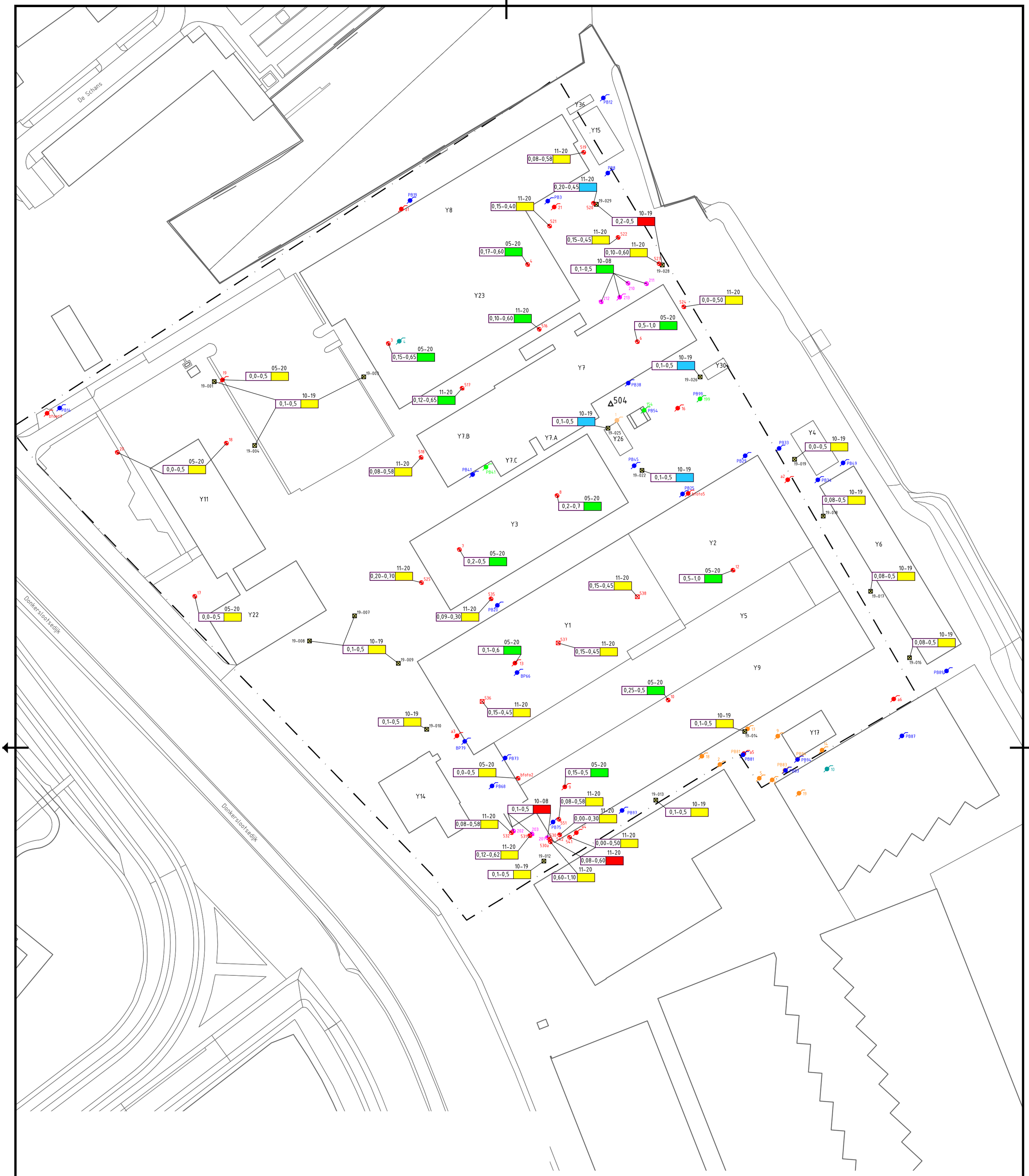
Tekeningnummer
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Schaal 1:1000
Formaat A2
1 IN 1
Status INTERN
Wijz.nr. C0

www.anteagroup.nl

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Bodemonderzoek 1989 (Dienst Centraal Milieubeheer Rijnmond)
- Bodemonderzoek 1991
- Bodemonderzoek 1995 (Geotechnisch en milieukundig advies- en onderzoeksburo)
- Bodemonderzoek februari 1999 (Oranjewoud)
- Bodemonderzoek 2007 (Royal Haskoning)
- Bodemonderzoek 2008 (Royal Haskoning)
- Bodemonderzoek oktober 2019 (Royal Haskoning)
- Bodemonderzoek juni 2020 (Anteagroup)

datum	
filterdiepte	

- Clean
- Lightly contaminated
- Moderately contaminated
- Strongly contaminated

0 10 20 30 40m

NR	DATUM	WIJZIGING	GET.
C0	03-12-2020	CONCEPT	M.H.

Panattoni

Tekenaar [redacted]

Schaal 1:1000

Formaat A2

1 IN 1

Overview topsoil contamination with PCB

Status INTERN

Wijz.nr. C0

www.anteagroup.nl

Tekeningnummer 0465250.100-S10

anteagroup

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Verklaring

- Grens onderzoeksgebied
- Strongly contaminated
- Moderately contaminated
- Lightly contaminated
- Clean

NR	DATUM	WIJZIGING	GET.
C0	08-12-2020	CONCEPT	-

Panattoni

Overview Topsoil contamination with metals, oil, asbestos and PCB

Tekeningnummer
0460838.100-S11

Tekenaar [redacted]d
Projectleider [redacted]

Schaal 1:1000
Formaat A2

1 IN 1

Status INTERN
Wijz.nr. C0

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De Schans

De Schans

Donkerslootsedijk

Industrieweg

Donkerslootsedijk

Y36

Y15

Y8

Y23

Y7

Y30

Y7.B

Y7.A

Y7.C

Y26

Y4

Y11

Y3

Y2

Y6

Y22

Y1

Y5

Y9

Y14

Y17

asfb2

B66

B76

Verklaring

Grens onderzoeksgebied

Strongly contaminated

Moderately contaminated

Lightly contaminated

Clean

0 10 20 30 40m

C0	15-12-2020	CONCEPT	-
NR	DATUM	WIJZIGING	GET.

Panattoni

-
-
-

Overview supsoil contaminations with immobile components, metals, PAH, PCB

Tekeningnummer
0460838.100-S14

Tekenaar

Schaal
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About Antea Group

From city to countryside, from air to water: Antea Group's engineers and consultants have been contributing to our living environment in the Netherlands for years now. We design bridges and roadways, and create residential neighborhoods and water structures. But we are also involved in areas such as the environment, safety, asset management and energy. Under the name Oranjewoud, we expanded into an all-round, independent partner for companies and government bodies. As the Antea Group, we also apply this knowledge at a global level. By combining valuable knowledge, including on technical matters, with a pragmatic approach, we make solutions attainable and workable. Goal-oriented, with an eye for sustainability. In this way, we anticipate today's questions and tomorrow's answers. Just as we have been for over 60 years now.

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