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13038100
BTW-nummer
NL8048.57.544.B01

Terra Projects
Dhr. M. Schouten
Poststraat 1
6135 KR Sittard

uw ref: - onze ref: 140.23.0510/R1 Panheel, 10 januari 2024

Betreft : Infiltratieonderzoek Tiskeswej te Nederweert-Eind
Opgesteld door : Dhr. ing. E. van Horen

Geachte heer Schouten,

Hierbij ontvangt u de resultaten van het infiltratie onderzoek (bepalen k-waarden) voor het projectgebied Tiskeswej te Nederweert-Eind.

Onderzoeksopzet
Het onderzoek wordt uitgevoerd volgens de Aardvark methode (constant-Head-boorgat-permeameter) in de onverzadigde zone ter plaatse van 5 meetpunten. Per meetpunt vindt een meting plaats in de bodemlaag van 1,0-1,5 m-mv en 2,0-2,5 m-mv. Per bodemlaag wordt vervolgens een k-waarde in m/d bepaald.

Uitvoering veldwerk
Het veldwerk is door dhr. J. Richaerts (protocol 2001 erkend) uitgevoerd op 18 en 22 december 2023. Per meetpunt is minimaal 1 meting uitgevoerd. Een schets met de meetpunten is opgenomen in bijlage 1. In verband met de hoge grondwaterstand (a.g.v. zeer natte periode) is gekozen voor een hogere infiltratiediepte dan voorzien bij de onderzoeksopzet. Een meting in de onverzadigde zone op 2 verschillende dieptes heeft niet kunnen plaatsvinden. De boorprofielen zijn opgenomen in bijlage 2. Uit de boorprofielen blijkt dat de bodem bestaat uit zeer fijn zand met laagjes leem.

Resultaten
De meetresultaten zijn per boorpunt in tabel 1 samengevat. De volledige meetresultaten zijn opgenomen in bijlage 3.

Tabel 1: Overzicht gegevens infiltratiemetingen en grondwaterstanden

Meetpunt	Meting	Grondwaterstand in m-mv	Infiltratiediepte in m-mv	K-waarde in m/d
01	1d	1,05	0,55	Geen betrouwbare meting
02	2a	0,86	0,45	0,1
03	3a	1,05	0,55	Geen betrouwbare meting
04	4a	1,60	1,05	0,00995
05	5a	1,65	1,15	Geen betrouwbare meting

Bespreking resultaten
Uit de resultaten blijkt dat ter plaatse van meetpunt 01, 03 en 05 geen betrouwbare meting mogelijk was. Ter plaatse van boring 02 en 04 is een zeer lage k-waarde gemeten.

Conclusie
Gezien de aangetroffen bodemopbouw (zeer fijn zand met laagjes leem) worden geen hoge k-waarden (= goed doorlatende bodemlagen) verwacht. Een aantal metingen heeft dit bevestigd. In de diepere bodem heeft, omdat geen sprake was van een onverzadigde zone, geen meting kunnen plaatsvinden met de Aardvark methode. Mogelijk dat dit op een later moment in een drogere periode wel nog mogelijk is.

Wij vertrouwen erop u hiermee voldoende te hebben geïnformeerd. Mocht u naar aanleiding van deze rapportage nog vragen hebben dan hoor ik het graag.

Met vriendelijke groet,
Milieutechnisch Adviesbureau Heel BV



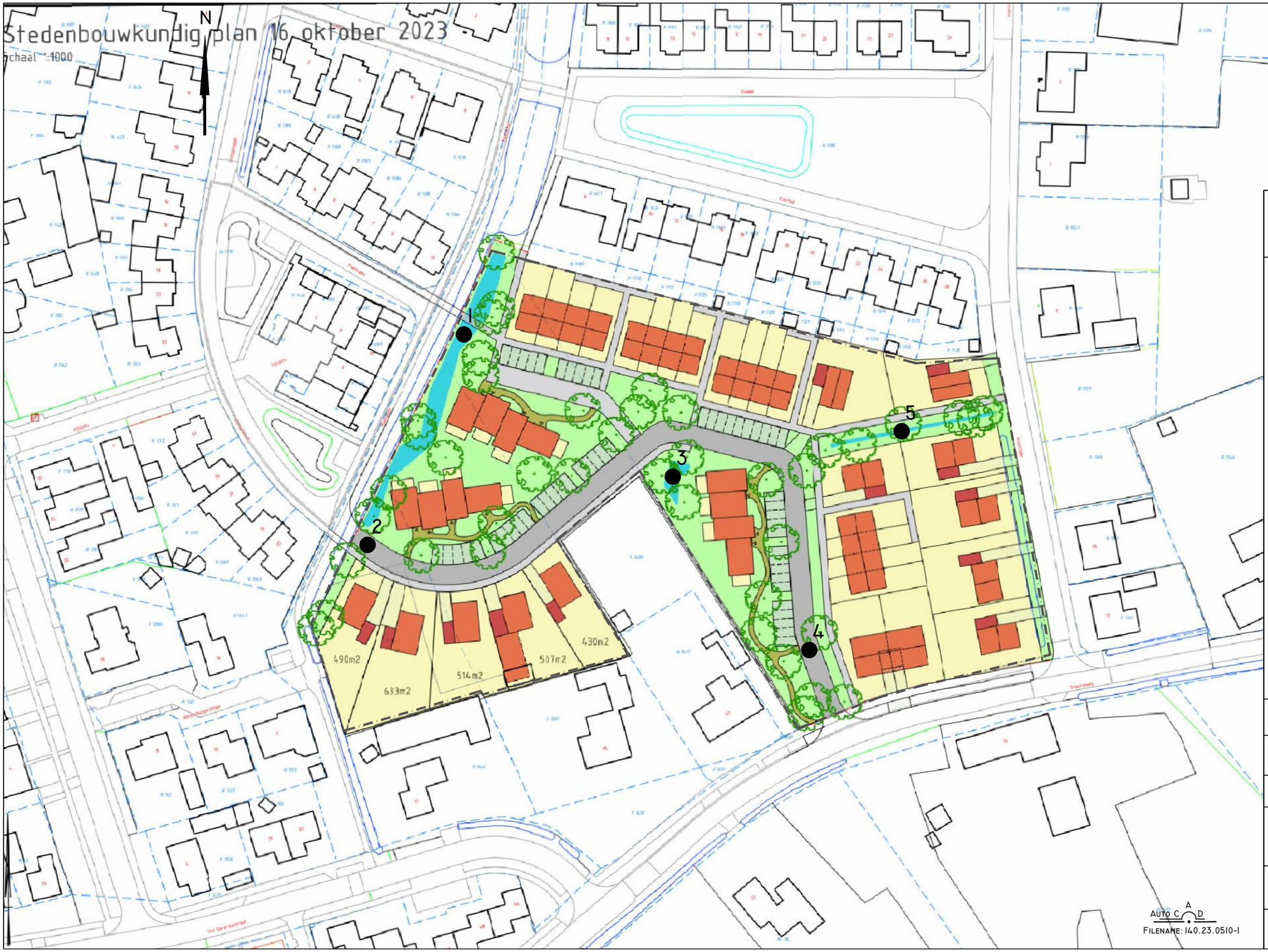
Ing. E.G.C. van Horen
Directeur

Voor akkoord, d.d. ……

Bijlage(n)
1. Situatieschets met meetpunten
2. Profielbeschrijvingen
3. Meetresultaten

BIJLAGE 1

SITUATIESCHETS MET MEETPUNTEN



BIJLAGE 2
SITUATIETEKENING MET
MEETPUNTEN INFILTRATIEONDERZOEK

LEGENDA

ONDERZOEKSLOCATIE

MEETPUNT INFILTRATIE
- DIEPTE 1,0-1,5 M-MV
- DIEPTE 2,0-2,5 M-MV

0 10 20 30 40 50

AAN DEZE TEKENING KUNNEN GEEN RECHTEN WORDEN ONTLEEND

PROJECT:
TISKEWEJ TE NEDERWEERT-EIND

OPDRACHTGEVER:
TERRA PROJECTS

PROJECTLEIDER : EH
TEKENAAR : EH
PROJECTNR. : 140.23.0510
DATUM : 08-12-2023
VERSIE : 01

MILIEUTECHNISCH
ADVIESBUREAU HEEL BV

TEL. : 0475-573231
FAX : 0475-571509

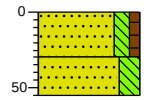
SCHAAL 1:1000 /A3

AUTO CAD
FILENAME: 140.23.0510-1

BIJLAGE 2

PROFIELBESCHRIJVINGEN

Boring: 01



0 gras

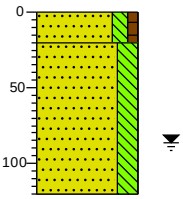
Zand matig fijn, matig siltig, zwak humeus, donker beigebruin, Edelmanboor

-30

Zand zeer fijn, sterk siltig, laagjes leem, sporen roest, licht grijsbeige, Edelmanboor, Grondwaterstand pb 24 = 105cm

-55

Boring: 02



0 gras

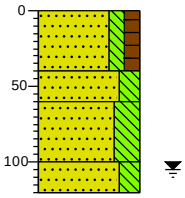
Zand matig fijn, matig siltig, zwak humeus, donker beigebruin, Edelmanboor

-20

Zand zeer fijn, sterk siltig, laagjes leem, Edelmanboor, Humeuze laagjes

-120

Boring: 03



0 weiland

Zand matig fijn, matig siltig, matig humeus, sporen baksteen, donker beigebruin, Edelmanboor

-40

Zand zeer fijn, sterk siltig, sporen leem, licht beigebruin, Edelmanboor

-60

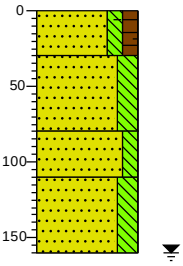
Zand zeer fijn, uiterst siltig, laagjes leem, zwak roesthoudend, licht grijsbeige, Edelmanboor

-100

Zand matig fijn, sterk siltig, licht beigegrijs, Edelmanboor

-120

Boring: 04



0 weiland

Zand matig fijn, matig siltig, matig humeus, sporen baksteen, donker beigebruin, Edelmanboor

-30

Zand matig fijn, sterk siltig, laagjes leem, licht beigegrijs, Edelmanboor

-80

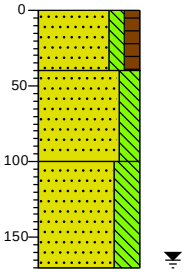
Zand matig fijn, matig siltig, licht beigegrijs, Edelmanboor

-110

Zand zeer fijn, sterk siltig, laagjes leem, Edelmanboor

-160

Boring: 05



0 weiland

Zand matig fijn, matig siltig, matig humeus, donker beigebruin, Edelmanboor

-40

Zand zeer fijn, sterk siltig, licht grijsbeige, Edelmanboor

-100

Zand zeer fijn, uiterst siltig, laagjes leem, licht grijsbeige, Edelmanboor

-170

Projectnaam: Tiskeswej te Nederweert

Projectcode: 140230510

BIJLAGE 3

MEETRESULTATEN

vrijdag 22 december 2023

Location: Nederweert1

Site: 1d

Time interval between readings: 0 minute

Ksat Method: Glover Solution

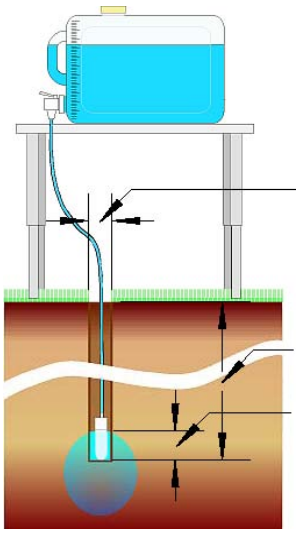
Steady Flow Rate Condition

Steady Flow Rate achieved when Water Consumption Rate changes less than

+/- 50 % for 3 consecutive readings

Steady Flow Rate:	-5,631 ml/min
Temp. Adj. FR:	-5,633 ml/min
Percolation Rate:	-13,943 min/cm
Ksat:	-1,4014E-1 Meters / day

Notes:



10 cm	Hole Diameter
10 ° C	Water Temperature
55 cm	Hole Depth
8 cm	Water Height in Hole
	Water Table Depth

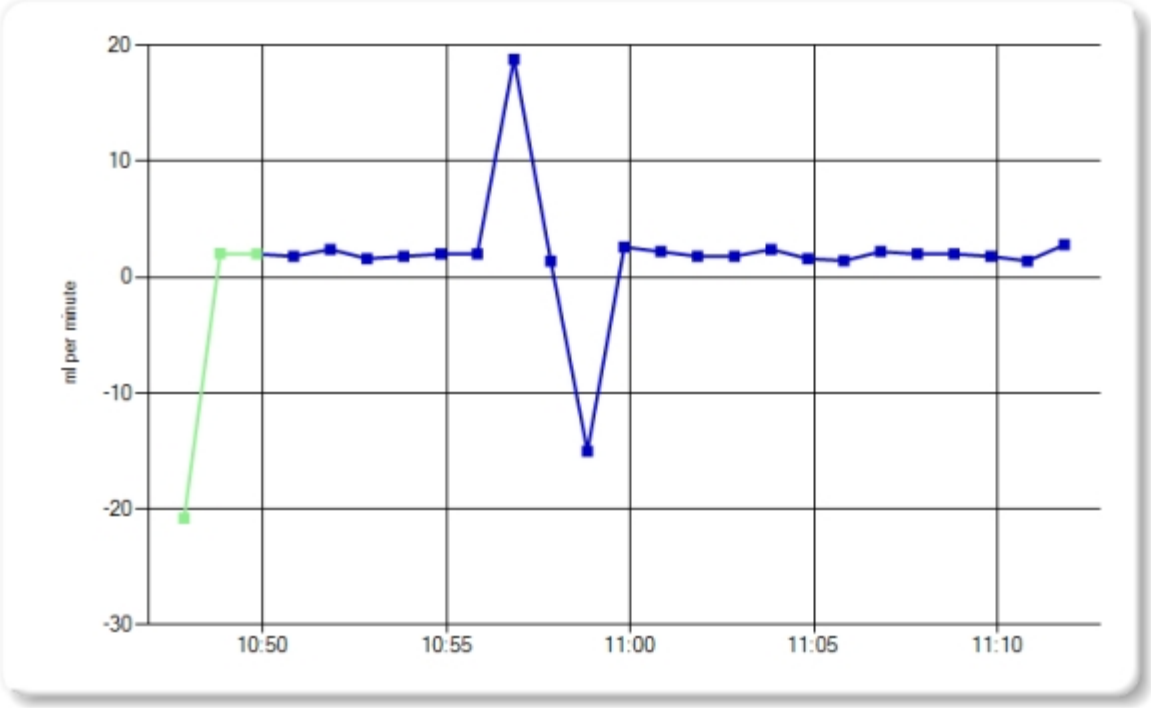
Site GPS Position

	Degrees	Minutes	Seconds	
Longitude:	0	0	0	East
Latitude:	0	0	0	North

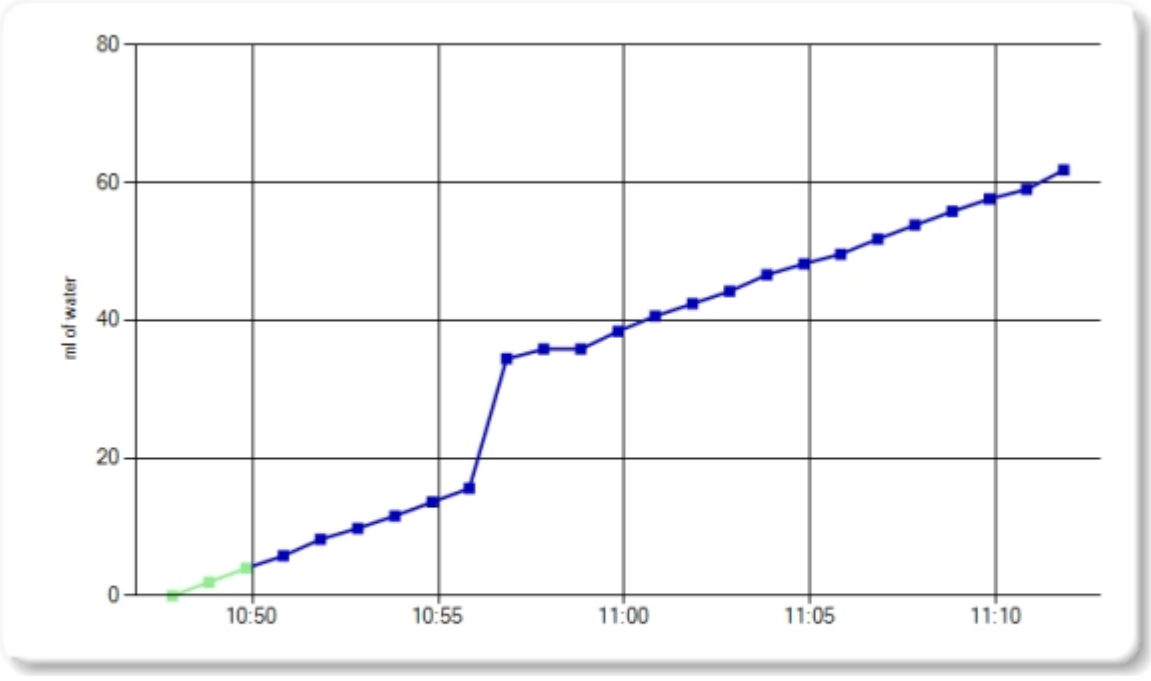
Soil Texture-Structure Category:

Most structured soils from clays through loams; also includes unstructured medium and fine sands. The category most frequently applicable for agricultural soils.

Water Consumption Rate



Total Water Consumed



Time	Reservoir Water Level	Elapsed Time Interval	Interval Water Consumed	Total Water Consumed	Water Consumption Rate	Ignore Reading
10:46:51	7595,2 ml					
10:47:51	7616,0 ml	1 minute	-20,8 ml	,0 ml	-20,800 ml/min	
10:48:50	7614,0 ml	59 seconds	2,0 ml	2,0 ml	2,034 ml/min	
10:49:50	7612,0 ml	1 minute	2,0 ml	4,0 ml	2,000 ml/min	
10:50:50	7610,2 ml	1 minute	1,8 ml	5,8 ml	1,800 ml/min	
10:51:50	7607,8 ml	1 minute	2,4 ml	8,2 ml	2,400 ml/min	
10:52:50	7606,2 ml	1 minute	1,6 ml	9,8 ml	1,600 ml/min	
10:53:50	7604,4 ml	1 minute	1,8 ml	11,6 ml	1,800 ml/min	
10:54:50	7602,4 ml	1 minute	2,0 ml	13,6 ml	2,000 ml/min	
10:55:50	7600,4 ml	1 minute	2,0 ml	15,6 ml	2,000 ml/min	
10:56:50	7581,6 ml	1 minute	18,8 ml	34,4 ml	18,800 ml/min	
10:57:50	7580,2 ml	1 minute	1,4 ml	35,8 ml	1,400 ml/min	
10:58:50	7595,2 ml	1 minute	-15,0 ml	35,8 ml	-15,000 ml/min	
10:59:50	7592,6 ml	1 minute	2,6 ml	38,4 ml	2,600 ml/min	
11:00:50	7590,4 ml	1 minute	2,2 ml	40,6 ml	2,200 ml/min	
11:01:50	7588,6 ml	1 minute	1,8 ml	42,4 ml	1,800 ml/min	
11:02:50	7586,8 ml	1 minute	1,8 ml	44,2 ml	1,800 ml/min	
11:03:50	7584,4 ml	1 minute	2,4 ml	46,6 ml	2,400 ml/min	
11:04:50	7582,8 ml	1 minute	1,6 ml	48,2 ml	1,600 ml/min	
11:05:49	7581,4 ml	59 seconds	1,4 ml	49,6 ml	1,424 ml/min	
11:06:49	7579,2 ml	1 minute	2,2 ml	51,8 ml	2,200 ml/min	
11:07:49	7577,2 ml	1 minute	2,0 ml	53,8 ml	2,000 ml/min	
11:08:49	7575,2 ml	1 minute	2,0 ml	55,8 ml	2,000 ml/min	
11:09:49	7573,4 ml	1 minute	1,8 ml	57,6 ml	1,800 ml/min	
11:10:49	7572,0 ml	1 minute	1,4 ml	59,0 ml	1,400 ml/min	
11:11:49	7569,2 ml	1 minute	2,8 ml	61,8 ml	2,800 ml/min	

vrijdag 22 december 2023

Location: Nederweert1

Site: 2a

Time interval between readings: 0 minute

Ksat Method: Glover Solution

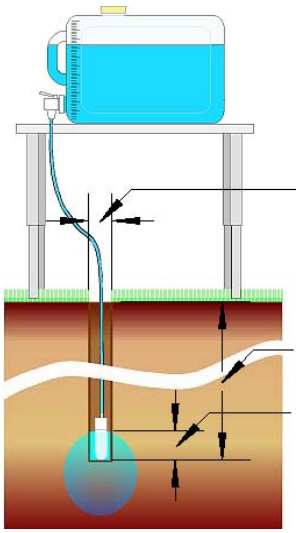
Steady Flow Rate Condition

Steady Flow Rate achieved when Water Consumption Rate changes less than

+/- 10 % for 3 consecutive readings

Steady Flow Rate:	4,000 ml/min
Temp. Adj. FR:	4,001 ml/min
Percolation Rate:	19,629 min/cm
Ksat:	0,1 Meters / day

Notes:



10 cm	Hole Diameter
10 ° C	Water Temperature
45 cm	Hole Depth
8 cm	Water Height in Hole
	Water Table Depth

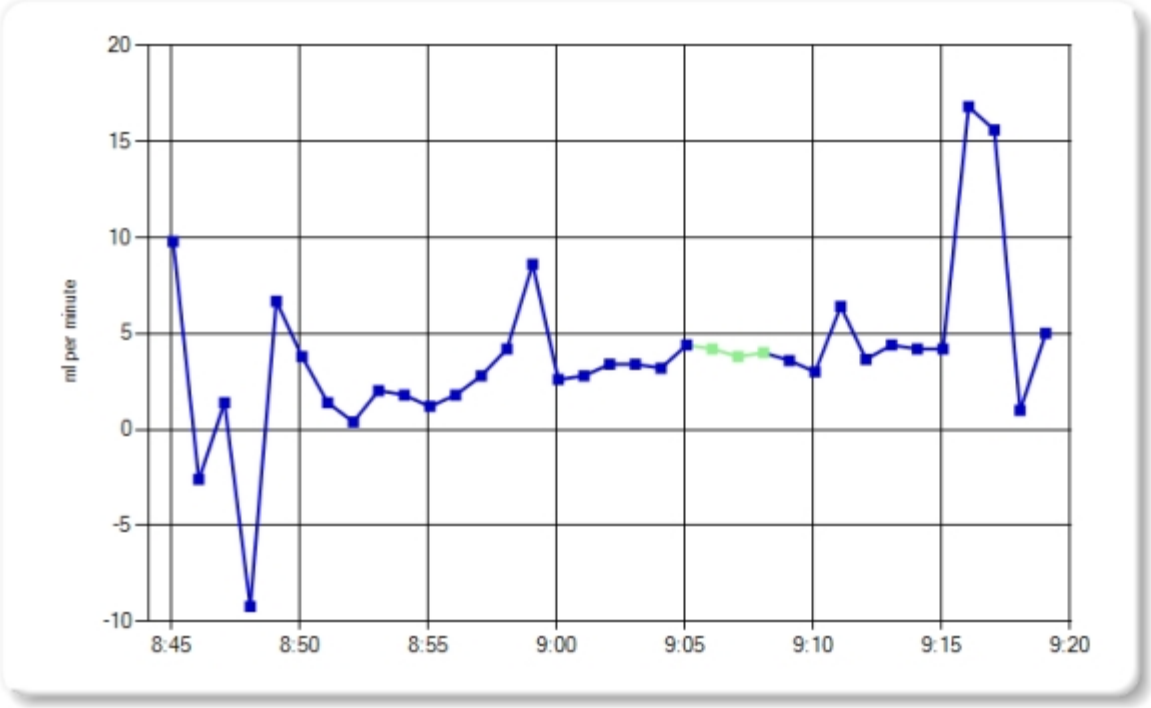
Site GPS Position

	Degrees	Minutes	Seconds	
Longitude:	0	0	0	East
Latitude:	0	0	0	North

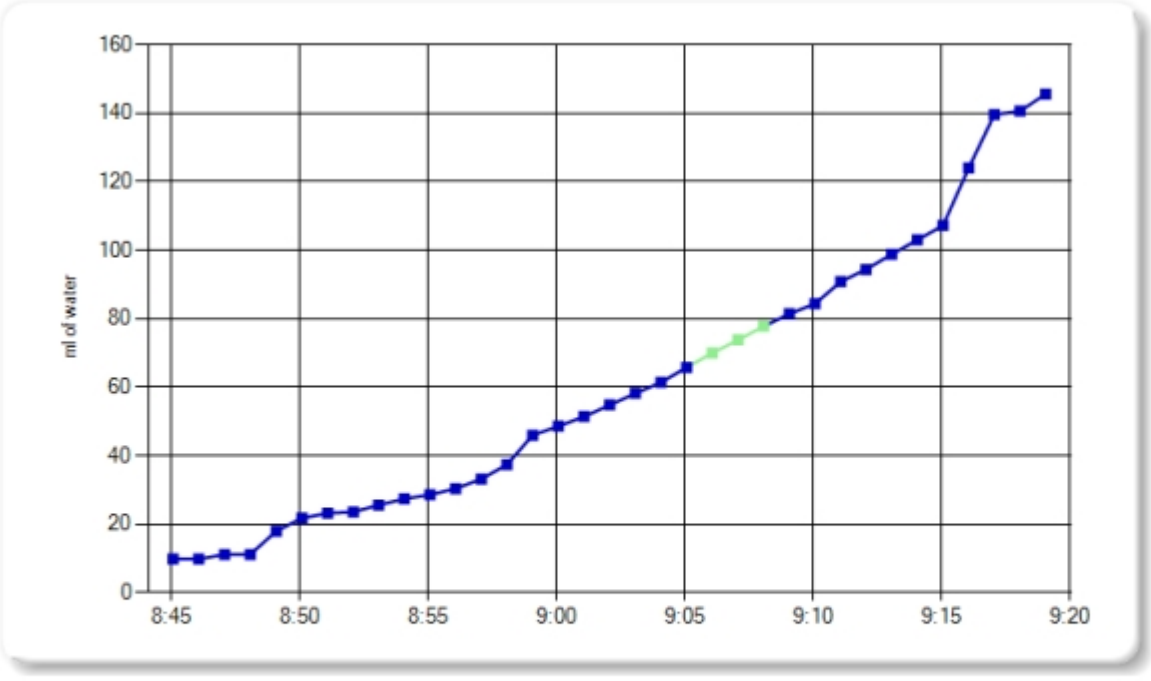
Soil Texture-Structure Category:

Most structured soils from clays through loams; also includes unstructured medium and fine sands. The category most frequently applicable for agricultural soils.

Water Consumption Rate



Total Water Consumed



Time	Reservoir Water Level	Elapsed Time Interval	Interval Water Consumed	Total Water Consumed	Water Consumption Rate	Ignore Reading
08:44:04	8527,8 ml					
08:45:04	8518,0 ml	1 minute	9,8 ml	9,8 ml	9,800 ml/min	
08:46:04	8520,6 ml	1 minute	-2,6 ml	9,8 ml	-2,600 ml/min	
08:47:04	8519,2 ml	1 minute	1,4 ml	11,2 ml	1,400 ml/min	
08:48:04	8528,4 ml	1 minute	-9,2 ml	11,2 ml	-9,200 ml/min	
08:49:05	8521,6 ml	1 minute	6,8 ml	18,0 ml	6,689 ml/min	
08:50:05	8517,8 ml	1 minute	3,8 ml	21,8 ml	3,800 ml/min	
08:51:05	8516,4 ml	1 minute	1,4 ml	23,2 ml	1,400 ml/min	
08:52:05	8516,0 ml	1 minute	,4 ml	23,6 ml	,400 ml/min	
08:53:04	8514,0 ml	59 seconds	2,0 ml	25,6 ml	2,034 ml/min	
08:54:04	8512,2 ml	1 minute	1,8 ml	27,4 ml	1,800 ml/min	
08:55:04	8511,0 ml	1 minute	1,2 ml	28,6 ml	1,200 ml/min	
08:56:04	8509,2 ml	1 minute	1,8 ml	30,4 ml	1,800 ml/min	
08:57:04	8506,4 ml	1 minute	2,8 ml	33,2 ml	2,800 ml/min	
08:58:04	8502,2 ml	1 minute	4,2 ml	37,4 ml	4,200 ml/min	
08:59:04	8493,6 ml	1 minute	8,6 ml	46,0 ml	8,600 ml/min	
09:00:04	8491,0 ml	1 minute	2,6 ml	48,6 ml	2,600 ml/min	
09:01:04	8488,2 ml	1 minute	2,8 ml	51,4 ml	2,800 ml/min	
09:02:04	8484,8 ml	1 minute	3,4 ml	54,8 ml	3,400 ml/min	
09:03:04	8481,4 ml	1 minute	3,4 ml	58,2 ml	3,400 ml/min	
09:04:04	8478,2 ml	1 minute	3,2 ml	61,4 ml	3,200 ml/min	
09:05:04	8473,8 ml	1 minute	4,4 ml	65,8 ml	4,400 ml/min	
09:06:04	8469,6 ml	1 minute	4,2 ml	70,0 ml	4,200 ml/min	
09:07:04	8465,8 ml	1 minute	3,8 ml	73,8 ml	3,800 ml/min	
09:08:04	8461,8 ml	1 minute	4,0 ml	77,8 ml	4,000 ml/min	
09:09:04	8458,2 ml	1 minute	3,6 ml	81,4 ml	3,600 ml/min	
09:10:04	8455,2 ml	1 minute	3,0 ml	84,4 ml	3,000 ml/min	
09:11:04	8448,8 ml	1 minute	6,4 ml	90,8 ml	6,400 ml/min	
09:12:03	8445,2 ml	59 seconds	3,6 ml	94,4 ml	3,661 ml/min	
09:13:03	8440,8 ml	1 minute	4,4 ml	98,8 ml	4,400 ml/min	
09:14:03	8436,6 ml	1 minute	4,2 ml	103,0 ml	4,200 ml/min	
09:15:03	8432,4 ml	1 minute	4,2 ml	107,2 ml	4,200 ml/min	
09:16:03	8415,6 ml	1 minute	16,8 ml	124,0 ml	16,800 ml/min	
09:17:03	8400,0 ml	1 minute	15,6 ml	139,6 ml	15,600 ml/min	
09:18:03	8399,0 ml	1 minute	1,0 ml	140,6 ml	1,000 ml/min	
09:19:03	8394,0 ml	1 minute	5,0 ml	145,6 ml	5,000 ml/min	

vrijdag 22 december 2023

Location: Nederweert

Site: 3a

Time interval between readings: 0 minute

Ksat Method: Glover Solution

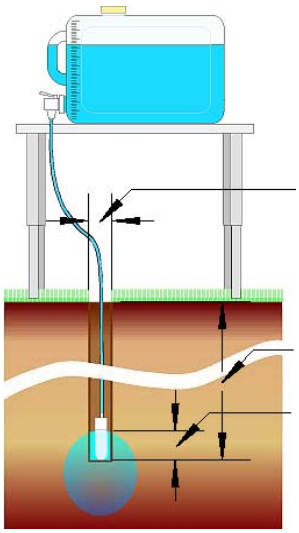
Steady Flow Rate Condition

Steady Flow Rate achieved when Water Consumption Rate changes less than

+/- 20 % for 3 consecutive readings

Steady Flow Rate:	-0,267 ml/min
Temp. Adj. FR:	-0,267 ml/min
Percolation Rate:	-294,440 min/cm
Ksat:	-6,6361E-3 Meters / day

Notes:



10 cm	Hole Diameter
10 ° C	Water Temperature
55 cm	Hole Depth
8 cm	Water Height in Hole
	Water Table Depth

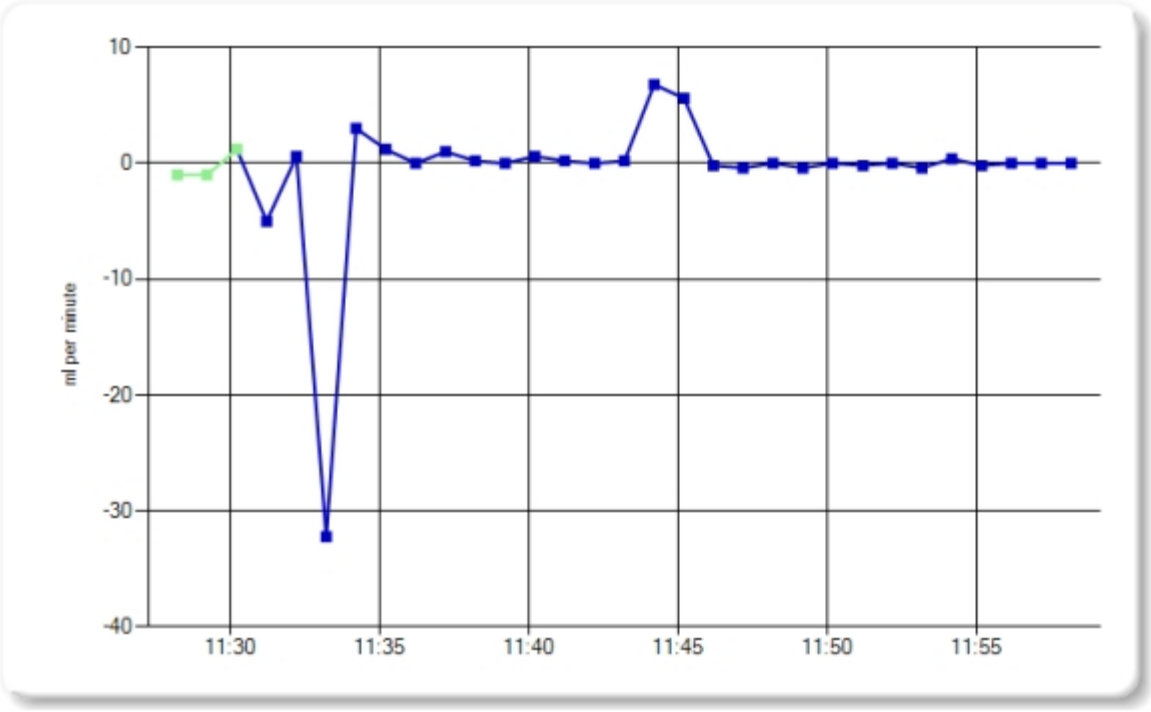
Site GPS Position

	Degrees	Minutes	Seconds	
Longitude:	0	0	0	East
Latitude:	0	0	0	North

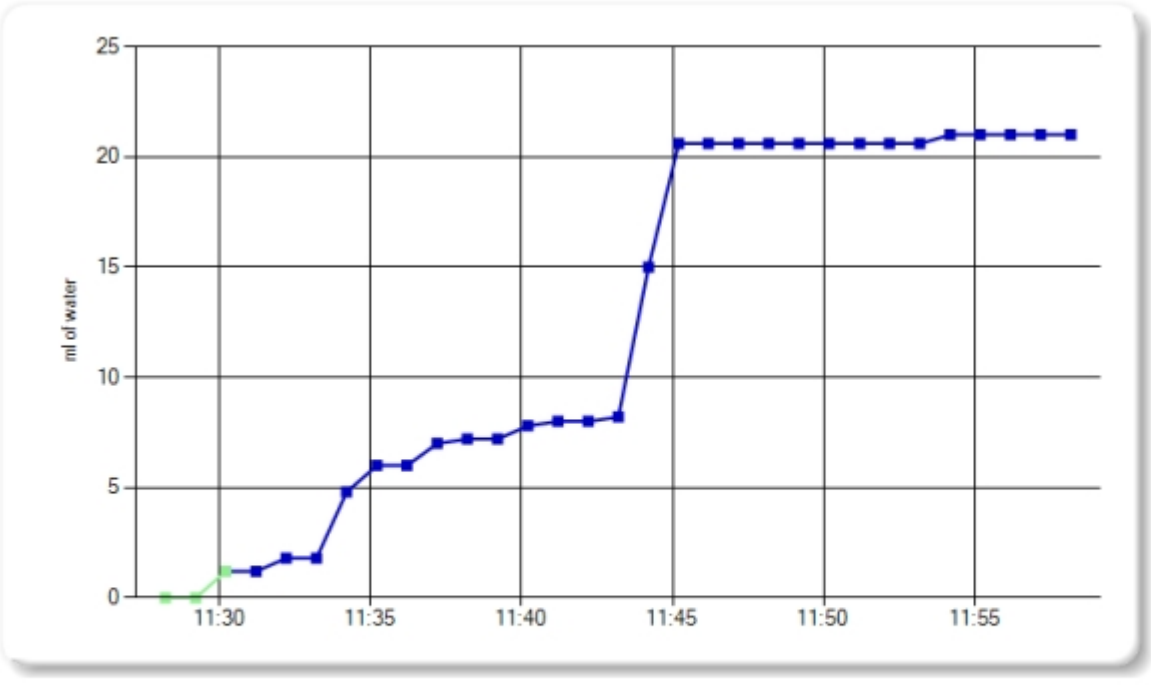
Soil Texture-Structure Category:

Most structured soils from clays through loams; also includes unstructured medium and fine sands. The category most frequently applicable for agricultural soils.

Water Consumption Rate



Total Water Consumed



Time	Reservoir Water Level	Elapsed Time Interval	Interval Water Consumed	Total Water Consumed	Water Consumption Rate	Ignore Reading
11:27:12	6058,4 ml					
11:28:12	6059,4 ml	1 minute	-1,0 ml	,0 ml	-1,000 ml/min	
11:29:12	6060,4 ml	1 minute	-1,0 ml	,0 ml	-1,000 ml/min	
11:30:12	6059,2 ml	1 minute	1,2 ml	1,2 ml	1,200 ml/min	
11:31:12	6064,2 ml	1 minute	-5,0 ml	1,2 ml	-5,000 ml/min	
11:32:12	6063,6 ml	1 minute	,6 ml	1,8 ml	,600 ml/min	
11:33:12	6095,8 ml	1 minute	-32,2 ml	1,8 ml	-32,200 ml/min	
11:34:12	6092,8 ml	1 minute	3,0 ml	4,8 ml	3,000 ml/min	
11:35:12	6091,6 ml	1 minute	1,2 ml	6,0 ml	1,200 ml/min	
11:36:12	6091,6 ml	1 minute	,0 ml	6,0 ml	,000 ml/min	
11:37:12	6090,6 ml	1 minute	1,0 ml	7,0 ml	1,000 ml/min	
11:38:12	6090,4 ml	1 minute	,2 ml	7,2 ml	,200 ml/min	
11:39:12	6090,4 ml	1 minute	,0 ml	7,2 ml	,000 ml/min	
11:40:12	6089,8 ml	1 minute	,6 ml	7,8 ml	,600 ml/min	
11:41:12	6089,6 ml	1 minute	,2 ml	8,0 ml	,200 ml/min	
11:42:12	6089,6 ml	1 minute	,0 ml	8,0 ml	,000 ml/min	
11:43:12	6089,4 ml	1 minute	,2 ml	8,2 ml	,200 ml/min	
11:44:12	6082,6 ml	1 minute	6,8 ml	15,0 ml	6,800 ml/min	
11:45:12	6077,0 ml	1 minute	5,6 ml	20,6 ml	5,600 ml/min	
11:46:11	6077,2 ml	59 seconds	-,2 ml	20,6 ml	-,203 ml/min	
11:47:11	6077,6 ml	1 minute	-,4 ml	20,6 ml	-,400 ml/min	
11:48:11	6077,6 ml	1 minute	,0 ml	20,6 ml	,000 ml/min	
11:49:11	6078,0 ml	1 minute	-,4 ml	20,6 ml	-,400 ml/min	
11:50:11	6078,0 ml	1 minute	,0 ml	20,6 ml	,000 ml/min	
11:51:12	6078,2 ml	1 minute	-,2 ml	20,6 ml	-,197 ml/min	
11:52:11	6078,2 ml	59 seconds	,0 ml	20,6 ml	,000 ml/min	
11:53:11	6078,6 ml	1 minute	-,4 ml	20,6 ml	-,400 ml/min	
11:54:11	6078,2 ml	1 minute	,4 ml	21,0 ml	,400 ml/min	
11:55:11	6078,4 ml	1 minute	-,2 ml	21,0 ml	-,200 ml/min	
11:56:11	6078,4 ml	1 minute	,0 ml	21,0 ml	,000 ml/min	
11:57:11	6078,4 ml	1 minute	,0 ml	21,0 ml	,000 ml/min	
11:58:11	6078,4 ml	1 minute	,0 ml	21,0 ml	,000 ml/min	

maandag 18 december 2023

Aardvark Permeameters

Location: Nederweert

Site: 4a

Time interval between readings: 0 minute

Ksat Method: Glover Solution

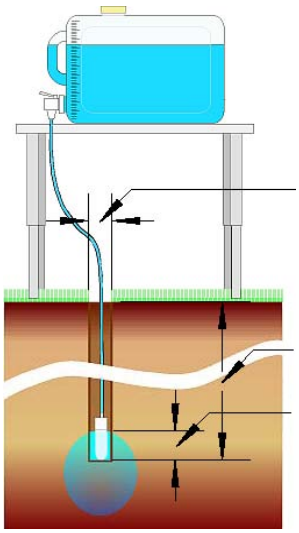
Steady Flow Rate Condition

Steady Flow Rate achieved when Water Consumption Rate changes less than

+/- 10 % for 3 consecutive readings

Steady Flow Rate:	0,400 ml/min
Temp. Adj. FR:	0,400 ml/min
Percolation Rate:	196,294 min/cm
Ksat:	9,9542E-3 Meters / day

Notes:



10 cm	Hole Diameter
10 ° C	Water Temperature
105 cm	Hole Depth
8 cm	Water Height in Hole
	Water Table Depth

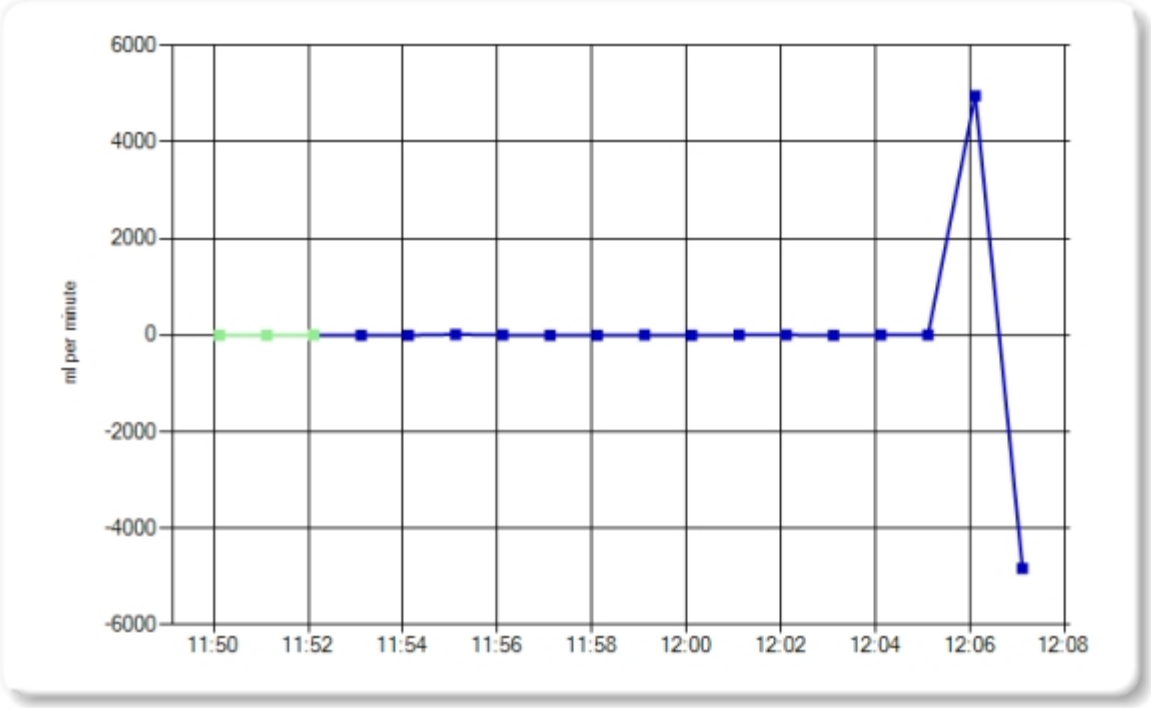
Site GPS Position

	Degrees	Minutes	Seconds	
Longitude:	0	0	0	East
Latitude:	0	0	0	North

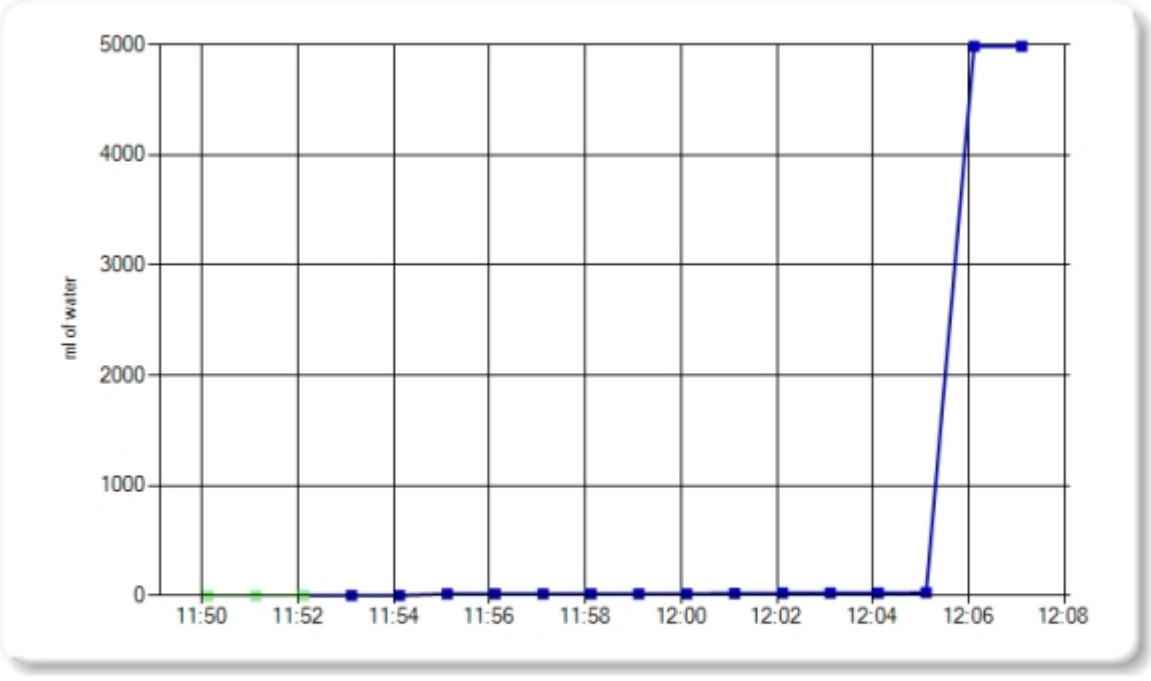
Soil Texture-Structure Category:

Most structured soils from clays through loams; also includes unstructured medium and fine sands. The category most frequently applicable for agricultural soils.

Water Consumption Rate



Total Water Consumed



Time	Reservoir Water Level	Elapsed Time Interval	Interval Water Consumed	Total Water Consumed	Water Consumption Rate	Ignore Reading
11:49:07	8978,8 ml					
11:50:07	8979,2 ml	1 minute	-,4 ml	,0 ml	-,400 ml/min	
11:51:07	8980,0 ml	1 minute	-,8 ml	,0 ml	-,800 ml/min	
11:52:07	8977,6 ml	1 minute	2,4 ml	2,4 ml	2,400 ml/min	
11:53:07	8977,2 ml	1 minute	,4 ml	2,8 ml	,400 ml/min	
11:54:07	8979,0 ml	1 minute	-1,8 ml	2,8 ml	-1,800 ml/min	
11:55:07	8964,8 ml	1 minute	14,2 ml	17,0 ml	14,200 ml/min	
11:56:07	8963,8 ml	1 minute	1,0 ml	18,0 ml	1,000 ml/min	
11:57:07	8965,0 ml	1 minute	-1,2 ml	18,0 ml	-1,200 ml/min	
11:58:07	8967,4 ml	1 minute	-2,4 ml	18,0 ml	-2,400 ml/min	
11:59:07	8966,0 ml	1 minute	1,4 ml	19,4 ml	1,400 ml/min	
12:00:07	8966,8 ml	1 minute	-,8 ml	19,4 ml	-,800 ml/min	
12:01:07	8965,8 ml	1 minute	1,0 ml	20,4 ml	1,000 ml/min	
12:02:07	8962,4 ml	1 minute	3,4 ml	23,8 ml	3,400 ml/min	
12:03:07	8966,4 ml	1 minute	-4,0 ml	23,8 ml	-4,000 ml/min	
12:04:07	8965,0 ml	1 minute	1,4 ml	25,2 ml	1,400 ml/min	
12:05:07	8962,2 ml	1 minute	2,8 ml	28,0 ml	2,800 ml/min	
12:06:07	4005,8 ml	1 minute	4956,4 ml	4984,4 ml	4956,400 ml/min	
12:07:07	8830,6 ml	1 minute	-4824,8 ml	4984,4 ml	-4824,800 ml/min	

maandag 18 december 2023

Location: Nederweert

Site: 5a

Time interval between readings: 0 minute

Ksat Method: Glover Solution

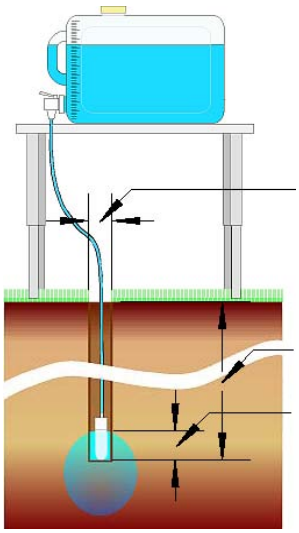
Steady Flow Rate Condition

Steady Flow Rate achieved when Water Consumption Rate changes less than

+/- 10 % for 3 consecutive readings

Steady Flow Rate:	-8,420 ml/min
Temp. Adj. FR:	-8,422 ml/min
Percolation Rate:	-9,325 min/cm
Ksat:	-2,0953E-1 Meters / day

Notes:



10 cm	Hole Diameter
10 ° C	Water Temperature
115 cm	Hole Depth
8 cm	Water Height in Hole
	Water Table Depth

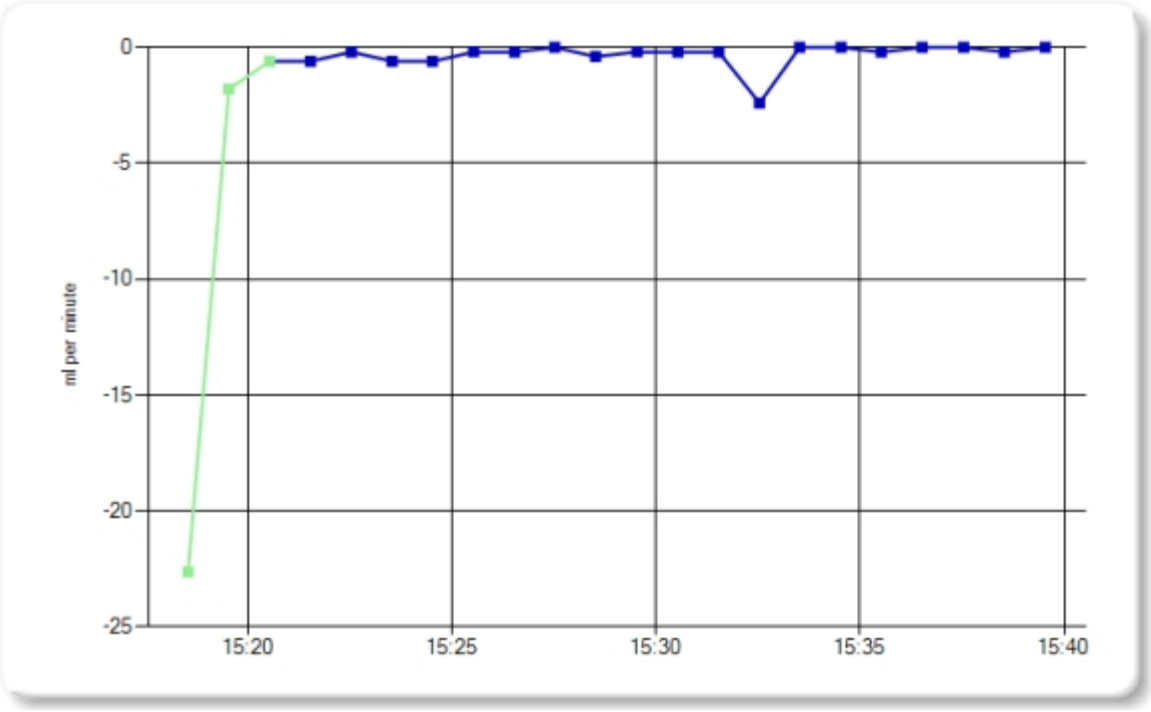
Site GPS Position

	Degrees	Minutes	Seconds	
Longitude:	0	0	0	East
Latitude:	0	0	0	North

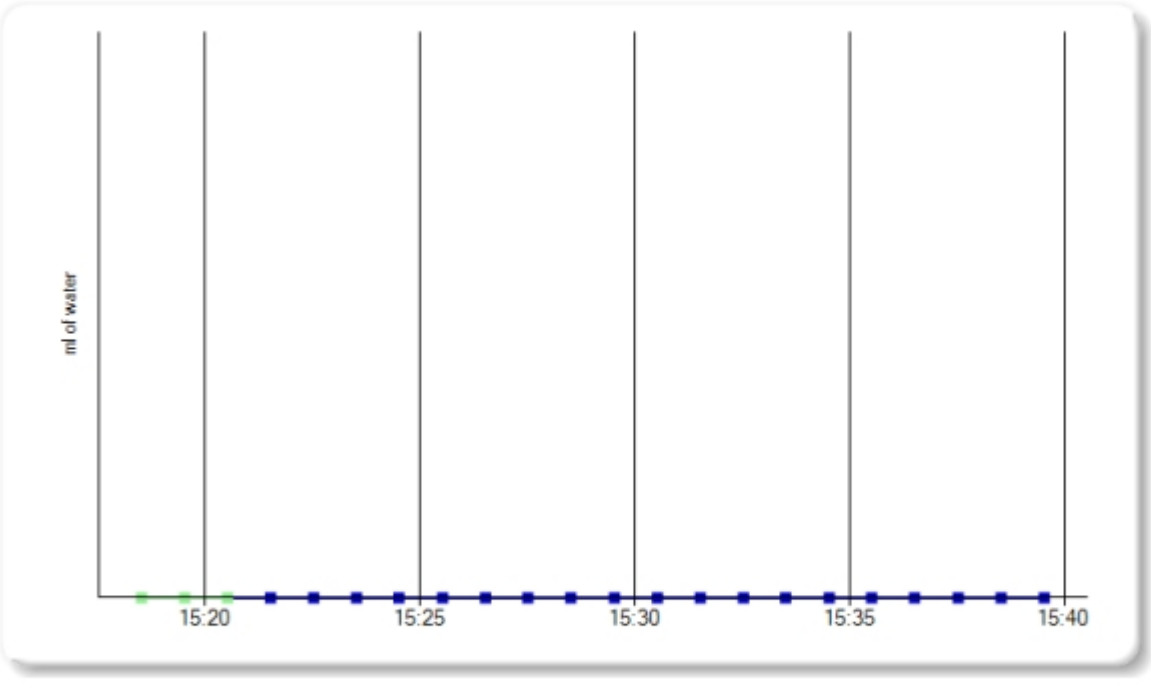
Soil Texture-Structure Category:

Most structured soils from clays through loams; also includes unstructured medium and fine sands. The category most frequently applicable for agricultural soils.

Water Consumption Rate



Total Water Consumed



Time	Reservoir Water Level	Elapsed Time Interval	Interval Water Consumed	Total Water Consumed	Water Consumption Rate	Ignore Reading
15:17:31	4831,0 ml					
15:18:32	4854,0 ml	1 minute	-23,0 ml	,0 ml	-22,623 ml/min	
15:19:32	4855,8 ml	1 minute	-1,8 ml	,0 ml	-1,800 ml/min	
15:20:32	4856,4 ml	1 minute	-,6 ml	,0 ml	-,600 ml/min	
15:21:32	4857,0 ml	1 minute	-,6 ml	,0 ml	-,600 ml/min	
15:22:32	4857,2 ml	1 minute	-,2 ml	,0 ml	-,200 ml/min	
15:23:32	4857,8 ml	1 minute	-,6 ml	,0 ml	-,600 ml/min	
15:24:31	4858,4 ml	59 seconds	-,6 ml	,0 ml	-,610 ml/min	
15:25:32	4858,6 ml	1 minute	-,2 ml	,0 ml	-,197 ml/min	
15:26:32	4858,8 ml	1 minute	-,2 ml	,0 ml	-,200 ml/min	
15:27:31	4858,8 ml	59 seconds	,0 ml	,0 ml	,000 ml/min	
15:28:31	4859,2 ml	1 minute	-,4 ml	,0 ml	-,400 ml/min	
15:29:32	4859,4 ml	1 minute	-,2 ml	,0 ml	-,197 ml/min	
15:30:32	4859,6 ml	1 minute	-,2 ml	,0 ml	-,200 ml/min	
15:31:32	4859,8 ml	1 minute	-,2 ml	,0 ml	-,200 ml/min	
15:32:32	4862,2 ml	1 minute	-2,4 ml	,0 ml	-2,400 ml/min	
15:33:31	4862,2 ml	59 seconds	,0 ml	,0 ml	,000 ml/min	
15:34:32	4862,2 ml	1 minute	,0 ml	,0 ml	,000 ml/min	
15:35:31	4862,4 ml	59 seconds	-,2 ml	,0 ml	-,203 ml/min	
15:36:31	4862,4 ml	1 minute	,0 ml	,0 ml	,000 ml/min	
15:37:32	4862,4 ml	1 minute	,0 ml	,0 ml	,000 ml/min	
15:38:32	4862,6 ml	1 minute	-,2 ml	,0 ml	-,200 ml/min	
15:39:32	4862,6 ml	1 minute	,0 ml	,0 ml	,000 ml/min	