

DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS



SINK HOLE FEATURES
(See Appendix 1_Trench Tables for further details)

LEGEND:

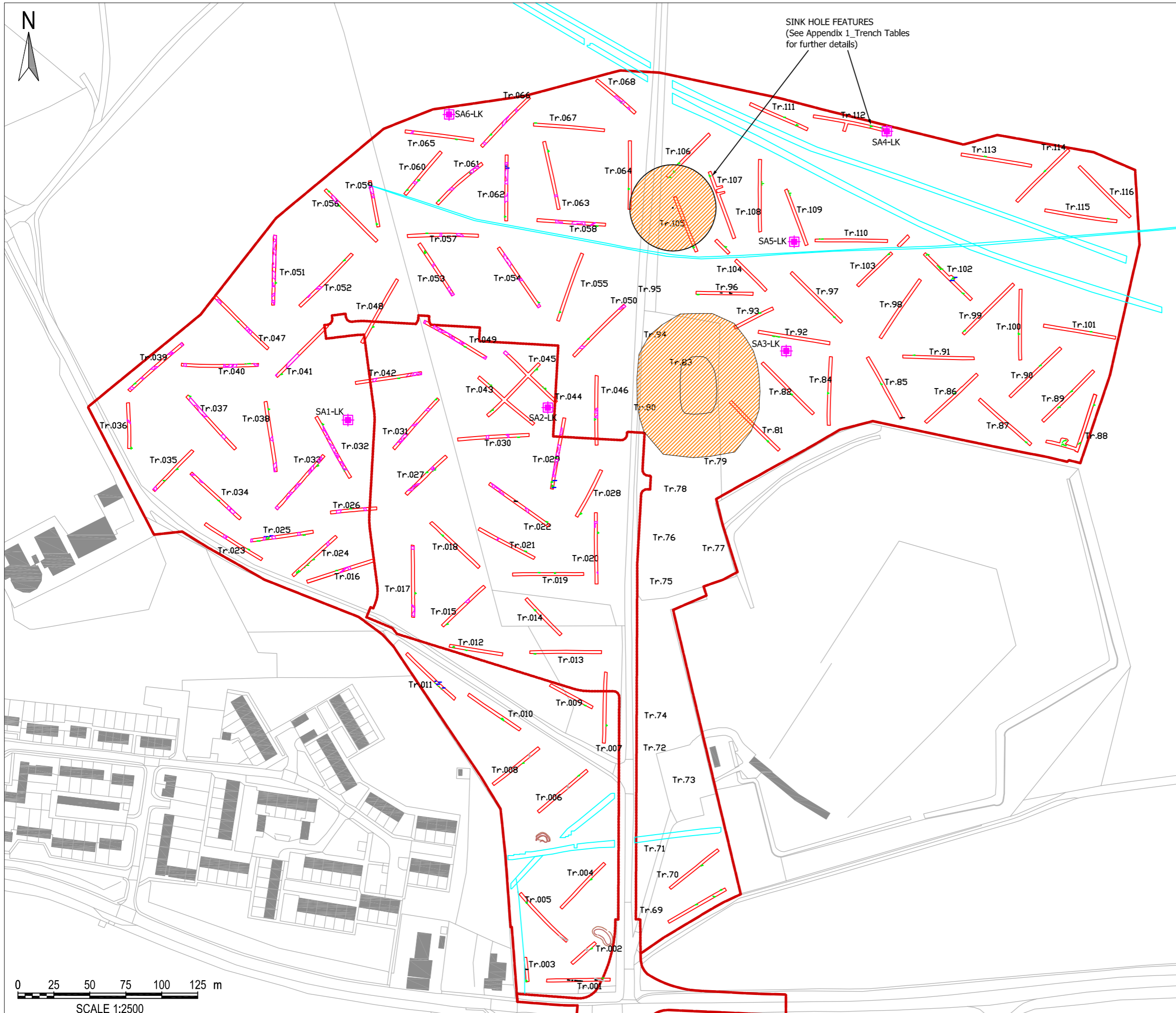
PROPOSED SOAKAWAYS
(10m FROM BUILDINGS)

SERVICES

NOTE: ARCHAEOLOGICAL AND SERVICE INFORMATION FROM WESSEX WATER (DRAWING 107942_Larkhill_WORKING) TO BE READ IN CONJUNCTION WITH WORD DOCUMENT APPENDIX 1 TRENCH TABLES.

ECOLOGY KEY

APPROXIMATE LOCATION OF BADGER SET (30m BUFFER ZONE)



SITE COPY

REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:
DEFENCE INFRASTRUCTURE ORGANISATION

5th FLOOR, LONGCROSS COURT
47 NEWPORT ROAD
CARDIFF
CF24 0AD

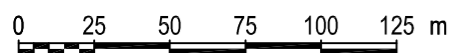


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Project:
SPTA - SFA - LARKHILL

Drawing Title:
PROPOSED SOAKAWAY LOCATIONS

Scale @	Drawn	Date	Checked	Date	Approved	Date
	PP	23.04.15	NP	23.04.15		
Project No.	Office	Type	Drawing No.	Revision		
A089116-10	CDF	GEO	LK -SA	00		



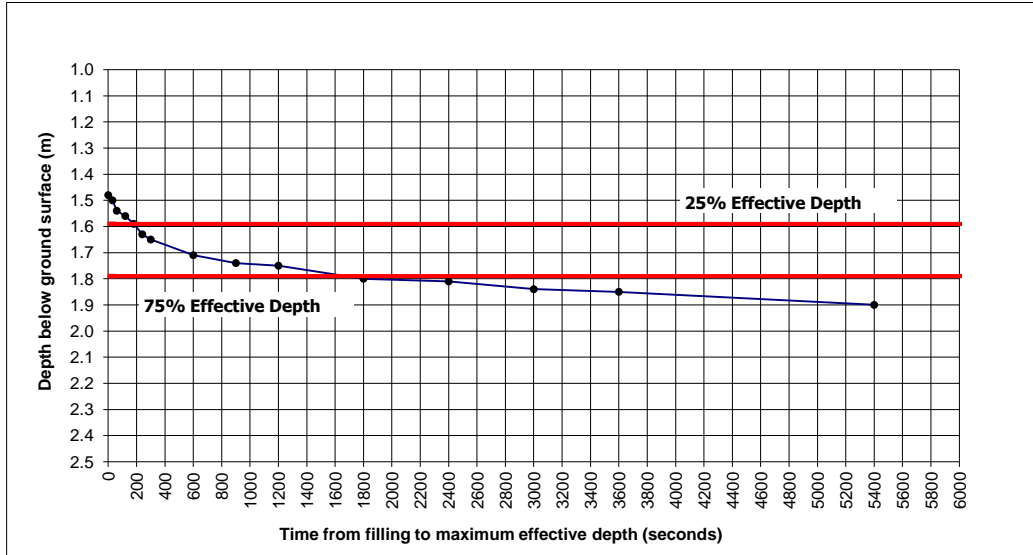
SCALE 1:2500

APPENDIX H

Soakaway tests results

SOAKAWAY SOIL INFILTRATION RATE/PERMEABILITY CALCULATION

TRIAL/PIT No.: SA01	TEST No.: 1
SOIL INFILTRATION RATE IN SOAKAWAY	DATE 27/04/2015 SHEET 1

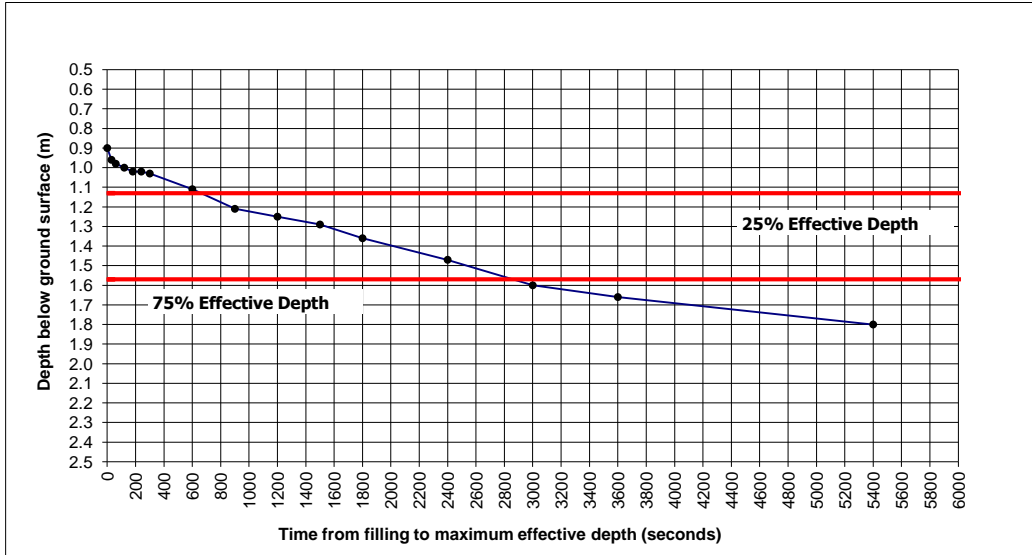


Time Elapsed (secs)	Time Elapsed (Minutes)	Depth of water below Ground Level (m)	
0	0.00	1.48	Effective depth of Pit (m) 0.42
30	0.50	1.5	Length of Pit (m) 2.30
60	1.00	1.54	Width of Pit (m) 0.35
120	2.00	1.56	Total volume of pit (m ³) 0.34
180	3.00	1.59	Total volume of Water * (m ³) 0.34
240	4.00	1.63	Level of water in pit at 75% effective depth (p ₇₅) (m) 0.11
300	5.00	1.65	Level of water in pit at 25% effective depth (p ₂₅) (m) 0.32
600	10.00	1.71	Surface area of pit up to 50% effective depth (A _{p50}) (m ²) 1.918
900	15.00	1.74	Time at 25% effective depth (p ₂₅) (seconds) 180
1200	20.00	1.75	Time at 75% effective depth (p ₇₅) (seconds) 1650
1800	30.00	1.8	Volume of outflow between 75% and 25% effective depth (V _{p75 - 25}) (m ³) 0.17
2400	40.00	1.81	Time taken for the outflow between 75% and 25% effective depth (T _{p75-25}) (seconds) 1470
3000	50.00	1.84	$f = \frac{V_{p75-25}}{A_{p50} \times T_{p75-25}}$ $1.918 \frac{0.17}{1470} = 5.99583E-05 \text{ m/s}$
3600	60.00	1.85	
5400	90.00	1.9	Soil Infiltration Rate (f) m/s
			Water Input (volume in cubic meters over time)
			Geology of Test Section Weathered Chalk
Compiled By NP	Date	27/04/2015	
Checked By	Date		
WYG Environment 5 th Floor, Longcross Court, 47 Newport Road, Cardiff Tel: 02920 829200 Fax: 02920 455321 Environmental Consultancy Ground Engineering Services			PROJECT No.: A089116-10 PROJECT NAME: Larkhill CLIENT: DIO FIGURE No.:




SOAKAWAY SOIL INFILTRATION RATE/PERMEABILITY CALCULATION

TRIALPIT No.: SA02 TEST No.: 1
 SOIL INFILTRATION RATE IN SOAKAWAY DATE 27/04/2015 SHEET 1

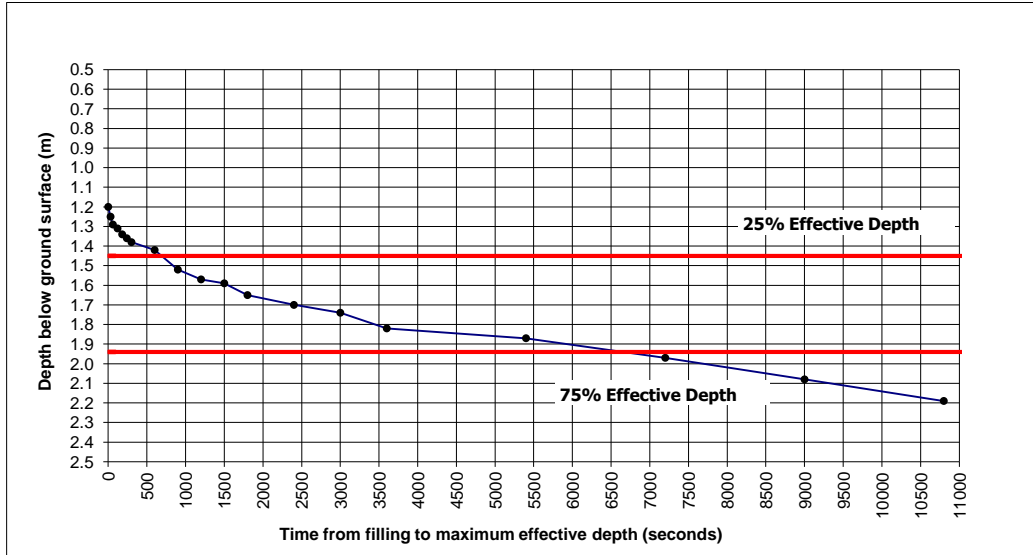


Time Elapsed (secs)	Time Elapsed (Minutes)	Depth of water below Ground Level (m)	
0	0.00	0.9	Effective depth of Pit (m) 0.90
30	0.50	0.96	Length of Pit (m) 2.40
60	1.00	0.98	Width of Pit (m) 0.35
120	2.00	1	Total volume of pit (m ³) 0.76
180	3.00	1.02	Total volume of Water * (m ³) 0.76
240	4.00	1.02	Level of water in pit at 75% effective depth (p ₇₅) (m) 0.23
300	5.00	1.03	Level of water in pit at 25% effective depth (p ₂₅) (m) 0.68
600	10.00	1.11	Surface area of pit up to 50% effective depth (A _{p50}) (m ²) 3.315
900	15.00	1.21	Time at 25% effective depth (p ₂₅) (seconds) 650
1200	20.00	1.25	Time at 75% effective depth (p ₇₅) (seconds) 2850
1500	25.00	1.29	Volume of outflow between 75% and 25% effective depth (V _{p75 - 25}) (m ³) 0.38
1800	30.00	1.36	Time taken for the outflow between 75% and 25% effective depth (T _{p75-25}) (seconds) 2200
2400	40.00	1.47	Soil Infiltration Rate (f) m/s ⁻¹ $f = \frac{V_{p75-25}}{A_{p50} \times T_{p75-25}}$
3000	50.00	1.6	$3.315 \frac{0.38}{2200} = 5.18305E-05 \text{ m/s}$
3600	60.00	1.66	Water Input (volume in cubic meters over time)
5400	90.00	1.8	Geology of Test Section Weathered Chalk

Compiled By NP	Date 27/04/2015		PROJECT No.: A089116-10
Checked By	Date		PROJECT NAME: Larkhill
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			FIGURE No.:

SOAKAWAY SOIL INFILTRATION RATE/PERMEABILITY CALCULATION

TRIAL/PIT No.: SA03	TEST No.: 1
SOIL INFILTRATION RATE IN SOAKAWAY	DATE 27/04/2015 SHEET 1



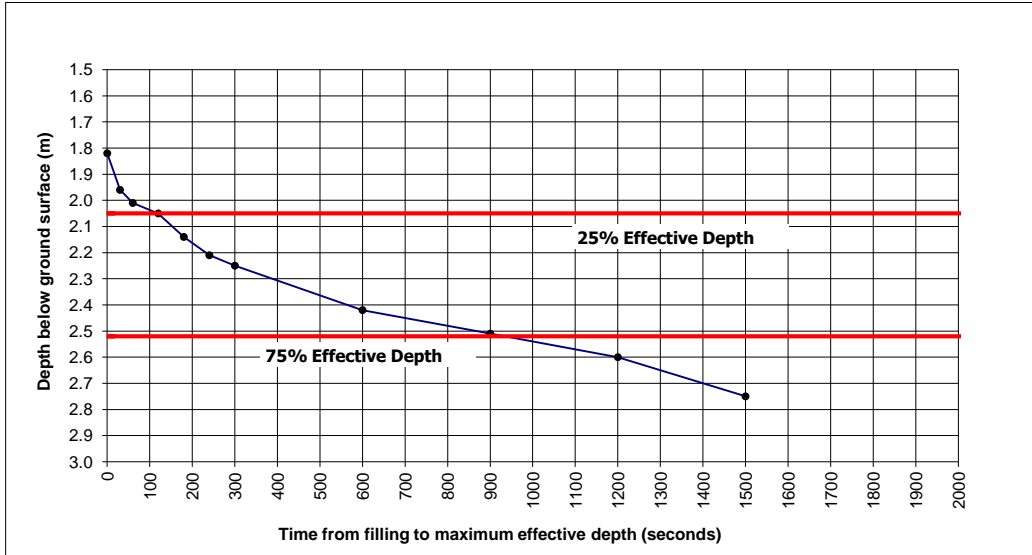
Time Elapsed (secs)	Time Elapsed (Minutes)	Depth of water below Ground Level (m)	
0	0.00	1.2	Effective depth of Pit (m) 0.99
30	0.50	1.25	Length of Pit (m) 2.40
60	1.00	1.29	Width of Pit (m) 0.35
120	2.00	1.31	Total volume of pit (m ³) 0.83
180	3.00	1.34	Total volume of Water * (m ³) 0.83
240	4.00	1.36	Level of water in pit at 75% effective depth (p ₇₅) (m) 0.25
300	5.00	1.38	Level of water in pit at 25% effective depth (p ₂₅) (m) 0.74
600	10.00	1.42	Surface area of pit up to 50% effective depth (A _{p50}) (m ²) 3.563
900	15.00	1.52	Time at 25% effective depth (p ₂₅) (seconds) 700
1200	20.00	1.57	Time at 75% effective depth (p ₇₅) (seconds) 6750
1500	25.00	1.59	Volume of outflow between 75% and 25% effective depth (V _{p75 - 25}) (m ³) 0.42
1800	30.00	1.65	Time taken for the outflow between 75% and 25% effective depth (T _{p75-25}) (seconds) 6050
2400	40.00	1.7	$f = \frac{V_{p75-25}}{A_{p50} \times T_{p75-25}}$ $= \frac{0.42}{3.563 \times 6050} = 1.92919E-05 \text{ m/s}$
3000	50.00	1.74	
3600	60.00	1.82	Water Input (volume in cubic meters over time)
5400	90.00	1.87	
7200	120.00	1.97	Geology of Test Section Weathered Chalk
9000	150.00	2.08	
10800	180.00	2.19	

Compiled By NP	Date 27/04/2015		PROJECT No.: A089116-10
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			FIGURE No.:



SOAKAWAY SOIL INFILTRATION RATE/PERMEABILITY CALCULATION

TRIALPIT No.: SA04 TEST No.: 1
 SOIL INFILTRATION RATE IN SOAKAWAY DATE: 28/04/2015 SHEET: 1

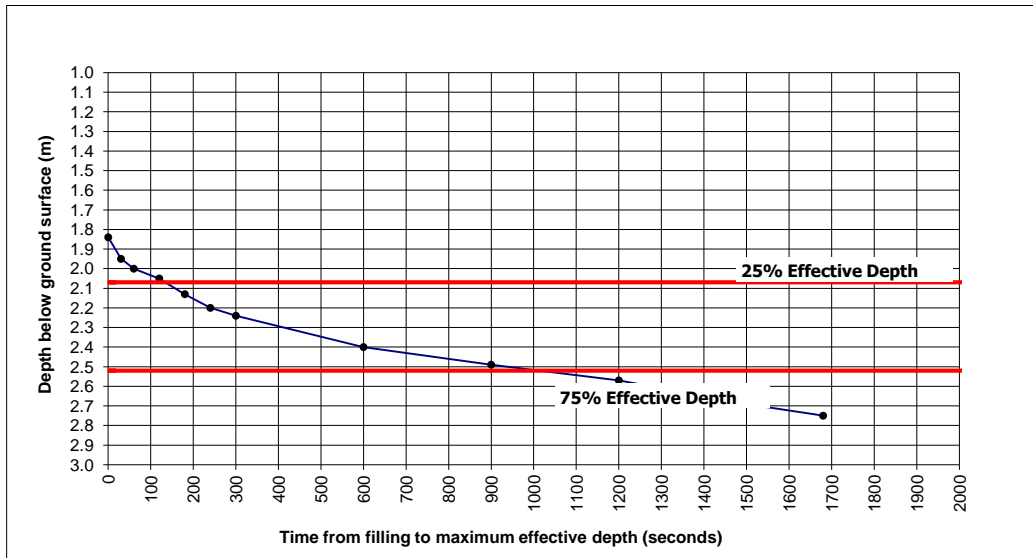


Time Elapsed (secs)	Time Elapsed (Minutes)	Depth of water below Ground Level (m)	
0	0.00	1.82	Effective depth of Pit (m) 1.18
30	0.50	1.96	Length of Pit (m) 2.70
60	1.00	2.01	Width of Pit (m) 0.40
120	2.00	2.05	Total volume of pit (m ³) 1.27
180	3.00	2.14	Total volume of Water * (m ³) 1.27
240	4.00	2.21	Level of water in pit at 75% effective depth (p ₇₅) (m) 0.30
300	5.00	2.25	Level of water in pit at 25% effective depth (p ₂₅) (m) 0.89
600	10.00	2.42	Surface area of pit up to 50% effective depth (A _{p50}) (m ²) 4.738
900	15.00	2.51	Time at 25% effective depth (p ₂₅) (seconds) 120
1200	20.00	2.6	Time at 75% effective depth (p ₇₅) (seconds) 900
1500	25.00	2.75	Volume of outflow between 75% and 25% effective depth (V _{p75 - 25}) (m ³) 0.64
			Time taken for the outflow between 75% and 25% effective depth (T _{p75-25}) (seconds) 780
			Soil Infiltration Rate (f) m/s ⁻¹ $f = \frac{V_{p75-25}}{A_{p50} \times T_{p75-25}}$ $4.738 \frac{0.64}{780} = 0.000172419 \text{ m/s}$
			Water Input (volume in cubic meters over time)
			Geology of Test Section Weathered Chalk
Compiled By	NP	Date	28/04/2015
Checked By		Date	
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SOAKAWAY SOIL INFILTRATION RATE/PERMEABILITY CALCULATION

TRIAL/PIT No.: SA04	TEST No.: 2
SOIL INFILTRATION RATE IN SOAKAWAY	DATE: 27/04/2015 SHEET: 1



Time Elapsed (secs)	Time Elapsed (Minutes)	Depth of water below Ground Level (m)	
0	0.00	1.84	Effective depth of Pit (m) 0.91
30	0.50	1.95	Length of Pit (m) 2.70
60	1.00	2.0	Width of Pit (m) 0.40
120	2.00	2.05	Total volume of pit (m ³) 0.98
180	3.00	2.13	Total volume of Water * (m ³) 0.98
240	4.00	2.2	Level of water in pit at 75% effective depth (p ₇₅) (m) 0.23
300	5.00	2.24	Level of water in pit at 25% effective depth (p ₂₅) (m) 0.68
600	10.00	2.4	Surface area of pit up to 50% effective depth (A _{p50}) (m ²) 3.901
900	15.00	2.49	Time at 25% effective depth (p ₂₅) (seconds) 135
1200	20.00	2.57	Time at 75% effective depth (p ₇₅) (seconds) 975
1500	25.00	2.69	Volume of outflow between 75% and 25% effective depth (V _{p75 - 25}) (m ³) 0.49
1680	28.00	2.75	Time taken for the outflow between 75% and 25% effective depth (T _{p75-25}) (seconds) 840
			Soil Infiltration Rate (f) m/s ⁻¹ $f = \frac{V_{p75-25}}{A_{p50} \times T_{p75-25}}$
			$\frac{0.49}{3.901 \times 840} = 0.000149962 \text{ m/s}$
			Water Input (volume in cubic meters over time)
			Geology of Test Section Weathered Chalk
Compiled By NP	Date	27/04/2015	
Checked By	Date		
WYG Environment 5 th Floor, Longcross Court, 47 Newport Road, Cardiff Tel: 02920 829200 Fax: 02920 455321 Environmental Consultancy Ground Engineering Services			PROJECT No.: A089116-10 PROJECT NAME: Larkhill CLIENT: DIO FIGURE No.:

