

18 July 2024

Our ref: J2307a/c04/ db
Planning Ref F/21/91686

Pete Humphry
Technical Coordinator
Foreman Homes Limited
Yarmouth House,
1300 Parkway,
Whiteley,
Hampshire.
PO15 7AX

Dear Mr Humphry,

RE: PROPOSED DEVELOPMENT AT TOYNBEE ROAD, EASTLEIGH SO50 9DH
SOAKAGE TESTING RESULTS AND CONTAMINATED LAND TESTING REPORT

Further to your instruction and following on from the discussions with your Civil Designers we have returned to site to carry out supplementary soakage testing in the proposed revised location of the proposed soakaway to be formed as part of the surface water management system at this site. This letter provides our report on these works and is provided in accordance with our agreed standard terms, conditions and limitations.

Introduction

The previous work carried out by others (report reference 17587/MIR June 2019 by Soils Limited) provided a range of infiltration test results in locations across the site, which have been used for initial design. As a result of the range of results that have been obtained from this site wide investigation, a lower bound result was selected from the concept design, resulting in a requirement for a substantial volume of attenuation and infiltration, the location for which has been necessarily extended into part of the site that has been identified as an historically backfilled former gravel extraction pit.

Clearly discharge of a soakaway into an area of historical backfilling is not ideal in terms of infiltration, contaminated land risks, variability of the ground conditions and the long term viability of the design.

These further works have therefore been carried out to provide a detailed investigation of the extent of the backfilled zone in the proximity of the revised location of the proposed attenuation and infiltration structure, together with the recovery of suitable soil samples for laboratory contamination testing to check for the presence of contamination in the soils through which surface water will be discharged.

Scope of Further Work

A series of five supplementary soakage tests have been carried out in two zones to obtain area specific infiltration results together with recovery of six representative soil samples for laboratory contamination testing to check for the presence of contamination in the soils through which surface water will be discharged. One of the initially proposed soakage tests was abandoned due to encountering backfill material in the excavation.

A series of trenches were subsequently excavated in the area to the east of the testing location to determine the extent of the backfill area and help inform the detailed design of the location of the proposed attenuation and infiltration structures.

The results of the soakage testing carried out are enclosed together with the results of six validation samples recovered as composite samples from the five trial pits.

The results of the soakage testing are summarised below;

TP101 location 445044.833, 119506.669, infiltration result $5.9\text{e-}4\text{m/s}$ in gravel.

TP102 location 445056.926, 119508.153, infiltration result $7.2\text{e-}4\text{m/s}$ in gravel.

TP103 location 445097.811, 119507.526, infiltration result $5.9\text{e-}4\text{m/s}$ in gravel.

TP104 location 445106.374, 119515.282, test abandoned as trial pit encountered made ground.

TP105 location 445099.943, 119514.209, infiltration result $2.1\text{e-}4\text{m/s}$ in gravel.

TP106 location 445100.023, 119499.214, infiltration result $1.8\text{e-}4\text{m/s}$ in gravel.

Trenching was also carried out to determine the edge of the landfilled area.

The following locations are the points within trenches where landfill soils were observed to be present to the east and natural gravel soils present to the west;

445105.226, 119515.142

445104.700, 119507.495

445104.600, 119504.479

445104.575, 119504.183

445103.212, 119501.230

445105.159, 119524.423

The results of the contamination testing carried out on six soil samples have not indicated the presence of elevated concentrations of a wide range of potential chemicals of concern with respect to a human health end use in residential garden with plant uptake which is considered to be an appropriate.

On this basis we would not anticipate the infiltration of surface water through these soils to present an issue of concern with regards to local or regional groundwater quality.

We trust that this letter and the enclosed factual records provide sufficient information for your needs at present, although please do not hesitate to contact me should you have any queries or questions or wish to discuss any of the issues raised.

Yours sincerely
Wilson Bailey Partnership

Dominic Brightman
BSc MSc DIC FGS CGeol ARSM



Dominic Brightman
Wilson Bailey Geotechnical & Environmental Ltd
Northdown Farmhouse
Donhead St Mary
Wiltshire
SP7 9DD

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ME17 2JN
t: 01622 850410

DETS Report No: 24-07387

Site Reference: Tovnbee Soakaway
Project / Job Ref: DB
Order No: None Supplied
Sample Receipt Date: 01/07/2024
Sample Scheduled Date: 02/07/2024
Report Issue Number: 1
Reporting Date: 05/07/2024

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



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Soil Analysis Certificate						
DETS Report No: 24-07387	~Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Toynbee Soakaway	~TP / BH No	V1	V2	V3	V4	V5
~Project / Job Ref: DB	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: None Supplied	~Depth (m)	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50
Reporting Date: 05/07/2024	DETS Sample No	724192	724193	724194	724195	724196

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	8.0	7.5	8.0	8.1	7.8
TOC (Total Organic Carbon)	%	< 0.1	MCERTS	3.8	0.2	2.2	1.3	0.3
Arsenic (As)	mg/kg	< 2	MCERTS	9	< 2	15	4	9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.8	< 0.2	0.8	0.3	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	13	4	26	9	13
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	13	< 4	19	6	7
Lead (Pb)	mg/kg	< 3	MCERTS	7	< 3	15	5	7
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	7	4	21	6	10
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	24	9	55	16	28
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results

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Soil Analysis Certificate					
DETS Report No: 24-07387	~Date Sampled	None Supplied			
Wilson Bailey Geotechnical & Environmental Ltd	~Time Sampled	None Supplied			
~Site Reference: Toynbee Soakaway	~TP / BH No	V6			
~Project / Job Ref: DB	~Additional Refs	None Supplied			
~Order No: None Supplied	~Depth (m)	1.50 - 2.50			
Reporting Date: 05/07/2024	DETS Sample No	724197			

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	7.4			
TOC (Total Organic Carbon)	%	< 0.1	MCERTS	0.1			
Arsenic (As)	mg/kg	< 2	MCERTS	< 2			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	2			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	< 4			
Lead (Pb)	mg/kg	< 3	MCERTS	< 3			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	< 3			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Zinc (Zn)	mg/kg	< 3	MCERTS	5			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs

DETS Report No: 24-07387	~Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Toynbee Soakaway	~TP / BH No	V1	V2	V3	V4	V5
~Project / Job Ref: DB	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: None Supplied	~Depth (m)	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50
Reporting Date: 05/07/2024	DETS Sample No	724192	724193	724194	724195	724196

Determinand	Unit	RL	Accreditation	(n)					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs

DETS Report No: 24-07387	~Date Sampled	None Supplied				
Wilson Bailey Geotechnical & Environmental Ltd	~Time Sampled	None Supplied				
~Site Reference: Toynbee Soakaway	~TP / BH No	V6				
~Project / Job Ref: DB	~Additional Refs	None Supplied				
~Order No: None Supplied	~Depth (m)	1.50 - 2.50				
Reporting Date: 05/07/2024	DETS Sample No	724197				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			

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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 24-07387	~Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Toynbee Soakaway	~TP / BH No	V1	V2	V3	V4	V5
~Project / Job Ref: DB	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: None Supplied	~Depth (m)	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50
Reporting Date: 05/07/2024	DETS Sample No	724192	724193	724194	724195	724196

Determinand	Unit	RL	Accreditation	(n)				
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 24-07387	~Date Sampled	None Supplied				
Wilson Bailey Geotechnical & Environmental L	~Time Sampled	None Supplied				
~Site Reference: Toynbee Soakaway	~TP / BH No	V6				
~Project / Job Ref: DB	~Additional Refs	None Supplied				
~Order No: None Supplied	~Depth (m)	1.50 - 2.50				
Reporting Date: 05/07/2024	DETS Sample No	724197				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21			
Total >C5 - C35	mg/kg	< 42	NONE	< 42			

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-07387	~Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Toynbee Soakaway	~TP / BH No	V1	V2	V3	V4	V5
~Project / Job Ref: DB	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: None Supplied	~Depth (m)	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50	1.50 - 2.50	0.50 - 1.50
Reporting Date: 05/07/2024	DETS Sample No	724192	724193	724194	724195	724196

Determinand	Unit	RL	Accreditation	(n)				
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-07387	~Date Sampled	None Supplied				
Wilson Bailey Geotechnical & Environmental Ltd	~Time Sampled	None Supplied				
~Site Reference: Toynbee Soakaway	~TP / BH No	V6				
~Project / Job Ref: DB	~Additional Refs	None Supplied				
~Order No: None Supplied	~Depth (m)	1.50 - 2.50				
Reporting Date: 05/07/2024	DETS Sample No	724197				

Determinand	Unit	RL	Accreditation				
Benzene	ug/kg	< 2	MCERTS	< 2			
Toluene	ug/kg	< 5	MCERTS	< 5			
Ethylbenzene	ug/kg	< 2	MCERTS	< 2			
p & m-xylene	ug/kg	< 2	MCERTS	< 2			
o-xylene	ug/kg	< 2	MCERTS	< 2			
MTBE	ug/kg	< 5	MCERTS	< 5			

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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 24-07387

Wilson Bailey Geotechnical & Environmental Ltd

~Site Reference: Toynbee Soakaway

~Project / Job Ref: DB

~Order No: None Supplied

Reporting Date: 05/07/2024

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 724192	V1	None Supplied	0.50 - 1.50	7.3	Light brown sandy gravel with stones
^ 724193	V2	None Supplied	1.50 - 2.50	5.4	Light brown sandy clay with stones and chalk
^ 724194	V3	None Supplied	0.50 - 1.50	13.1	Light brown sandy clay with stones
^ 724195	V4	None Supplied	1.50 - 2.50	6.7	Light brown sandy clay with stones and chalk
^ 724196	V5	None Supplied	0.50 - 1.50	9.4	Light brown sandy clay with stones
^ 724197	V6	None Supplied	1.50 - 2.50	4.3	Light brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{1/5}

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^ no sampling date provided; unable to confirm if samples are within acceptable holding times



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-07387

Wilson Bailey Geotechnical & Environmental Ltd

~Site Reference: Toynbee Soakaway

~Project / Job Ref: DB

~Order No: None Supplied

Reporting Date: 05/07/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

~Sample details provided by customer and can affect the validity of results

Site Former Jewsons Site, Toynbee Road, Eastleigh

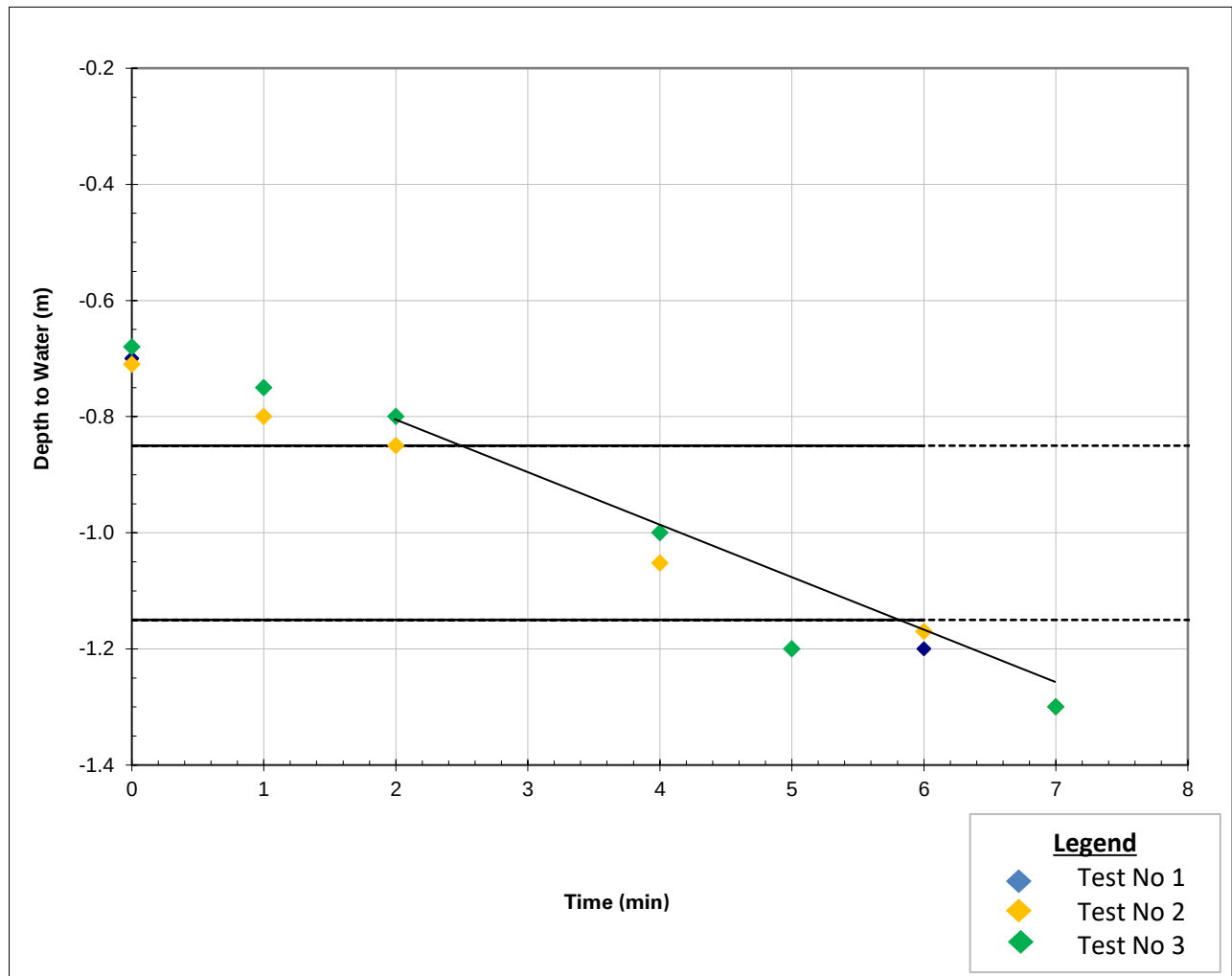
Client Foreman Homes

Trial Pit No. TP101

Pit Length (m) 1.3

Pit Width (m) 0.5

Pit Depth (m) 1.3



Design Soakage Rate 5.9E-04 m/s (based on linear portion of graph as shown)
51.37 m/day

Notes

Trial pit log presented separately
Soakage test carried out in accordance with requirements of BRE365 with three completed fills
Worst case infiltration rate assessed from plot above in accordance with the BRE365 methodology

Site Former Jewsons Site, Toynbee Road, Eastleigh

Client Foreman Homes

Trial Pit No. TP102

Pit Length (m)

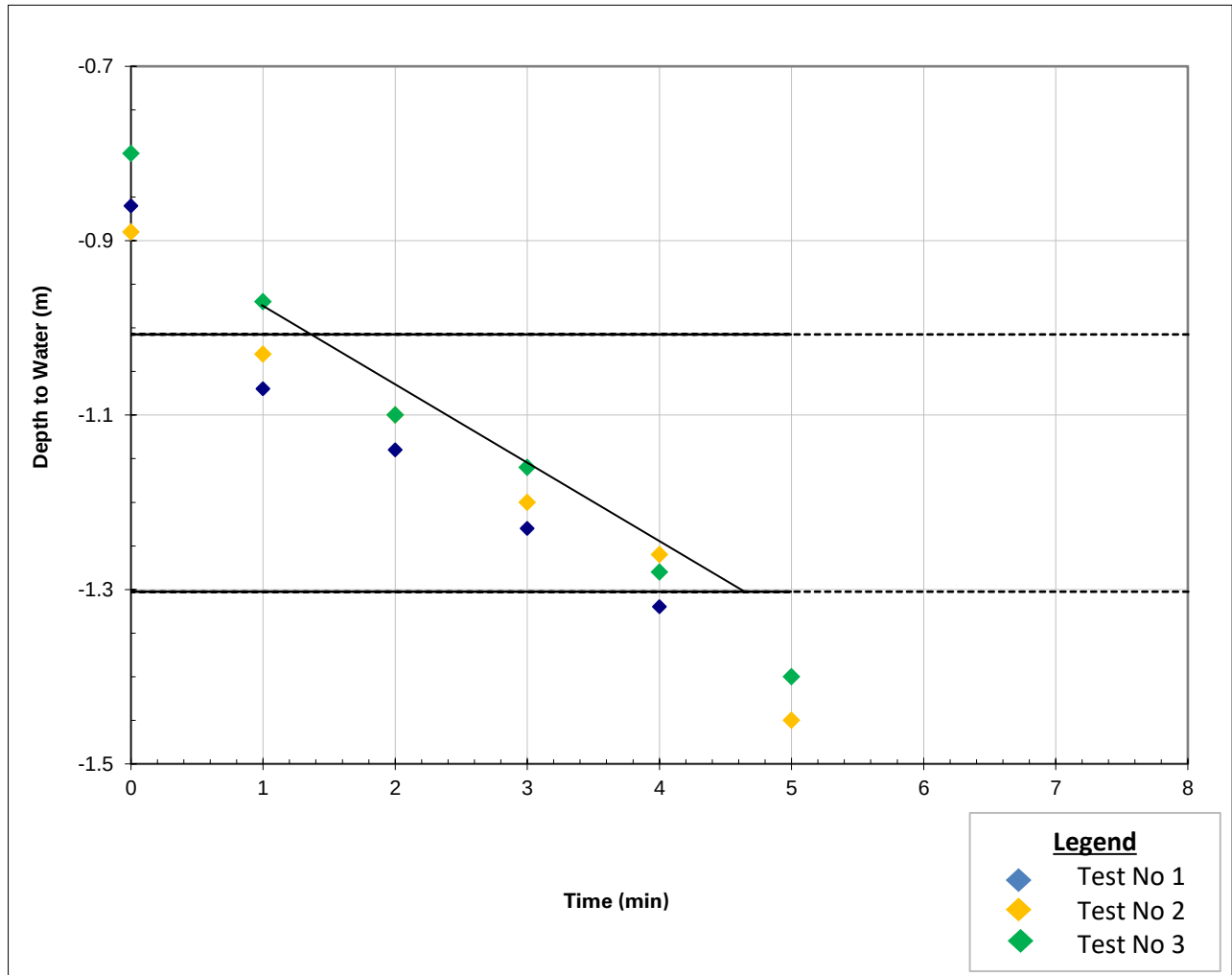
1.3

Pit Width (m)

0.5

Pit Depth (m)

1.45



Design Soakage Rate 7.2E-04 m/s (based on linear portion of graph as shown)
 62.20 m/day

Notes

Trial pit log presented separately
Soakage test carried out in accordance with requirements of BRE365 with three completed fills
Worst case infiltration rate assessed from plot above in accordance with the BRE365 methodology

Site Former Jewsons Site, Toynbee Road, Eastleigh

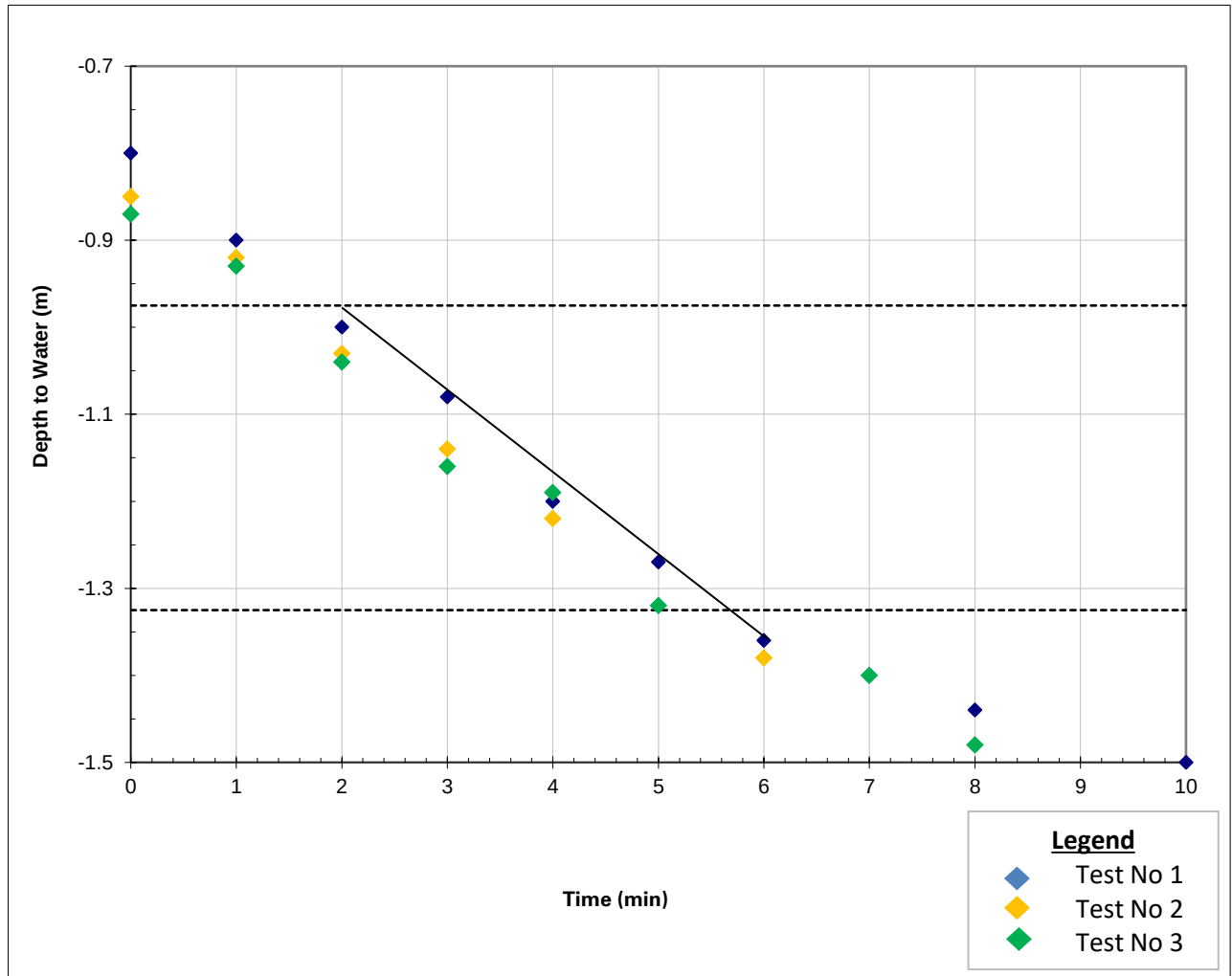
Client Foreman Homes

Trial Pit No. TP103

Pit Length (m) 1.7

Pit Width (m) 0.5

Pit Depth (m) 1.5



Design Soakage Rate 5.9E-04 m/s (based on linear portion of graph as shown)
 50.93 m/day

Notes

Trial pit log presented separately
Soakage test carried out in accordance with requirements of BRE365 with three completed fills
Worst case infiltration rate assessed from plot above in accordance with the BRE365 methodology

Site Former Jewsons Site, Toynbee Road, Eastleigh

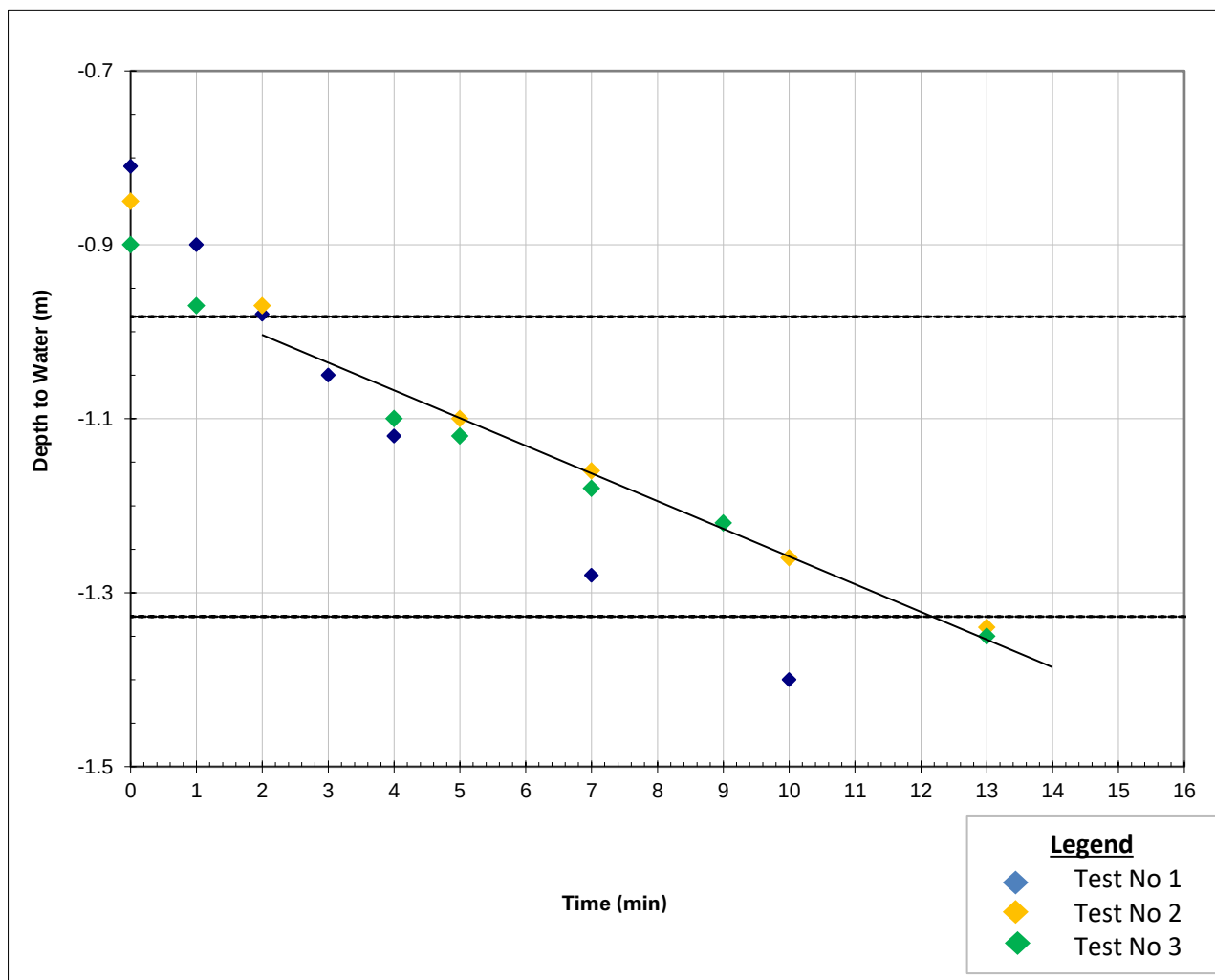
Client Foreman Homes

Trial Pit No. TP105

Pit Length (m) 1.6

Pit Width (m) 0.5

Pit Depth (m) 1.5



Design Soakage Rate 2.1E-04 m/s (based on linear portion of graph as shown)
17.76 m/day

Notes

Trial pit log presented separately
Soakage test carried out in accordance with requirements of BRE365 with three completed fills
Worst case infiltration rate assessed from plot above in accordance with the BRE365 methodology

Site Former Jewsons Site, Toynbee Road, Eastleigh

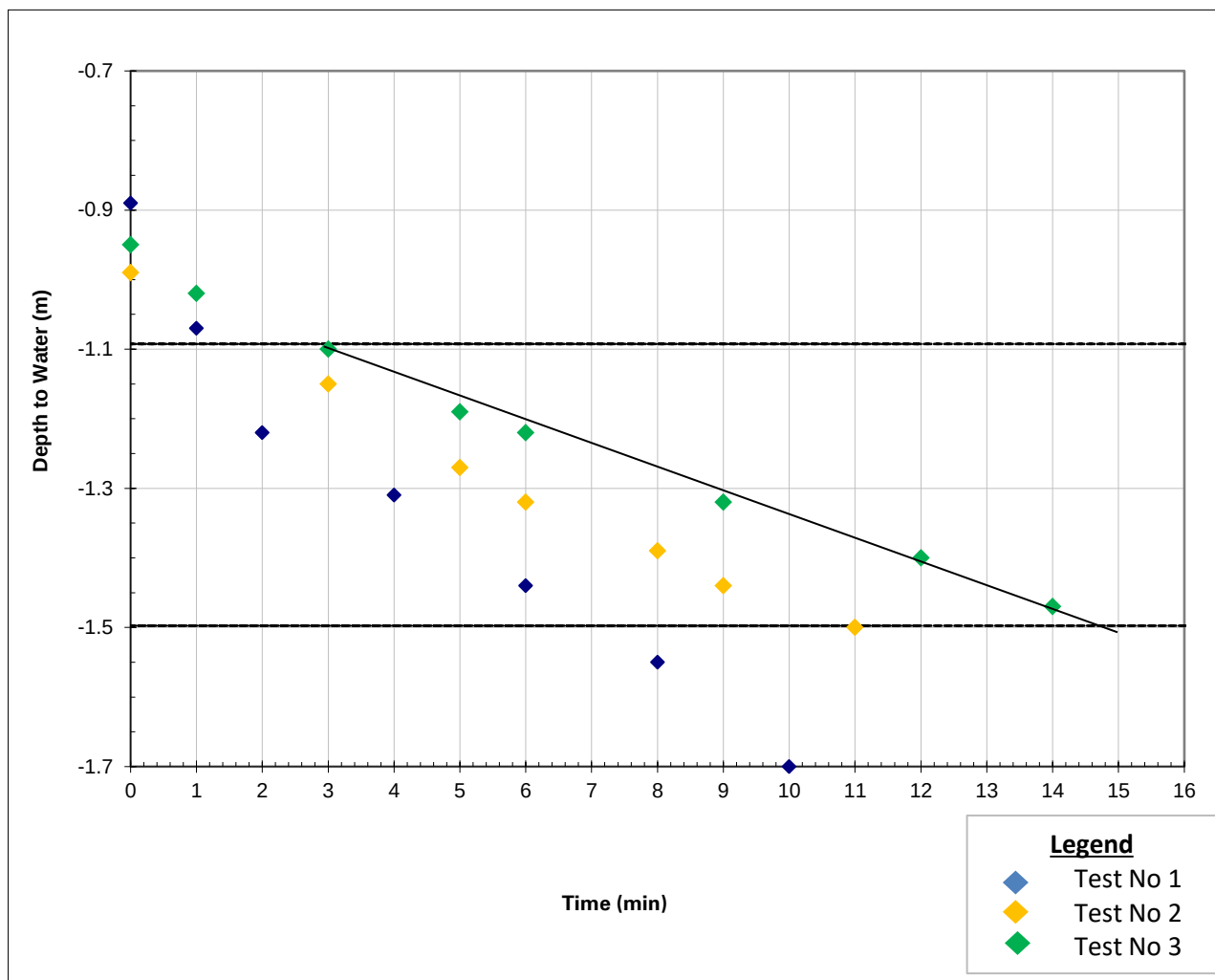
Client Foreman Homes

Trial Pit No. TP106

Pit Length (m) 1.9

Pit Width (m) 0.5

Pit Depth (m) 1.7



Design Soakage Rate 1.8E-04 m/s (based on linear portion of graph as shown)
15.95 m/day

Notes

Trial pit log presented separately
Soakage test carried out in accordance with requirements of BRE365 with three completed fills
Worst case infiltration rate assessed from plot above in accordance with the BRE365 methodology