

Our Ref: CC/2205771

Sarah Burrow
Arun District Council
Civic Centre
Maltravers Rd
Littlehampton
West Sussex
BN17 5LF

12th March 2025

Dear Sarah

Ford Airfield – F/14/24/RES & F/15/24/RES Arun Drainage Officer Comments Response

Further to your responses dated 29 February 2025 and 10 March 2025, in relation to IRM and RM1 respectively, this letter provides supplementary information in relation to the latest geotechnical site investigations undertaken at the site, as well as our interpretation of this information, ahead of a requested meeting with yourself.

Geological Site Conditions

The site investigations show that the site is underlain primarily by Sandy Clay overlain in places with pockets of River Terrace Deposits (sand and gravel). This indicates that the infiltration potential across the site is likely to be generally poor but it may be that some areas within the site, associated with the superficial deposits, where localised may appear to be acceptable. However, infiltration into superficial deposits is not advisable as this can create localised groundwater flooding.

Site Investigation

Various site investigations, including groundwater monitoring and soakage testing, at the proposed development has been undertaken, from 2018 to 2024, to inform the design of the development and the surface water drainage design.

The testing locations were chosen to give a good spread across the site but with a specific focus on obtaining groundwater levels and infiltration rates in the vicinity of the proposed SuDS features. The findings of the site investigations undertaken are shown on enclosed Drg No. 2205773-1955.

Head Office: Third Floor, The Hallmark Building, 52-56 Leadenhall Street, London EC3M 5JE | 020 7680 4088
Edinburgh: Suite 35, 4-5 Lochside Way, Edinburgh EH12 9DT | 0131 516 3111
Essex: 1-2 Crescent Court, High Street, Billericay CM12 9AQ | 01277 657677
Kent: Suite 10, 40 Churchill Business Square, Kings Hill, West Malling, Kent ME19 4YU | 01732 752155
Midlands: Office 3, The Garage Studios, 41-43 St Mary's Gate, The Lace Market, Nottingham NG1 1PU | 0115 697 0940
South West: Temple Studios, Temple Gate, Bristol BS1 6QA | 0117 456 4994
Suffolk: Suffolk Enterprise Centre, Felaw Maltings, 44 Felaw Street, Ipswich IP2 8SJ | 01473 407321

The site investigation showed variable groundwater levels and infiltration rates across the site but notably high groundwater or poor infiltration rates at the locations of the proposed strategic SuDS basins (based on the approved outline drainage strategy (ref. Drainage Technical Note (ref: C85228-JNP-92-XX-RP-C-1004) dated 9 July 2021 by JNP Group). The variable levels and rates are characteristic of the underlying geology with good infiltration rates being associated with the pockets of sand and gravel within the site.

On the basis of further comments from the West Sussex County Council (WSCC), as the Lead Local Flood Authority (LLFA). Further infiltration testing was undertaken in the northern part of the site to inform the drainage proposals for the site in December 2024. The results of this investigation are enclosed with this letter.

We have enclosed drawing no. 2205773-1955 which shows our analysis of the infiltration constraints across the northern part of the site based on the site investigation undertaken to date. Whilst there are some areas where either reasonable soakage rates or deep groundwater levels suggest the possibility of infiltration, when viewed in combined the results indicate that groundwater levels have the potential to be very shallow in any areas where soakage rates are reasonable. Localised deeper groundwater levels are likely to be caused by small pockets of differing geology but infiltrating at these locations would be at high risk of causing localised groundwater issues when the soakage capacity of these pockets is exceeded. Given that the geological characteristics of the site are broadly consistent then it is prudent to consider the worst-case infiltration rates and groundwater levels to inform the drainage principles at the site, in order to ensure that risk of groundwater flooding does not increase within the site or elsewhere. It is our professional opinion that infiltration should not be taken forward as an option for draining any part of the development based on the identified constraints.

Notwithstanding the above, the worst-case groundwater readings taken at the locations of the SuDS features will be used to inform the design of these features (i.e. lining and flotation design).

Proposed Drainage Strategy

On the basis of the above, the proposed drainage strategy for the site has been designed to discharge all flows to the surrounding watercourse network (i.e. the second option of the drainage hierarchy within the Planning Practice Guidance). The proposed discharge rates have been limited to less than the Qbar rates (i.e.

Head Office: Third Floor, The Hallmark Building, 52-56 Leadenhall Street, London EC3M 5JE | 020 7680 4088
Edinburgh: Suite 35, 4-5 Lochside Way, Edinburgh EH12 9DT | 0131 516 3111
Essex: 1-2 Crescent Court, High Street, Billericay CM12 9AQ | 01277 657677
Kent: Suite 10, 40 Churchill Business Square, Kings Hill, West Malling, Kent ME19 4YU | 01732 752155
Midlands: Office 3, The Garage Studios, 41-43 St Mary's Gate, The Lace Market, Nottingham NG1 1PU | 0115 697 0940
South West: Temple Studios, Temple Gate, Bristol BS1 6QA | 0117 456 4994
Suffolk: Suffolk Enterprise Centre, Felaw Maltings, 44 Felaw Street, Ipswich IP2 8SJ | 01479 407321

greenfield runoff rates) based on the proposed impermeable areas as a conservative measure. This demonstrates that the proposed drainage strategy will result in a reduction in discharge rates, relative to the existing site conditions.

Natural Drainage Catchments

ADC have indicated that parts of the northern site drain to a low spot within the topography. This low is confirmed within the topographical survey but at a lower depth than ADC have indicated of around 400mm. Whilst runoff from parts of the site would flow towards this low spot, in the existing situation, in extreme events this would quickly overtop and water would flow in the natural direction of the catchment towards the watercourse. Given the high groundwater levels at this location it is likely that runoff from this catchment makes its way through the underlying geology to the watercourse.

The proposed drainage strategy limits the peak flow for the catchment to a rate of 13.3l/s from a Qbar rate of 78.2l/s for the natural catchment which is an 83% reduction on the rate. This offers a significant reduction on the rate of discharge and would manage any increase in volume by virtue of the minimal discharge rate.

We would like to request a meeting at your earliest convenience to discuss the above and agree a way forward for the drainage proposals for the site. Please let me know when you are available and we can arrange a meeting over Teams, or in person if preferred.

We trust the above is of assistance but do not hesitate to contact me if you would like to discuss further.

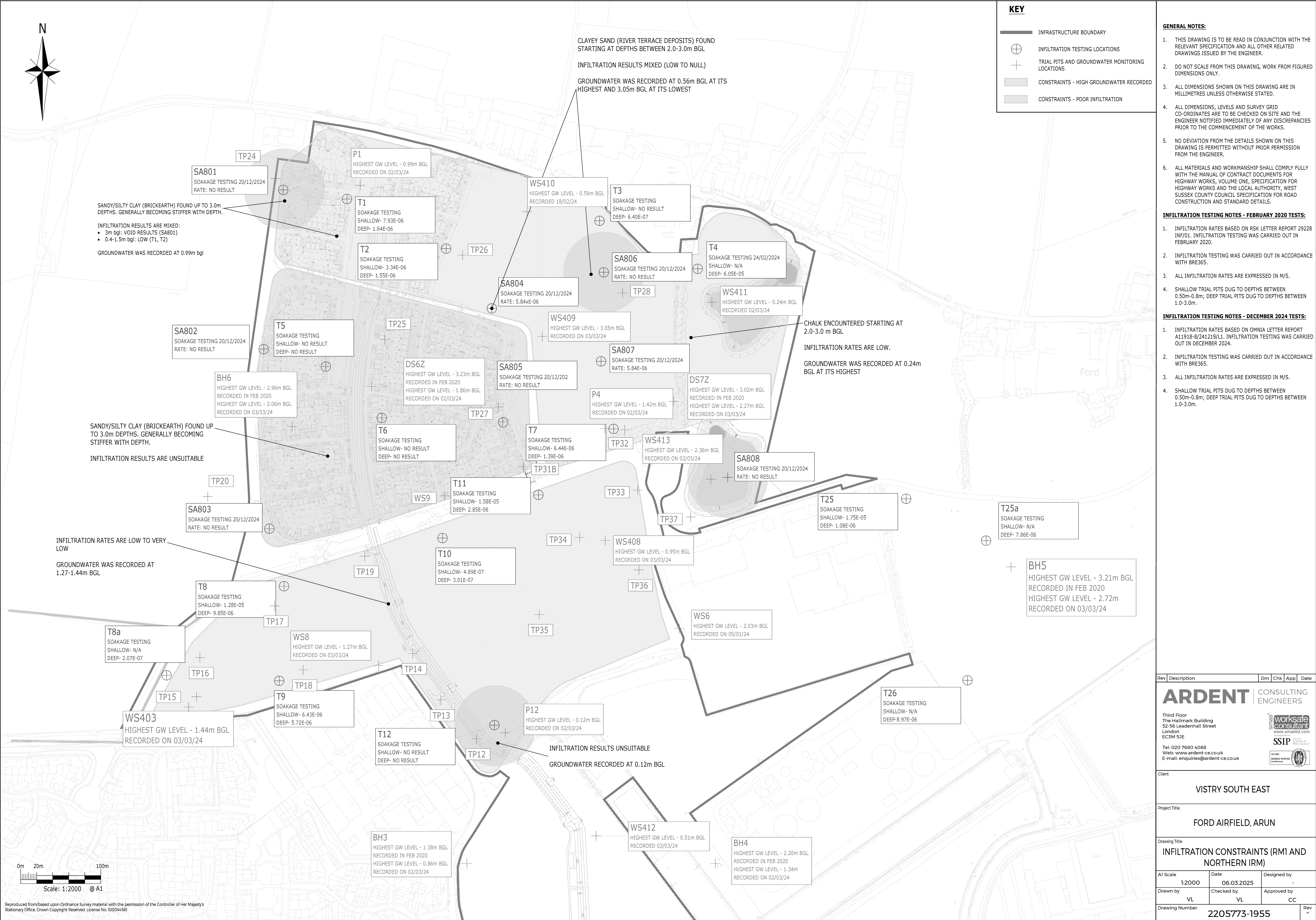
Yours sincerely

Charlie Cooper

Charlie Cooper
Associate Director

Encl: Ardent Drg No. 2205773-1955 Infiltration Constraints (RM1 and North IRM)
Omnia Infiltration Factual Report – Soakage Testing – 23rd December 2024

Head Office: Third Floor, The Hallmark Building, 52-56 Leadenhall Street, London EC3M 5JE | 020 7680 4088
Edinburgh: Suite 35, 4-5 Lochside Way, Edinburgh EH12 9DT | 0131 516 3111
Essex: 1-2 Crescent Court, High Street, Billericay CM12 9AQ | 01277 657677
Kent: Suite 10, 40 Churchill Business Square, Kings Hill, West Malling, Kent ME19 4YU | 01732 752155
Midlands: Office 3, The Garage Studios, 41-43 St Mary's Gate, The Lace Market, Nottingham NG1 1PU | 0115 697 0940
South West: Temple Studios, Temple Gate, Bristol BS1 6QA | 0117 456 4994
Suffolk: Suffolk Enterprise Centre, Felaw Maltings, 44 Felaw Street, Ipswich IP2 8SJ | 01473 407321



KEY

INFRASTRUCTURE BOUNDARY

INFILTRATION TESTING LOCATIONS

TRIAL PITS AND GROUNDWATER MONITORING LOCATIONS

CONSTRAINTS - HIGH GROUNDWATER RECORDED

CONSTRAINTS - POOR INFILTRATION

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATION AND ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.

2. DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY.

3. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

4. ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.

5. NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER.

6. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY FULLY WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, VOLUME ONE, SPECIFICATION FOR HIGHWAY WORKS AND THE LOCAL AUTHORITY, WEST SUSSEX COUNTY COUNCIL SPECIFICATION FOR ROAD CONSTRUCTION AND STANDARD DETAILS.

INFILTRATION TESTING NOTES - FEBRUARY 2020 TESTS:

1. INFILTRATION RATES BASED ON RSK LETTER REPORT 29228 INF/01. INFILTRATION TESTING WAS CARRIED OUT IN FEBRUARY 2020.

2. INFILTRATION TESTING WAS CARRIED OUT IN ACCORDANCE WITH BRE365.

3. ALL INFILTRATION RATES ARE EXPRESSED IN M/S.

4. SHALLOW TRIAL PITS DUG TO DEPTHS BETWEEN 0.50m-0.8m; DEEP TRIAL PITS DUG TO DEPTHS BETWEEN 1.0-3.0m.

INFILTRATION TESTING NOTES - DECEMBER 2024 TESTS:

1. INFILTRATION RATES BASED ON OMNIA LETTER REPORT A11918-8/241219/L1. INFILTRATION TESTING WAS CARRIED OUT IN DECEMBER 2024.

2. INFILTRATION TESTING WAS CARRIED OUT IN ACCORDANCE WITH BRE365.

3. ALL INFILTRATION RATES ARE EXPRESSED IN M/S.

4. SHALLOW TRIAL PITS DUG TO DEPTHS BETWEEN 0.50m-0.8m; DEEP TRIAL PITS DUG TO DEPTHS BETWEEN 1.0-3.0m.

Rev	Description	Dn	Chk	App	Date
ARDENT CONSULTING ENGINEERS Third Floor The Hallmark Building 52-56 Leadenhall Street London EC3M 5JE worksafe consultant www.smasitd.com SSIP SAFETY MANAGEMENT ASSOCIATION USE ONLY BUREAU VERITAS CERTIFICATION BSI BRITISH STANDARDS INSTITUTION Client VISTRY SOUTH EAST Project Title FORD AIRFIELD, ARUN Drawing Title INFILTRATION CONSTRAINTS (RM1 AND NORTHERN IRM) At Scale 1:2000 Date 06.03.2025 Designed by - Drawn by VL Checked by VL Approved by CC Drawing Number 2205773-1955 Rev -					

Reproduced from/based upon Ordnance Survey material with the permission of the Controller of Her Majesty's Stationary Office. Crown Copyright Reserved. License No.100044561

File Location: \\ardent\projects\2205773 - Ford Airfield - Infrastructure\m\detail\design\technical\drawings\2205773-1955 - Infiltration constraints plan.dwg



Omnia
Suite 1, Pure Offices,
One Port Way
Port Solent,
Portsmouth,
PO6 4TY
Tel: 01489 808 088
Email: [REDACTED]
Web: www.omnia-consulting.co.uk

23rd December 2024

ref: A11918-8/241219/L1

Julson Delishaj
Vistry South East
Linden House,
Guards Avenue,
Caterham,
Surrey,
CR3 5XL

By Email: [REDACTED]

Dear Julson,

RE: Ford Airfield, Arun, West Sussex, BN17 5QZ – Infiltration Factual Report – Soakage Testing

Omnia were commissioned by Vistry South East, to undertake additional soakage testing in full accordance with BRE Digest 365 – Soakaway Design at the above referenced site. Please find set out below a summary of on-site observations from site works undertaken from Monday 16th December 2024 to 19th December 2024, including presentation of infiltration rates.

Yours sincerely,

[REDACTED]

Abbie Dodds
Geo-Environmental Consultant

[REDACTED]

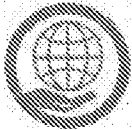
Olivia Maxwell
Principal Geo-Environmental
Consultant

Attachments:

- Appendix I: Limitations
- Appendix II: Figures
- Appendix III: Logs
- Appendix IV: In-situ Soakaway Certificates
- Appendix V: Drainage Scheme (Drawing ref: 2205771-D075)



Quality Assurance

Project Number: A11918-8					
December 2024					
 Geo-Environmental	Infiltration Testing Letter Report				
	Prepared by:	A. Dodds	Date:	19/12/2024	Signature:
Reviewed and authorised by:	O. Maxwell	Date:	24/12/2024	Signature:	

North Office
No.3 Fulwood,
3 Caxton Road,
Preston,
PR2 9ZZ

Midlands Office
Office 203,
St Nicholas House,
31 Park Row,
Nottingham,
NG1 6FG

South Office
Suite 1, Pure Offices,
One Port Way,
Port Solent,
Portsmouth
PO6 4TY



Site Address	Ford Airfield, Arun, West Sussex, BN17 5QZ
National Grid Reference	499156, 103169

1.0 BACKGROUND

Omnia have been commissioned by Vistry South East to undertake additional soakaway testing at the site of Ford Airfield, Arun, West Sussex, BN17 5QZ. Multiple previous phases of investigation have been undertaken for the site to date (by RSK, Omnia and others). Additional soakaway testing works have been commissioned by the client to obtain further information within the northern area of the site. This is in order to support the planning application as discussed with Omnia and presented in an email on the 25th November 2024.

The area of investigation was located between the villages of Ford and Yapton in West Sussex, with the wider site boundary approximately 90 hectares in size. The southern parcel of land was 32.43 ha, and the northern parcel 30.63 ha. This additional soakage testing was focussed within the northern parcel of land.

The land is predominantly used for agricultural purposes, however commercial premises are also located on the site including the former highways yard towards the north of the site.

The site was bordered by a mixture of residential to the south and west and commercial/open fields to the south, east and north.

It is understood outline planning application [F/4/20/OUT](#) has been granted with conditions for the development of “*up to 1,500 dwellings (Use Class C3), 60-bed care home (Use Class C2), up to 9,000 sqm of employment floorspace (Use Classes B1), local centre of up to 2,350 sqm including up to 900 sqm retail / commercial (Use Classes A1-A5) and 1,450 sqm community / leisure floorspace (Use Classes D1-D2), land for a two-form entry primary school (Use Class D1), public open space, allotments, new sports pitches and associated facilities, drainage, parking and associated access, infrastructure, landscape, ancillary and site preparation works, including demolition of existing buildings and part removal of existing runway hardstanding*”

The soakage testing was completed within gravel soak cells which were set up during a previous phase of ground investigation between the 3rd of December 2024 and the 4th of December 2024. Infiltration testing was then undertaken from Monday 16th December 2024 to Thursday 19th December 2024. The soakaway test locations were specified by the drainage engineers for the scheme (Ardent) as presented within drawing reference 2205771-D075 dated November 2024. Locations are presented as Figure 3.0 in Appendix II.

2.0 GEOLOGY & HYDROGEOLOGY

The British Geological Survey (BGS) map for the site, Fareham (Chichester & Bognor, Sheets 317/332, Solid and Drift Edition at a scale of 1:50,000 dated 1996) indicates that the site is underlain by the following geological sequence:

Table 2-1 Geological sequence on-site

Geological Unit	Formation Name	Description	Aquifer Classification
Superficial	Brickearth	Sand, silt and clay	Secondary A
	River Terrace Deposits	Sand and gravel	
Bedrock	Upper Chalk (Lewes Nodular Chalk, Seaford chalk, Newhaven chalk, Culver chalk and Portsdown chalk)	Chalk	Principal

3.0 GROUND CONDITIONS ENCOUNTERED

Geology encountered on site generally corresponds with that highlighted within BGS Mapping. The findings of the investigation have been outlined below.

3.1 Topsoil

Topsoil was encountered within six (6no.) exploratory hole locations (SA801, SA802, SA804, SA805, SA806, SA807), to a maximum depth of 0.50m bgl (SA802). The Topsoil generally comprised soft brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. The base of the Topsoil was proved within all locations.

3.2 Made Ground

Made Ground was encountered within two (2no.) exploratory hole locations (SA803 and SA808), to a depth of 0.30m bgl (SA808) and 0.60m bgl (SA803). The Made Ground generally comprised soft dark brown gravelly clayey SILT. Gravel is angular to sub-rounded fine to coarse flint and brick.

3.3 Superficial Deposits

3.3.1 Brickearth

Soils attributed to the Brickearth Formation were encountered within all locations (SA801-SA808) directly beneath the Made Ground or Topsoil to a maximum observed depth of 3.00m bgl (SA802 and SA805) although the base of the strata was not proven within either of the locations (SA802 and SA805). The Brickearth generally comprised soft to firm orangeish brown slightly sandy silty CLAY. Sand is fine to coarse.

3.3.2 River Terrace Deposits

Soils attributed to the River Terrace Deposits were encountered within five (5no.) locations (SA801, SA803, SA804, SA806 and SA808) directly beneath the Brickearth from a depth range of 1.90-2.70m bgl to a maximum observed depth of 3.00m bgl although the base of the strata was not proven within any of the locations. The River Terrace Deposits comprised yellowish brown gravelly silty fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and occasional chalk.

3.4 Bedrock Deposits – Upper Chalk

Soils attributed to the Upper Chalk were only encountered within one location (SA807) directly beneath the Brickearth from a depth of 2.20m bgl to a maximum observed depth of 3.00m bgl although the base of the strata was not proven. It was recovered as structureless chalk composed

of soft light yellowish brown very gravelly sandy SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse weak low density off white with black specks chalk and occasionally flint.

The base of the bedrock deposits was not encountered during this investigation.

3.5 Groundwater Conditions

Groundwater was not encountered within any intrusive location.

Exploratory hole logs are included within Appendix III of this report.

4.0 BRE DG365 Soakaway Testing

Soakaway testing was undertaken in full accordance with BRE DG365 between 16th December and 19th December 2024 within SA801-SA808.

The soakaway test certificates, including full time and depth data, are included within Appendix IV with the test results summarised in Table 5.1.

Table 4-1 Summary of Infiltration rate

Location	Test Number	Pit Dimensions (L x W x D)	Depth to fill (m bgl)	Strata Type	Duration of Test (hrs:mins)	Infiltration Rate (m/s)
SA801	1	2.00x0.40x3.00	1.81	Clay	24:00	N/A
SA802	1	2.00x0.40x3.00	1.49	Clay	24:36	N/A
SA803	1	2.00x0.45x3.00	1.88	Sand	24:15	N/A
SA804	1	2.10x0.50x3.00	1.85	Clay/Sand	00:22	5.84×10^{-6}
	2		1.82		00:34	3.01×10^{-5}
	3		1.80		00:52	1.80×10^{-5}
SA805	1	2.00x0.50x3.00	0.77	Clay	24:07	N/A
SA806	1	2.20x0.40x3.00	1.79	Clay/Sand	24:00	N/A
SA807	1	2.10x0.50x3.00	1.88	Clay/Chalk	00:35	2.85×10^{-5}
	2		1.84		01:07	1.56×10^{-5}
	3		1.85		02:00	7.25×10^{-6}
SA808	1	2.20x0.50x3.00	1.75	Clay/Sand	24:17	N/A

Testing was undertaken within SA801, SA802, SA803, SA805, SA806 and SA808 over a duration of 24hrs, during this period, the required 25% effective storage depth intercept was not reached. All six (6no.) locations (SA801, SA802, SA803, SA805, SA806 and SA808) were left to run for a duration of 24:00 (hours: minutes) therefore, all six (6no.) tests (SA801, SA802, SA803, SA805, SA806 and SA808) are considered to be unsuccessful.

Testing was undertaken within SA804 and SA807 over a duration of 00:22– 01:07 (hours: minutes). During these periods, the required 25% and 75% effective storage depth intercepts were reached within SA804 and SA807 such that the tests were considered to be successful, providing soil infiltration rates ranging from 5.84×10^{-6} to 3.01×10^{-5} m/s.

Three (3no.) successful tests were undertaken in each of the successful trial pits in succession to ensure full saturation of surrounding soils, with all reaching the 25% and 75% effective storage depth intercepts. The results indicate low permeability soil with good drainage conditions.

Given the 'good' infiltration rates (Carter, 1991) within the near surface River Terrace deposits and bedrock deposits of Upper chalk at 2no. locations, the site may prove suitable for conventional soakaway design within locations SA804 and SA807.

It is recommended that the calculated infiltration rates are provided to a suitably qualified drainage engineer. The application of soakaway drainage will ultimately be dependent on the specific requirements of the development. All soakaways should be designed in accordance with BRE Special Digest 365-Soakaway Design.

5.0 DISCUSSION & CONCLUSIONS

During the soakaway testing, the 75% and 25% effective storage depths were reached in two (2no.) out of the eight (8no.) soakaway test locations, and as a result soil infiltration rates were able to be calculated and ranged from 5.84×10^{-6} to 3.01×10^{-5} m/s indicating low permeability soil with good drainage conditions.

However, six (6no.) locations (SA801, SA802, SA803, SA805, SA806, SA808) failed to reach the 25% effective storage depths and as a result soil infiltration rates could not be calculated. This is attributed to the cohesive nature of the fine-grained material of the superficial deposits of Brickearth and River Terrace Deposits.

It is considered that the site may be suitable for conventional soakaway design, and it is recommended that a qualified drainage engineer is provided with the results of this testing for further discussion.

The application of soakaway drainage will ultimately be dependent on the specific requirements of the development. All soakaways should be designed in accordance with BRE Special Digest 365-Soakaway Design.

END OF REPORT

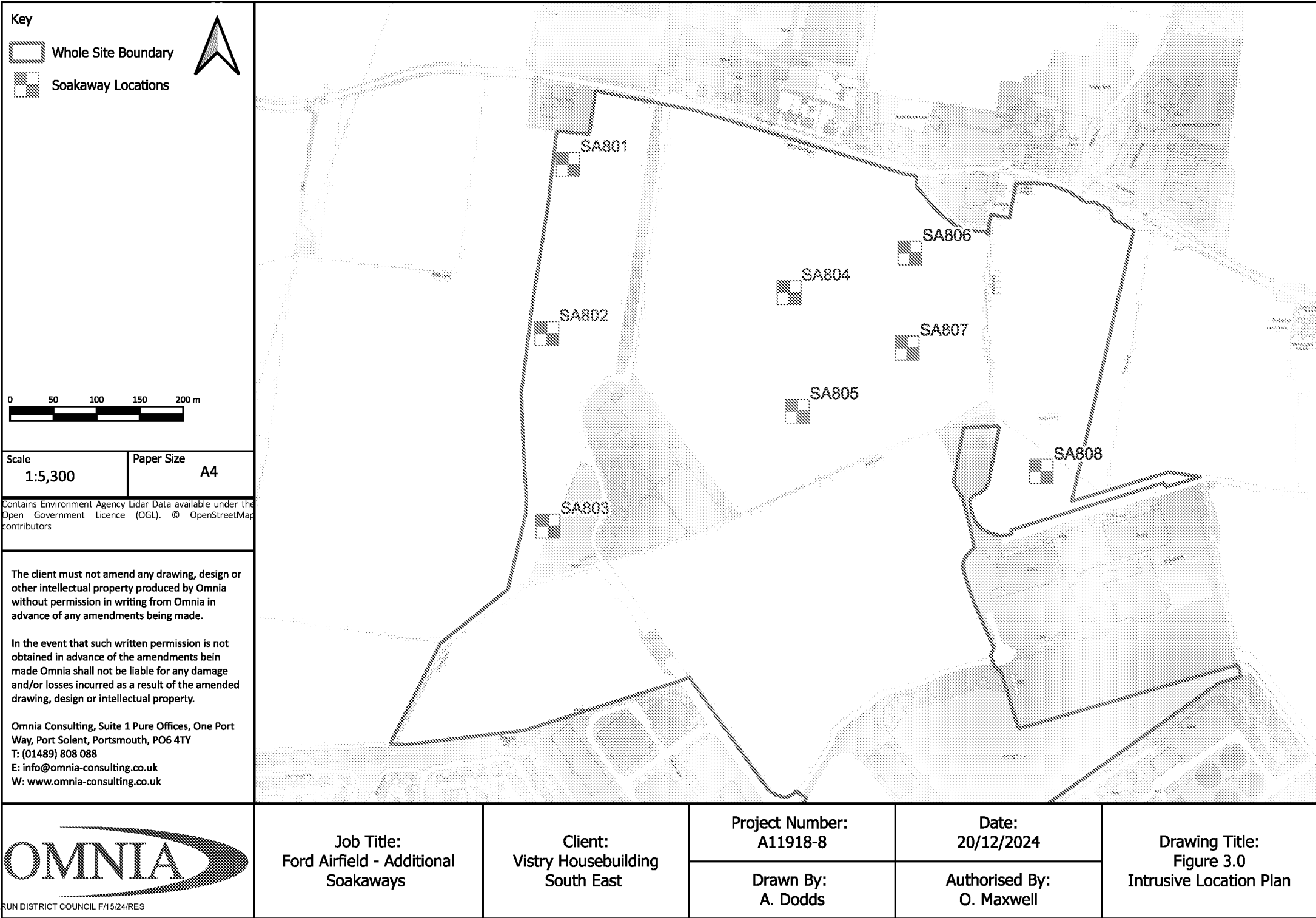
APPENDIX I

LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between OE Ltd and the Client as indicated in Section 1.2.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination, which are enforced, by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.
8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
9. OE cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by OE is owned by them and no such plans or documents may be reproduced, published, or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by OE in this connection without their explicit written agreement there to by OE.
10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II

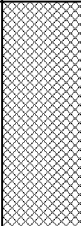
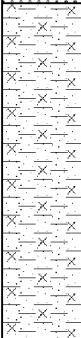
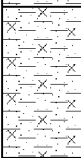
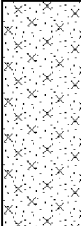
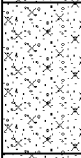
FIGURES



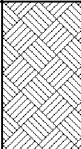
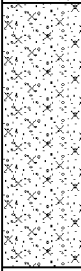
APPENDIX III

INTRUSIVE LOGS

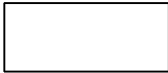
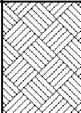
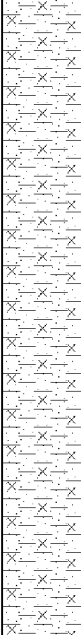
				Trial Pit Log				Trialpit No SA802 Sheet 1 of 1		
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 498803.41 - 103653.05 Level: 6.61		Date 12/03/2024		
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Client: Vistry South East		Dimensions (m): Depth 3.00		2 		Scale 1:20
						Logged JW				
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.50 - 1.00	B					Soft brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]			
	1.50 - 2.00	B					Soft to firm orangeish brown mottled light greyish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]			
	2.50 - 3.00	B		3.00	3.61		From 1.30m bgl: becoming slightly gravelly very sandy. Gravel is sub-angular to sub-rounded fine to coarse flint.			
							End of pit at 3.00 m			
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.										
Stability: STABLE										

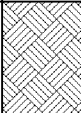
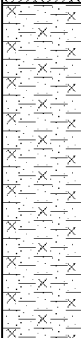
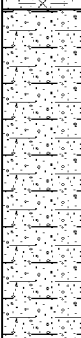
				Trial Pit Log				Trialpit No SA803 Sheet 1 of 1	
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 498801.56 - 103432.80 Level: 7.22		Date 12/03/2024	
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY						Dimensions (m): Depth 3.00 0.45 2		Scale 1:20 Logged JW	
Client: Vistry South East									
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.60 - 1.00	B		0.60	6.62		Soft dark brown slightly gravelly clayey SILT with rootlets and rare brick cobbles. Gravel is sub-angular to sub-rounded fine to coarse flint and brick. [MADE GROUND]		
							<i>Between 0.45-0.60m bgl: On south side of pit was a lens of black sandy very gravelly SILT. Gravel is angular to sub-angular fine to coarse flint, brick and macadam.</i>		
	1.50 - 1.90	B		1.50	5.72		Soft dark orangeish brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]		
	2.00 - 2.50	B		1.90	5.32		Soft to firm orange brown mottled light greyish brown silty very sandy CLAY. Sand is fine to coarse. [BRICKEARTH]		
2.50 - 2.90	B		2.50	4.72		Orange brown silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]			
			2.90	4.32		Orange brown silty gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]			
			3.00	4.22		Yellowish brown silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]			
End of pit at 3.00 m									
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.									
Stability: STABLE									

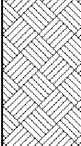
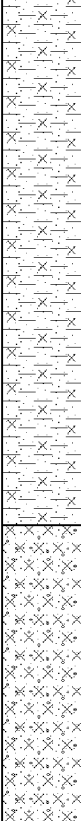
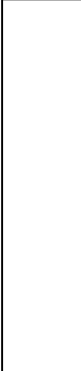


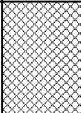
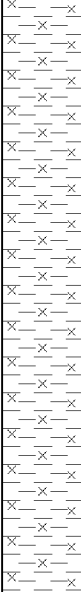
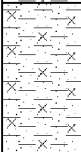
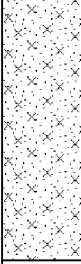
				Trial Pit Log			Trialpit No SA804 Sheet 1 of 1					
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 499081.96 - 103700.11 Level: 7.19		Date 12/04/2024				
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Dimensions (m): Depth 3.00			2.1 		Scale 1:20 Logged JW			
Client: Vistry South East												
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description					
	Depth	Type	Results									
				0.40	6.79		Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine and medium flint. [TOPSOIL]					1
							Soft dark orangeish brown silty CLAY. [BRICKEARTH]					
				1.60	5.59		Soft to firm orangeish brown and occasional mottled light brown slightly sandy silty CLAY with rare sub-angular to sub-rounded fine to coarse flint gravel. [BRICKEARTH]					2
				2.30	4.89		Yellowish brown gravelly silty fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and white with black specks, weak, low density chalk. [RIVER TERRACE DEPOSITS]					3
				3.00	4.19		End of pit at 3.00 m					
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.												
Stability: STABLE												



				Trial Pit Log			Trialpit No SA805 Sheet 1 of 1		
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 499090.72 - 103563.88 Level: 6.94		Date 12/04/2024	
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Dimensions (m):		2		Scale 1:20	
Client: Vistry South East				Depth 3.00				Logged JW	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.30	6.64		Soft brown slightly gravelly silty CLAY with rootlets. [TOPSOIL]		
				1.30	5.64		Soft dark orangeish brown silty CLAY [BRICKEARTH]		
							Soft to firm orangeish brown mottled light greyish brown slightly sandy silty CLAY. [BRICKEARTH]		
				3.00	3.94		End of pit at 3.00 m		
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.									
Stability: STABLE									

				Trial Pit Log			Trialpit No SA806 Sheet 1 of 1			
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 499223.29 - 103746.27 Level: 6.50		Date 12/04/2024		
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Client: Vistry South East		Dimensions (m): 2.2		Scale 1:20		
Depth 3.00		0.4				Logged JW				
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
				0.30	6.20		Soft dark brown silty CLAY with rootlets. [TOPSOIL]			1
							Soft dark orangeish brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]			
							Soft to firm orangeish brown mottled light brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]			
							From 1.50m bgl: rare cobbles of sub-rounded flint and becoming sandy.			
				1.20	5.30					2
				2.10	4.40		Orange slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]			
				3.00	3.50		End of pit at 3.00 m			3
										4
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.										
Stability: STABLE										

				Trial Pit Log			Trialpit No SA807 Sheet 1 of 1										
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 499218.02 - 103635.02 Level: 5.91		Date 12/04/2024									
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Client: Vistry South East		Dimensions (m): Depth 3.00		2.1 		Scale 1:20 Logged JW							
Water Strike		Samples and In Situ Testing				Depth (m)		Level (m)		Legend		Stratum Description					
		Depth		Type		Results		0.40		5.51				Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]			
								0.80		5.11				Soft dark orangeish brown silty CLAY. [BRICKEARTH]			
								2.20		3.71				Soft orangeish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]		1	
								3.00		2.91				Recovered as structureless chalk composed of Soft light yellowish brown very gravelly sandy SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse weak low density off white with black specks chalk and occasionally flint. Presumed grade is Dm. [LEWES NODULAR CHALK]		2	
														End of pit at 3.00 m		3	
																4	
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.																	
Stability: STABLE																	

				Trial Pit Log			Trialpit No SA808 Sheet 1 of 1								
Project Name: Ford Airfield				Project No. A11918-8		Co-ords: 499373.48 - 103494.59 Level: 6.55		Date 12/04/2024							
Location: Northern Grainstore, Ford Airfield Industrial Estate, Ford, Arundel BN18 0HY				Client: Vistry South East		Dimensions (m): Depth 3.00		2 0.5		Scale 1:20 Logged JW					
Water Strike		Samples and In Situ Testing				Depth (m)		Level (m)		Legend		Stratum Description			
						0.30		6.25				Soft dark brown gravelly clayey SILT. Gravel is angular to sub-rounded fine to coarse flint and brick. [MADE GROUND]			
						1.90		4.65				Soft dark orangeish brown silty CLAY. [BRICKEARTH]		1	
						2.30		4.25				Soft orangeish brown mottled yellowish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]		2	
						3.00		3.55				Orange silty fine to coarse SAND. [RIVER TERRACE DEPOSITS] <i>From 2.50m bgl: becomes slightly gravelly. Gravel is sub-angular to sub-rounded fine to coarse flint.</i>		3	
												End of pit at 3.00 m		4	
Remarks: 1. Position scanned with calibrated CAT & 'Genny' prior to excavation. 2. No groundwater encountered.															
Stability: STABLE															

APPENDIX IV

SOAKAWAY TESTING CERTIFICATES

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	16/12/2024



Trial Pit Identification:	SA801
Trial Pit Length (m):	2.00
Trial Pit Width (m):	0.40
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

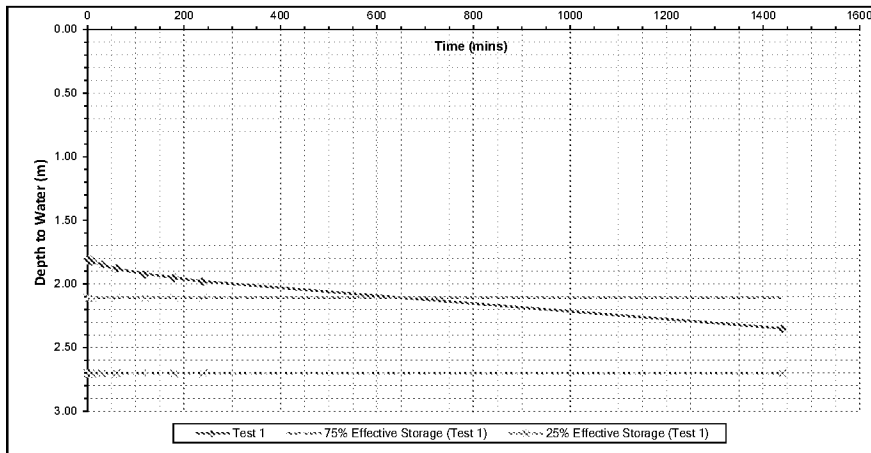
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.30m bgl Soft brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.30-1.40m bgl Soft dark orangeish brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
1.40-2.70m bgl Soft to firm orangeish brown slightly sandy silty CLAY. Sand is fine to coarse [BRICKEARTH]
From 2.40m bgl: becomes very sandy
2.70-3.00m bgl Orange and yellow silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.19	0.00	1.81
	1.00	1.81
75% Effective Storage Depth (m):	2.00	1.81
0.89	3.00	1.81
	4.00	1.81
(i.e. Depth Below Ground Level) (m):	5.00	1.81
2.11	10.00	1.82
	30.00	1.85
25% Effective Storage Depth (m):	60.00	1.88
0.30	120.00	1.92
	180.00	1.95
(i.e. Depth Below Ground Level) (m):	240.00	1.98
2.70	1440.00	2.35
Effective Storage Depth Across 75% - 25% (m):		
0.60		
Time to Fall to 75% Effective Depth (min):		
650		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.14		
As50% (m2):		
3.66		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required interstage failed to be reached. Therefore the test is considered not to have been successful.

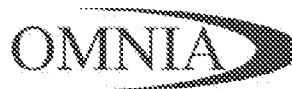


Site Engineer:	Date:
Oakland	16/12/2024

Checked and Approved By:	Date:
HS	19/12/2024

Location
SA801

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	16/12/2024



Trial Pit Identification:	SA802
Trial Pit Length (m):	2.00
Trial Pit Width (m):	0.40
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

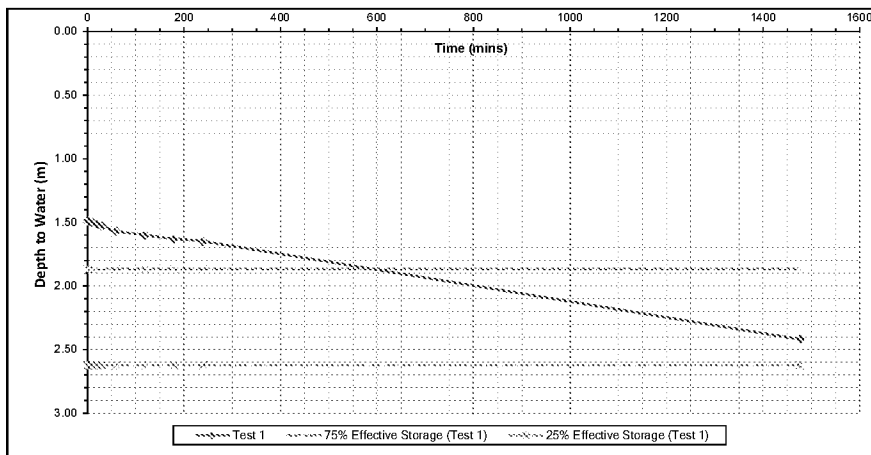
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50m bgl Soft brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.50-3.00m bgl Soft to firm orangeish brown mottled light greyish brown sandy silty CLAY. Sand is fine to coarse. [BRICK EARTH]
From 1.30m bgl becoming slightly gravelly very sandy. Gravel is sub-angular to sub-rounded fine to coarse flint.

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.51	0.00	1.49
	1.00	1.49
75% Effective Storage Depth (m):	2.00	1.49
1.13	3.00	1.49
	4.00	1.49
(i.e. Depth Below Ground Level) (m):	5.00	1.49
1.87	10.00	1.50
	20.00	1.52
25% Effective Storage Depth (m):	30.00	1.53
0.38	60.00	1.57
	120.00	1.60
(i.e. Depth Below Ground Level) (m):	180.00	1.63
2.62	240.00	1.65
	1476.00	2.42
Effective Storage Depth Across 75% - 25% (m):		
0.76		
Time to Fall to 75% Effective Depth (min):		
600		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.18		
As50% (m2):		
4.42		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intersept failed to be reached. Therefore the test is considered not to have been successful.

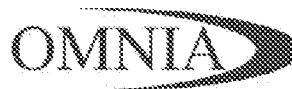


Site Engineer:	Date:
Oakland	16/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA802

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	16/12/2024



Trial Pit Identification:	SA803
Trial Pit Length (m):	2.00
Trial Pit Width (m):	0.45
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

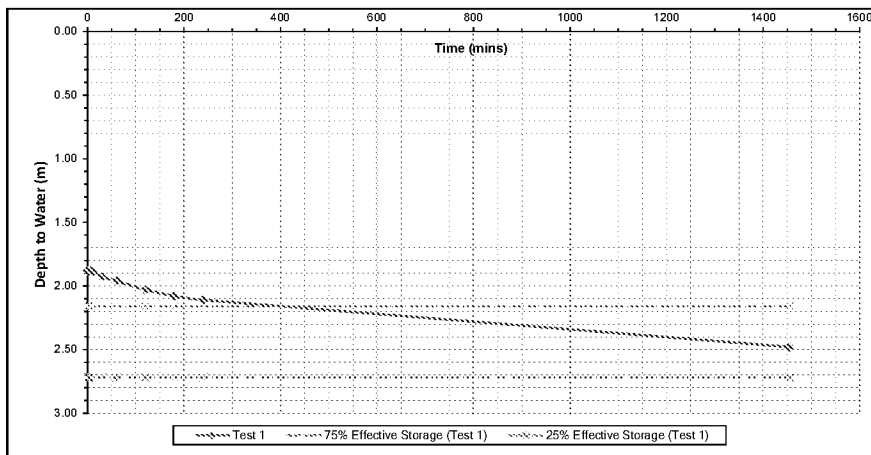
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.60m bgl Soft dark brown slightly gravelly clayey SILT with rootlets and rare brick cobbles. Gravel is sub-angular to sub-rounded fine to coarse flint and brick. [MADE GROUND]
Between 0.45-0.60m bgl: On south side of pit was a lens of black sandy very gravelly SILT in southern half of pit. Gravel is angular to sub-angular fine to coarse flint, brick and macadam.
0.60-1.50m bgl Soft dark orangesh brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
1.50-1.90m bgl Soft to firm orange brown mottled light greyish brown silty very sandy CLAY. Sand is fine to coarse. [BRICKEARTH]
1.90-2.50m bgl Orange brown silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]
2.50-2.90m bgl Orange brown silty gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]
2.90-3.00m bgl Yellowish brown silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.12	0.00	1.88
	1.00	1.88
75% Effective Storage Depth (m):	2.00	1.88
0.84	3.00	1.88
	4.00	1.88
(i.e. Depth Below Ground Level) (m):	5.00	1.88
2.16	10.00	1.89
	30.00	1.93
25% Effective Storage Depth (m):	60.00	1.96
0.28	120.00	2.03
	180.00	2.08
(i.e. Depth Below Ground Level) (m):	240.00	2.11
2.72	1455.00	2.48
Effective Storage Depth Across 75% - 25% (m):		
0.56		
Time to Fall to 75% Effective Depth (min):		
400		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.15		
As50% (m2):		
3.64		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
N/A: During the duration of the test the required intercege failed to be reached. Therefore the test is considered not to have been successful.



Site Engineer:	Date:
Oakland	16/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA803

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	17/12/2024



Trial Pit Identification:	SA804
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

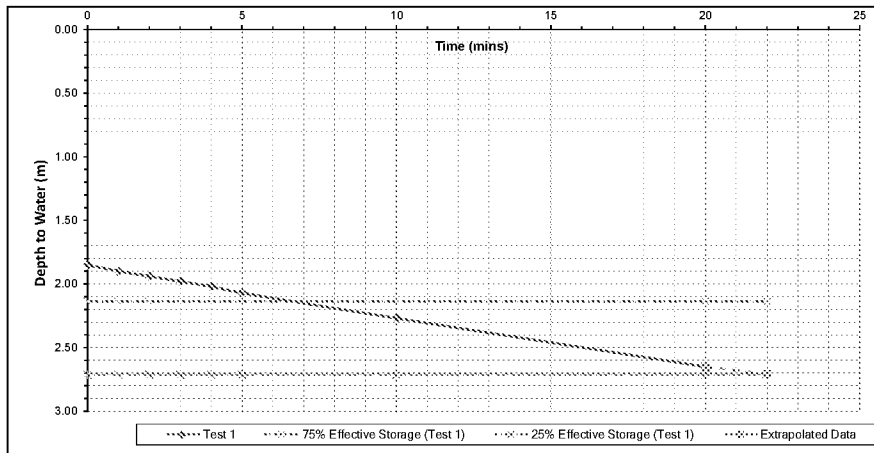
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine and medium flint. [TOPSOIL]
0.40-1.60m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
1.60-2.30m bgl Soft to firm orangeish brown and occasional mottled light brown slightly sandy silty CLAY with rare sub-angular to sub-rounded fine to coarse flint gravel. [BRICKEARTH]
2.30-3.00m bgl Yellowish brown gravelly silty fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and white with black specks, weak, low density chalk. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.15	0.00	1.85
	1.00	1.90
75% Effective Storage Depth (m):	2.00	1.94
0.86	3.00	1.98
	4.00	2.02
(i.e. Depth Below Ground Level) (m):	5.00	2.07
2.14	10.00	2.27
	20.00	2.65
25% Effective Storage Depth (m):	22.00	2.71
0.29		
(i.e. Depth Below Ground Level) (m):		
2.71		
Effective Storage Depth Across 75% - 25% (m):		
0.58		
Time to Fall to 75% Effective Depth (min):		
150		
Time to Fall to 25% Effective Depth (min):		
22		
30%(Vp75%-25%) (m3):		
0.18		
As50% (m2):		
4.04		
Tp75%-25% (mins):		
-128		

DESIGN SOIL INFILTRATION RATE, f (m/s):	-5.84E-06
---	-----------

Comments:



Site Engineer:	Date:
Oakland	17/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA804

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	17/12/2024



Trial Pit Identification:	SA804
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

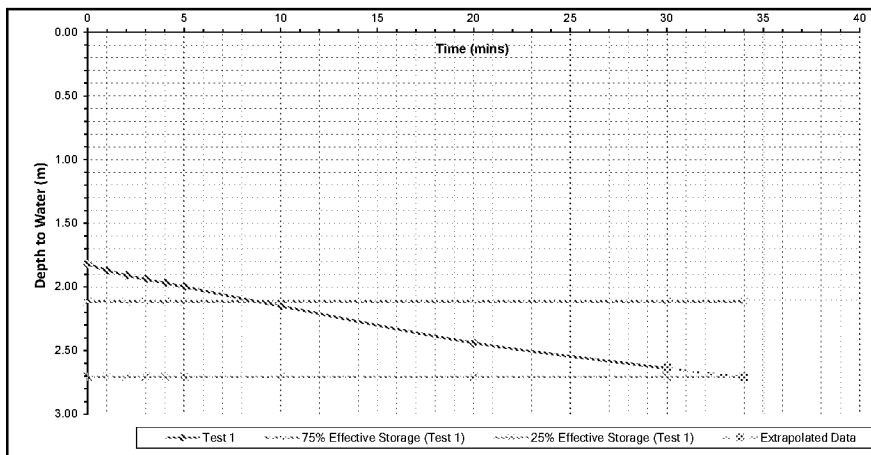
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine and medium flint. [TOPSOIL]
0.40-1.60m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
1.60-2.30m bgl Soft to firm orangeish brown and occasional mottled light brown slightly sandy silty CLAY with rare sub-angular to sub-rounded fine to coarse flint gravel. [BRICKEARTH]
2.30-3.00m bgl Yellowish brown gravelly silty fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and white with black specks, weak, low density chalk. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.18	0.00	1.82
	1.00	1.87
75% Effective Storage Depth (m):	2.00	1.91
0.89	3.00	1.94
	4.00	1.97
(i.e. Depth Below Ground Level) (m):	5.00	2.00
2.12	10.00	2.15
	20.00	2.44
25% Effective Storage Depth (m):	30.00	2.64
0.30	34.00	2.71
(i.e. Depth Below Ground Level) (m):		
2.71		
Effective Storage Depth Across 75% - 25% (m):		
0.59		
Time to Fall to 75% Effective Depth (min):		
9.00		
Time to Fall to 25% Effective Depth (min):		
34.00		
30%(Vp75%-25%) (m3):		
0.19		
As50% (m2):		
4.12		
Tp75%-25% (mins):		
25.00		

DESIGN SOIL INFILTRATION RATE, f (m/s):	3.01E-05
---	----------

Comments:



Site Engineer:	Date:
Oakland	17/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA804

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	17/12/2024



Trial Pit Identification:	SA804
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

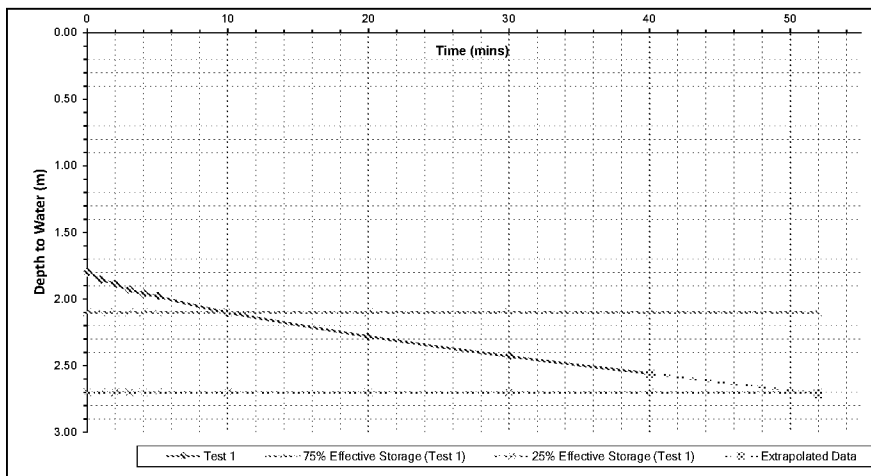
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine and medium flint. [TOPSOIL]
0.40-1.60m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
1.60-2.30m bgl Soft to firm orangeish brown and occasional mottled light brown slightly sandy silty CLAY with rare sub-angular to sub-rounded fine to coarse flint gravel. [BRICKEARTH]
2.30-3.00m bgl Yellowish brown gravelly silty fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and white with black specks, weak, low density chalk. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.20	0.00	1.80
	1.00	1.85
75% Effective Storage Depth (m):	2.00	1.89
0.90	3.00	1.93
	4.00	1.96
(i.e. Depth Below Ground Level) (m):	5.00	1.98
2.10	10.00	2.10
	20.00	2.28
25% Effective Storage Depth (m):	30.00	2.43
0.30	40.00	2.56
	52.00	2.71
(i.e. Depth Below Ground Level) (m):		
2.70		
Effective Storage Depth Across 75% - 25% (m):		
0.6		
Time to Fall to 75% Effective Depth (min):		
10		
Time to Fall to 25% Effective Depth (min):		
52		
30%(Vp75%-25%) (m3):		
0.19		
As50% (m2):		
4.17		
Tp75%-25% (mins):		
42		

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.80E-05
---	----------

Comments:

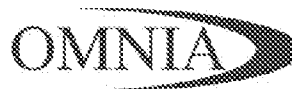


Site Engineer:	Date:
Oakland	17/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA804

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	17/12/2024



Trial Pit Identification:	SA805
Trial Pit Length (m):	2.00
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

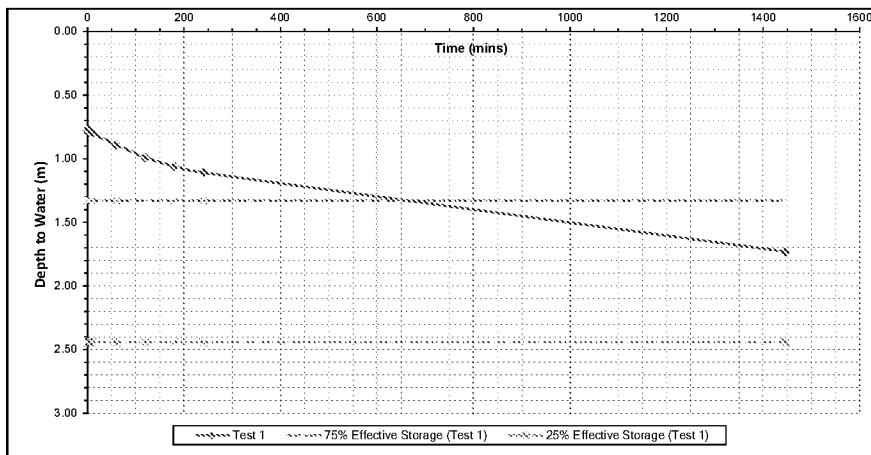
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.30m bgl Soft brown slightly gravelly silty CLAY with rootlets. [TOPSOIL]
0.30-1.30m bgl Soft dark orangeish brown silty CLAY. [BRICEARTH]
1.30-3.00m bgl Soft to firm orangeish brown mottled light greyish brown slightly sandy silty CLAY. [BRICEARTH]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
2.23	0.00	0.77
	1.00	0.78
75% Effective Storage Depth (m):	2.00	0.78
1.67	3.00	0.78
	4.00	0.79
(i.e. Depth Below Ground Level) (m):	5.00	0.79
1.33	10.00	0.80
	60.00	0.89
25% Effective Storage Depth (m):	120.00	0.99
0.56	180.00	1.06
	240.00	1.11
(i.e. Depth Below Ground Level) (m):	1447.00	1.73
2.44		
Effective Storage Depth Across 75% - 25% (m):		
1.12		
Time to Fall to 75% Effective Depth (min):		
650		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.33		
As50% (m2):		
6.58		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.

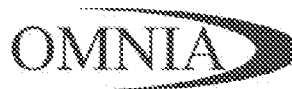


Site Engineer:	Date:
Oakland	17/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA805

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	18/12/2024



Trial Pit Identification:	SA806
Trial Pit Length (m):	2.20
Trial Pit Width (m):	0.40
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

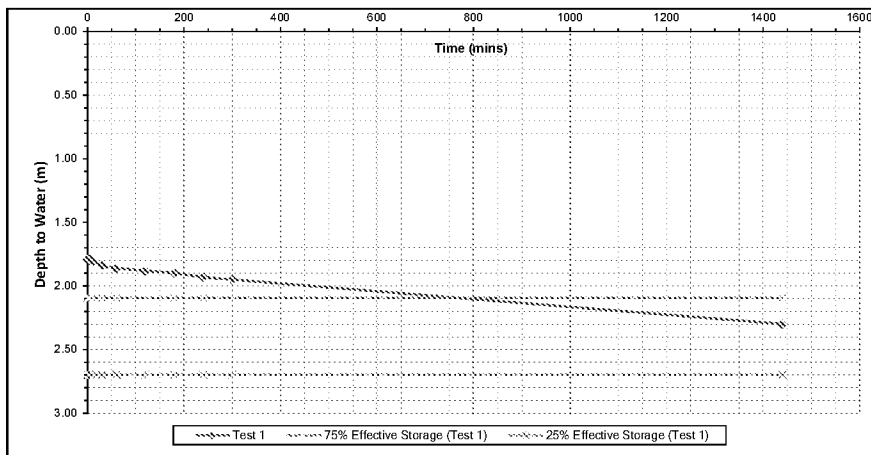
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.30m bgl Soft dark brown silty CLAY with rootlets. [TOPSOIL]
0.30-1.20m bgl Soft dark orangeish brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
1.20-2.10m bgl Soft to firm orangeish brown mottled light brown slightly sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
From 1.50m bgl: rare cobbles of sub-rounded flint and becoming sandy.
2.10-3.00m bgl Orange slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.21	0.00	1.79
	1.00	1.79
75% Effective Storage Depth (m):	2.00	1.79
0.91	3.00	1.79
	4.00	1.79
(i.e. Depth Below Ground Level) (m):	5.00	1.80
2.09	10.00	1.81
	30.00	1.84
25% Effective Storage Depth (m):	60.00	1.86
0.30	120.00	1.88
	180.00	1.90
(i.e. Depth Below Ground Level) (m):	240.00	1.93
2.70	300.00	1.95
	1440.00	2.30
Effective Storage Depth Across 75% - 25% (m):		
0.61		
Time to Fall to 75% Effective Depth (min):		
750		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.16		
As50% (m2):		
4.03		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intercege failed to be reached. Therefore the test is considered not to have been successful.



Site Engineer:	Date:
Oakland	18/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA806

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	18/12/2024



Trial Pit Identification:	SA807
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

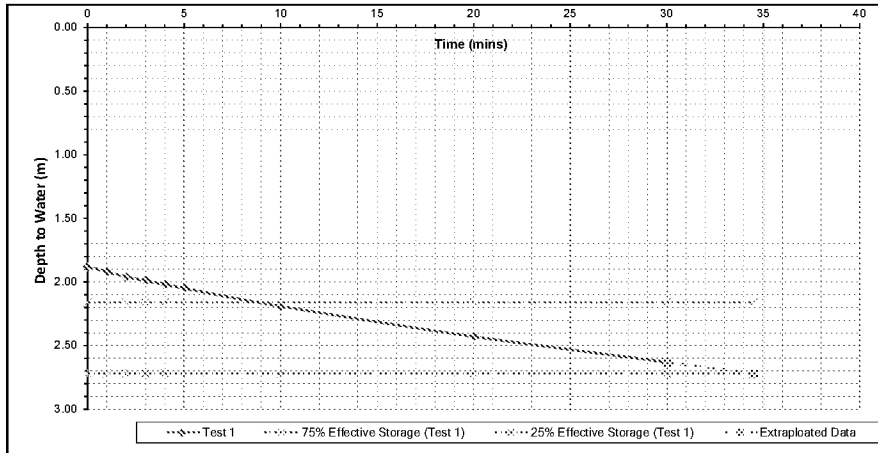
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.40-0.80m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
0.80-2.20m bgl Soft orangeish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
2.20-3.00m bgl Recovered as structureless chalk composed of Soft light yellowish brown very gravelly sandy SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse weak low density off white with black specks chalk and occasionally flint. Presumed grade is Dm. [LEWES NODULAR CHALK]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.12	0.00	1.88
	1.00	1.92
75% Effective Storage Depth (m):	2.00	1.96
0.84	3.00	1.99
	4.00	2.02
(i.e. Depth Below Ground Level) (m):	5.00	2.05
2.16	10.00	2.19
	20.00	2.43
25% Effective Storage Depth (m):	30.00	2.63
0.28	34.50	2.72
(i.e. Depth Below Ground Level) (m):		
2.72		
Effective Storage Depth Across 75% - 25% (m):		
0.56		
Time to Fall to 75% Effective Depth (min):		
9		
Time to Fall to 25% Effective Depth (min):		
35		
30%(Vp75%-25%) (m3):		
0.18		
As50% (m2):		
3.96		
Tp75%-25% (mins):		
26		

DESIGN SOIL INFILTRATION RATE, f (m/s):	2.85E-05
---	----------

Comments:



Site Engineer:	Date:
Oakland	18/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA807

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	18/12/2024



Trial Pit Identification:	SA807
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

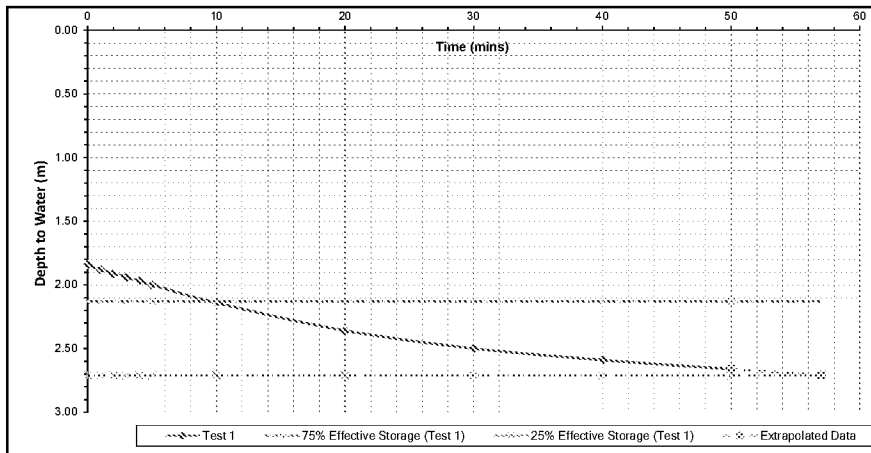
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.40-0.80m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
0.80-2.20m bgl Soft orangeish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
2.20-3.00m bgl Recovered as structureless chalk composed of Soft light yellowish brown very gravelly sandy SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse weak low density off white with black specks chalk and occasionally flint. Presumed grade is Dm. [LEWES NODULAR CHALK]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.16	0.00	1.84
	1.00	1.88
75% Effective Storage Depth (m):	2.00	1.91
	3.00	1.94
	4.00	1.97
(i.e. Depth Below Ground Level) (m):	5.00	2.00
	10.00	2.14
	20.00	2.36
25% Effective Storage Depth (m):	30.00	2.50
	40.00	2.59
	50.00	2.66
(i.e. Depth Below Ground Level) (m):	57.00	2.71
Effective Storage Depth Across 75% - 25% (m):		
0.58		
Time to Fall to 75% Effective Depth (min):		
9.00		
Time to Fall to 25% Effective Depth (min):		
57.00		
30%(Vp75%-25%) (m3):		
0.18		
As50% (m2):		
4.07		
Tp75%-25% (mins):		
48.00		

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.56E-05
---	----------

Comments:



Site Engineer:	Date:
Oakland	18/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA807

Site Name:	Ford Airfield - Soakaway Testing
Site Reference:	A11918-8
Test Date:	18/12/2024



Trial Pit Identification:	SA807
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

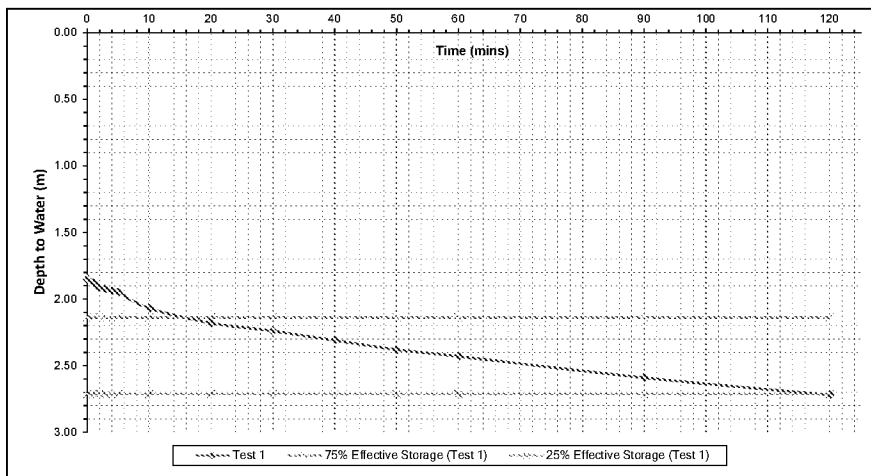
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Soft dark brown slightly gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.40-0.80m bgl Soft dark orangeish brown silty CLAY. [BRICKEARTH]
0.80-2.20m bgl Soft orangeish brown sandy silty CLAY. Sand is fine to coarse. [BRICKEARTH]
2.20-3.00m bgl Recovered as structureless chalk composed of Soft light yellowish brown very gravelly sandy SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse weak low density off white with black specks chalk and occasionally flint. Presumed grade is Dm. [LEWES NODULAR CHALK]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.15	0.00	1.85
	1.00	1.88
75% Effective Storage Depth (m):	2.00	1.91
0.86	3.00	1.92
	4.00	1.94
(i.e. Depth Below Ground Level) (m):	5.00	1.95
2.14	10.00	2.07
	20.00	2.18
25% Effective Storage Depth (m):	30.00	2.24
0.29	40.00	2.31
	50.00	2.38
(i.e. Depth Below Ground Level) (m):	60.00	2.43
2.71	90.00	2.59
	120.00	2.72
Effective Storage Depth Across 75% - 25% (m):		
0.575		
Time to Fall to 75% Effective Depth (min):		
16		
Time to Fall to 25% Effective Depth (min):		
119		
30%(Vp75%-25%) (m3):		
0.18		
As50% (m2):		
4.04		
Tp75%-25% (mins):		
103		

DESIGN SOIL INFILTRATION RATE, f (m/s):	7.25E-06
---	----------

Comments:



Site Engineer:	Date:
Oakland	18/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA807

Site Name:	rd Airfield - Soakaway Testing & Monitor
Site Reference:	A11918-8
Test Date:	18/12/2024



Trial Pit Identification:	SA808
Trial Pit Length (m):	2.20
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	3.00
Groundwater Level (m bgl):	N/A

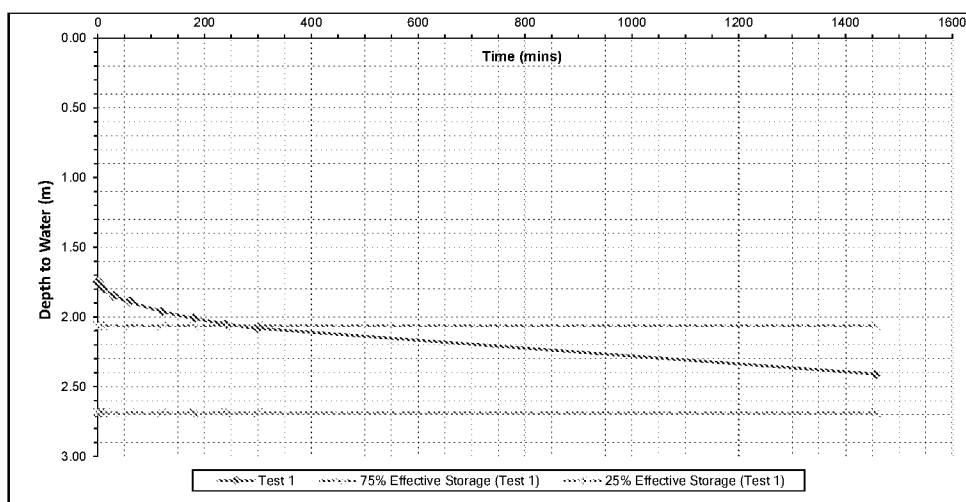
GRAVEL FILLED SOIL INFILTRATION RATE TEST
20mm Clean Gravel used with 30% free void space assumed
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.30m bgl Soft dark brown gravelly clayey SILT. Gravel is angular to sub-rounded fine to coarse flint and brick. [MADE GROUND]
0.30-1.90m bgl Soft dark orangeish brown silty CLAY. [BRICEARTH]
1.90-2.30m bgl Soft orangeish brown mottled yellowish brown sandy silty CLAY. Sand is fine to coarse. [BRICEARTH]
2.30-3.00m bgl Orange silty fine to coarse SAND. [RIVER TERRACE DEPOSITS]
From 2.50m bgl: becomes slightly gravelly. Gravel is sub-angular to sub-rounded fine to coarse flint.

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.25	0.00	1.75
	1.00	1.75
75% Effective Storage Depth (m):	2.00	1.75
0.94	3.00	1.76
	4.00	1.76
(i.e. Depth Below Ground Level) (m):	5.00	1.77
2.06	10.00	1.80
	30.00	1.85
25% Effective Storage Depth (m):	60.00	1.89
0.31	120.00	1.96
	180.00	2.01
(i.e. Depth Below Ground Level) (m):	240.00	2.05
2.69	300.00	2.08
	1457.00	2.41
Effective Storage Depth Across 75% - 25% (m):		
0.63		
Time to Fall to 75% Effective Depth (min):		
250		
Time to Fall to 25% Effective Depth (min):		
N/A		
30%(Vp75%-25%) (m3):		
0.21		
As50% (m2):		
4.48		
Tp75%-25% (mins):		
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.



Site Engineer:	Date:
Oakland	18/12/2024

Checked and Approved By:	Date:
HS	20/12/2024

Location
SA808

APPENDIX V

APPENDIX V: DRAINAGE SCHEME (DRAWING REF: 2205771-D075)