Groundwater flows issuing from overflowing soakaway at Northdown Close. Taken on 7th March 2014 (Source: A. Brauninger, KCC)

Flooding at end of Northdown Close due to groundwater flows filling drainage systems. Taken on 7th March 2014. (Source: A. Brauninger, KCC)

Excess groundwater flows alleviated by overpumping from soakaway into nearby highway culvert by landowner. Taken on 20th March 2014. (Source: A Brauninger, KCC)

Thank you for your enquiry

Your form has been submitted successfully.
It will be forwarded to the KCC SuDS team and will be dealt with as soon as possible (within 14/21 days, depending on the nature of the enquiry)

Name: Daniel Alstead

Agent name (if required):

Address: Enzygo Ltd, Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

Telephone number: 01143215151

Mobile number: 07595654238

Email address: daniel.alstead@enzygo.com

Please state your interest in the property/land e.g. owner, developer, prospective purchaser: Flood risk and drainage consultants

Please provide the site address of the development site including postcode: Land south of Old Ashford Road, Lenham, Maidstone Road, Charing, Kent

Easting/Northing: 590751, 151920

Postcode: ME17 2GQ

Please provide a description of the proposed development (if known): Residential dwellings and Sport Pitches. Number of units currently unknown.

What advice are you seeking?: Flood Risk Enquiry (written advice)

What is your planning status?: Pre-application

Do you have a planning application number?: No

Site location plan (e.g. 1:1250 or 1:2500) with the site outlined in red : 7968-P-01- Promotion Land Boundary.pdf

Area of site (hectares):

Layout plan of proposal:

Available ground information:

Details of current use(s):

Proposed drainage discharge destination:

Flood modelling or flood information:

Please explain the nature of your enquiry: Enzygo Ltd have been commissioned to undertake a Flood Risk Assessment for a proposed residential and sports pitch development located on land south of Old Ashford Road.

Environment Agency online flood mapping (Figure 1) shows the site is located within Flood Zone 1, at ‘low’ risk of fluvial (river) flooding. There are however surface water flow pathways conveying flows south through the site. The flow pathways appear to be associated with an onsite watercourse (which is likely to be representative of fluvial flooding) and overland flow generate by topography and soils with low permeability.

Could you provide us with flooding data? In relation to the site we would require clarification on the following points. Please note we are consulting with both the Environment Agency and LLFA.

Can you confirm the flood zone within the site?

Are you able to provide comment on the likely source of flooding to the site?

Do you have any records of historic flooding events on this site, either from fluvial sources or other sources (i.e. surface water, sewers, groundwater, reservoir etc.)? If you are aware of historical flooding at the site, can you please provide us with details of these historical flood events where it is available, including flood levels, estimated return periods, photographs, and other such data as may be relevant to our study?

Do you have any information on drainage within the site and in the local area, including any known drainage problems on site and in the local area?

Do you hold any information on the culverted reach beneath the railway line to the south?

As required by the Building Regulations, we will need to consider discharge of surface water from the site to soakaway / infiltration as a first option. We would be grateful if you could provide us with any information that you have that may assist in our assessment of this option, such as details of sensitive aquifers in the area, known contamination issues, etc.

The proposal is for a development of a greenfield Site. Please could you indicate the maximum allowable discharge rate if we were to discharge to the onsite watercourses?

What level of allowance for climate change would be required when considering surface water attenuation?

Please can you also indicate to us whether you are aware of any relevant environmentally sensitive receptors (such as aquatic wildlife in receiving watercourses, etc.) in the area around the site that we should be aware of when preparing this Flood Risk Assessment?

Do you wish to add any additional supporting documents?: No

If you consider your enquiry to be confidential, please set out the reasons why, and for what period any information should remain confidential.: N/A

Advice being sought: Flooding and drainage pre-application advice. Written advice for a general site enquiry or flood risk assessment enquiry - £240

Amount to pay: 240

.: I/We agree to the following with respect to provision of service with this application:

.: I confirm that planning advice is requested and agree to pay the fee of the amount above as payment for the planning advice service, within 14 days:

.: I agree to pay any additional sums arising from the provision of the service as required, as outlined in the Drainage Advice Charging Guide:

Marion Geary
Maidstone Borough Council
Maidstone Planning Department
King Street
Maidstone
Kent
ME15 6JQ

Flood and Water Management
Invicta House
Maidstone
Kent
ME14 1XX
Website: www.kent.gov.uk/flooding
Email: suds@kent.gov.uk
Tel: 03000 41 41 41
Our Ref: MBC/2019/075812
Date: 25 October 2019

Application No: 19/504724/HYBRID

Location: Land Off Old Ashford Road Lenham Maidstone Kent

Proposal: Hybrid application comprising of - Outline application (all matters reserved except for access) for up to 100 dwellings and Full application for change of use of land for public sports, play and recreation.

Thank you for your consultation on the above referenced planning application.

Kent County Council as Lead Local Flood Authority have reviewed the Flood Risk Assessment produced by Enzygo dated April 2019 have following comments.

1. Our pre-application consultation letter dated 11 March 2019 emphasises that the offsite discharge should be limited to QBAR and recommends to utilise 2l/s/ha as the limiting discharge rate. The assumption for soil type made in the greenfield runoff calculation in the report is therefore unacceptable to KCC. We would require that the calculation is revised.

2. The indicative drainage layout plan SHF.1528.004.HY.D.008 does not show any arrangement of drainage to serve the sports area car park and pavilion. The report states controlling discharge rate from this area at 5l/s. We recommend utilising 2l/s as minimum discharge rate.

3. We notice there is opportunity to discharge the surface runoff from the site within the site boundary. However, the drainage layout plan shows an outfall pipe through the third-party land. Any work outside redline boundary may require appropriate planning obligation required by the LPA to secure the off-site works.

4. The Illustrative Layout submitted indicates that a watercourse crossing the site requires culverting to provide access to the sports facilities. The report does not include any design and flood risk assessment associated with the new culvert.

We therefore recommend the application is not determined until a revised report is provided for review, which addresses our issues discussed above

Please note:
Any feature capable of conveying water can be considered to fall under the definition of an ‘ordinary watercourse’ and we would urge the applicant to contact us prior to

undertaking any works that may affect any watercourse/ditch/stream or any other feature which has a drainage or water conveyance function. Any works that have the potential to affect the watercourse or ditch's ability to convey water will require our formal flood defence consent (including culvert removal, access culverts and outfall structures). Please contact flood@kent.gov.uk for further information.

This response has been provided using the best knowledge and information submitted as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Yours faithfully,

Bandana Shrestha
Flood Risk Project Officer
Flood and Water Management

Appendix 5 – Southern Water Sewer Asset Plans

Order received: 26 October 2017
Order completed: 8 November 2017

Drainage and water enquiry

Commercial

Order reference: LS/U1320546
Your reference: 17274130

Search address:
Land at East Lenham Farm Ashford Road
Maidstone
Kent
ME17 2DP

Ordered by:
TM Property Searches Limited
1200 Delta Business Park Great Western Way
Swindon
Wiltshire
SN5 7XZ

For enquiries regarding the information provided in this report, please contact the LandSearch team:

Tel: 0845 270 0212
0330 303 0276 (individual consumers)

Email: searches@southernwater.co.uk

Web: www.southernwater.co.uk

LandSearch
Southern Water Services
Southern House
Capstone Road
Chatham
Kent
ME5 7QA

COMMERCIALDW
DRAINAGE AND WATER ENQUIRY

Southern Water

What you need to know about...

Private sewer transfer

On 1 October 2011, ownership of private sewers and lateral drains changed in accordance with The Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. The contents of this search may not reflect these changes.

For further information please visit our website: www.southernwater.co.uk/sewer-ownership-changes.

Records searched

The following records were searched in compiling this report: the Map of Public Sewers, the Map of Waterworks, water and sewerage records, the Register of Properties subject to Internal Foul Flooding, the Register of Properties subject to Poor Water Pressure and the Drinking Water Register. Should the property not fall entirely within Southern Water's region, a copy of the records held by the relevant water company was searched.

Competition in the non-household retail market

From April 2017 non-household customers in England can choose their retailer. 'Retail' refers to the way in which customers are billed for their water and sewerage as well as customer services including meter reading.

The 'wholesale' part of the water industry was not opened for competition in April 2017. This means Southern Water continues to look after the pipes and infrastructure for all its customers across Kent, Sussex, Hampshire and the Isle of Wight.

Moving

There can be a lot to do and remember when you're moving. Whether you are moving within our area, moving into our area or moving out of the area please let your retailer know.

Your order summary

	Maps	
1.1	Where relevant, please include a copy of an extract from the public sewer map.	Map provided
1.2	Where relevant, please include a copy of an extract from the map of waterworks	Map provided
	Drainage	
2.1	Does foul water from the property drain to a public sewer?	No
2.2	Does surface water from the property drain to a public sewer?	No
2.3	Is a surface water drainage charge payable?	See answer
2.4	Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?	Yes
2.4.1	Does the public sewer map indicate any public pumping station or any other ancillary apparatus within the boundaries of the property?	No
2.5	Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?	No
2.5.1	Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?	No
2.6	Are any sewers or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?	No
2.7	Has any sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?	No
2.8	Is the building which is or forms part of the property at risk of internal flooding due to overloaded public sewers?	No
2.9	Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.	See answer
	Water	
3.1	Is the property connected to mains water supply?	No
3.2	Are there any water mains, resource mains or discharge pipes within the boundaries of the property?	See answer
3.3	Is any water main or service pipe serving, or which is proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?	No
3.4	Is the property at risk of receiving low water pressure or flow?	No
3.5	What is the classification of the water supply for the property?	See answer
3.6	Is there a meter installed at this property?	See answer
	Charging	
4.1.1	Who is responsible for providing the sewerage services for the property?	Southern Water
4.1.2	Who is responsible for providing the water services for the property?	South East Water
4.2	Who bills the property for sewerage services?	See answer
4.3	Who bills the property for water services?	See answer
	Trade effluent information	
4.4	Is there a consent on this property to discharge trade effluent under Section 118 of the Water Industry Act (1991) into the public sewerage system?	No

Maps

Public sewer map

Q. 1.1: Where relevant, please include a copy of an extract from the public sewer map.

A.: A copy of an extract from the public sewer map is provided.

Guidance notes:

The Water Industry Act 1991 defines public sewers as those which the Company has responsibility for. Other assets and rivers, watercourses, ponds, culverts or highway drains may be shown for information purpose only.

Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an "as constructed" record. It is recommended these details be checked with the developer.

Map of waterworks

Q. 1.2: Where relevant, please include a copy of an extract from the map of waterworks.

A.: A copy of an extract of the map of waterworks is provided.

Guidance notes:

Assets other than vested water mains may be shown on the plan for information only.

The Company is not responsible for private supply pipes connecting the property to the public water main and does not hold details of these. These may pass through land outside of the control of the seller, or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Drainage

Foul water

Q. 2.1: Does foul water from the property drain to a public sewer?

A.: The Company's records indicate that foul water from the property does not drain to the public sewerage system.

Guidance notes:

The Company is not responsible for private drains and sewers that connect the property to the public sewerage system and does not hold details of these.

The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility, with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

If foul water does not drain to the public sewerage system the property may have private facilities in the form of a cesspit, septic tank or other type of treatment plant.

Surface water

Q. 2.2: Does surface water from the property drain to a public sewer?

A.: The Company's records indicate that surface water from the property does not drain to the public sewerage system. If the property was constructed after 6 April 2015 the surface water drainage may be served by a Sustainable Drainage System. Further information may be available from the developer.

Guidance notes:

The Company is not responsible for private drains and sewers that connect the property to the public sewerage system and does not hold details of these.

The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility, with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

In some cases company records do not distinguish between foul and surface water connections to the public sewerage system. If on inspection the buyer finds that the property is not connected for surface water drainage, the property may be eligible for a rebate of the surface water drainage charge. Details can be obtained from the Company.

If surface water does not drain to the public sewerage system the property may have private facilities in the form of a soakaway or private connection to a watercourse

Surface water drainage charge

Q. 2.3: Is a surface water drainage charge payable?

A.: Records confirm that a surface water drainage charge is not applicable at this property. If the property was constructed after 6 April 2015 the surface water drainage may be served by a Sustainable Drainage System. Further information may be available from the developer.

Guidance notes:

Where surface water from a property does not drain to the public sewerage system no surface water drainage charges are applicable.

If on inspection the buyer finds that the property is not connected for surface water drainage, the buyer should contact their retailer.

Public sewers within the boundary of the property

Q. 2.4: Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?

A.: The public sewer map included indicates that there is a public sewer, disposal main or lateral drain within the boundaries of the property. However, from 1 October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map but which may further prevent or restrict development of the property.

Guidance notes:

The approximate boundary of the property has been determined by reference to the Ordnance Survey record or the map supplied.

The presence of a public sewer within the boundary of the property may restrict further development within it.

Southern Water Services has a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of Southern Water Services or its contractors needing to enter the property to carry out work.

Please note if the property was constructed after 1 July 2011 any sewers and/or lateral drain within the boundary of the property are the responsibility of the householder.

Public pumping station within the boundary of the property

Q. 2.4.1: Does the public sewer map indicate any public pumping station or any other ancillary apparatus within the boundaries of the property?

A.: The public sewer map included indicates that there is no public pumping station within the boundaries of the property. Any other ancillary apparatus is shown on the public sewer map and referenced on the legend.

Guidance notes:

The approximate boundary of the property has been determined by reference to the Ordnance Survey record or the map supplied.

The presence of a pumping station within the boundary of the property may restrict further development within it.

Southern Water Services has a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of Southern Water Services or its contractors needing to enter the property to carry out work.

It should be noted that only private pumping stations installed before 1 July 2011 will be transferred into the ownership of Southern Water Services.

Public sewers near to the property

Q. 2.5: Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?

A.: The public sewer map indicates that there are no public sewers within 30.48 metres (100 feet) of a building within the property.

Guidance notes:

From 1 October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property.

The presence of a public sewer within 30.48 metres (100 feet) of a building within the property can result in the local authority requiring a property to be connected to the public sewer.

The measure is estimated from the Ordnance Survey record, between a building within the boundary of the property and the nearest public sewer.

Public pumping station near to the property

Q. 2.5.1: Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?

A.: The public sewer map included indicates that there is no public pumping station within 50 metres of any buildings within the property. Any other ancillary apparatus is shown on the public sewer map and referenced on the legend.

Guidance notes:

The measure is estimated from the Ordnance Survey record, between a building within the boundary of the property and the nearest pumping station.

It should be noted that only private pumping stations installed before 1 July 2011 will be transferred into the ownership of Southern Water Services.

Public adoption of sewers and lateral drains

Q. 2.6: Are any sewers or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?

A.: Records indicate that the sewers serving the development, of which this property forms part, are not the subject of an application for adoption under Section 104 of the Water Industry Act 1991. Where the property is part of an established development it would not normally be subject to an adoption agreement under Section 104 of the Water Industry Act 1991.

Guidance notes:

This enquiry is of interest to purchasers of new buildings who will want to know whether or not the building will be linked to a public sewer.

Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.

Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991.

Any sewers and/or lateral drains within the boundary of the property are not the subject of an adoption agreement and remain the responsibility of the householder. Adoptable sewers are normally those situated in the public highway.

Building over a public sewer, disposal main or drain

Q. 2.7: Has the sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?

A.: There are no records in relation to any approval or consultation about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain. However, the sewerage undertaker might not be aware of a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain.

Guidance notes:

Buildings or extensions erected over a sewer in contravention of Building Control may have to be removed or altered.

From 1 October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership and the sewerage undertaker may not have approved or been consulted about any plans to erect a building or extension on the property or in the vicinity of these.

Risk of flooding due to overloading public sewers

Q. 2.8: Is the building which is or forms part of the property at risk of internal flooding due to overloaded public sewers?

A.: The building is not recorded as being at risk of internal flooding due to overloaded public sewers. From 1 October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership. It is therefore possible that a building may be at risk of internal flooding due to an overloaded public sewer which the sewerage undertaker is not aware of. For further information it is recommended that enquiries are made of the vendor.

Guidance notes:

A sewer is "overloaded" when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding as a result of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.

"Internal flooding" from the public sewers is defined as flooding, which enters a building or passes below a suspended floor.

For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes

"At Risk" properties are defined as properties that have suffered or are likely to suffer internal flooding from the public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the sewerage undertaker's reporting procedure.

Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included.

Buildings may be at risk of flooding but not identified where flooding incidents have not been reported to the sewerage undertaker.

Public sewers are defined as those for which the sewerage undertaker holds statutory responsibility under the Water Industry Act 1991.

It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the sewerage undertaker. This report excludes flooding from the private sewers and drains and the sewerage undertaker makes no comment upon this matter.

Sewage treatment works

Q. 2.9: Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.

A.: The nearest sewage treatment works is 0.94 kilometres South of the property. The name of the sewage treatment works is LENHAM WTW, which is the responsibility of Southern Water Services, Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX.

Guidance notes:

The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated.

The sewerage undertaker's records were inspected to determine the nearest sewage treatment works

It should be noted that there may be a private sewage treatment works closer than the one detailed above that have not been identified.

Water

Connection to mains water supply

Q. 3.1: Is the property connected to mains water supply?

A.: Records indicate that the property is not connected to mains water supply and water is therefore likely to be provided by virtue of a private supply.

Guidance notes:

The situation should be checked with the current owner of the property.

Details of private supplies are not kept by the water undertaker.

Water mains, resource mains or discharge pipes

Q. 3.2: Are there any water mains, resource mains or discharge pipes within the boundaries of the property?

A.: The map of waterworks is provided by South East Water whose records do not indicate any water mains, resource mains or discharge pipes within the boundaries of the property.

Guidance notes:

The boundary of the property has been determined by reference to the Ordnance Survey record or the map supplied.

The presence of a public water main within the boundary of the property may restrict further development within it.

Water undertakers have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the water undertaker or its contractors needing to enter the property to carry out work.

Adoption of water mains and services pipes

Q. 3.3: Is any water main or service pipe serving, or which is proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?

A.: Records confirm that water mains or service pipes serving the property are not the subject of an existing adoption agreement or an application for such an agreement.

Guidance notes:

This enquiry is of interest to purchasers of new properties who will want to know whether or not the property will be linked to the mains water supply.

Risk of low water pressure or flow

Q. 3.4: Is the property at risk of receiving low water pressure or flow?

A.: Records confirm that the property is not recorded by the water undertaker as being at risk of receiving low water pressure or flow.

Guidance notes:

"Low water pressure" means water pressure below the regulatory reference level which is the minimum pressure when demand on the system is not abnormal.

The reference level of service is a flow of 9 litres/minute at a pressure of 10 metres head on the customer's side of the main stop tap (mst). The reference level of service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap.

The reference level applies to a single property. Where more than one property is served by a common service pipe, the flow assumed in the reference level must be appropriately increased to take account of the total number of properties served.

For two properties, a flow of 18 litres/minute at a pressure of 10 metres head on the customers' side of the mst is appropriate. For three or more properties the appropriate flow should be calculated from the standard loadings provided in BS6700 or Institute of Plumbing handbook.

Water companies include properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level). Refer to list below:

Abnormal demand: This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand which are normally expected. Companies exclude properties which are affected by low pressure only on those days with the highest peak demands. During the year companies may exclude, for each property, up to five days of low pressure caused by peak demand.

Planned maintenance: Companies exclude low pressures caused by planned maintenance. It is not intended that companies identify the number of properties affected in each instance. However, companies must maintain sufficiently accurate records to verify that low pressure incidents that are excluded because of planned maintenance are actually caused by maintenance.

One-off incidents: This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as PRVs or booster pumps); firefighting; and action by a third party. However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded.

Low pressure incidents of short duration: Properties affected by low pressures which only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the course of the year, may be excluded.

Water hardness

Q. 3.5: What is the classification of the water supply for the property?

A.: The water supplied to the property has an average water hardness of 147mg/l calcium carbonate which is defined as "Slightly hard" by South East Water.

Guidance notes:

The hardness of water depends on the amount of calcium in it – the more it contains, the harder the water is.

There is no UK or European standard set for the hardness of drinking water. More information on water hardness can be found on the Drinking Water Inspectorates' website: http://www.dwi.gov.uk/

Water hardness can be expressed in various indices for example the hardness settings for dishwashers are commonly expressed in Clark's degrees, but check with the manufacturer as there are also other units. The following table explains how to convert mg/l calcium and mg/l calcium carbonate classifications.

To convert from:	to Clark degrees	to French degrees	to German degrees
mg/l calcium	multiply by 0.18	multiply by 0.25	multiply by 0.14
mg/l calcium carbonate	multiply by 0.07	multiply by 0.10	multiply by 0.056

Water meters

Q. 3.6: Is there a meter installed at this property?

A.: Records indicate that the property is not served by a water meter

Guidance notes:

Where the property is not served by a water meter and the customer wishes to consider this method of charging they should contact the water undertaker for their area.

If a property is measured (metered) upon change of occupation this property will remain as a metered property.

Charging

Sewerage undertaker

Q. 4.1.1: Who is responsible for providing the sewerage services for the property?

A.: Southern Water is responsible for providing the sewerage services for the property.

Guidance notes:

The 'wholesale' part of the water industry did not open for competition in April 2017. This means that Southern Water continues to operate the network of pipes, mains and treatment works.

As a wholesaler, Southern Water sells sewerage services to the companies who enter the retail market. In some instances, wholesalers will still need to interact directly with customers. For example, customers will still contact Southern Water to report internal sewer flooding.

Water undertakers

Q. 4.1.2: Who is responsible for providing the water services for the property?

A.: South East Water is responsible for providing the water services for the property.

Guidance notes:

The 'wholesale' part of the water industry did not open for competition in April 2017. This means that water undertakers continue to operate the network of pipes, mains and treatment works.

As a wholesaler, water undertakers sell water services to the companies who enter the retail market. In some instances, wholesalers will still need to interact directly with customers. For example, customers will still contact water undertakers to report leaks.

Sewerage bills

Q. 4.2: Who bills the property for sewerage services?

A.: If you wish to know who bills the sewerage services for this property then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk.

Guidance notes:

From April 2017 non-household customers in England can choose their retailer.

'Retail' refers to the way in which customers are billed for their water and sewerage as well as customer services including meter reading.

Water bills

Q. 4.3: Who bills the property for water services?

A.: If you wish to know who bills the water services for this property then you will need to contact the current owner. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk.

Guidance notes:

From April 2017 non-household customers in England can choose their retailer.

'Retail' refers to the way in which customers are billed for their water and sewerage as well as customer services including meter reading

Trade effluent information

Q. 4.4: Is there a consent on this property to discharge trade effluent under Section 118 of the Water Industry Act (1991) into the public sewerage system?

A.: The trader operating at this commercial property does not hold either a Trade Effluent Consent, or an acknowledgement of a trade effluent discharge, as issued by Southern Water.

Guidance notes:

Please note, any existing consent is dependent on the business being carried out at the property and will not transfer automatically upon change of ownership.

Any change of ownership from the current incumbent of a property will require the negotiation of a new trade effluent consent or a new acknowledgement between the new incumbent and Southern Water.

Where consent or acknowledgement details have been provided, this does not represent a direct copy of the original.

Other information

Additional meter information
No further information.

Appendix one: Terms and expressions

"the 1991 Act" means the Water Industry Act 1991**(i)**;
"the 2000 Regulations" means the Water Supply (Water Quality) Regulations 2000**(ii)**;
"the 2001 Regulations" means the Water Supply (Water Quality) Regulations 2001**(iii)**;
"adoption agreement" means an agreement made or to be made under Section 51A(1) or 104(1) of the 1991 Act**(iv)**;
"bond" means a surety granted by a developer who is a party to an adoption agreement;
"bond waiver" means an agreement with a developer for the provision of a form of financial security as a substitute for a bond;
"calendar year" means the twelve months ending with 31 December;
"discharge pipe" means a pipe from which discharges are made or are to be made under Section 165(1) of the 1991 Act;
"disposal main" means (subject to Section 219(2) of the 1991 Act) any outfall pipe or other pipe which:
(a) is a pipe for the conveyance of effluent to or from any sewage disposal works, whether of a sewerage undertaker or of any other person; and
(b) is not a public sewer;
"drain" means (subject to Section 219(2) of the 1991 Act) a drain used for the drainage of one building or any buildings or yards appurtenant to buildings within the same curtilage;
"effluent" means any liquid, including particles of matter and other substances in suspension in the liquid;
"financial year" means the twelve months ending with 31 March;
"lateral drain" means:
(a) that part of a drain which runs from the curtilage of a building (or buildings or yards within the same curtilage) to the sewer with which the drain communicates or is to communicate; or
(b) (if different and the context so requires) the part of a drain identified in a declaration of vesting made under Section 102 of the 1991 Act or in an agreement made under Section 104 of that Act**(v)**;
"licensed water supplier" means a company which is the holder for the time being of a water supply licence under Section 17A(1) of the 1991 Act**(vi)**;
"maintenance period" means the period so specified in an adoption agreement as a period of time:
(a) from the date of issue of a certificate by a sewerage undertaker to the effect that a developer has built (or substantially built) a private sewer or lateral drain to that undertaker's satisfaction; and
(b) until the date that private sewer or lateral drain is vested in the sewerage undertaker;
"map of waterworks" means the map made available under section 198(3) of the 1991 Act**(vii)** in relation to the information specified in subsection (1A);
"private sewer" means a pipe or pipes which drain foul or surface water, or both, from premises, and are not vested in a sewerage undertaker;
"public sewer" means, subject to Section 106(1A) of the 1991 Act**(viii)**, a sewer for the time being vested in a sewerage undertaker in its capacity as such, whether vested in that undertaker:
(a) by virtue of a scheme under Schedule 2 to the Water Act 1989**(ix)**;
(b) by virtue of a scheme under Schedule 2 to the 1991 Act**(x)**;
(c) under Section 179 of the 1991 Act**(xi)**; or
(d) otherwise;
"public sewer map" means the map made available under Section 199(5) of the 1991 Act**(xii)**;
"resource main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a trunk main, which is or is to be used for the purpose of:
(a) conveying water from one source of supply to another, from a source of supply to a regulating reservoir or from a regulating reservoir to a source of supply; or
(b) giving or taking a supply of water in bulk;
"sewerage services" includes the collection and disposal of foul and surface water and any other services which are required to be provided by a sewerage undertaker for the purpose of carrying out its functions;
"Sewerage undertaker" means the company appointed to be the sewerage undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated;
"surface water" includes water from roofs and other impermeable surfaces within the curtilage of the property;
"water main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a pipe for the time being vested in a person other than the water undertaker, which is used or to be used by a water undertaker or licensed water supplier for the purpose of making a general supply of water available to customers or potential customers of the undertaker or supplier, as distinct from for the purpose of providing a supply to particular customers;
"water meter" means any apparatus for measuring or showing the volume of water supplied to, or of effluent discharged from any premises;
"water supplier" means the company supplying water in the water supply zone, whether a water undertaker or licensed water supplier;
"water supply zone" means the names and areas designated by a water undertaker within its area of supply that are to be its water supply zones for that year; and
"Water undertaker" means the company appointed to be the water undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated.

In this report, references to a pipe, including references to a main, a drain or a sewer, shall include references to a tunnel or conduit which serves or is to serve as the pipe in question and to any accessories for the pipe.

(i) 1991 c.56.
(ii) S.I. 2000/3184. These Regulations apply in relation to England.
(iii) S.I. 2001/3911. These Regulations apply in relation to Wales.
(iv) Section 51A was inserted by Section 92(2) of the Water Act 2003 (c. 37). Section 104(1) was amended by Section 96(4) of that Act.
(v) Various amendments have been made to Sections 102 and 104 by section 96 of the Water Act 2003.
(vi) Inserted by Section 56 of and Schedule 4 to the Water Act 2003.
(vii) Subsection (1A) was inserted by Section 92(5) of the Water Act 2003.
(viii) Section 106(1A) was inserted by Section 99 of the Water Act 2003.
(ix) 1989 c.15.
(x) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
(xi) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
(xii) Section 199 was amended by Section 97(1) and (8) of the Water Act 2003.

Appendix two: A guide to new development

The information contained below is for general guidance only. It is recommended that Southern Water's Developer Services department be contacted for further details concerning new infrastructure development.

Wastewater information

Sewer requisitions

It may be necessary for a developer to request that Southern Water provides a public sewer to connect a development site to the existing public system. The developer is responsible for the cost of the work, although a discount will be applied based on the future predicted income from the development served by the new sewer.

Sewer diversions

If a public sewer crosses private land, it may be possible for the landowner/developer to request the sewer be diverted. In the majority of cases Southern Water will allow the developer to undertake this work under close supervision. Whether Southern Water or the developer undertakes the diversionary works the costs are the responsibility of the developer.

Building-over sewers

Public sewers are afforded statutory protection and consequently there is no right to build over or in close proximity to a public sewer. If an existing public sewer either crosses a development site or is located in close proximity to a development site it is essential that a developer contact Southern Water.

Sewer connections

A developer can serve notice on Southern Water that it wishes to make a connection to the public sewerage system. The developer must provide 21 days' notice and the work will be supervised by Southern Water.

Water information

Water requisitions

It may be necessary for a developer to request that Southern Water provides both:

(a) A public water main to connect a development site to the existing public system and,
(b) On-site public water mains to serve the individual properties.

In both cases the developer is responsible for the cost of the work, although a discount will be applied based on the future predicted income from the development.

It is possible for the developer to lay the on-site mains themselves under a Self-Lay Agreement. Further details are available from Southern Water.

Water main diversions

The building over or in close proximity to public water mains is not permitted. A developer must request that Southern Water undertakes a diversion of a water main that is affected by a development.

Water connections

A developer can request a new connection to a public water main. This work will be undertaken by Southern Water.

Contact us

For specific information on Southern Water's Developer Services service, including details on how to contact the right person, please visit our website: www.southernwater.co.uk/developers-and-builders-overview.

Appendix three: Terms and conditions

The Customer the Client and the Purchaser are asked to note these terms, which govern the basis on which this drainage and water report is supplied.

Definitions
"The Company" means the water service company operating within the Southern Water drainage area that provides information to Southern Water for this commercial search Report.
"Order" means any request completed by the Customer requesting the Report.
"Report" means the drainage and/or water report prepared by The Company in respect of the Property.
"Property" means the address or location supplied by the Customer in the Order.
"Customer" means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.
"Client" means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.
"Purchaser" means the actual or potential purchaser of the Property including their mortgage lender.

1.0 Agreement
1.1 Southern Water agrees to supply the Report subject to these terms. The scope and limitations of the Report are described in paragraph 2 of these terms. Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing these terms to the attention of the Client.
1.2 The Customer and Client agree that the placing of an Order for a Report indicates their acceptance of these terms.

2.0 The Report
Whilst Southern Water will use reasonable care and skill in producing the Report, it is provided to the Client on the basis that they acknowledge and agree to the following:
2.1 The information contained in the Report can change on a regular basis so Southern Water cannot be responsible to the Client for any change in the information contained in the Report after the date on which the Report was produced and sent to the Client.
2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as a substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.
2.3 The information contained in the Report is based upon the accuracy of the address supplied by the Customer or Client.
2.4 The Report provides information as to the location and connection of existing services, and details of trade effluent consents. It should not be relied upon for any other purpose. The Report may contain opinions or general advice to the Customer and the Client and Southern Water cannot ensure that any such opinion or general advice is accurate, complete or valid and accepts no liability therefore.
2.5 The position and depth of apparatus shown on any maps attached to the Report are approximate, and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes.

3.0 Liability
3.1 Southern Water shall not be liable to the Client for any failure defect or non-performance of its obligations arising from any failure of or defect in any machine, processing system or transmission link or anything beyond Southern Water's reasonable control or the acts or omissions or any party for whom Southern Water is not responsible.
3.2 Where a Report is requested for an address falling within a geographical area where Southern Water and another Company separately provide water and sewerage services, then it shall be deemed that liability for the information given by Southern Water or the Company as the case may be will remain with Southern Water or the Company as the case may be in respect of the accuracy of the information supplied. Where Southern Water is supplying information which has been provided to it by another Company for the purposes outlined in this agreement, Southern Water will therefore not be liable in any way for the accuracy of that information.
3.3 Where the Customer sells this Report to a Client (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) Southern Water or the Company as the case may be shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss or damage whatsoever (save to the extent provided by clause 3.4) and the Customer shall indemnify Southern Water in respect of any claim (other than a claim covered by clause 3.4) by the Client.
3.4 Southern Water shall accept liability for death or personal injury arising from its negligence.
3.5 The entire liability of Southern Water or the Company as the case may be in respect of all causes of action arising under or in connection with the Report (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) shall not exceed £2,000,000 (two million pounds); and Southern Water or the Company as the case may be shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss of profit, loss of goodwill, loss of reputation, loss of business or any indirect, special or consequential loss, damage or other claims, costs or expenses.

4.0 Copyright and confidentiality
4.1 The Customer and the Client acknowledge that the Report is confidential and is intended for the personal use of the Client. The copyright and any other intellectual property rights in the Report shall remain the property of Southern Water. No intellectual or other property rights are transferred or licensed to the Customer or the Client except to the extent expressly provided.
4.2 The Customer or Client is entitled to make copies of the Report (other than any maps contained in the, or attached to the Report, where no copying is permitted).
4.3 The Customer and Client agree (in respect of both the original and any copies made) to respect and not to alter any trademark, copyright notice or other property marking which appears on the Report.
4.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.
4.5 The Customer and the Client agree to indemnify Southern Water or the Company as the case may be against any losses, costs, claims and damage suffered by Southern Water or the Company as the case may be, as a result of any breach by either of them of the terms of paragraphs 4.1 to 4.4 inclusive.

5.0 Payment
5.1 Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay for the price of the Report specified by Southern Water, without any set off, deduction or counterclaim. Unless the Customer or Client has an account with Southern Water for payment for Reports, payments for Reports must be received in full by Southern Water before the Report is produced. For Customers or Clients with accounts, payment terms will be as agreed with Southern Water.

6.0 General
6.1 If any provision of these terms is or becomes invalid or unenforceable, it will be taken to be removed from the rest of these terms to the extent that it is invalid or unenforceable. No other provision of these terms shall be affected.
6.2 These terms shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.
6.3 Nothing in this notice shall in any way restrict your statutory or any other rights of access to the information contained in the Report.

These Terms and conditions are available in larger print for those with impaired vision.

Appendix four: Complaints procedure

When we get it wrong
You deserve the highest standard of service from us, but sometimes we make mistakes. If we do, please let us know and we will investigate and review your concerns.

Whilst we always try to resolve all complaints straight away, if this is not possible and you are not happy with the course of action taken by us, you can ask us to escalate the issue internally or take your complaint to an independent third party.

How you contact us
Firstly please call us and we will try to sort out your problem straight away.

You can call us between 8am and 5pm, Monday to Friday on 0845 270 0212 or 0330 303 0276 (individual consumers);

Email us at searches@southernwater.co.uk; or

Write to us at LandSearch, Southern Water Services, Southern House, Capstone Road, Chatham, Kent, ME5 7QA.

What you can expect
You will receive a full, fair and courteous response from someone who can effectively deal with your problem.

If we can remedy the problem straight away we will do it but if we cannot immediately resolve your problem we will keep you informed of actions being taken.

The process
We will try to resolve any telephone contact or complaint at the time of the call, however, if that isn't possible, we will take the details of your complaint and we will investigate and get back to you within 10 working days.

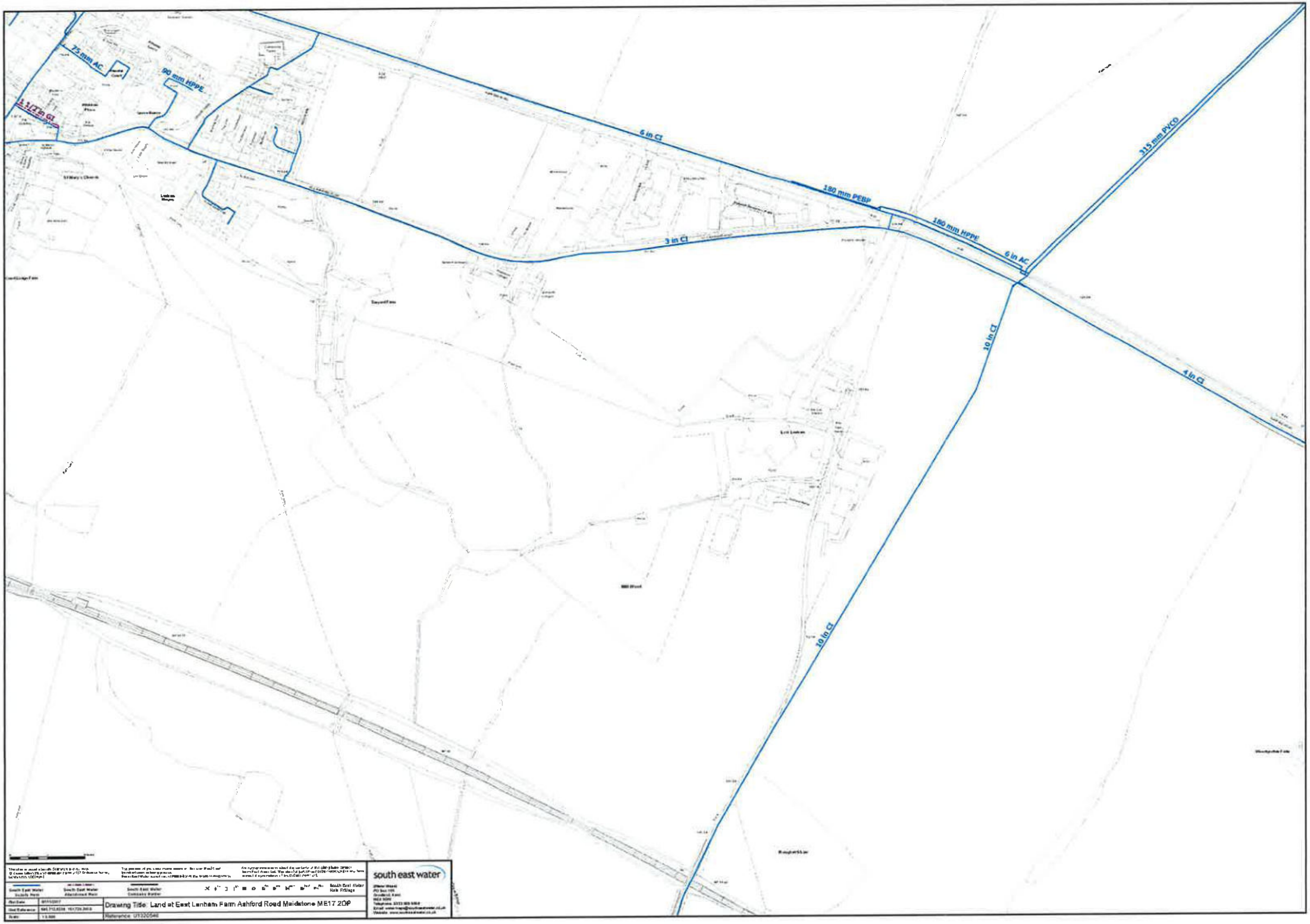
We will respond to written complaints within 10 working days of the date received, but we will always aim to respond more quickly. Depending on the scale of investigation required, we will keep you informed of the progress and update you with new timescales if necessary.

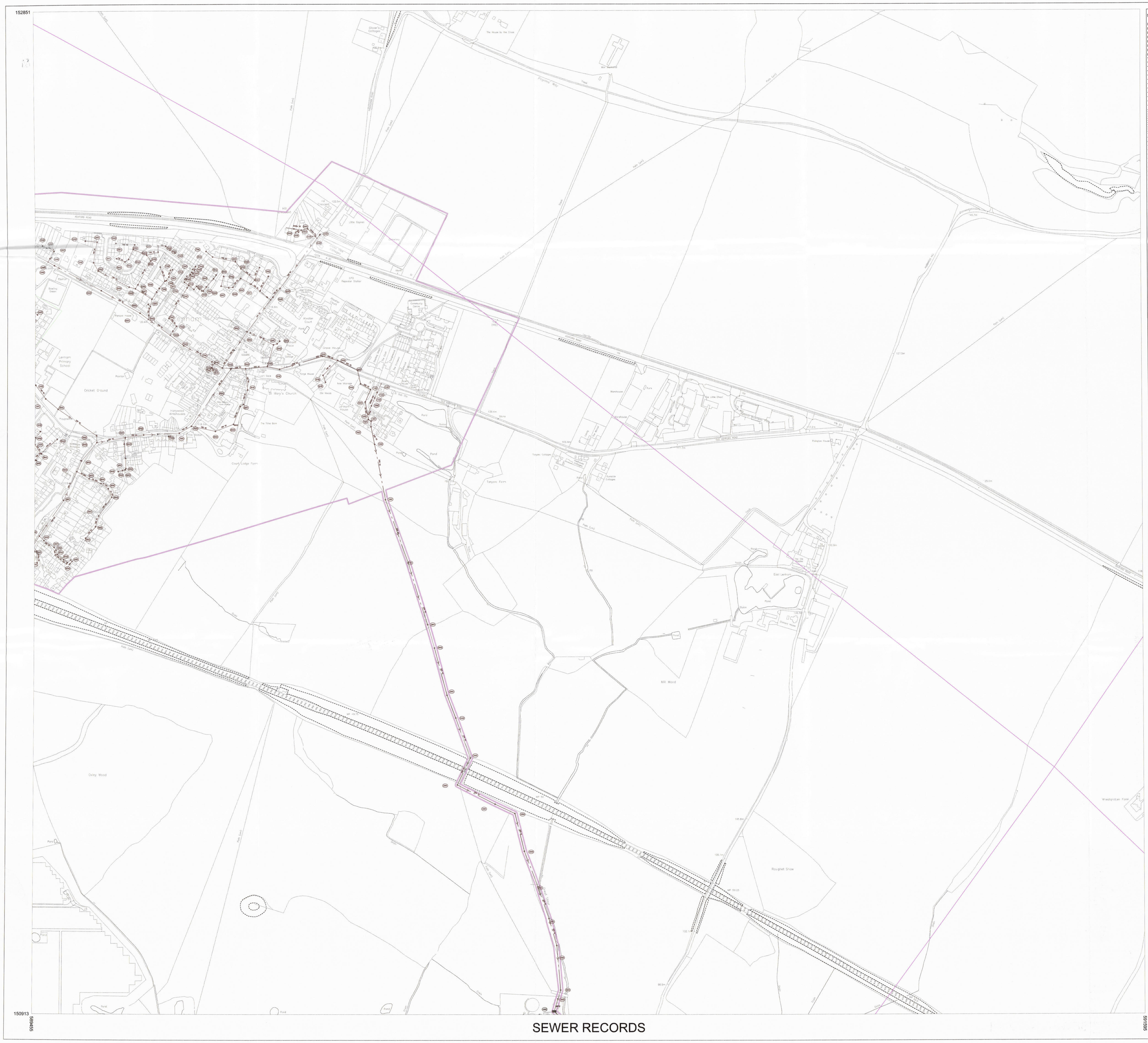
If you are still not satisfied with our response or action we will refer the matter to a Senior Manager for resolution. At your request we will liaise with a third party representative acting on your behalf.

Our commitment to you
If we do not respond to your complaint within 10 working days of receipt of your contact, we will compensate you in line with Southern Water's Customer services — Guaranteed standards of service for business customers.

If we find your complaint to be justified, or we have made any errors that substantially change the outcome in your search result, we will refund the search fee. We will also provide you with a revised search and undertake the necessary action to put things right as soon as practically possible. You will be kept informed of the progress of any action required.

If you remain dissatisfied
While we aim to resolve your complaint first time, in the event that we are unable to resolve the issue to your satisfaction, ultimately you can contact a third party. Please make sure that you have followed the process above first, if not, your complaint will be passed back to us.


315 mm PVCO
6 in CI
180 mm PEBP
180 mm HPPE
6 in AC
3 in CI
4 in CI
10 in CI
10 in CI
75 mm AC
90 mm HPPE
1 1/2 in GI
South East Water
Rate Fittings
south east water
Drawing Title: Land at East Lenham Farm Ashford Road Maidstone ME17 2DP



SEWER RECORDS

Node	Cover	Invert	Size	Material	Shape	
0001X	110.01		225	VC	CIRC	
0101X	112.6		225	VC	CIRC	
0102X	111.81		225	VC	CIRC	
0103X	111.39		225	VC	CIRC	
0104X	110.72		225	VC	CIRC	
0105X			100	VC	CIRC	
0106X			100	VC	CIRC	
0401X	120.82	118.7	150	VC	CIRC	
1001X	109.63		225	VC	CIRC	
1002X	109.08		225	VC	CIRC	
1003X	109.4		225	VC	CIRC	
1004X	109.92		225	VC	CIRC	
1005X			UNK	UNK	CIRC	
100DX			225	VC	CIRC	
1101X	110.54		225	VC	CIRC	
1102X			100	VC	CIRC	
1103X			100	UNK	CIRC	
110DX			100	VC	CIRC	
1701X	104.85		225	VC	CIRC	
1901X	106.94		225	VC	CIRC	
2301X	98.5		300	VC	CIRC	
2401X	98.78		300	VC	CIRC	
2402X	99.7	98.69	300	VC	CIRC	
2501X	100.63		300	VC	CIRC	
2601X	102.96	101.86	225	VC	CIRC	
2602X	101.94		300	VC	CIRC	
3301X	97.47		300	VC	CIRC	
3302X	97.26		300	DI	CIRC	
4001X	96.48		300	DI	CIRC	
4002X	96.39		300	DI	CIRC	
4008X	124.02	123.24	100	VC	CIRC	
4009X	123.7	122.9	100	VC	CIRC	
4010X	123.59	122.64	100	VC	CIRC	
4011X	125.32	121.4	150	VC	CIRC	
4101X	96.83		300	DI	CIRC	
4103X	125.9	121.94	150	VC	CIRC	
4200X	96.9		300	VC	CIRC	
4204X	127.77	126.32	150	VC	CIRC	
4302X	128.48	126.43	150	VC	CIRC	
4305X			100	VC	CIRC	
4306X			100	VC	CIRC	
4307X			100	VC	CIRC	
4308X			100	VC	CIRC	
430DX			150	VC	CIRC	
4701X			UNK	VC	CIRC	
4802X	121.99	120.07	150	VC	CIRC	
4804X	122.31	120.38	150	VC	CIRC	
4806X	122.3	120.55	150	VC	CIRC	
4807X	122.19	120.46	150	VC	CIRC	
4808X	122.15	120.24	150	VC	CIRC	
4901X	96.07		300	DI	CIRC	
4902X	96.11	95.31	300	DI	CIRC	
4904X	123.6	122.03	150	VC	CIRC	
4905X	123.5	121.93	150	VC	CIRC	
5001X	124.97	120.94	150	VC	CIRC	
5002X	123.13	119.38	150	VC	CIRC	
5003X	122.72	118.99	150	VC	CIRC	
5004X	123.9	122.45	150	VC	CIRC	
5301X	127.92	126.74	150	VC	CIRC	
5302X	127.18	126.22	150	VC	CIRC	
5303X	124.02	122.23	150	VC	CIRC	
5401X	128.39	127.58	150	VC	CIRC	
5402X	129.42	128.82	100	VC	CIRC	
5701X	122.08	120.97	150	VC	CIRC	
5702X	121.98	120.88	150	VC	CIRC	
5703X	121.97	120.97	150	VC	CIRC	
5704X	122.18	120.63	150	VC	CIRC	
5801X	121.73	120.61	150	VC	CIRC	
5802X	122.04	120.66	150	VC	CIRC	
5803X	122.31	120.97	150	VC	CIRC	
5901X	122.18	119.81	150	VC	CIRC	
5902X	122.66	119.28	150	VC	CIRC	
5903X	122.37	119.43	150	VC	CIRC	
5904X	122.15	119.67	150	VC	CIRC	
5905X	121.8	119.86	150	VC	CIRC	
5906X	121.58	119.93	150	VC	CIRC	
6001X	122.29	118.59	150	VC	CIRC	
6002X	121.79	118.32	150	VC	CIRC	
6003X	122.35	120.51	150	VC	CIRC	
6201X	121.14	119.53	150	VC	CIRC	
6202X	121.53	120.27	100	VC	CIRC	
6203X	120.72	119.01	150	VC	CIRC	
6204X	121.07	118.83	150	VC	CIRC	
620DX			150	VC	CIRC	
621DX			150	VC	CIRC	
6301X	123.72	122.81	150	VC	CIRC	
6302X	123.23	122.31	150	VC	CIRC	
6303X	122.81	121.92	150	VC	CIRC	
6304X	122.8	121.9	150	VC	CIRC	
6305X	121.82	121	100	VC	CIRC	
6306X	120.97	119.69	150	VC	CIRC	
6307X	120.92	119.63	150	VC	CIRC	
6308X	123.26	121.38	150	VC	CIRC	
6309X	123.2	121.36	150	VC	CIRC	
6310X	123.77	122.58	150	VC	CIRC	
6311X	126	125.21	100	VC	CIRC	
6312X	124.81	124.1	100	VC	CIRC	
6313X	124.3	123.51	100	VC	CIRC	
6314X	123.3	122.45	150	VC	CIRC	
6315X	123.76	123.2	100	VC	CIRC	
6401X	125.96	125.28	100	VC	CIRC	
6901X	122.24	120.76	150	VC	CIRC	
6902X	121.47	120.09	150	VC	CIRC	
6903X			100	PF	CIRC	
6904X			100	PF	CIRC	
6905X			100	PF	CIRC	
6906X			100	PF	CIRC	
7001X	119.58	117.1	150	VC	CIRC	
7002X	118.86	116.64	150	VC	CIRC	*
7002Y	118.86	116.61	150	VC	CIRC	*
7101X	115.62	113.87	150	VC	CIRC	
7102X			UNK	VC	CIRC	
710DX			UNK	VC	CIRC	
7201X	119.8	118.32	150	VC	CIRC	
7202X	119.35	117.68	150	VC	CIRC	
7203X	118.97	117.38	150	VC	CIRC	
7204X	117.73	115.55	150	VC	CIRC	
720DX			150	VC	CIRC	
7301X	125.71	125.12	100	VC	CIRC	
7303X	124.37	123.8	100	PF	CIRC	
7304X	124.5	123.51	100	VC	CIRC	
7305X	124.21	123.19	100	VC	CIRC	
7306X	123.03	121.55	150	VC	CIRC	
7307X	121.4	120.17	150	VC	CIRC	
7308X	121.15	119.92	150	VC	CIRC	
7309X	121.12	119.88	150	VC	CIRC	
730DX			100	VC	CIRC	
7310X	123.28	122.13	100	VC	CIRC	
7311X	122.43	121.89	100	VC	CIRC	
7312X	122.38	121.64	100	VC	CIRC	
7313X	122.46	121.57	100	VC	CIRC	
7314X	121.8	120.76	100	VC	CIRC	
7315X	121.5	119.85	150	VC	CIRC	
7316X	120.7	119.54	150	VC	CIRC	
7318X	120.89	120.61	100	PF	CIRC	
7319X	120.79	120.54	100	VC	CIRC	
7320X	121.43	120.31	100	VC	CIRC	
7321X	121	120.17	100	VC	CIRC	
7322X	122.01	121.02	100	VC	CIRC	
7323X	122.02	121.38	100	VC	CIRC	
7324X	122.47	122.01	100	VC	CIRC	
8001X	114.02	111.94	150	VC	CIRC	
8002X	117.62	116	150	VC	CIRC	
8003X	116.24	114.1	150	VC	CIRC	
8004X	114.09	112.18	150	VC	CIRC	
8101X	115.18	113.17	225	VC	CIRC	
8102X	115		225	VC	CIRC	
8103X	114.56		225	VC	CIRC	
8104X	114.58	111.67	150	VC	CIRC	
810DX			150	VC	CIRC	
811DX			UNK	VC	CIRC	
8201X	115.96	113.58	150	VC	CIRC	
8202X	115.98	115.04	150	VC	CIRC	
8301X	122.3	121.1	100	VC	CIRC	
8302X	120.82	119.7	150	VC	CIRC	
8303X	120.13	119.38	100	VC	CIRC	
8304X	119.43	118.14	150	VC	CIRC	
8305X	120.44	119.76	100	VC	CIRC	
8306X	120.27	119.29	100	VC	CIRC	
8307X	119.24	118.66	100	VC	CIRC	
8308X	119.47	118.29	100	VC	CIRC	
8309X	119.85	117.92	100	VC	CIRC	
8310X	119.42	117.35	150	VC	CIRC	
8311X	118.38	116.78	150	VC	CIRC	
8312X	121.39	120.9	100	PF	CIRC	
8313X	121.18	120.77	100	PF	CIRC	
8316X	124.58	124.03	100	VC	CIRC	
9101X	114.31		225	VC	CIRC	
9102X	113.94		225	VC	CIRC	
9201X	114.91	113.71	150	VC	CIRC	
9202X	114.98	113.76	150	VC	CIRC	
9203X	115	113.95	150	VC	CIRC	
9205X	116.99	114.95	150	VC	CIRC	
9206X	117.53	115.66	150	VC	CIRC	
920DX			150	VC	CIRC	
9301X	118.9	118.21	100	VC	CIRC	
9302X	117.34	115.29	150	VC	CIRC	
9402X			UNK	VC	CIRC	
9403X			UNK	VC	CIRC	
9405X			UNK	VC	CIRC	
9406X			UNK	UNK	CIRC	
940DX			150	VC	CIRC	

Node Cover Invert Size Material Shape

Node Cover Invert Size Material Shape

LINE STYLES / COLOURS

Brown	Foul
	Foul Syphon Sewer
	Foul Vacuum Main
	Foul Rising Main
Red	Combined
	Combined Syphon Sewer
	Combined Rising Main
	Lateral Drain
Orange	Building Over Agreement Area
Dark Blue	Treated Effluent
Purple	Sludge
	Sewer Catchment
	Section 104 Area
Light Blue	Surface Water
	Surface Water Rising Main
Yellow	Private
Green	Access Shaft
	Decommissioned

MATERIALS

AK	Alkathene
BAC	Bonded Asbestos Cement
BRC	Brick (Common)
BRE	Brick (Engineering)
CC	Concrete Box Culvert
CI	Cast Iron
CO	Concrete (In-Situ)
CP	Concrete (Pre-Cast)
CSB	Concrete Segments (bolted)
CSU	Concrete Segments (unbolted)
DI	Ductile Iron
GRC	Glass Reinforced Concrete
GRP	Glass Reinforced Plastic
MAC	Masonry in regular Courses
MAR	Masonry in random Courses
PE	Polyethylene
PF	Pitch Fibre
PP	Polypropylene
PVC	Polyvinyl Chloride
RPM	Reinforced Plastic Matrix
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
XXX	Other
ZZZ	Unknown

WARNING: BAC pipes are constructed of Bonded Asbestos Cement

LEGEND - SEWERS

- Manhole (SW)
- Manhole (F&C)
- Lamp hole (SW)
- Lamp hole (F&C)
- Pumping Station (SW)
- Pumping Station (F&C)
- Side entry manhole (SW)
- Side entry Manhole (F&C)
- Blind shaft (SW)
- Blind shaft (F&C)
- Ejector station (SW)
- Ejector station (F&C)
- Watertight door (SW)
- Watertight door (F&C)
- Flushing ch. Mn-e (SW)
- Flushing ch. Mn-e (F&C)
- Flushing ch. No-e (SW)
- Flushing ch. No-e (F&C)
- Demarcation Chamber
- Washout (SW)
- Washout (F&C)
- Rodding Eye (SW)
- Rodding Eye (F&C)
- Gauging point (SW)
- Gauging point (F&C)
- Intercept chamber (SW)
- Intercept chamber (F&C)
- Storm Tank (SW)
- Storm Tank (F&C)
- Vortex chamber (SW)
- Vortex chamber (F&C)
- Label ellipse
- Dummy/S24 manhole
- Outfall
- Penstock chamber
- Damboards
- Storm Overflow
- Backdrop manhole
- Other (s)
- Other
- Change in sewer (s)
- Change in sewer
- Reflux valve
- Flap valve
- Cascade
- Anode
- Valve
- Closed Valve
- Air Valve
- Hatch box (SW)
- Hatch box (F&C)
- Direction arrow
- Emptying valve
- Catchpit
- Soakaway
- Inlet
- Balancing Pond
- Wastewater treatment works
- Marine treatment works
- Outfall headworks
- Vent
- Vent column
- Tidal storage tank
- Blank end
- Head of Public Sewer
- Micro Pumping Station

SHAPES (S)

A	Arched	R	Rectangular
B	Barrel	S	Square
C	Circular	T	Trapezoidal
E	Egg	U	U Shape
H	Horseshoe	X	Other

NODE REFERENCING SYSTEM

1st digit:	hundred metre easting identifier
2nd digit:	hundred metre northing identifier
3rd digit:	sewer type identifier 0-4 = Foul/Combined 5-9 = Surface Water
4th digit:	next sequential node

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

O.S. Ref.	TQ9051NE	Drawn by:	chakrap
Scale:	1:2500	Date:	08/11/2017

Title: U1320546_Land at East Lenham F

N

The information contained on this plan is provided as a guide to the approximate position of existing public sewers. The accuracy thereof cannot be guaranteed.

THIS INFORMATION MUST BE TREATED WITH CAUTION AND THE ACTUAL POSITION OF THE PUBLIC SEWERS MUST BE ESTABLISHED ON SITE, IN ALL CASES.

Southern Water must be informed before lifting manhole covers or excavating trial holes.

Appendix 6 – Soakaway Test Results

Samuel House, 5 Fox Valley Way
Stocksbridge, Sheffield, S36 2AA

Tel: 0114 321 51 51
www.enzygo.com

F.A.O Tim Dean
Dean Lewis Estates Ltd.
The Hayloft,
Park Lane,
Endon,
Stoke-on-Trent,
ST9 9JA

Our Ref: SHF.1528.004.GE.L.001.A
Date: 28th March 2019

Dear Tim,

OLD ASHFORD ROAD, LENHAM – SOAKAWAY TESTING

Enzygo Geo-environmental Ltd. [Enzygo] were employed by Dean Lewis Estates Ltd. [the Client] to undertake soakaway testing in accordance with BRE365 Soakaway design, 2016, for a proposed residential development at Old Ashford Road, Lenham. This letter report covers an assessment of the encountered ground conditions and the potential suitability for a soakaway drainage option for the development site.

Geology

With reference to the British Geological Survey (BGS) website[1] the south of the site is indicated to be underlain by superficial deposits Alluvium, (clay, silt, sand and peat) and Head deposits, (clay, silt, sand and gravel), across the centre of site. The underlying bedrock strata to the south and across the centre of site is shown to be Mudstone of the Gault Formation with chalk of West Melbury Marly Chalk Formation being shown to outcrop to the north onsite, which is likely to be weathered near surface.

With reference to the aquifer designation, as indicated on Magic.gov.uk website[2], the Superficial deposits are classified as Secondary Undifferentiated Aquifers and the chalk is classified as a Principal Aquifer and the mudstone is classified as unproductive.

Ground Investigation

The ground investigation was undertaken between the 11th and 13th March 2019 comprising the excavation of six trial pits (SA01- SA06) of which all were tested to BRE 365, 2016. The trial pit locations proposed for soakaway testing, were located based upon anticipated geology and the topography of the site i.e. potentially most suitable location for an actual soakaway drain. The exploratory hole locations are shown on drawing ref: SHF.1528.004.GE.DR.002, which is appended to this letter report.

Trial pits were established to depths of between 2.00m (SA03 to SA06) and 2.20m (SA01/SA02) below existing ground level (begl) to represent typical infiltration depths for conventional soakaway drainage assets inclusive of chambers and infiltration trenches. Trial pits were excavated and backfilled with single size gravel and slotted pipe for testing purposes. A tractor towed water bowser and Intermediate Bulk Containers (IBC) was utilised to fill the pits with clean water and the fall in water level was monitored and recorded over time by a suitably qualified Enzygo engineer.

Following completion of the soakaway testing in SA02 and SA06, the trial pits were excavated to a maximum depth of 4.00m begl to try and find peat, before being reinstated with arisings.

[1] *The British Geological Survey, www.bgs.ac.uk (Date accessed March 2019)*

[2] *The Magic website, www.magic.gov.uk (Date accessed March 2019)*

Samuel House, 5 Fox Valley Way
Stocksbridge, Sheffield, S36 2AA

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Ground Conditions

Typical ground and groundwater conditions have been assessed by Enzygo using the available data and are summarised below. Full details of the ground and groundwater conditions encountered during the works are given on the exploratory hole records appended to this letter report and are summarised in further detail in the section overleaf.

Table 1: Summary of Ground and Groundwater Conditions

Strata	Summary Description	Depth (m)
Made Ground	Topsoil	0.00 to 0.80
Superficial	Soft to firm consistency yellow grey/orange brown gravelly sandy clay	0.30 to 2.00
	Yellow orange brown clayey gravelly fine to coarse sand	0.45 to 1.90
Bedrock	Stiff consistency yellow grey brown sandy gravelly clay	0.80 to 2.20
	Very stiff consistency grey blue clay	2.00 to 4.00
Groundwater	Water seepage	2.00 to 3.50

Made Ground

Made Ground was encountered across the site typically comprising of topsoil.

Superficial Deposits

Natural deposits were generally consistent with the published BGS information and were encountered as a locally granular deposits overlying cohesive strata, though generally typically proven to the base of the exploratory holes.

Bedrock

Weathered bedrock was encountered at varied depths in thickness across site comprising cohesive horizons which were typically proven below the topsoil across site to the base of each trial pit.

Groundwater

Groundwater was encountered as water seepage within SA02, SA03 and SA06 between 2.00m and 3.50m begl. Before conducting the soakaway tests the trial pits were dipped using a dip-meter and found that the water levels in SA03 and SA06 had risen to 1.60m begl and 1.87m begl, respectively.

SA04 and SA05 which had recorded no water seepage during excavation noted water levels at 1.88 m begl and 1.93m begl respectively prior to testing, this is potentially groundwater however, due to the cohesive strata it is possibly related to heavy rainfall that occurred before the tests collecting within the pit.

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Stocksbridge, Sheffield, S36 2AA

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Soakaway Results

The soakaway test results are summarised in Table 2, present below with the full test results attached to this letter report.

Table 2: Soakaway Infiltration Rates

Test Pit	Soakaway Infiltration Rate (m/s)			Worst case Infiltration Rate (m/s)
	Test 1	Test 2	Test 3	
SA01	6.5×10^{-7}	Test abandoned due to poor infiltration rates.		
SA02	Test abandoned due to poor infiltration rates.			
SA03	Test abandoned due to poor infiltration rates.			
SA04	Test abandoned due to poor infiltration rates.			
SA05	Test abandoned due to poor infiltration rates.			
SA06	Test abandoned due to poor infiltration rates.			

Recommendations and Conclusions

All of the soakaway tests were unable to generate rates suitable for soakaway drainage. Therefore soakaway drainage is not considered feasible for this site.

If you have any queries, or require further information, please do not hesitate to contact the under signed.

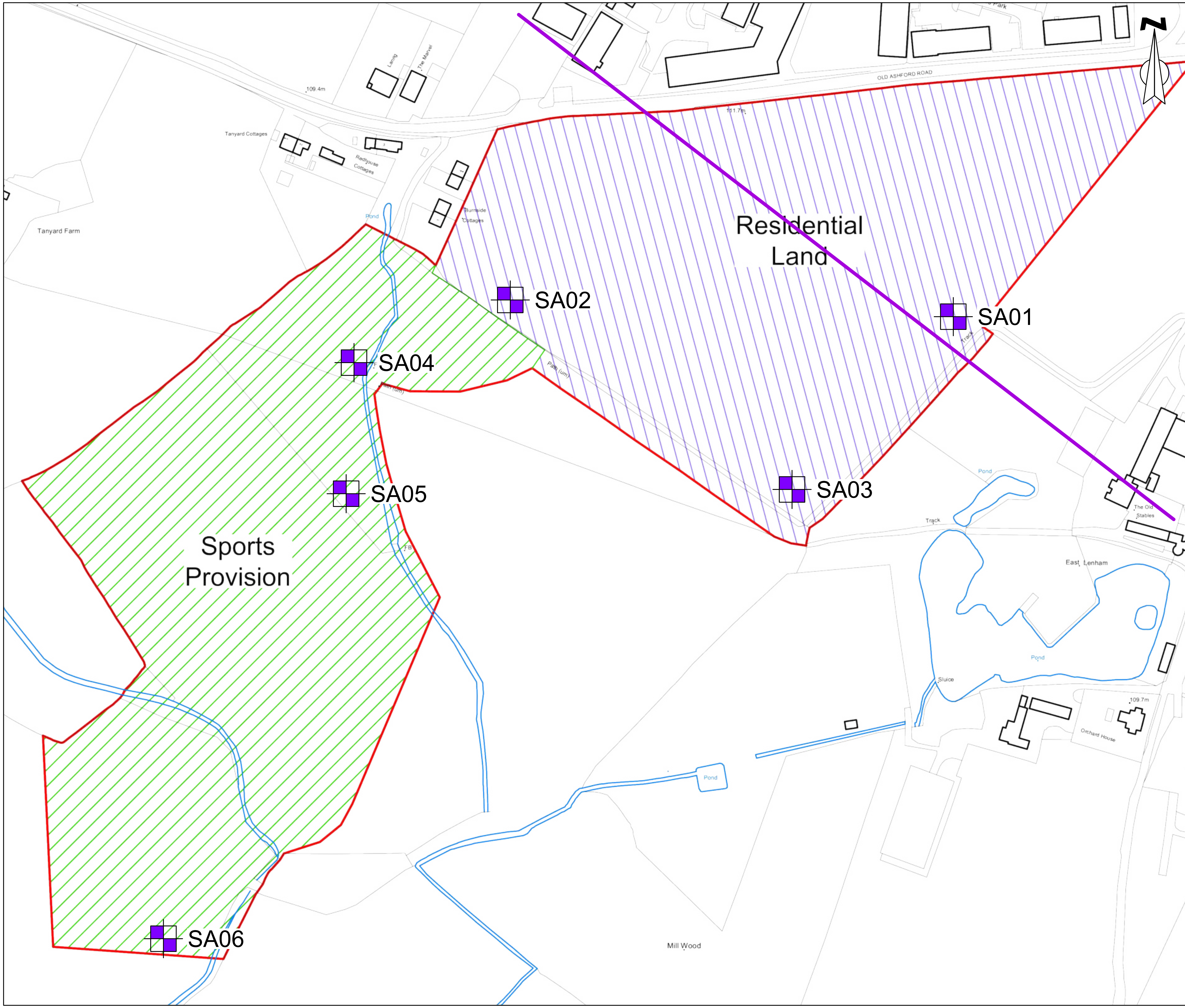
Yours sincerely,

Deanna Leedle – BSc (Hons), FGS.
Graduate Geo-Environmental Engineer

Reviewed by,

Nick Brook – BSc (Hons), FGS.
Senior Consultant

ENCL.
SHF.1528.004.GE.DR.002 – Exploratory Hole Location Plan
Exploratory Hole Logs
Soakaway Test Results



Key

- Soakaway Test Location
- Red Line Boundary
- Approximate allignment of sewer catchment

Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT: Dean Lewis Estates Ltd

SCALE: Not to Scale

PROJECT REF: SHF.1528.004

DRAWN: DL

CHECKED: NB

DATE: March 2019

PROJECT: Old Ashford Road, Lenham, Kent

TITLE: Exploratory Hole Location Plan

FIGURE NO: SHF.1528.004.GE.DR.002.B

Enzygo Ltd
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Web: www.enzygo.com

Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA01

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	Samples & In Situ Testing: No/Type	Samples & In Situ Testing: Results	Depth (m)	Level (mAD)	Legend	Stratum Description
				0.45			MADE GROUND: Dark brown slightly gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint.
				1.90			Yellow orange slightly clayey gravelly SAND with a low cobble content of subangular flint. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				2.20			Stiff consistency light yellow orange slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				{4.00}			Trial Pit completed at 2.20m.

0 1 2 3 4

General Remarks

Dimensions: 1.80x0.40x2.20
1. Machine excavated trial pit using a JCB 3CX to 2.20m begl due to reaching required depth.
2. Groundwater was not encountered.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

Logged By
DL

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Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA02

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	Samples & In Situ Testing: No/Type	Samples & In Situ Testing: Results	Depth (m)	Level (mAD)	Legend	Stratum Description
				0.80			MADE GROUND: Dark brown slightly sandy gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint. Sand is fine to coarse.
				1.70			Stiff consistency yellow brown grey slightly gravelly sandy CLAY with a low cobble content of subangular flint. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
▽				3.80			Stiff consistency grey slightly sandy CLAY with a low cobble content of subangular flint. Sand is fine to coarse.
				{4.00}			Trial Pit completed at 3.80m.

0
1
2
3
4

General Remarks

Dimensions: 1.90x0.35x3.80
1. Machine excavated trial pit using a JCB 3CX to 3.80m begl due to encountering groundwater.
2. Water seepage was encountered at 3.50m begl.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with arisings single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

Logged By
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Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA03

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	Samples & In Situ Testing: No/Type	Samples & In Situ Testing: Results	Depth (m)	Level (mAD)	Legend	Stratum Description
							MADE GROUND: Dark brown slightly sandy slightly gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint. Sand is fine to coarse.
				0.60			Soft consistency orange brown slightly gravelly CLAY with a low cobble content of subangular flint. Gravel is subangular to subrounded fine to coarse of flint. Sand is fine to coarse.
				0.90			Soft consistency yellow orange slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
▽				2.00			Trial Pit completed at 2.00m.
				{4.00}			

0 1 2 3 4

General Remarks

Dimensions: 1.70x0.35x2.00
1. Machine excavated trial pit using a JCB 3CX to 2.00m begl due to reaching required depth.
2. Wtaer seepage was encountered at 2.00m begl.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

Logged By
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Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA04

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	No/Type	Results	Depth (m)	Level (mAD)	Legend	Stratum Description
							MADE GROUND: Dark brown slightly gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint.
				0.30			Soft consistency yellow grey slightly sandy gravelly CLAY with a low cobble content of subangular flint. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				1.00			Firm consistency grey slightly gravelly CLAY with a low cobble content of subangular flint. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				2.00			Trial Pit completed at 2.00m.
				{4.00}			

0
1
2
3
4

General Remarks

Dimensions: 1.90x0.35x2.00
1. Machine excavated trial pit using a JCB 3CX to 2.00m begl due to reaching required depth.
2. Groundwater was not encountered.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

Logged By
DL

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Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA05

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	Samples & In Situ Testing: No/Type	Samples & In Situ Testing: Results	Depth (m)	Level (mAD)	Legend	Stratum Description
				0.40			MADE GROUND: Dark brown slightly gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint
				1.10			Soft consistency yellow grey gravelly CLAY with a low cobble content of flint. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				2.00			Soft consistency grey slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to medium of chalk and flint. Sand is fine to coarse.
				{4.00}			Trial Pit completed at 2.00m.

0 1 2 3 4

General Remarks

Dimensions: 2.00x0.35x2.00
1. Machine excavated trial pit using a JCB 3CX to 2.00m begl due to reaching required depth.
2. Groundwater was not encountered.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

Logged By
DL

Enzygo Ltd
Tel: 01454 269237
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Web: www.enzygo.com

Site
Land off Old Ashford Road, Lenham, ME17 2QA

SA06

Job No	Dates	Ground Level (m)	Co-Ordinates
SHF.1528.004	Start 11-03-19 Finish 11-03-19		

Client
Dean Lewis Estates Ltd.

Sheet
1 of 1

Water Levels	Samples & In Situ Testing: Depth (m)	Samples & In Situ Testing: No/Type	Samples & In Situ Testing: Results	Depth (m)	Level (mAD)	Legend	Stratum Description
				0.00			MADE GROUND: Dark brown slightly gravelly silty topsoil. Gravel is subangular to subrounded fine to medium of flint.
				0.50			Orange yellow brown slightly gravelly clayey SAND. Gravel is subangular to subrounded fine to coarse of chalk and flint. Sand is fine to coarse.
				0.90			Firm consistency grey slightly sandy CLAY. Sand is fine to coarse.
▽				2.00			Stiff to very stiff consistency grey blue CLAY.
				4.00 {4.00}			Trial Pit completed at 4.00m.

0 1 2 3 4

General Remarks

Dimensions: 1.70x0.35x4.00
1. Machine excavated trial pit using a JCB 3CX to 4.00m begl due to reaching extent of JCB reach.
2. Water seepage encountered at 2.00m begl.
3. Log completed inaccordance with BS5930:2015.
4. Trial pit was backfilled with arisings, single size gravel and installed with a 63mm slotted pipe for testing purposes.
5. Coordinates and levels were not obtained.

All dimensions in metres
Scale 1:25

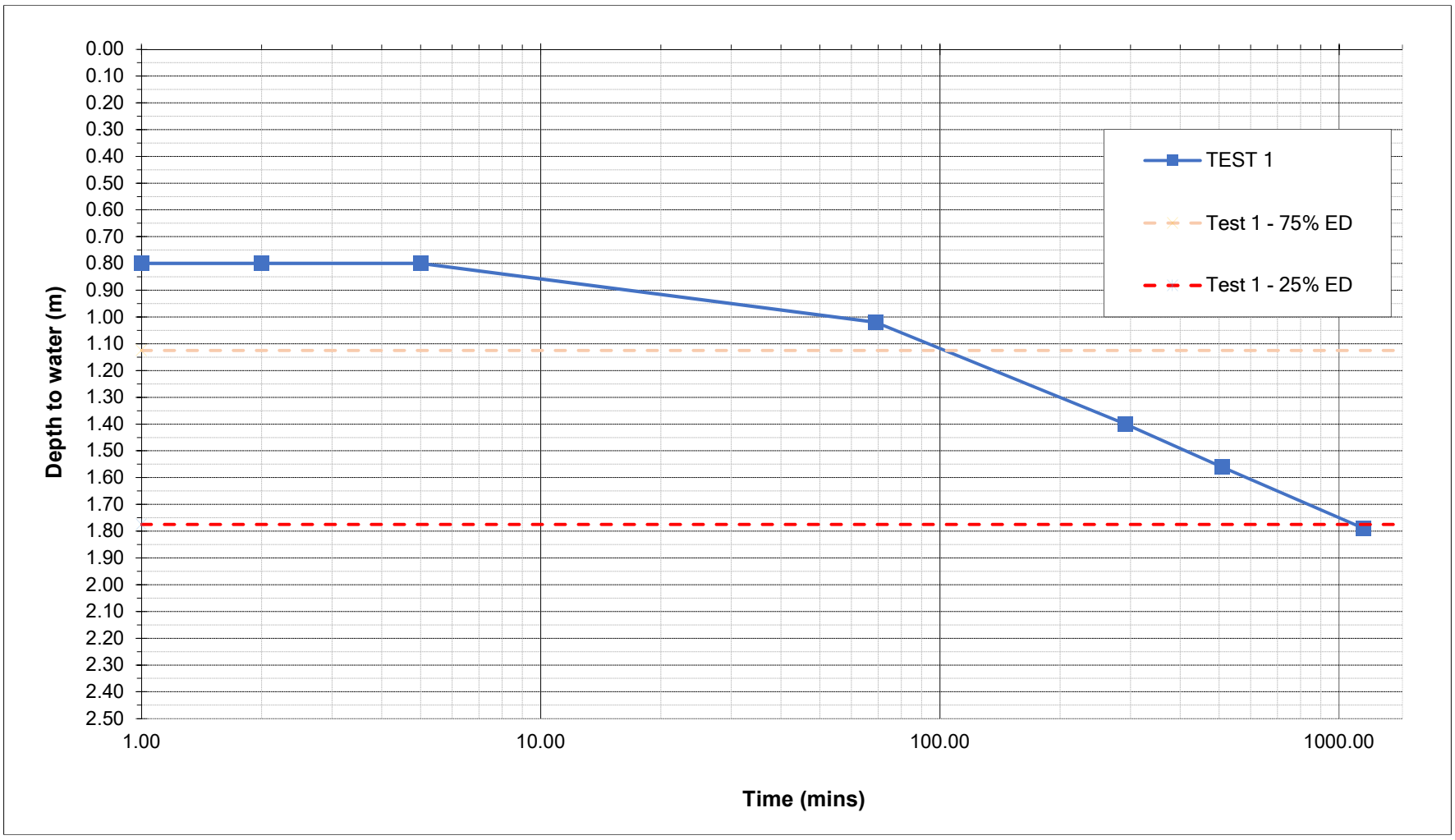
Logged By
DL

		Site:	**Old Ashford Road, Lenham**			Trial pit	SA01
		Job Number :	**SHF.1528.004**			Pit Length	1.80
		Date:	**11-12/03/2019**			Pit Width	0.40
						Pit Depth	2.10
		SOIL INFILTRATION RATE TEST				Gravel Void Ratio	0.30
		BRE Digest 365, DG365, February 2016				*(Gravel used = 0.30, No Gravel = 1.00)*	

Remarks: -	TEST 1		TEST 2		TEST 3	
Geology	Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
See SA01 exploratory hole log.	0.00	0.80				
	1.00	0.80				
Weather	2.00	0.80				
Cloudy sunshine with rain showers, damp	5.00	0.80				
underfoot.	69.00	1.02				
	292.00	1.40				
Groundwater	509.00	1.56				
None encountered.	1153.00	1.79				
Timescales						
Test Started - 1203, 11/03/19.						
Test Finished - 0716, 12/03/19.						

Effective Depth	m	1.30		
75% Effective Depth	m	0.98		
(i.e. depth below GL)	m	**1.13**		
50% Effective depth	m	0.65		
(i.e. depth below GL)	m	**1.45**		
25% Effective Depth	m	0.33		
(i.e. depth below GL)	m	**1.78**		
Effective Storage Depth 75%-25%	m	0.65		
Time to fall to 75% effective depth	mins	100.00		
Time to fall to 25% effective depth	mins	1100.00		
Vp (75%-25%)	m^3	0.14		
ap50 (50%)	m^2	3.58		
tp(75%-25%)	mins	1000.00		
SOIL INFILTRATION RATE	m/s	**6.5E-07**		

DESIGN SOIL INFILTRATION RATE, f m/s	**6.54E-07**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

	Site:	**Old Ashford Road, Lenham**	
	Job Number :	**SHF.1528.004**	
	Date:	**11-12/03/2019**	
	SOIL INFILTRATION RATE TEST		
	BRE Digest 365, DG365, February 2016		

Trial pit	SA02
Pit Length	1.90
Pit Width	0.35
Pit Depth	2.20
Gravel Void Ratio	0.30
(Gravel used = 0.30, No Gravel = 1.00)	

Remarks: -
Geology
See SA02 exploratory hole log.

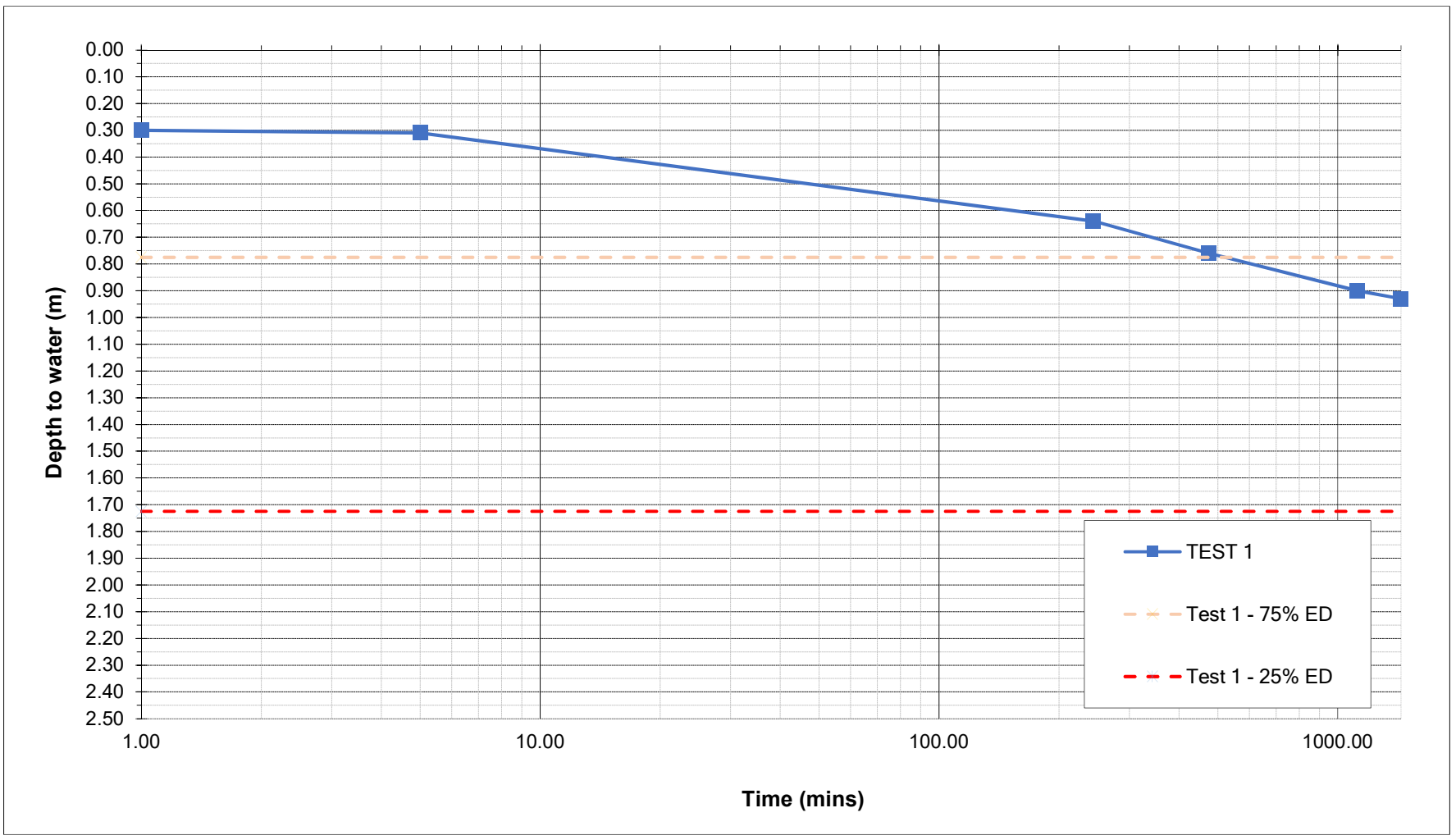
Weather
Cloudy sunshine with rain showers, damp underfoot.

Groundwater
None encountered.

Timescales
Test Started - 1245, 11/03/19.
Test Finished - 1245, 12/03/19.

	TEST 1		TEST 2		TEST 3	
	Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
	0.00	0.30				
	1.00	0.30				
	5.00	0.31				
	244.00	0.64				
	476.00	0.76				
	1119.00	0.90				
	1440.00	0.93				
Effective Depth	m	1.90				
75% Effective Depth	m	1.43				
(i.e. depth below GL)	m	**0.78**				
50% Effective depth	m	0.95				
(i.e. depth below GL)	m	**1.25**				
25% Effective Depth	m	0.48				
(i.e. depth below GL)	m	**1.73**				
Effective Storage Depth 75%-25%	m	0.95				
Time to fall to 75% effective depth	mins	**n/a**				
Time to fall to 25% effective depth	mins	**n/a**				
Vp (75%-25%)	m^3	0.19				
ap50 (50%)	m^2	4.94				
tp(75%-25%)	mins	**n/a**				
SOIL INFILTRATION RATE	m/s	**n/a**				

DESIGN SOIL INFILTRATION RATE, f m/s	**n/a**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

	Site:	**Old Ashford Road, Lenham**
	Job Number :	**SHF.1528.004**
	Date:	**11-12/03/2019**

SOIL INFILTRATION RATE TEST

BRE Digest 365, DG365, February 2016

Trial pit	SA03
Pit Length	1.70
Pit Width	0.35
Pit Depth	1.60
Gravel Void Ratio	0.30

(Gravel used = 0.30, No Gravel = 1.00)

Remarks: -

Geology
See SA03 exploratory hole log.

Weather
Cloudy sunshine with rain showers, damp underfoot.

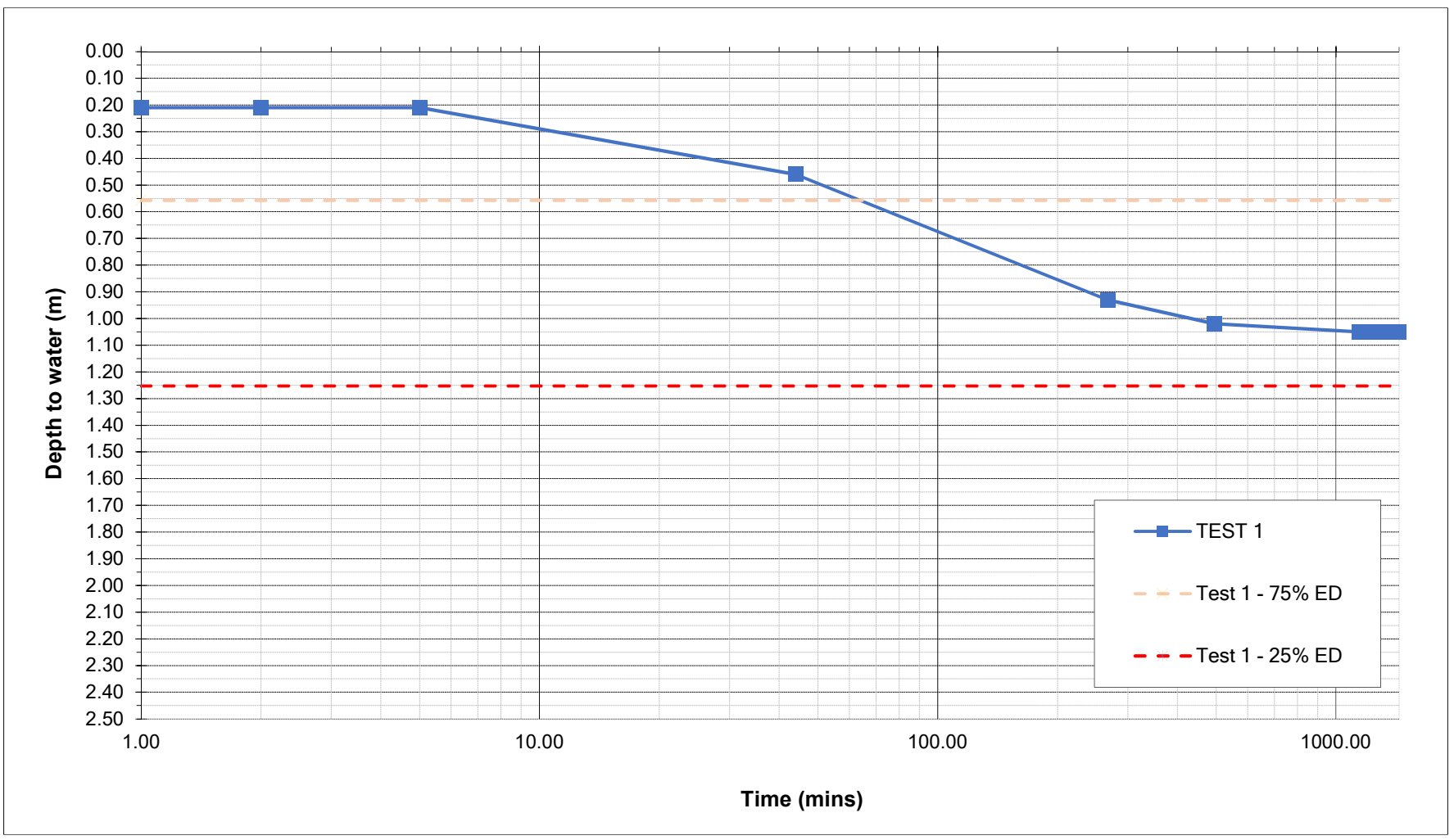
Groundwater
Water seepage at 2.00m begl. Water at 1.60m begl at start of test.

Timescales
Test Started - 1217, 11/03/19.
Test Finished - 1218, 12/03/19.

TEST 1		TEST 2		TEST 3	
Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
0.00	0.21				
1.00	0.21				
2.00	0.21				
5.00	0.21				
44.00	0.46				
267.00	0.93				
495.00	1.02				
1143.00	1.05				
1208.00	1.05				
1273.00	1.05				
1368.00	1.05				
1440.00	1.05				

Effective Depth	m	1.39
75% Effective Depth	m	1.04
(i.e. depth below GL)	m	**0.56**
50% Effective depth	m	0.70
(i.e. depth below GL)	m	**0.91**
25% Effective Depth	m	0.35
(i.e. depth below GL)	m	**1.25**
Effective Storage Depth 75%-25%	m	0.70
Time to fall to 75% effective depth	mins	**n/a**
Time to fall to 25% effective depth	mins	**n/a**
Vp (75%-25%)	m^3	0.12
ap50 (50%)	m^2	3.44
tp(75%-25%)	mins	**n/a**
SOIL INFILTRATION RATE	m/s	**n/a**

DESIGN SOIL INFILTRATION RATE, f m/s **n/a**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

	Site:	**Old Ashford Road, Lenham**	
	Job Number :	**SHF.1528.004**	
	Date:	**12-13/03/2019**	
	SOIL INFILTRATION RATE TEST		
	BRE Digest 365, DG365, February 2016		

Trial pit	SA04
Pit Length	1.90
Pit Width	0.35
Pit Depth	1.88
Gravel Void Ratio	0.30
(Gravel used = 0.30, No Gravel = 1.00)	

Remarks: -
Geology
See SA04 exploratory hole log.

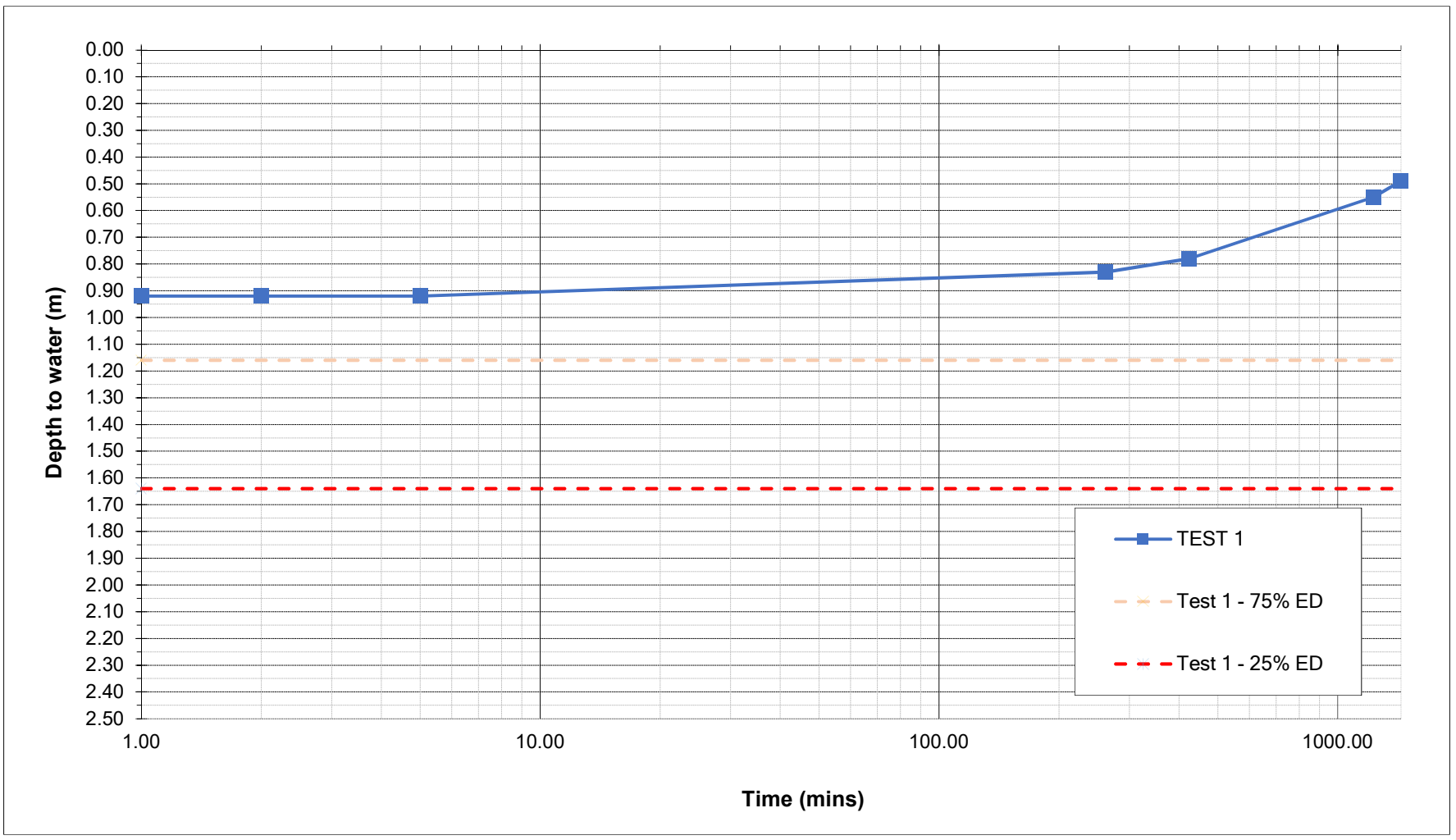
Weather
Cloudy sunshine with rain showers, damp underfoot.

Groundwater
Water at 1.88m begl at start of test.

Timescales
Test Started - 0907, 12/03/19.
Test Finished - 1904, 13/03/19.

	TEST 1		TEST 2		TEST 3	
	Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
	0.00	0.92				
	1.00	0.92				
	2.00	0.92				
	5.00	0.92				
	262.00	0.83				
	424.00	0.78				
	1228.00	0.55				
	1440.00	0.49				
Effective Depth	m	0.96				
75% Effective Depth	m	0.72				
(i.e. depth below GL)	m	**1.16**				
50% Effective depth	m	0.48				
(i.e. depth below GL)	m	**1.40**				
25% Effective Depth	m	0.24				
(i.e. depth below GL)	m	**1.64**				
Effective Storage Depth 75%-25%	m	0.48				
Time to fall to 75% effective depth	mins	**n/a**				
Time to fall to 25% effective depth	mins	**n/a**				
Vp (75%-25%)	m^3	0.10				
ap50 (50%)	m^2	2.83				
tp(75%-25%)	mins	**n/a**				
SOIL INFILTRATION RATE	m/s	**n/a**				

DESIGN SOIL INFILTRATION RATE, f m/s	**n/a**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

	Site:	**Old Ashford Road, Lenham**	
	Job Number :	**SHF.1528.004**	
	Date:	**12-13/03/2019**	
	SOIL INFILTRATION RATE TEST		
	BRE Digest 365, DG365, February 2016		

Trial pit	SA05
Pit Length	2.00
Pit Width	0.35
Pit Depth	1.93
Gravel Void Ratio	0.30
(Gravel used = 0.30, No Gravel = 1.00)	

Remarks: -
Geology
See SA05 exploratory hole log.

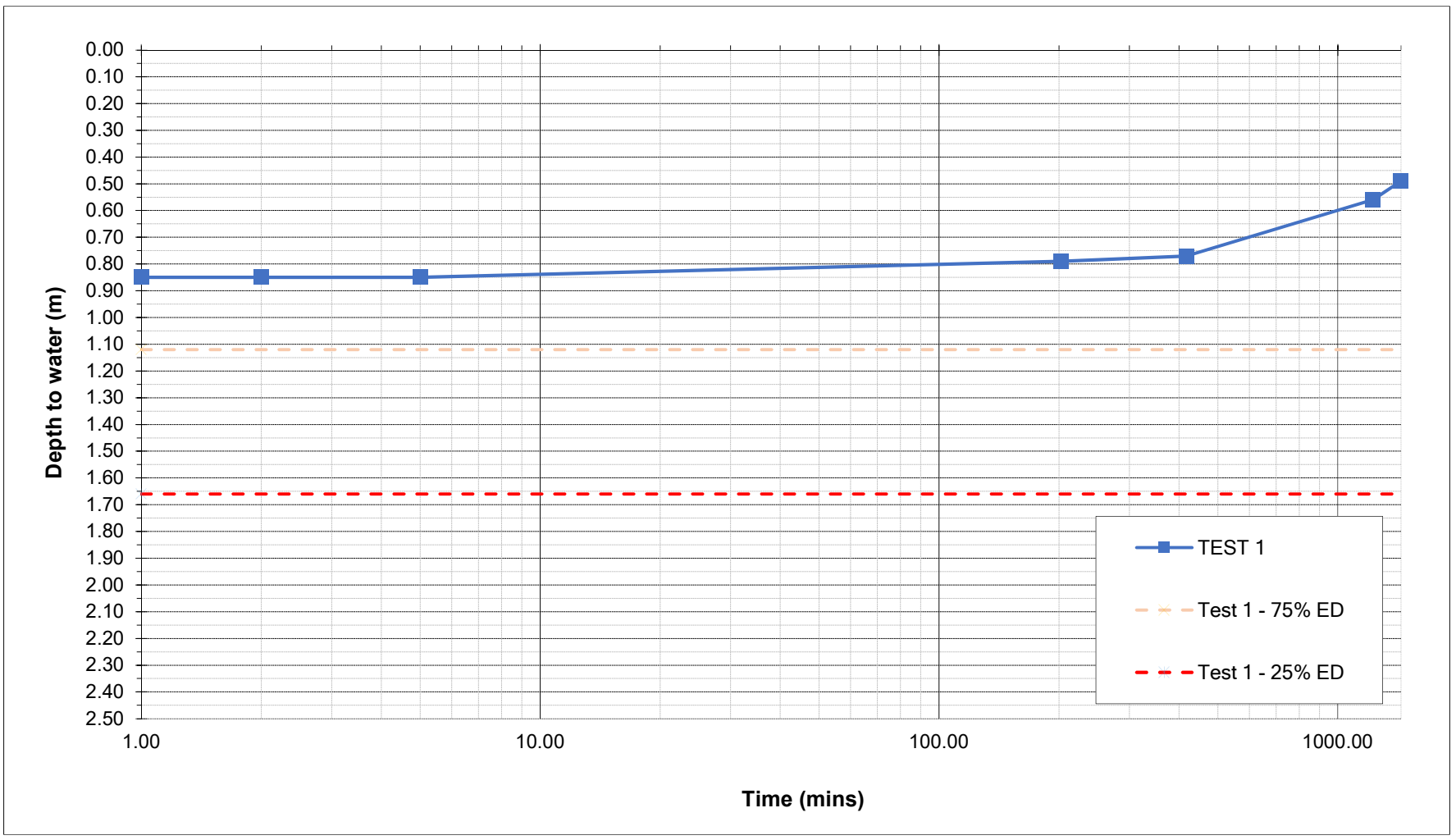
Weather
Cloudy sunshine with rain showers, damp underfoot.

Groundwater
Water at 1.93m begl at start of test.

Timescales
Test Started - 0917, 12/03/19.
Test Finished - 1913, 13/03/19.

	TEST 1		TEST 2		TEST 3	
	Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
	0.00	0.85				
	1.00	0.85				
	2.00	0.85				
	5.00	0.85				
	202.00	0.79				
	418.00	0.77				
	1224.00	0.56				
	1440.00	0.49				
Effective Depth	m	1.08				
75% Effective Depth	m	0.81				
(i.e. depth below GL)	m	**1.12**				
50% Effective depth	m	0.54				
(i.e. depth below GL)	m	**1.39**				
25% Effective Depth	m	0.27				
(i.e. depth below GL)	m	**1.66**				
Effective Storage Depth 75%-25%	m	0.54				
Time to fall to 75% effective depth	mins	**n/a**				
Time to fall to 25% effective depth	mins	**n/a**				
Vp (75%-25%)	m^3	0.11				
ap50 (50%)	m^2	3.24				
tp(75%-25%)	mins	**n/a**				
SOIL INFILTRATION RATE	m/s	**n/a**				

DESIGN SOIL INFILTRATION RATE, f m/s	**n/a**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

	Site:	**Old Ashford Road, Lenham**
	Job Number :	**SHF.1528.004**
	Date:	**11-12/03/2019**

SOIL INFILTRATION RATE TEST

BRE Digest 365, DG365, February 2016

Trial pit	SA06
Pit Length	1.70
Pit Width	0.35
Pit Depth	1.87
Gravel Void Ratio	0.30

(Gravel used = 0.30, No Gravel = 1.00)

Remarks: -

Geology
See SA06 exploratory hole log.

Weather
Cloudy sunshine with rain showers, damp underfoot.

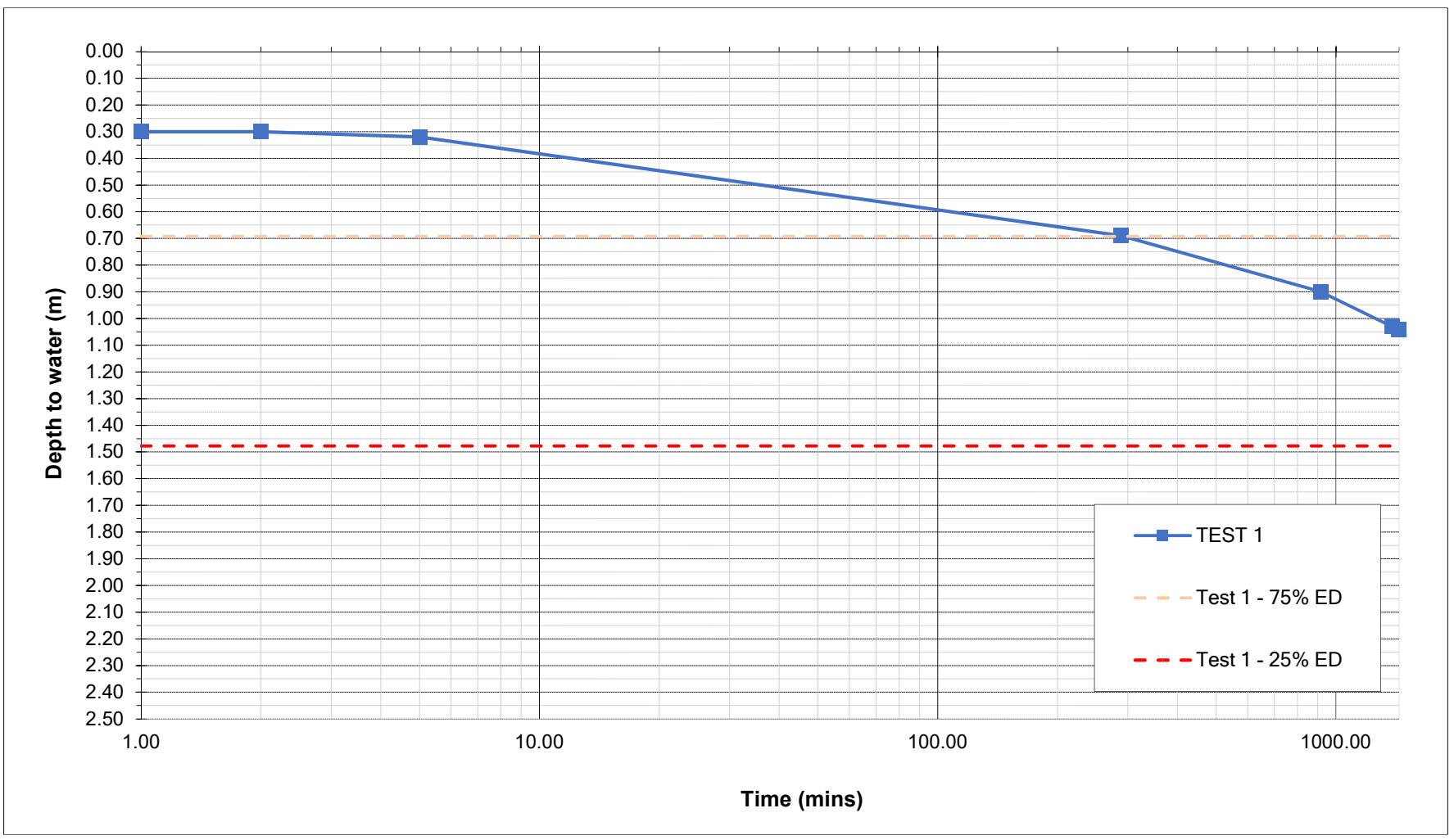
Groundwater
Water seepage at 2.00m begl. Water at 1.87m begl at start of test.

Timescales
Test Started - 1611, 11/03/19.
Test Finished - 1611, 12/03/19.

TEST 1		TEST 2		TEST 3	
Time (min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
0.00	0.30				
1.00	0.30				
2.00	0.30				
5.00	0.32				
289.00	0.69				
916.00	0.90				
1383.00	1.03				
1440.00	1.04				

Effective Depth	m	1.57		
75% Effective Depth	m	1.18		
(i.e. depth below GL)	m	**0.69**		
50% Effective depth	m	0.79		
(i.e. depth below GL)	m	**1.09**		
25% Effective Depth	m	0.39		
(i.e. depth below GL)	m	**1.48**		
Effective Storage Depth 75%-25%	m	0.79		
Time to fall to 75% effective depth	mins	**n/a**		
Time to fall to 25% effective depth	mins	**n/a**		
Vp (75%-25%)	m^3	0.14		
ap50 (50%)	m^2	3.81		
tp(75%-25%)	mins	**n/a**		
SOIL INFILTRATION RATE	m/s	**n/a**		

DESIGN SOIL INFILTRATION RATE, f m/s	**n/a**



Compiled By:	Date:	Approved By:	Date
D.Leedle	14/03/2019	N. Brook	28/03/2019

Appendix 7 – SFRA Mapping Extracts