

Land north of Sun Lane, Riseley

Wellington Estate & 3West Group

Flood Risk Assessment



Land north of Sun Lane, Riseley

Flood Risk Assessment

Job Title	Land north of Sun Lane, Riseley
Project Number	2047
Date	18 February 2026
Revision	A
Client	Wellington Estate & 3West Group
Prepared by	R Leever
Checked by	C Yalden
Authorised by	C Yalden
File Reference	p:\2047 land off sun lane, riseley, reading\c documents\reports\2047 land north of sun lane, riseley - flood risk assessment.docx

AWP
Ada House
Pynes Hill
Exeter
EX2 5TU

Tel: 01392 409007

www.awpexeter.com



Contents

1	Introduction	1
2	Existing Conditions	4
3	Development Proposals	8
4	Surface Water Management Plan	12
5	Mitigation, Conclusions and Recommendations	18

Appendices

Appendix A	Existing Topographic Survey
Appendix B	Soakaway Test Report
Appendix C	Thames Water Records
Appendix D	Proposed Masterplan
Appendix E	Causeway FLOW Reporting
Appendix F	Preliminary Drainage Layout

AWP
Ada House
Pynes Hill
Exeter
EX2 5TY

Tel: 01392 409007

www.awpexeter.com

1 Introduction

1.1 AWP have been commissioned by the Wellington Estate and 3West Group to undertake a Flood Risk Assessment (FRA) in support of an outline planning application, comprising up to 44 residential dwellings on land north of Sun Lane, Riseley.

1.2 The proposed development description has been shared below:

“Outline application with all matters reserved except for access for the construction of up to 44 dwellings, including affordable housing together with access, landscaping and associated infrastructure (cross boundary application)”.

1.3 The location of the proposed development in relation to the wider area is shown in Figure 1.1 below.

Figure 1.1 - Site Location



National Planning Policy Framework

1.4 The National Planning Policy Framework (NPPF) was most recently updated by the Department for Communities and Local Government in February 2025.

- 1.5 The NPPF states that *“A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use”*.
- 1.6 The aim of a site-specific flood risk assessment is to demonstrate that *“the development should be made safe for its lifetime without increasing flood risk elsewhere”*.

Structure and limitations of this FRA

- 1.7 This site-specific FRA has been written in accordance with the guidance set by the NPPF and supplemented by the National Planning Practice Guidance, using the information that is currently available.
- 1.8 The report has been structured to describe the existing site parameters, the proposed development and to offer a surface water management plan (SWMP), indicating how surface water runoff can be managed so that it does not increase flood risk within the downstream catchment.

Reference

- 1.9 This FRA has been prepared by reference to the following documents:
- National Planning Policy Framework (February 2025);
 - Planning Practice Guidance – Flood Risk & Coastal Change (September 2025);
 - Environment Agency (EA) Flood Warning Information Service 'Flood Risk from Rivers or the Sea' and 'Flood Risk from Surface Water' (online);
 - New Geosciences Ltd Phase 1 Preliminary Geo-Environmental and Geotechnical Risk Assessment (November 2025)
 - CIRIA Guide 753 The SuDS Manual (2015); and,
 - Thames Water's Asset Records (received November 2025)

2 Existing Conditions

Existing land uses

- 2.1 The site is located on greenfield land, comprising two fields which are bordered and subdivided by existing hedgerows. The south-western and north-western boundaries of the site are bordered by the adopted highways of Sun Lane and Bull Lane, respectively.
- 2.2 The site forms part of the Stratfield Saye Estate and is surrounded by the following land uses:
- To the north of the site, beyond Bull Lane, lies St Leger's Copse.
 - To the West and South of the site, past Sun Lane, lies Coldharbour Wood, with the A33 and B3349 beyond.
 - To the east lies existing properties immediately beyond the boundaries of the site, fronting Yeosfield and the B3349.

Topographic survey

- 2.3 The topographic survey was undertaken by 360Geomatics in August 2025 and confirms the site falls in a north-easterly direction at a consistent gradient of 1 in 28.
- 2.4 A copy of the existing sites topographic survey can be found within Appendix A of this report.

Existing Flood Risk

- 2.5 The Planning Practice Guidance requires planning applications for areas at risk of flooding, or sites of 1 hectare or more, to be accompanied by a site-specific flood risk assessment which assesses "flood risk".
- 2.6 In accordance with Para. 001 of the Planning Practice Guidance, it is required that new developments consider flood risk as a '*combination of the probability and the potential consequences of flooding from all sources*' including rivers and the sea, rainfall, rising groundwater, infrastructure and artificial sources.
- 2.7 Each potential source of flooding has been assessed as part of this FRA.

Fluvial sources (River flooding)

- 2.8 The EA's 'Flood Warning Information Service' provides flood risk information and mapping throughout England.
- 2.9 The EA's 'Flood Map for Planning' shows the site as being entirely within 'Flood Zone 1' (low risk), with less than 1 in 1,000 annual exceedance probability (AEP) of river or sea flooding (<0.1% AEP).
- 2.10 The site remains at low risk of flooding from fluvial and tidal sources throughout its 100 year lifetime, with allowances for climate change, as reflected by Figure 2.1 below.

Figure 2.1 – Fluvial Flooding (inc. Climate Change)



Pluvial sources (surface water flooding)

- 2.11 The EA's 'Flooding from Surface Water' mapping is based on LIDAR data and indicates the typical conveyance routes of surface water runoff in up to the 100 year return period.
- 2.12 The mapping for this site has been extracted as Figure 2.2 and shows that the site is not at risk of surface water flooding, in up to the 1 in 1,000 year AEP (<0.1%), however some sections of Sun Lane and Bull Lane are susceptible to flooding.

- 2.13 The flooding identified on Sun Lane is consistent with the rural nature of this road surface, which is slightly sunken below the adjacent greenfield catchment with no formal drainage system to manage runoff.
- 2.14 The existing agricultural access which serves the site is not shown as being at risk and takes access from the eastern-most edge of Sun Lane, which is also outside the extents of any areas at risk of flooding.
- 2.15 The site and existing access route is therefore not susceptible to flooding from surface water.

Figure 2.2 – Flood Risk from Surface Water



Infrastructure (overwhelmed sewers or drainage systems)

- 2.16 There are no known on-site flood risks associated with infrastructure failure.

Artificial sources (Reservoirs, Canals & Lakes)

- 2.17 The site is not located downstream of any existing canals, lakes or artificial sources and lies outside the maximum extent of flooding from reservoir failure. The site is therefore not considered as being at risk of flooding from artificial sources.

Ground conditions

- 2.18 New Geosciences Ltd have undertaken a Phase 1 Preliminary Geo-Environmental and Geotechnical Risk Assessment and a Soakaway Test Report for the site.
- 2.19 The Phase 1 investigation states that the underlying natural geology across most of the site is anticipated to comprise generally medium to high strength cohesive deposits of the London Clay Formation, with some medium dense sand of the Bagshot Formation anticipated in the upper western corner of the site.
- 2.20 The investigation considered that the ground beneath the site is anticipated to be of generally low permeability, and the use of infiltration drainage may not be feasible.
- 2.21 In December 2025, four separate trial pits were excavated for soakaway testing in accordance with BRE Digest 365. The tests were positioned in each corner of the site, with a fifth trial pit excavated more centrally.
- 2.22 The trial pits were excavated to depths of 2.40m and 2.50m below ground level (BGL). The vertical trial pit sides were trimmed square and a 2,000-gallon bowser was used to supply the required volumes of water at a rapid rate of inflow.
- 2.23 The central trial pit returned 200-500mm thick topsoil, underlain by 200-600mm of clay and gravel river terrace deposits, followed by the London Clay Formation.
- 2.24 The soakaway tests recorded water level falls of just 0.00m-0.07m over the course of the day. As all tests failed to reach 75% of the effective depth, the calculation of infiltration rates was not possible.
- 2.25 A copy of the Soakaway Test Report can be found within Appendix B of this report.

Existing site drainage

- 2.26 The existing drainage regime represents that of a typical greenfield site, with a limited amount of surface water runoff soaking into the underlying strata and the remainder following the natural

topography of the site towards the rear of existing residential properties on Yeosfield and the B3349 Basingstoke Road.

Existing drainage infrastructure

- 2.27 There are no existing adoptable sewer networks within the application boundary. The nearest asset takes the form of an existing Thames Water adopted foul sewer network within Basingstoke Road, to the east of the site.
- 2.28 An adoptable Section 104 surface water network also exists within the nearby development 'Land at Odiham Road, Riseley', which received planning consent in November 2017 (Ref. 16/02989/OUT). This system has not yet been vested as an adopted asset and is likely still within the maintenance period, under review by TW.
- 2.29 The nearest ordinary watercourse appears to be located approximately 280m east of the site, near the Riseley Memorial Hall Car Park and The Devil's Highway private access road.
- 2.30 Copies of TW's asset records can be found within Appendix C of this report.

3 Development Proposals

Introduction

- 3.1 This FRA support an outline application with all matters reserved except for access for the construction of up to 44 dwellings, including affordable housing together with access, landscaping and associated infrastructure (cross boundary application).
- 3.2 A copy of the proposed masterplan for the site can be found within Appendix D of this report.

Vulnerability

- 3.3 In accordance with the Planning Practice Guidance, residential dwellings are the most vulnerable use within this application and are considered to be "More Vulnerable". However, with all built development located entirely within Flood Zone 1, Table 3 of the Planning Practice Guidance demonstrates that the proposals are appropriate for this site.

Sequential Test

- 3.4 The full extents of built development are located within 'Flood Zone 1' and are not susceptible to any other source of flooding, therefore the site would pass the Sequential Test, as there are no competing sites with a lower flood risk classification.

Cross sections and finished levels

- 3.5 It is proposed that the existing ground profile will be modified to reflect the drainage requirements for the new development.
- 3.6 Any future levels design for the site should aim to minimise the extent of any re-profiling works and should look to retain existing catchment areas wherever possible.

Safe access and egress

- 3.7 All access/egress roads surrounding the site are located within Flood Zone 1 and the site's vehicular and pedestrian access to Sun Lane and Basingstoke Road remains outside the extents of any surface water flood risk.
- 3.8 It is concluded that access and egress for motorised and non-motorised vehicles will not be impacted by flooding and will remain safe throughout the development's lifetime.

Drainage strategy requirements

- 3.9 Sustainable Drainage Systems (SuDS) can be used to reduce the amount of rainfall collected at source and can be used to improve water quality.
- 3.10 The National Standards for SuDS (June 2025) advises that for any rainfall not being re-used, surface water disposal should be prioritised in the following order;
1. Infiltration
 2. Discharge to surface waters
 3. Discharge to a surface water drainage system
 4. Discharge to a combined sewer

- 3.11 As required by the NPPF, the drainage strategy must demonstrate that the development will be safe throughout its lifetime, without increasing flood risk elsewhere, whilst also taking account of the impacts of climate change.
- 3.12 Attenuation features will be sized to accommodate runoff in up to the 100 year return period with allowance for climate change and 10% allowance for urban creep to the domestic catchment.
- 3.13 The proposed surface water management plan will seek to provide surface water attenuation through the use of SuDS to ensure downstream flood risks are not increased whilst also promoting biodiversity, amenity and water quality enhancement.

Climate change impacts

- 3.14 The NPPF requires that the impact of climate change be considered to minimise vulnerability and provide resilience. The NPPF and Planning Practice Guidance explain that an FRA should demonstrate how flood risk will be managed across the development's lifetime, taking climate change into account.
- 3.15 Climate change allowances for peak rainfall in England is published online by the Department of Rural Affairs. The 'Loddon and tributaries Management Catchment Peak rainfall allowances' are summarised in Table 3.1 below, providing the climate change recommendations for new developments.

Table 3.1 – Peak rainfall allowances

Allowance category	Epoch	Central allowance	Upper end allowance
3.3% annual exceedance rainfall event	2050s	20%	35%
	2070s	25%	35%
1% annual exceedance rainfall event	2050s	20%	40%
	2070s	25%	40%

- 3.16 The 50th percentile (central allowance) is the point at which half of the possible scenarios for peak flows fall below it. The upper end allowance is based on the 95% percentile, thus only 5% of possible scenarios fall above an allowance level.



- 3.17 The guidance states for peak rainfall intensity, Flood Risk Assessments should “assess both the central and upper end allowances to understand the range of impact”.
- 3.18 The on-site attenuation for this proposed development has been sized to offer flood protection for the development and its downstream catchment throughout its lifetime, with the upper end allowance of 40% being utilised to present a worst-case scenario.

4 Surface Water Management Plan

Existing surface water runoff

- 4.1 The existing drainage regime represents that of a typical greenfield site, with limited surface water runoff soaking into the underlying strata and the remainder following the natural topography of the site, towards the rear of existing properties on Yeosfield and Basingstoke Road.
- 4.2 Causeway FLOW has been used to assess the greenfield runoff rates for the existing site using the FEH methodology considering a Positively Contributing Area (PCA) of 1.275ha, in line with the National Standards for SuDS.
- 4.3 A copy of the greenfield runoff assessment has been included within Appendix E of this report, with the results summarised in Table 4.1 below;

Table 4.1 – Greenfield Runoff Rates (l/s)

Return Period	Greenfield runoff (l/s)
2 year	3.8
30 years	8.4
100 years	10.6

- 4.4 To ensure the development will be safe throughout its lifetime and that it does not increase flood risk elsewhere, the drainage strategy will include appropriate mitigation measures, so that the greenfield runoff rates stated within Table 4.1 are not exceeded.

Surface Water Management Plan

- 4.5 To ensure the development is safe throughout its lifetime, the surface water strategy accounts for runoff in up to the 100 year return period.
- 4.6 The strategy safeguards against the upper end allowances for climate change (40%), providing betterment over undeveloped conditions, where the rate and volume of runoff would continue to increase due to climate change.
- 4.7 The strategy also includes 10% allowance for urban creep to domestic areas, mitigating the impacts of any additional drainage catchments (future property extensions or hard standings).

- 4.8 Runoff generated by the development is unable to discharge via infiltration due to unfavourable ground conditions, so will instead be attenuated to greenfield rates prior to discharge.
- 4.9 Whilst there are currently no available adopted surface water networks within Riseley, the Section 104 storm network which serves the residential development on land at Odiham Road could provide a potential point of connection in the future, subject to becoming vested as an adopted asset and subject to Thames Water approval.
- 4.10 Given the above and in line with the drainage hierarchy, the most practicable point of connection at this time is the existing ordinary watercourse, located adjacent to The Devil's Highway, approximately 280m east of the site.
- 4.11 The existing watercourse lies within the wider landholding of the Stratfield Saye Estate and therefore provides riparian rights to facilitate a new surface water discharge.
- 4.12 Runoff generated by the proposed development will route through a new adoptable surface water network towards the lower eastern corner of the site where a new attenuation basin can receive and attenuate flows.
- 4.13 As part of any future Reserved Matters Application the proposed SuDS basin could be designed to include a sedimentary forebay and/or could include lined areas which hold permanent water (to improve biodiversity).
- 4.14 The proposed masterplan provides opportunities for additional SuDS measures, located at source. This includes areas which could be constructed as permeable pavements, together with opportunities for tree pits, raingardens, filter strips and swales.
- 4.15 As part of any forthcoming Reserved Matters Application, the use of additional SuDS features should be assessed in detail to meet the interception requirements, as set out within the National Standards for SuDS.
- 4.16 For the purpose of this outline applicaiton, the SuDS basin has been sized to provide the full scope of attenuation for the scheme, however it is anticipated the size and volume of this basin would

reduce as additional SuDS measures are incorporated throughout the development parcels.

- 4.17 All open SuDS features must include minimum 300mm freeboard allowance for exceedance storms and must not exceed 1 in 3 earthworks.
- 4.18 Owing to the surrounding residential properties, which span the eastern lower perimeter of the site, flows from the proposed SuDS basin will be pumped to the western edge of site, where a new adoptable gravity system can convey flows off-site to the east, towards the ordinary watercourse adjacent the Devil's Highway.
- 4.19 The proposed surface water arrangements can be seen on drawing 2047-01-PDL-1001 within Appendix F of this report.

Water Quality Management

- 4.20 In line with the pollution indices set out in CIRIA SuDS Manual (C753) the scheme is required to provide 'SuDS component features' which have a 'total SuDS mitigation index' greater than or equal to the 'pollution hazard index'.
- 4.21 Table 4.2 outlines the pollution hazard indices required for the proposed land use at this site, taken from Table 26.2 of C753 as summarised below;

"Individual property driveways, residential car parks, low traffic roads (e.g. cul de sacs, homezones and general access roads) and non-residential car parking with infrequent change (e.g. schools, offices) i.e. <300 traffic movements/day."

Table 4.2 – Pollution Hazard Indices (Ref. C753 Table 26.2)

Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Low	0.5	0.4	0.4

- 4.22 The SuDS components proposed for the site and their relevant 'mitigation indices' are identified within Table 4.3, with a factor of 0.5 to account for reduced performance associated with any secondary SuDS components.

- 4.23 Whilst the final drainage scheme will incorporate additional SuDS measures at source, the adopted highway may only pass through the SuDS basin and therefore as a worst-case, it is important to ensure the basin offers sufficient pollution mitigation in line with the Simple Index approach from CIRIA C753.
- 4.24 The SuDS mitigation indices for the proposed SuDS basin have been taken from CIRIA C753 Table 26.3 and can be seen summarised within Table 4.3 below.

Table 4.3 – SuDS Mitigation Indices

SuDS Component	Total Suspended Solids	Metals	Hydrocarbons
SuDS Basin	0.5	0.5	0.6
Total	0.5	0.5	0.6

- 4.25 Table 4.3 demonstrates that the total 'SuDS mitigation index' would be greater than the 'pollution hazard index', and therefore the proposed SuDS basin provides a suitable level of water quality management, capable of mitigating the site's pollution hazard level.
- 4.26 As previously mentioned, as part of any future Reserved Matters Application, the drainage design will consider additional SuDS measures which will further enhance the amount of treatment provided, whilst further improving amenity and biodiversity value.

Attenuation Storage Volumes and Discharge Rates

- 4.27 Causeway Flow has been used to determine the storage requirements for the development to ensure it can manage runoff throughout its 100 year lifetime, with allowances for climate change and urban creep.
- 4.28 The output of this exercise can be found within Appendix E of this report, with the results of the attenuation provisions and proposed discharge rates summarised in Tables 4.4 and 4.5.

Table 4.4 – Attenuation Storage Volumes

Feature	100yr + 40% Vol. (m ³)
SUDS Attenuation Basin	505.3
Total	505.3

Table 4.5 – Proposed Discharge Rates

Return Period	Existing Greenfield Rate (l/s)	Allowable Discharge Rate +40%CC (l/s)
2 year	3.8	3.8
30 years	8.4	3.8
100 years	10.6	3.8

- 4.29 Drawing 2047-01-PDL-1001 identifies the surface water management plan for the scheme, with copies included in Appendix F of this report.

Exceedance events

- 4.30 During exceedance events beyond the 100 year return period storm, runoff will overflow from the aforementioned drainage systems and away from primary access and egress routes, towards areas of open green space and the proposed SuDS attenuation basin, where any freeboard allowances will be utilised.
- 4.31 Beyond the capacity of the attenuation features, flows will follow the natural topography and continue overland where additional shallow bunding will be incorporated to provide further above ground attenuation within the site, prior to flows continuing off-site as existing.

Proposed foul water strategy

- 4.32 In terms of wastewater connections, the developer is entitled to make a connection to the nearest practical point on the adopted network, where the existing sewer is at least the same diameter as the new sewer required to provide capacity for the development.
- 4.33 Under the provisions of the Water Industry Act 1992, the developer will pay the sewerage undertaker the published sewer connection charges and infrastructure charge per dwelling, and the sewerage undertaker is responsible for any network reinforcement.

- 4.34 The proposed development will be served by a new adoptable foul sewer network and will prioritise connectivity to the adopted Thames Water foul sewer within Basingstoke Road.
- 4.35 For the purposes of this outline application the foul drainage arrangements consider that a new pumping station may be required to enable connectivity with the off-site network.
- 4.36 As part of any future Reserved Matters Application, consideration should be given towards the potential to gravity discharge foul flows without the need for pumping. This will be subject to the final site layout arrangements and use of deep drainage inside the western edge of site.
- 4.37 The proposed foul water drainage arrangements can be seen identified on the preliminary drainage layout drawing included within Appendix F of this report.

Maintenance

- 4.38 Any adoptable sewerage networks will be designed in accordance with the Design and Construction Guidance (DCG) and will be offered to Thames Water for adoption.
- 4.39 Any storm drainage which solely serves the adopted highway will be offered to the Highway authority for adoption.
- 4.40 Any private drainage will be designed in accordance with Building Regulations Part H and will become the responsibility of the respective homeowner, or where communal, an appointed management company.
- 4.41 The operation and maintenance of the private SuDS features will be undertaken in accordance with 'CIRIA C753 – The SuDS Manual, Chapter 32 – Operation and Maintenance'.
- 4.42 As part of any future Reserved Matters Application a 'Drainage Maintenance Plan' should be prepared. The Plan must set out maintenance tasks, responsibilities and frequencies for the entire drainage network, including private, adopted and SuDS drainage. The plan should be circulated to all purchasers, occupants and management companies.

5 Mitigation, Conclusions and Recommendations

Mitigation

- 5.1 The proposed development has been assessed in line with the NPPF, to allow the planning application to be progressed and to show that the development can be undertaken in an acceptable manner from a flood risk perspective.
- 5.2 The proposed development is located within Flood Zone 1 and is not susceptible to flooding from pluvial, groundwater, infrastructure or artificial sources.
- 5.3 To ensure the development is safe throughout its lifetime, the surface water strategy accounts for runoff in up to the 100 year return period.
- 5.4 The strategy also safeguards against the upper end allowances for climate change (40%), providing betterment over undeveloped conditions, where the rate and volume of runoff would continue to increase due to climate change.
- 5.5 All in-situ soakaway tests failed to reach 75% of the effective depth. The underlying geology has a low permeability and is not suitable for the use of soakaway drainage.
- 5.6 The use of SuDS attenuation will enable storm water runoff to be stored on site and discharged to an off-site ordinary watercourse at the 2 year greenfield rate, with allowances for climate change and urban creep.
- 5.7 The receiving watercourse lies within the estates wider land ownership, offering sufficient riparian rights to enable a discharge. Opportunities for a more local discharge to an adopted surface water network may become available and should be considered as part of any future Reserved Matters Application.
- 5.8 The use of SuDS will be considered throughout the proposed development, with opportunities for areas of permeable paving, raingardens, tree pits, filter strips and swales. Any future design must ensure the interception requirements from the National Standards for SuDS are being achieved and that the scheme provides water quality enhancement, alongside biodiversity and amenity value.

- 5.9 During exceedance events runoff will be directed towards areas of open green space and the proposed SuDS basin, where any freeboard allowances will be utilised. Beyond the capacity of the attenuation basin, flows will be impounded by a shallow landscape bund which offers further overland attenuation before flows continue off-site as existing.
- 5.10 Foul flows generated by the development will be discharged to the head of Thames Waters adopted foul sewer network within Basingstoke Road.

Conclusions

- 5.11 This Flood Risk Assessment has been assessed in line with the NPPF. It is concluded that the development can be undertaken in a sustainable manner, whilst also reducing the flood risk to existing properties in the downstream catchment.

Recommendations

- 5.12 As demonstrated, the development will be safe from flooding throughout its lifetime and will actively reduce flood risk within the downstream catchment. It is therefore, recommended that the Lead Local Flood Authority advise the Local Planning Authority that they have no objections to the proposed development.

Appendix A Existing Topographic Survey

Coordinate Table				
Station	Eastings	Northings	Level	Description
STN A1	471985.731	102690.799	66.979	Nail
STN A2	472098.184	103016.373	66.981	Nail
STN R1	471897.739	103077.788	69.705	Nail

Note	
This survey data has been prepared for the client detailed below to an agreed specification. Unless otherwise agreed in writing the liability of 360 Geomatics Ltd is limited to the client's order or the appointed agent and does not extend to use beyond the limitations of the specification.	
Copyright of this survey, and all associated drawings and digital information, is owned by 360 Geomatics Ltd. This information may not be sold on to a third party without prior permission of 360 Geomatics Ltd and payment.	
Physical boundary details may not represent the extent of legally owned ownership.	
360 Survey is based on a local plane grid, site centred at Station A1 to Ordnance Survey National Grid coordinates (OSGB36).	
Level: datum, Ordnance Datum Newlyn (ODNN).	
All levels on kerb lines are channel levels unless noted otherwise.	

© Copyright 360 Geomatics Ltd 2025

Abbreviations (Where Applicable)			
Building Abbreviations			
BL	Basement Level	HD	Heating Duct
BM	Beam Sill	H	Height
BSL	Beam Sill Level	RWP	Rain Water Pipe
BS	Brimm Teleson Cover	SL	Soil Level
DP	Down Pipe	SV	Soot and Vent Pipe
GPC	Gully Pipe from FFL	VP	Vent Pipe
DR	Door Height	W	Window Height from sill
DRH	Door Head Level	WD	Direction of Floor Joint and Sign
FTL	Finished Floor Level	C Level	Ceiling Level
FFL	Floor to Ceiling Height	F Level	Floor Level
CC	or Ceiling Level	CSST	Ceiling Soffit
CH	Ceiling Height	H-H	Window Head Height
Topographical Abbreviations			
AR	Assumed Road	MKR	Marker
BS	Boundary	MT	Memory Teleson Cover
BDL	Bolt	OC	Overhead Cable
BT	Brimm Teleson Cover	OP	Overhead Pipe
BSW	Bare Wire Fence	OSM	Ordnance Survey Bench Mark
BMX	Brimm Teleson	PS	Post Box
CAV	Cable To Cover	PSA	Perimeter Ground Marker
CH	Chalked Circle	PF	Pipe & Wire Fence
CHK	Chalked Circle	PWM	Pipe & Wire Mesh Fence
CHPL	Chalked Paving Fence	RG	Reading Eye
CL	Cover Level	RG	Road Gully
CM	Cable Marker	RN	Road Name
CP	Catch Pit	RS	Road Sign
CPH	Catch Pit Base Level	RP	Rain Water Pipe
DA	Diameter	RWP	Rain Water Pipe
DE	Draw Kite	SAP	Sealing
DN	Down Pipe	SC	Stack
ED	Electricity Junction Box	SFR	Stair
EC	Electricity Cover	SW	Staircase Station
EF	Electricity Pole	SV	Stack Valve
ER	Earthed Road	TA	Telephone Junction Box
FE	Fire Hydrant	ST	Staircase
FR	Footing Road	TS	Topographical Bench Mark
FW	Four Water	TSM	Thermal Station
GU	Gully	TTR	Telephone From Records
GV	Gas Valve	TR	Thermal Sign
H	Height	TR	Telephone Junction Box
IC	Inspection Cover	TPT	Trap
IR	Iron	TL	Top Light
IR	Iron Roofing	TR	Thermal Sign
IS	Iron Sill	UL	Under Laid
LB	Liter Bin	UT	Under Laid
LC	Landing	UTL	Under Laid To Floor
LD	Landing	VP	Vent Pipe
LP	Lamp Post	WH	Water Hole
MT	Marker	WH	Water Hole
		---	Approximate

A	Contours added	PB	26/12/25
Rev Suffix	Revisions Details	Initial	Date

Surveyed by

360GEOMATICS
LAND & MEASURED BUILDING SURVEYS

10 Selters Heath Road
 Monk Sherborne, Tadley
 Hampshire RG26 5HY

Tel: 01256 851672
 Mob: 07734 233459
 Email: info@360g.co.uk
 Website: www.360g.co.uk

Client:

3West

Unit 3, Gereint Hill, Tisbury
 Exeter EX1 3RS

Job Title:

Survey of land at
 Risleigh
 RG7 1QL

Drawing Title:

Topographical
 Survey

Drawing No:	360G-25039T-100	Rev Suffix:	A
Drawn:	SR	Checked:	PB
Scale:	1:250	Date:	22/08/2025
Job No:	25039T	Sheet:	2 of 2
		Sheet Size:	A0

Appendix B Soakaway Test Report

Soakaway Testing Report



Land North of Sun Lane, Riseley, Berkshire

3West Group Limited

February 2026

NGL25052/STR/REV002

Document Control Sheet

Site Address	Land North of Sun Lane, Riseley, Berkshire
Client	3West Group Limited
Document Title	Soakaway Testing Report
Document Reference	NGL25052/STR/REV002
Date	03 February 2026

Prepared by	Tim New
Signature	
Position	Managing Director
Qualifications	BSc (Hons) MSc FGS CGeol EurGeol RoGEP AMICE

Revision	Date	Description
000	06/12/2025	For Issue
001	02/02/2026	Revisions following Client review
002	03/02/2026	Updated base plan to Exploratory Hole Location Plan

New Geosciences Limited
Rhode Hawkins House, Mount Dinham Court, Exeter, Devon, EX4 4FR
07966 469835
info@newgeosciences.co.uk
www.newgeosciences.co.uk

Contents

1	Introduction	4
1.1	General	4
1.2	Objectives	4
1.3	Scope of Works	4
1.4	Scope of Report	4
2	The Site	5
2.1	Site Location	5
2.2	Site Description	5
2.3	Site Surroundings	5
2.4	Site Geology	5
2.5	Proposed Development	6
3	Fieldwork	7
3.1	General	7
3.2	Soakaway Testing	7
3.3	Trial Pit	7
4	Investigation Results	8
4.1	Ground and Groundwater Conditions	8
4.1.1	Ground Conditions	8
4.1.2	Groundwater	8
4.2	Soakaway Testing Results	8
5	Discussion and Recommendations	9
6	References	10
7	Limitations	11

Figures

FIGURE 1 SITE LOCATION PLAN

FIGURE 2 EXPLORATORY HOLE LOCATION PLAN

Appendices

APPENDIX A TRIAL PIT LOGS

APPENDIX B SOAKAWAY TESTING RESULTS

1 Introduction

1.1 General

New Geosciences Limited has been commissioned by 3West Group Limited (the Client) to undertake soakaway testing at Land North of Sun Lane, Riseley, Berkshire (the Site).

1.2 Objectives

The testing was undertaken in order to confirm the permeability of the ground and to provide infiltration rates for drainage design at the Site.

1.3 Scope of Works

The following scope of works was undertaken at the Site:

- 4 No. in-situ soakaway tests in general accordance with Building Research Establishment (BRE) *Digest 365, Soakaway design* (BRE, 2016).
- The excavation of 1 No. trial pit.

1.4 Scope of Report

This report presents details of the testing undertaken, a description of the ground and groundwater conditions encountered, a summary of the testing results, followed by a discussion and recommendations.

2 The Site

2.1 Site Location

The Site is located at Land North of Sun Lane, Riseley, Berkshire, as presented in **Figure 1**. The Site is centred at approximate National Grid Reference SU 71949 63036 and the nearest postcode is RG7 1QR.

The Site is located within a mixed rural and residential area, approximately 250m to the southwest of Riseley village centre. The Site is situated on the western side of a shallow valley.

Access to the Site is gained via Bull Lane, to the northwest, and Sun Lane, to the south.

2.2 Site Description

The Site is roughly rectangular in shape and occupies an area of approximately 1.98 hectares. The Site slopes gently down to the east, from an elevation of approximately 73m above Ordnance Datum (aOD) in the western corner of the Site, to an elevation of approximately 68m aOD in the eastern corner of the Site.

The Site currently comprises two agricultural fields, covered by rough vegetation, separated by a hedgerow. An access track, approximately 40m in length, is present leading from Sun Lane to the southern corner of the Site.

2.3 Site Surroundings

The Site is surrounded to the northwest by a road (Bull Lane) before woodland, to the northeast and southeast by residential properties, and to the southwest by a road (Sun Lane) before residential properties, woodland, and a dual carriageway (A33).

2.4 Site Geology

British Geological Survey (BGS) information (BGS, 2000) (BGS, 2011) (BGS, 2025) indicates the Site to be underlain by the Palaeogene London Clay Formation, described as clay, variably silty, with beds of sand and silt and flint pebble seams.

In the western corner of the Site, the London Clay Formation is overlain by the Palaeogene Bagshot Formation, which is described as fine to medium grained sand with silt and clay laminae.

No artificial or superficial deposits are shown on the Site. However, River Terrace Deposits, which are described as predominantly sands and gravels with thin silt and clay seams, are shown within approximately 60m of the western Site boundary.

No significant thicknesses of Made Ground are anticipated based on the Site history.

An area of worked ground, described as road and rail cuttings, chalk, clay, sand and gravel pits with little or no fill, lakes, and cut away landscaping, is shown approximately 10m to the west of the Site. The worked ground appears to be associated with the construction of the A33 dual carriageway.

An historical BGS exploratory hole record (BGS ID 15634982) located approximately 250m to the northeast of the Site indicates the following ground conditions to have been encountered:

- Topsoil, to a depth of 0.30m below ground level (bgl), underlain by...
- Firm brown/ grey mottled sandy silty clay with some gravel, to a depth of 1.10m bgl, underlain by...
- Medium dense orange brown gravelly sand, to a depth of 2.30m bgl, underlain by...
- Firm dark grey sandy silty clay, to the base of the trial pit (2.40m bgl).

Groundwater seepage was encountered at a depth of 0.70m bgl.

2.5 Proposed Development

It is proposed to develop the Site for residential purposes with the construction of 44 No. residential dwellings and associated infrastructure.

The proposed layout is presented in **Figure 2**.

3 Fieldwork

3.1 General

All fieldwork was undertaken on 05 December 2025.

Due to the Site access being narrow, rutted, and soft, the tractor-towed bowser used to supply the water for the testing was not taken onto the Site to avoid damaging the gate posts. Water was instead conveyed to the testing locations from the highways to the northwest and southwest of the Site. In order to undertake a test in the eastern corner of the Site, water was conveyed using the excavator bucket. In addition, a trial pit was excavated in the central area of the Site in order to prove the ground conditions in this area.

Coordinates provided on trial pit logs were obtained using a hand-held GPS device and are typically accurate to around 5m.

Details of ground and groundwater conditions encountered can be found on the trial pit logs and photographs, presented in **Appendix A**. The soakaway testing results are presented in **Appendix B**. The exploratory hole locations are presented in **Figure 2**.

3.2 Soakaway Testing

4 No. in-situ soakaway tests (ST01 to ST04) were undertaken in general accordance with *Digest 365, Soakaway design* (BRE, 2016).

The trial pits were excavated to depths of 2.40m and 2.50m below ground level (bgl) using a JCB 3CX 8-tonne wheeled excavator. The vertical trial pit sides were trimmed square. A 2,000-gallon bowser was used to supply the required volumes of water at a rapid rate of inflow. Once filled, the drop in water level at each testing location was measured over time.

3.3 Trial Pit

1 No. trial pit (TP01) was excavated to a depth of 3.10m bgl using a JCB 3CX 8-tonne wheeled excavator.

The trial pits arisings were logged from the surface. Groundwater conditions and trial pit stability were also recorded.

4 Investigation Results

4.1 Ground and Groundwater Conditions

4.1.1 Ground Conditions

The ground conditions encountered during the investigation generally conform to the anticipated geological sequence.

The ground conditions encountered are summarised in **Table 4.1**. Further detail is provided in the trial pit logs, presented in **Appendix A**.

Table 4.1: Ground Conditions Summary

Stratum	Depth to Top (m bgl)	Thickness (m)
Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint. (TOPSOIL)	0.00	0.20 – 0.50
Firm light brown gravelly silty CLAY or light brown sandy slightly clayey/ silty fine to coarse subangular to subrounded GRAVEL of flint. Sand is fine to medium. Gravel is fine to coarse subangular to subrounded of flint. Encountered in ST01, ST03, and TP01 only. (RIVER TERRACE DEPOSITS)	0.20 – 0.50	0.20 – 0.60
Firm, stiff, or hard orangish brown mottled light grey slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of flint. (LONDON CLAY FORMATION)	0.40 – 1.10	>3.10

4.1.2 Groundwater

No groundwater was encountered in any of the trial pits.

4.2 Soakaway Testing Results

The results of the in-situ soakaway testing undertaken at 4 No. locations (ST01 to ST04) across the Site are presented in **Appendix B**.

Water level falls of between 0.00m and 0.07m were recorded over the course of the day. As all of the tests failed to reach 75% of the effective depth, the calculation of infiltration rates is not possible.

5 Discussion and Recommendations

In-situ soakaway testing in general accordance with *Digest 365, Soakaway design* (BRE, 2016) was undertaken at 4 No. locations.

The results of the testing indicate that the ground is of particularly low permeability and that infiltration drainage is not suitable at this Site.

6 References

BGS. (2000). *1:50,000 Series England and Wales Sheet 268. Reading.*

BGS. (2011). *1:10,000 Geology Series. Sheet SU76SW.*

BGS. (2020). *GeoIndex*. Retrieved from <https://mapapps2.bgs.ac.uk/geoindex/home.html>

BRE. (2016). *Digest 365. Soakaway design.*

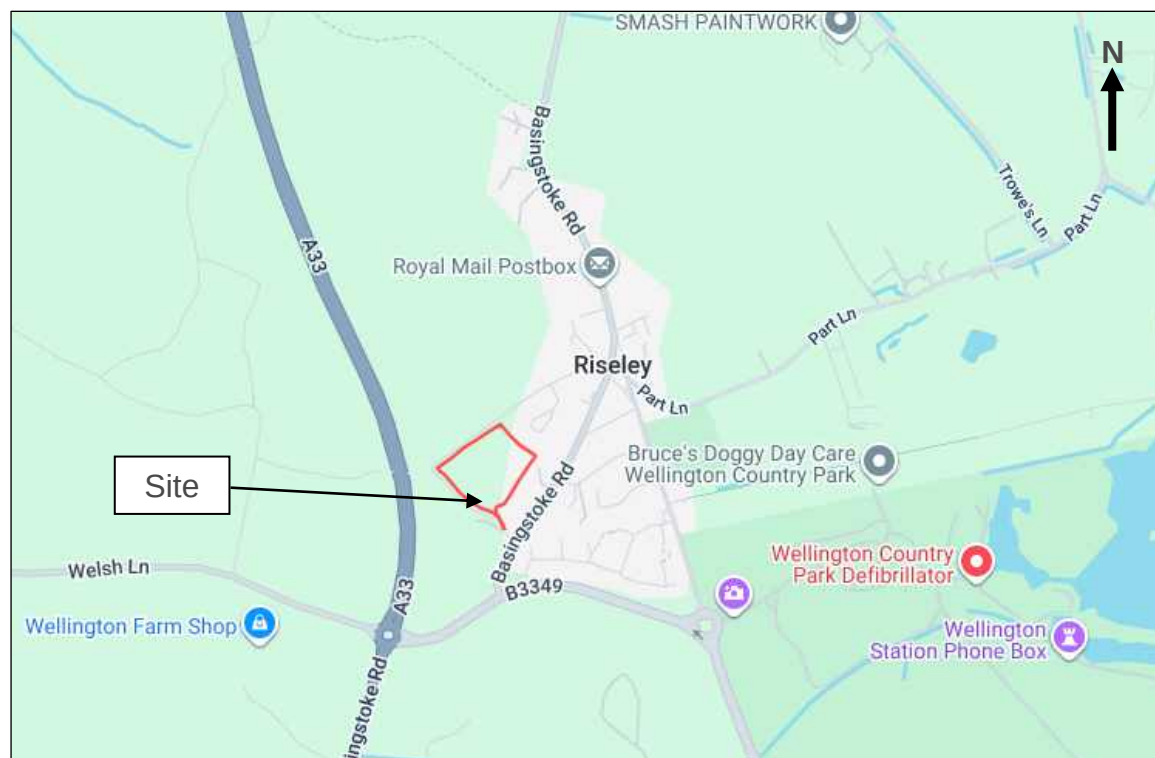
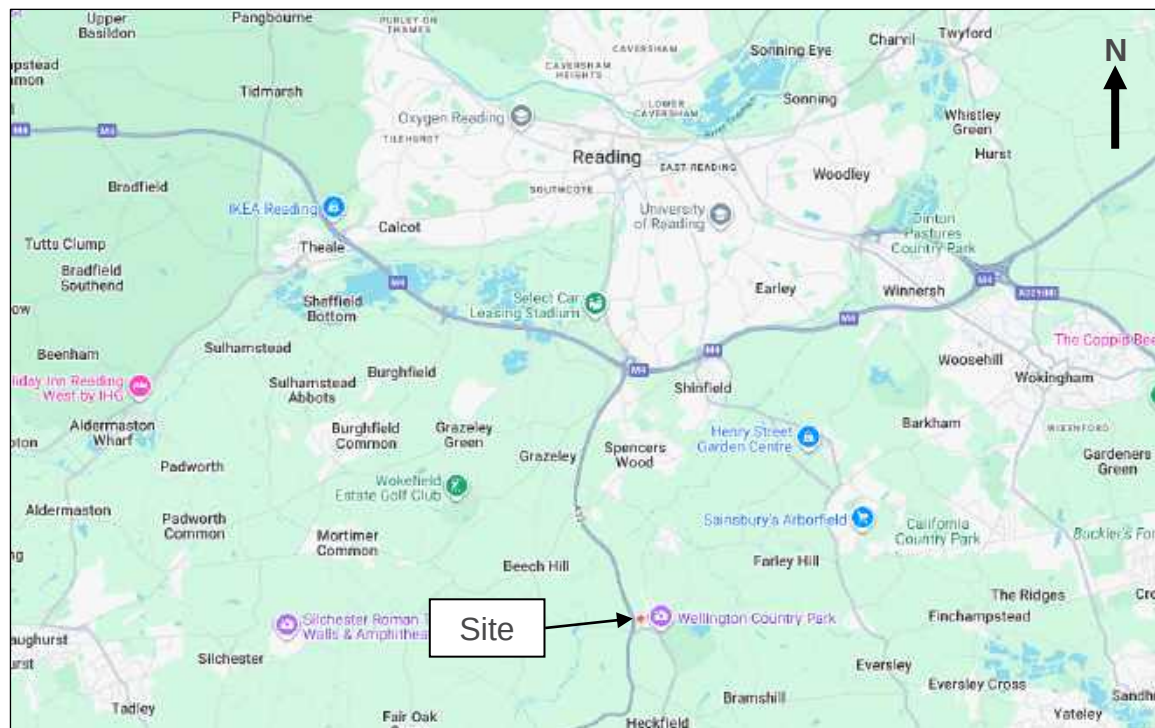
7 Limitations

1. The opinions and recommendations presented in this report are based on legislation, guidance, and best practice current at the time of issue. New Geosciences Limited does not accept any liability whatsoever for the consequences of any future change in legislation, guidance and best practice, which may render the conclusions and recommendations made in this report inadequate. Following issue of the report, New Geosciences Limited has no obligation to advise the Client or any other party of such changes or their potential repercussions.
2. Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third-party data used.
3. The assessment of ecology, flood risk, and archaeology are beyond the scope of this report, as is the identification of asbestos and invasive species.
4. This report has been prepared for the sole use of the named Client and in relation to the Site as identified. This report shall not be relied upon or transferred to any other party without the written consent of New Geosciences Limited. Any such party relies upon the report at its own risk.

FIGURES

FIGURE 1

SITE LOCATION PLAN



Site Location Plan

© Google

FIGURE 2

EXPLORATORY HOLE LOCATION PLAN



KEY:	
	= SOAKAWAY TEST
	= TRIAL PIT

Project:	Land North of Sun Lane, Riseley, Berkshire
Drawing:	Exploratory Hole Location Plan
Client:	3West Group Limited
Drawing No.:	NGL25052/02/REV002
Date:	February 2026
Scale:	Not to scale



New Geosciences Limited
Rhode Hawkins House, Mount Dinham Court,
Exeter, Devon, EX4 4FR
07966 469835
info@newgeosciences.co.uk
www.newgeosciences.co.uk

Base plan supplied by client

APPENDICES

APPENDIX A

TRIAL PIT LOGS

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample	AMAL - Amalgamated sample	B - Bulk disturbed sample
BLK - Block sample	C - Core sample	CBR - CBR test sample
D - Disturbed sample	ES - Environmental sample	EW - Environmental water sample
G - Gas sample	J - Jar sample	L - Liner sample
TW - Pushed thin wall sample	U - Undisturbed sample	UT - Undisturbed thin wall sample
W - Water sample		

IN-SITU TESTS

HV - Hand shear vane	HV(r) - Hand shear vane residual	PID - Photo ionisation detector
PP - Hand penetrometer	SPT - Standard penetration test	SPT(C) - SPT using cone

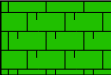
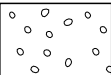
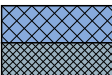
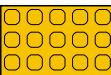
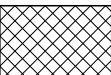
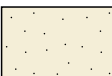
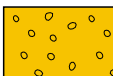
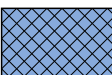
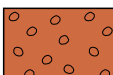
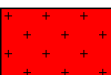
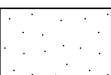
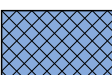
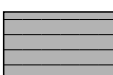
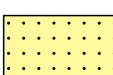
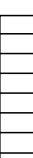
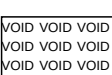
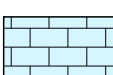
GROUNDWATER

 Groundwater strike	 Groundwater rest level
--	--

ROTARY CORE DETAILS

TCR - Total core recovery (%)	SCR - Solid core recovery (%)	RQD - Rock quality designation (%)
FI - Fracture index	NI - Non-intact core	AZCL - Assumed zone of core loss

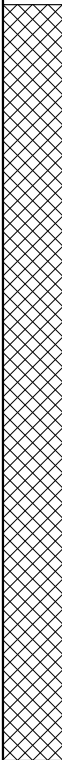
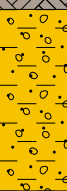
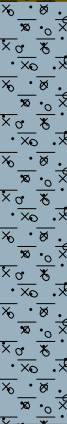
LEGEND

 Topsoil	 Clay	 Chalk	 Sand backfill
 Peat	 Silt	 Breccia	 Gravel backfill
 Made ground [cohesive]	 Sand	 Conglomerate	 Arisings
 Concrete	 Gravel	 Metamorphic	 Bentonite
 Wood	 Cobbles	 Igneous	 Concrete
 Brick	 Boulders		 Grout
 Bituminous material	 Mudstone		 Plain pipe
 Gypsum	 Siltstone		
 Coal	 Sandstone		 Slotted pipe
 Void	 Limestone		

Trial Pit

Hole Type TP	Easting 471961.00	Northing 163112.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata	
		Depth (m)	Type/ Ref	Results			Legend	Description
						(0.50)		TOPSOIL: Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint.
						0.50		Light brown sandy slightly clayey/ silty fine to coarse subangular to subrounded GRAVEL of flint. Sand is fine to medium. [River Terrace Deposits]
						(0.60)		
						1.10		Hard orangish brown mottled light grey slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of flint. [London Clay Formation] ...stiff (1.60m)
						1.40		
						2.50		End of Trial Pit at 2.50m

Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.50m SOAKJCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Trial Pit

New Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471961.00	163112.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.50m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.00m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

New Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471961.00	163112.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth. 2. No groundwater encountered.	0.00 - 2.50m SOAK JCB 3CX Generally stable L = 2.00m W = 0.50m	Tim New
Checked By: Tim New Approved By: Tim New		

Trial Pit

Hole Type TP	Easting 471961.00	Northing 163112.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	
Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire		

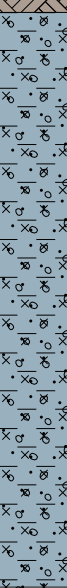


Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.50m SOAKJCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Trial Pit

Hole Type TP	Easting 471855.00	Northing 163035.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
						(0.50)		TOPSOIL: Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint.	
						0.50		Firm orangish brown mottled light grey slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of flint. [London Clay Formation]	
						(1.90)		...stiff, no gravel (1.10m)	
						2.40		End of Trial Pit at 2.40m	

Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.40m SOAKJCB 3CX Generally stable L = 2.10m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

New Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471855.00	163035.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.40m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.10m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471855.00	163035.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth. 2. No groundwater encountered.	0.00 - 2.40m SOAKJCB 3CX Generally stable L = 2.10m W = 0.50m	Tim New
Checked By: Tim New Approved By: Tim New		

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471855.00	163035.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		

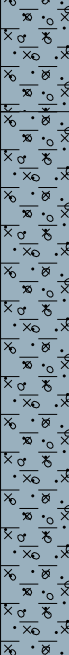


Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.40m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.10m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Hole Type TP	Easting 472004.00	Northing 163057.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (thickness) (m)	Strata						
		Depth (m)	Type/ Ref	Results			Legend	Description					
						(0.20)		TOPSOIL: Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint.					
						0.20		Firm light brown sandy gravelly silty CLAY. Sand is fine to medium. Gravel is fine to coarse subangular to subrounded of flint. [River Terrace Deposits]					
						(0.40)		Stiff orangish brown mottled light grey slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of flint. [London Clay Formation]					
						0.60							
						(1.80)							
						2.40		End of Trial Pit at 2.40m					

Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.40m SOAK JCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Trial Pit

New Geosciences Limited	Hole Type TP	Easting 472004.00	Northing 163057.00	Ground Level (m)	Scale 1:25
	Project Name Land North of Sun Lane, Riseley	Project No. NGL25052		Start Date 05/12/2025	End Date 05/12/2025
	Client 3West Developments Limited	Consultant New Geosciences Limited		Contractor TM Coates JCB Hire	



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.40m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.00m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	472004.00	163057.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.40m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.00m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

ST03
PHOTO PAGE

Hole Type TP	Easting 472004.00	Northing 163057.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	
Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire		



Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.40m SOAKJCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Trial Pit

Hole Type TP	Easting 471943.00	Northing 162953.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
						(0.40)		TOPSOIL: Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint.	
						0.40		Stiff orangish brown mottled light grey sandy silty CLAY. Sand is fine to coarse. [London Clay Formation]	0.5
						(2.10)			1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0
						2.50	End of Trial Pit at 2.50m		

Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.50m SOAKJCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471943.00	162953.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.50m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.00m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

ST04
PHOTO PAGE

Hole Type TP	Easting 471943.00	Northing 162953.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------



Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 2.50m SOAKJCB 3CX Generally stable L = 2.00m W = 0.50m	Logger Tim New
---	--	-------------------

Checked By: Tim New Approved By: Tim New

Trial Pit

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471943.00	162953.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		

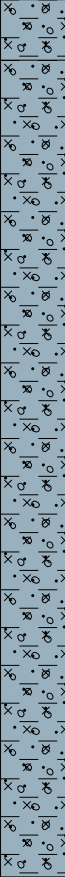
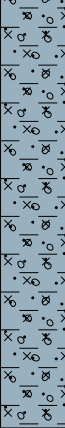


Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 2.50m SOAKJCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.00m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Hole Type TP	Easting 471970.00	Northing 163030.00	Ground Level (m)	Scale 1:25
Project Name Land North of Sun Lane, Riseley	Project No. NGL25052	Start Date 05/12/2025	End Date 05/12/2025	

Client 3West Developments Limited	Consultant New Geosciences Limited	Contractor TM Coates JCB Hire
--------------------------------------	---------------------------------------	----------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata			
		Depth (m)	Type/ Ref	Results			Legend	Description		
						(0.20)		TOPSOIL: Dark brown sandy gravelly silty clay with frequent rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of mixed lithologies including flint.		
						0.20		Firm light brown sandy gravelly silty CLAY. Sand is fine to medium. Gravel is fine to coarse subangular to subrounded of flint. [River Terrace Deposits] Stiff orangish brown mottled light grey slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of flint. [London Clay Formation] ...no gravel (1.10m)		
						(0.20)				
						0.40				
						(2.70)				
						3.10		End of Trial Pit at 3.10m		

Remarks 1. Trial pit terminated at target depth. 2. No groundwater encountered.	Method, Plant, Stability, Dimensions 0.00 - 3.10m TP JCB 3CX Generally stable L = 2.30m W = 0.50m	Logger Tim New
	Checked By: Tim New Approved By: Tim New	

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471970.00	163030.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 3.10m TP JCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.30m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471970.00	163030.00		1:25
	Project Name	Project No.		Start Date	End Date
	Land North of Sun Lane, Riseley		NGL25052	05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth.	0.00 - 3.10m TP JCB 3CX	Tim New
2. No groundwater encountered.	Generally stable	
	L = 2.30m	
	W = 0.50m	
Checked By: Tim New Approved By: Tim New		

Trial Pit

Geosciences Limited	Hole Type	Easting	Northing	Ground Level (m)	Scale
	TP	471970.00	163030.00		1:25
	Project Name	Project No.		Start Date	End Date
Land North of Sun Lane, Riseley		NGL25052		05/12/2025	05/12/2025
Client	Consultant		Contractor		
3West Developments Limited	New Geosciences Limited		TM Coates JCB Hire		



Remarks	Method, Plant, Stability, Dimensions	Logger
1. Trial pit terminated at target depth. 2. No groundwater encountered.	0.00 - 3.10m TP JCB 3CX Generally stable L = 2.30m W = 0.50m	Tim New
Checked By: Tim New Approved By: Tim New		

APPENDIX B

SOAKAWAY TESTING RESULTS

Soakaway Test Results**In Accordance with BRE Digest 365**

Project: Land North of Sun Lane, Riseley, Berkshire
 Project No.: NGL25052
 Client: 3West Developments Limited
 Date: 05/12/2025
 Test Location: ST01
 Test No. Test 1

Trial Pit Dimensions

Length (m): 2.00
 Width (m): 0.50
 Depth (m): 2.50
 Start Water Level (m): 1.07
 Total Depth of Test 1.43

Calculation

$$f = (V_{p75-25}) / (a_{s50} \times t_{p75-25})$$

$$V_{p75-25} = 0.715 \text{ m}^3$$

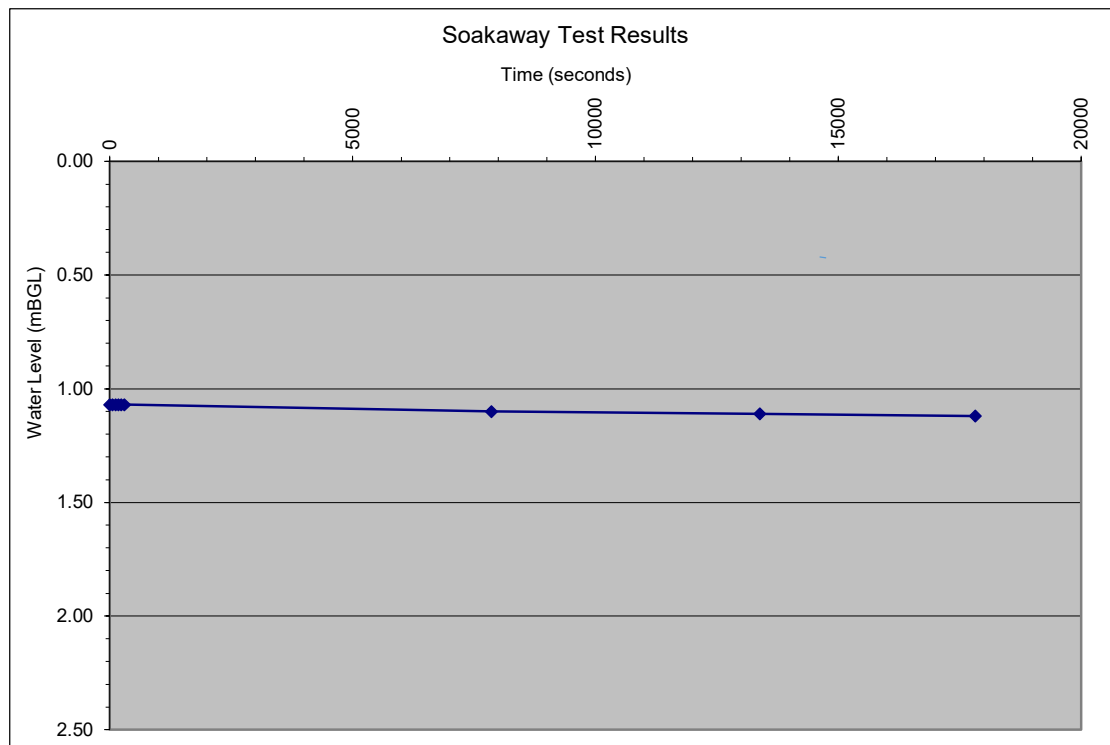
$$a_{s50} = 4.575 \text{ m}^2$$

$$t_{p75-25} = - \text{ s}$$

$$f = \text{\#VALUE! m/s}$$

Field Results

Time (seconds)	Water Level (mBGL)
0	1.07
60	1.07
120	1.07
180	1.07
240	1.07
300	1.07
7860	1.10
13380	1.11
17820	1.12



Soakaway Test Results**In Accordance with BRE Digest 365**

Project: Land North of Sun Lane, Riseley, Berkshire
 Project No.: NGL25052
 Client: 3West Developments Limited
 Date: 05/12/2025
 Test Location: ST02
 Test No. Test 1

Trial Pit Dimensions

Length (m): 2.10
 Width (m): 0.50
 Depth (m): 2.40
 Start Water Level (m): 1.05
 Total Depth of Test 1.35

Calculation

$$f = (V_{p75-25}) / (a_{s50} \times t_{p75-25})$$

$$V_{p75-25} = 0.709 \text{ m}^3$$

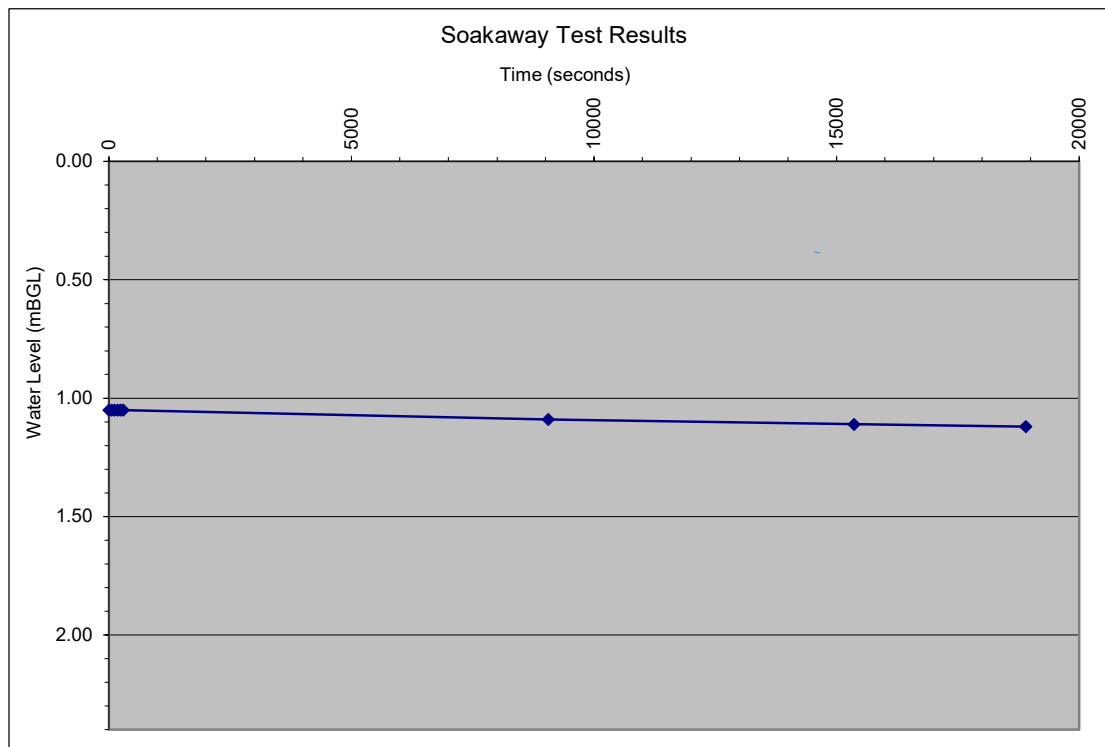
$$a_{s50} = 4.56 \text{ m}^2$$

$$t_{p75-25} = - \text{ s}$$

$$f = \text{\#VALUE! m/s}$$

Field Results

Time (seconds)	Water Level (mBGL)
0	1.05
60	1.05
120	1.05
180	1.05
240	1.05
300	1.05
9060	1.09
15360	1.11
18900	1.12



Soakaway Test Results**In Accordance with BRE Digest 365**

Project: Land North of Sun Lane, Riseley, Berkshire
 Project No.: NGL25052
 Client: 3West Developments Limited
 Date: 05/12/2025
 Test Location: ST03
 Test No. Test 1

Trial Pit Dimensions

Length (m): 2.00
 Width (m): 0.50
 Depth (m): 2.40
 Start Water Level (m): 1.12
 Total Depth of Test 1.28

Calculation

$$f = (V_{p75-25}) / (a_{s50} \times t_{p75-25})$$

$$V_{p75-25} = 0.640 \text{ m}^3$$

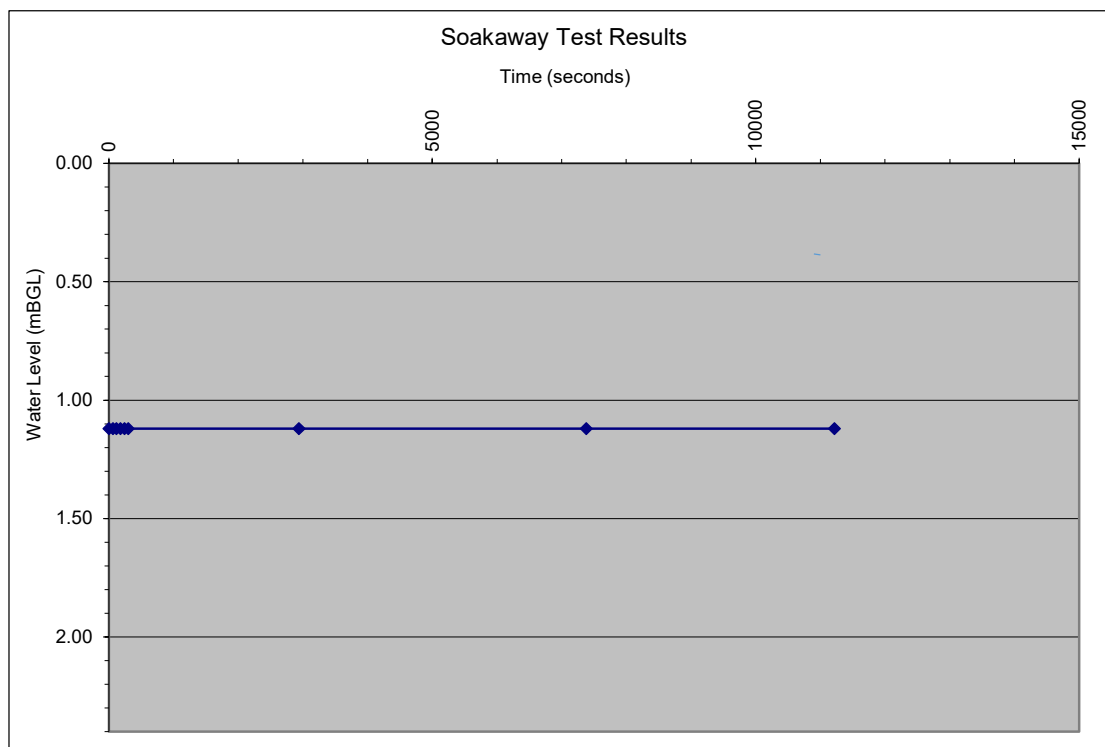
$$a_{s50} = 4.2 \text{ m}^2$$

$$t_{p75-25} = - \text{ s}$$

$$f = \#VALUE! \text{ m/s}$$

Field Results

Time (seconds)	Water Level (mBGL)
0	1.12
60	1.12
120	1.12
180	1.12
240	1.12
300	1.12
2940	1.12
7380	1.12
11220	1.12



Soakaway Test Results**In Accordance with BRE Digest 365**

Project: Land North of Sun Lane, Riseley, Berkshire
 Project No.: NGL25052
 Client: 3West Developments Limited
 Date: 05/12/2025
 Test Location: ST04
 Test No. Test 1

Trial Pit Dimensions

Length (m): 2.00
 Width (m): 0.50
 Depth (m): 2.50
 Start Water Level (m): 1.12
 Total Depth of Test 1.38

Calculation

$$f = (V_{p75-25}) / (a_{s50} \times t_{p75-25})$$

$$V_{p75-25} = 0.690 \text{ m}^3$$

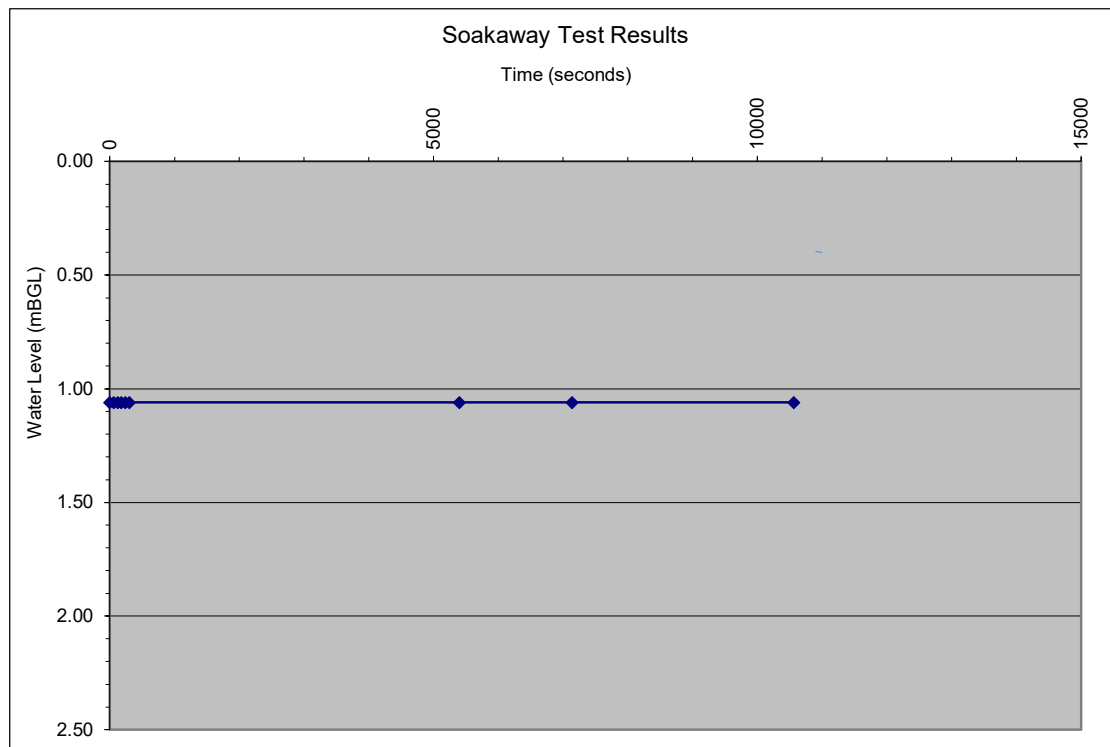
$$a_{s50} = 4.45 \text{ m}^2$$

$$t_{p75-25} = - \text{ s}$$

$$f = \text{\#VALUE! m/s}$$

Field Results

Time (seconds)	Water Level (mBGL)
0	1.06
60	1.06
120	1.06
180	1.06
240	1.06
300	1.06
5400	1.06
7140	1.06
10560	1.06



Appendix C Thames Water Records

AWP Exeter LLP
ADA HOUSE, PYNES HILL
EXETER
EX2 5TU

Search address supplied 4
Yeosfield
Riseley
Reading
RG7 1SG

Your reference 2047 Riseley Reading

Our reference ALS/ALS Standard/2025_5257979

Search date 25 November 2025

Keeping you up-to-date

Notification of price changes

We're changing our report prices from 4th June 2025. The price will increase by 3.5% based on Retail Price Index (RPI).

Find our new prices on our website thameswater.co.uk/property-searches

Any Questions? We're happy to talk through the changes with you – give our Property Searches team a call on 0800 009 4540 .



Thames Water Utilities Ltd
Property Searches,
Clearwater Court, Vastern Road, Reading RG1 8DB



property.searches@thameswater.co.uk
thameswater.co.uk/propertysearches



0800 009 4540

Search address supplied: 4, Yeosfield, Riseley, Reading, RG7 1SG

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position and size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the contact details below:

Thames Water Utilities Ltd
Property Searches
Clearwater Court
Vastern Road
Reading
RG1 8DB

Email: property.searches@thameswater.co.uk

Web: thameswater.co.uk/propertysearches

Waste Water Services

Please provide a copy extract from the public sewer map.

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority. Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners. The public sewer map relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus. The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information 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.

Clean Water Services

Please provide a copy extract from the public water main map.

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies. For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.



For your guidance:

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

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. You can do this by emailing customer.feedback@thameswater.co.uk with the email subject header 'Enquiry – TWOSA', along with details of the request.

If you have any questions regarding sewer connections, budget estimates, diversions or building over issues please direct them to our service desk which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

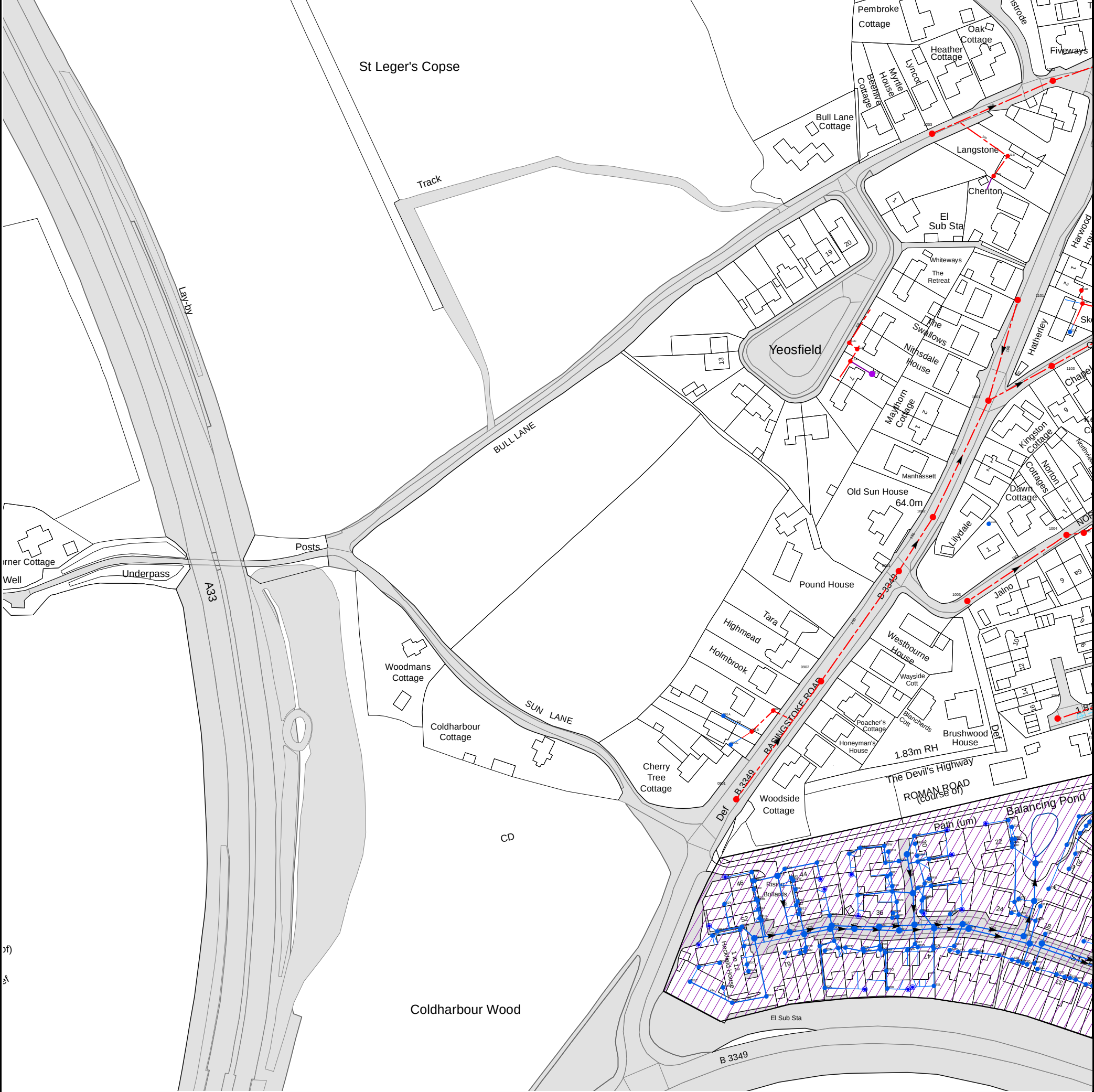
Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 471926,163029

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
0901	68.25	66.67
091C	n/a	n/a
182X	n/a	n/a
181F	n/a	n/a
181B	n/a	n/a
182Y	n/a	n/a
182Z	n/a	n/a
183A	n/a	n/a
181T	n/a	n/a
183B	n/a	n/a
183C	n/a	n/a
181X	n/a	n/a
183D	n/a	n/a
181G	n/a	n/a
183E	n/a	n/a
181C	n/a	n/a
183P	n/a	n/a
181W	n/a	n/a
182C	n/a	n/a
181I	n/a	n/a
183L	n/a	n/a
182D	n/a	n/a
182E	n/a	n/a
182F	n/a	n/a
182G	n/a	n/a
181Y	n/a	n/a
182H	n/a	n/a
182I	n/a	n/a
181Z	n/a	n/a
182J	n/a	n/a
083Z	n/a	n/a
083X	n/a	n/a
084C	n/a	n/a
082I	n/a	n/a
084A	n/a	n/a
082J	n/a	n/a
082K	n/a	n/a
081J	n/a	n/a
084J	n/a	n/a
084P	n/a	n/a
084K	n/a	n/a
084O	n/a	n/a
084N	n/a	n/a
084I	n/a	n/a
181O	n/a	n/a
181V	n/a	n/a
183K	n/a	n/a
181H	n/a	n/a
183H	n/a	n/a
181U	n/a	n/a
183M	n/a	n/a
182T	n/a	n/a
083U	n/a	n/a
083V	n/a	n/a
083W	n/a	n/a
082H	n/a	n/a
0001	n/a	n/a
083Y	n/a	n/a
081K	n/a	n/a
084F	n/a	n/a
084L	n/a	n/a
084M	n/a	n/a
084H	n/a	n/a
084G	n/a	n/a
1003	64.35	62.77
191F	n/a	n/a
181Q	n/a	n/a
183G	n/a	n/a
181S	n/a	n/a
183F	n/a	n/a
181R	n/a	n/a
1901	63.7	62.38
183N	n/a	n/a
182U	n/a	n/a
191G	n/a	n/a
1950	63.58	62.07
182V	n/a	n/a
191B	n/a	n/a
191C	n/a	n/a
011C	n/a	n/a
011A	n/a	n/a
011B	n/a	n/a
011D	n/a	n/a
1203	62.11	60.72
1002	64.13	62.48
1001	63.11	61.2
101A	n/a	n/a
111D	n/a	n/a
121B	n/a	n/a
1101	62.83	62.19
1103	62.29	60.38

Manhole Reference	Manhole Cover Level	Manhole Invert Level
1004	62.95	62.22
111A	n/a	n/a
111B	n/a	n/a
111C	n/a	n/a
1005	63.19	n/a
082P	n/a	n/a
081B	n/a	n/a
083L	n/a	n/a
082Q	n/a	n/a
081H	n/a	n/a
083O	n/a	n/a
082R	n/a	n/a
083P	n/a	n/a
083Q	n/a	n/a
083R	n/a	n/a
084B	n/a	n/a
082M	n/a	n/a
082L	n/a	n/a
081C	n/a	n/a
083S	n/a	n/a
081I	n/a	n/a
083T	n/a	n/a
082S	n/a	n/a
084Q	n/a	n/a
181K	n/a	n/a
181M	n/a	n/a
181L	n/a	n/a
181A	n/a	n/a
182W	n/a	n/a
181P	n/a	n/a
181N	n/a	n/a
1202	60.95	59.63
081G	n/a	n/a
083C	n/a	n/a
081U	n/a	n/a
083G	n/a	n/a
083I	n/a	n/a
081Z	n/a	n/a
081T	n/a	n/a
083J	n/a	n/a
082Y	n/a	n/a
081Y	n/a	n/a
083B	n/a	n/a
081S	n/a	n/a
081X	n/a	n/a
081R	n/a	n/a
083D	n/a	n/a
081P	n/a	n/a
081W	n/a	n/a
081V	n/a	n/a
081E	n/a	n/a
083E	n/a	n/a
083H	n/a	n/a
083F	n/a	n/a
091B	n/a	n/a
091A	n/a	n/a
091D	n/a	n/a
0902	66.43	64.78
082V	n/a	n/a
082X	n/a	n/a
083K	n/a	n/a
082W	n/a	n/a
981C	n/a	n/a
081N	n/a	n/a
981B	n/a	n/a
081O	n/a	n/a
082U	n/a	n/a
082C	n/a	n/a
082A	n/a	n/a
082D	n/a	n/a
082N	n/a	n/a
082O	n/a	n/a
082E	n/a	n/a
081M	n/a	n/a
084D	n/a	n/a
084E	n/a	n/a
081D	n/a	n/a
981A	n/a	n/a
082F	n/a	n/a
081F	n/a	n/a
082Z	n/a	n/a
081L	n/a	n/a
081A	n/a	n/a
083A	n/a	n/a
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.		



Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

	Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Storm Sewer
	Sludge Sewer
	Foul Trunk Sewer
	Surface Trunk Sewer
	Combined Trunk Sewer
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Vacuum
	Thames Water Proposed
	Vent Pipe
	Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer
	Culverted Watercourse
	Proposed
	Decommissioned Sewer
	Content of this drainage network is currently unknown
	Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve		Meter
	Dam Chase		Vent
	Fitting		

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Ancillary		Drop Pipe
	Control Valve		Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Inlet		Outfall
	Undefined End		

Other Symbols

Symbols used on maps which do not fall under other general categories.

	Change of Characteristic Indicator		Public / Private Pumping Station
	Invert Level		Summit

Areas

Lines denoting areas of underground surveys, etc.

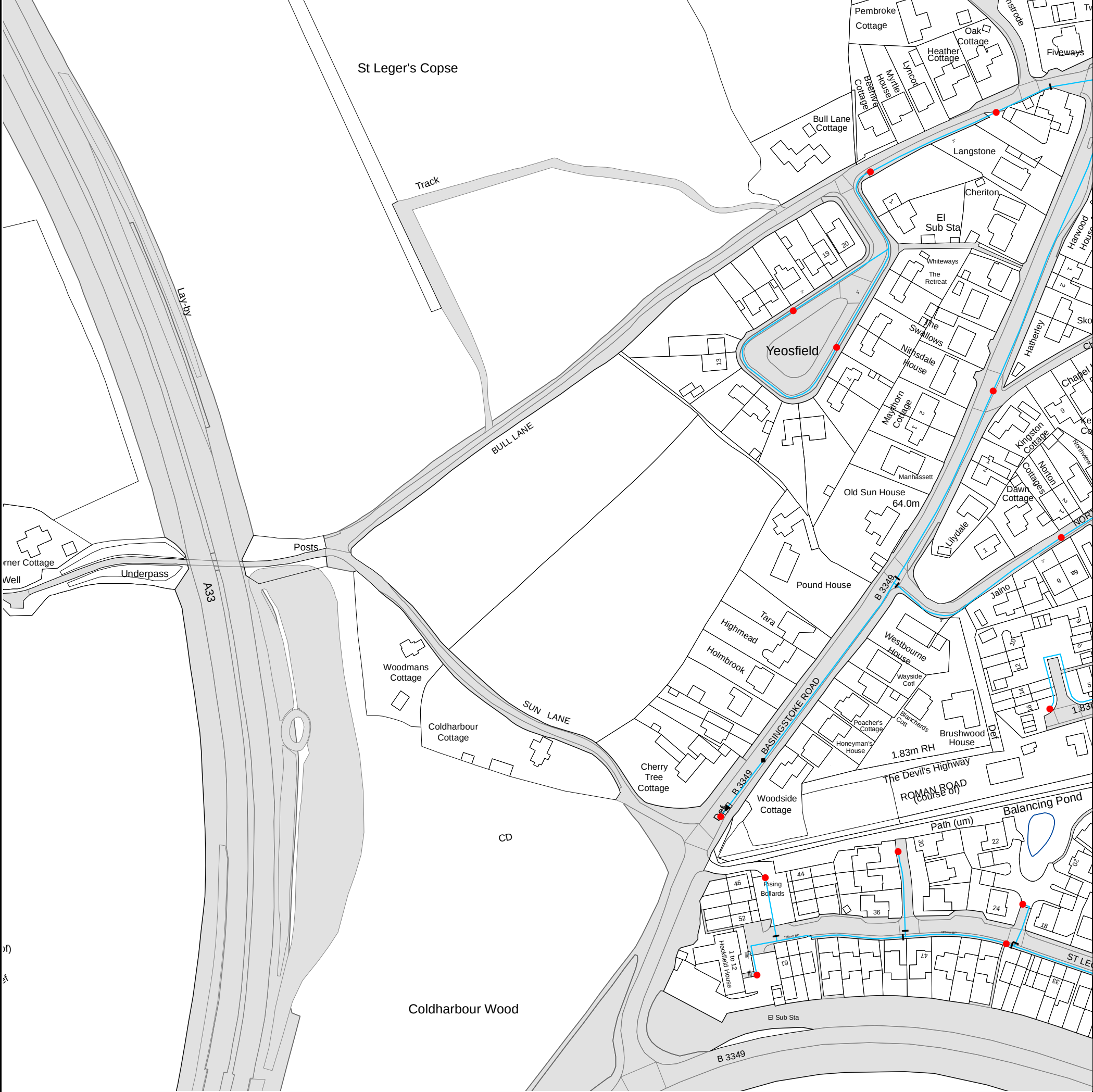
	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement	Ducts may contain high voltage cables. Please check with Thames Water.
	Conduit Bridge	
	Subway	
	Tunnel	

5) 'na' or '0' on a manhole indicates that data is unavailable.

6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 471926, 163029.

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.



Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

- 4"** **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 16"** **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 3" SUPPLY** **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 3" FIRE** **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 3" METERED** **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger
- Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

Other Water Pipes (Not Operated or Maintained by Thames Water)

- Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
- Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Appendix D Proposed Masterplan



Appendix E Causeway FLOW Reporting



Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Depth (m)
Basin	0.638	5.00	100.000	1.300
Outfall			98.000	1.300

Links (Input)

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1	Basin	Outfall	40.000	0.060	98.700	96.700	2.000	20.0	500	5.63	50.0

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	2 year (l/s)	3.8
Summer CV	0.903	Drain Down Time (mins)	240	30 year (l/s)	8.4
Winter CV	0.903	Additional Storage (m³/ha)	0.0	100 year (l/s)	10.6
Analysis Speed	Normal	Check Discharge Rate(s)	✓	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	35	0	0
30	35	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	FEH	Growth Factor 100 year	2.48
Positively Drained Area (ha)	1.275	Betterment (%)	0
SAAR (mm)	718	QMed	3.8
Host	1	QBar	4.3
BFIHost	0.519	Q 2 year (l/s)	3.8
Region	6	Q 30 year (l/s)	8.4
QBar/QMed conversion factor	1.136	Q 100 year (l/s)	10.6
Growth Factor 2 year	0.88		



Node Basin Online Orifice Control

Flap Valve	x	Design Depth (m)	1.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	3.8		
Invert Level (m)	98.700	Diameter (m)	0.043		

Node Basin Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	98.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	415.0	0.0	1.300	753.0	0.0



Results for 2 year +35% CC Critical Storm Duration. Lowest mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
600 minute winter	Basin	570	99.061	0.361	15.0	166.7972	0.0000	SURCHARGED
600 minute winter	Outfall	570	96.713	0.013	2.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
600 minute winter	Basin	1	Outfall	2.2	0.246	0.007	0.3686	80.2



Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	Basin	472	99.447	0.747	38.6	382.6269	0.0000	SURCHARGED
480 minute winter	Outfall	472	96.716	0.016	3.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	Basin	1	Outfall	3.3	0.283	0.010	0.4667	105.4

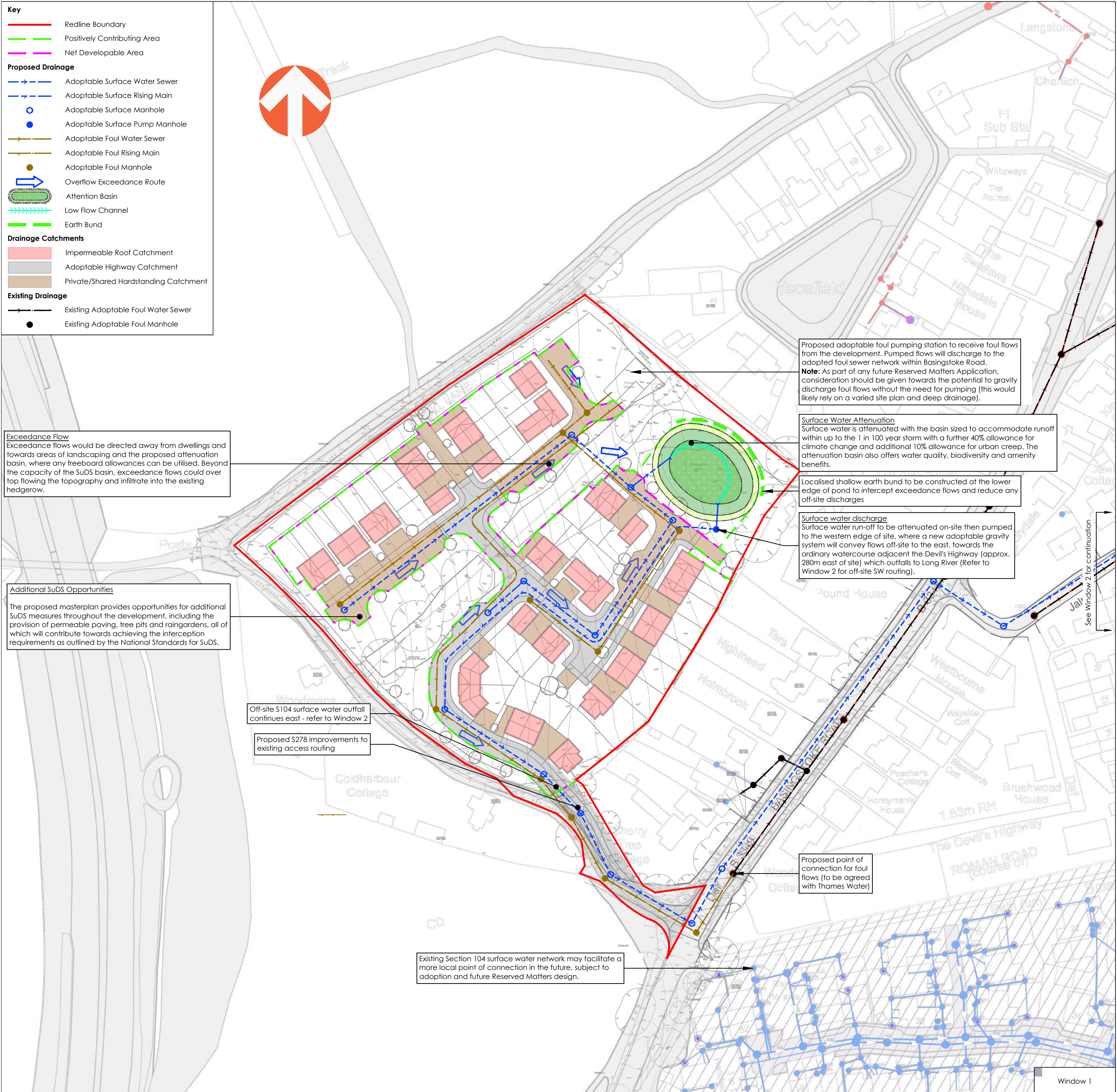


Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.88%

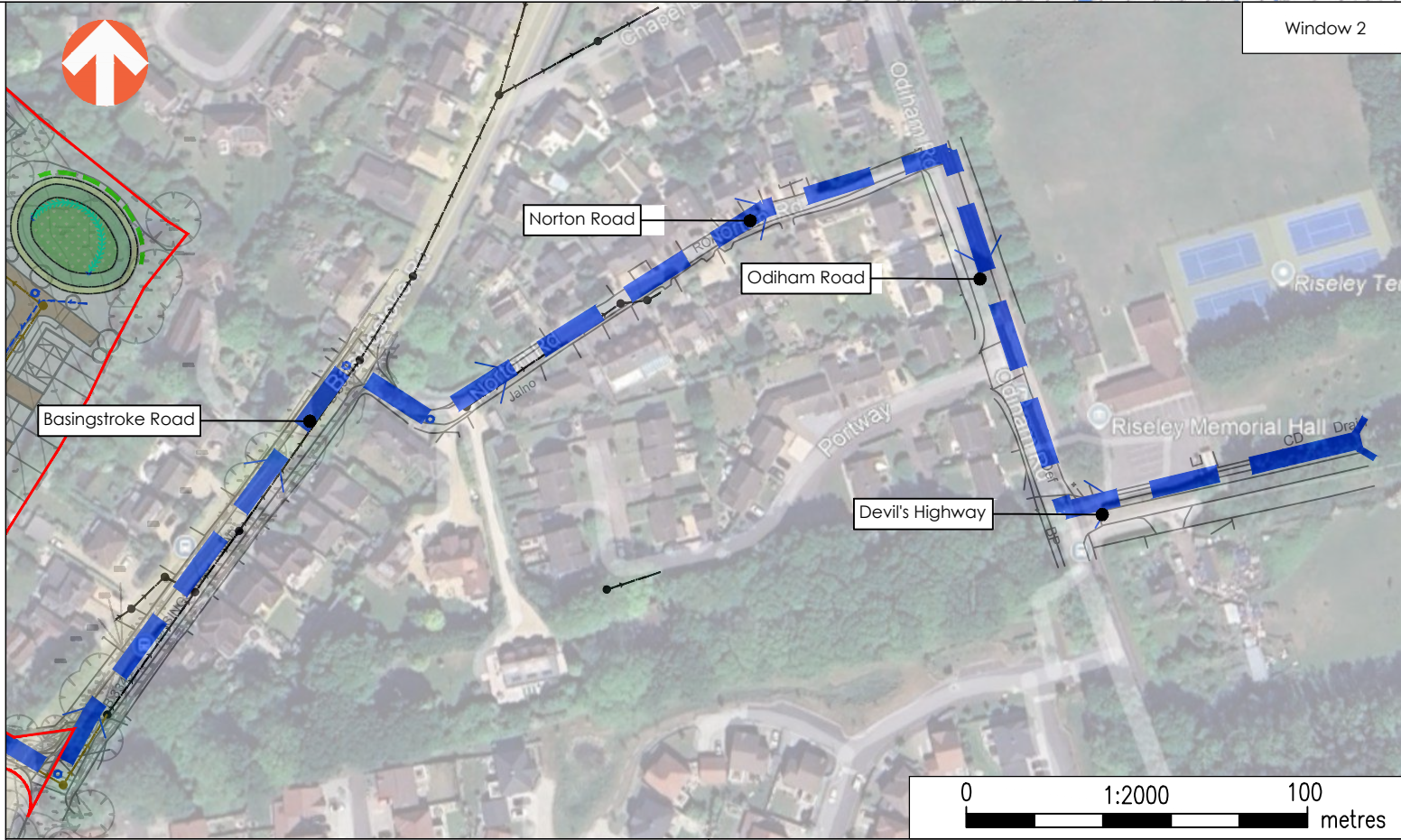
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	Basin	585	99.641	0.941	41.0	505.3821	0.0000	SURCHARGED
600 minute winter	Outfall	585	96.717	0.017	3.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	Basin	1	Outfall	3.7	0.295	0.011	0.5035	136.2

Appendix F Preliminary Drainage Layout



- Notes**
- The proposed development has been assessed in line with the NPPF, to allow the planning application to be progressed and to show that the development can be undertaken in an acceptable manner from a flood risk perspective.
 - The proposed development is located within Flood Zone 1 and is not susceptible to flooding from pluvial, groundwater, infrastructure or artificial sources.
 - To ensure the development is safe throughout its lifetime, the surface water strategy accounts for runoff in up to the 100 year return period.
 - The strategy also safeguards against the upper end allowances for climate change (40%), providing betterment over undeveloped conditions, where the rate and volume of runoff would continue to increase due to climate change.
 - All in-situ soakaway tests failed to reach 75% of the effective depth. The underlying geology has a low permeability and is not suitable for the use of soakaway drainage.
 - The use of SuDS attenuation will enable storm water runoff to be stored on site and discharged to an off-site ordinary watercourse at the 2 year greenfield rate, with allowances for climate change and urban creep.
 - The receiving watercourse lies within the estates wider land ownership, offering sufficient riparian rights to enable a discharge. Opportunities for a more local discharge to an adopted surface water network may become available and should be considered as part of any future Reserved Matters Application.
 - The use of SuDS will be considered throughout the proposed development, with opportunities for areas of permeable paving, raingardens, tree pits, filter strips and swales. Any future design must ensure the interception requirements from the National Standards for SuDS are being achieved and that the scheme provides water quality enhancement, alongside biodiversity and amenity value.
 - During exceedance events runoff will be directed towards areas of open green space and the proposed SuDS basin, where any freeboard allowances will be utilised. Beyond the capacity of the attenuation basin, flows will be impounded by a shallow landscape bund which offers further overland attenuation before flows continue off-site as existing.[CY1]
 - Foul flows generated by the development will be discharged to the head of Thames Waters adopted foul sewer network within Basingstoke Road.[CY2]



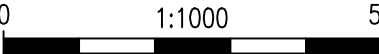
Area Summary Schedule			
Total Site Area	1,981 ha		
Positively Contributing Area	1,275 ha		
Net Developable Area (NDA)	1,149 ha		
Impermeable Catchment (assumed 60% of NDA)	0,638 ha (+10% Urban creep to dwellings)		
Drainage Catchment (for modelling)	0,638 ha (inc. 10%...)		

Pre-Development (Greenfield) Runoff			
The greenfield runoff rates have been assessed for the 'Positively Contributing Area' using the FEH Method.			
Existing Greenfield	Runoff Rates		
Return Period	Greenfield Rate	Allowable	
Discharge Rates			
2yr	3.8 (l/s)	3.8 (l/s)	
30yr	8.4 (l/s)	3.8 (l/s)	
100yr	10.6 (l/s)	3.8 (l/s)	

The National Standards for SuDS advise that peak flows from new developments should be limited to the sites 2 year greenfield rate, or 3 l/s/ha, whichever is greatest. For this site, 3 l/s/ha would result in an allowable discharge of 3.8 l/s. This is equal to the greenfield 2 year rate and therefore the maximum allowable discharge rate is 3.8 l/s (2yr rate).

Attenuation Summary	
Attenuation Basin	
Ownership	Private (Management Company)
Catchment	0.638 ha (incl. 10% Urban Creep)
Depth	1.3m (inc. 300mm Freeboard)
Basin Slope	1:3
Internal Hydraulic Controls	43mm Orifice @ IL

Total 100yr+40% CC Volume	505.3m ³
Total 2r+35% CC Peak Discharge	2.2 l/s
Total 30yr+35% CC Peak Discharge	3.3 l/s
Total 100yr+40% CC Peak Discharge	3.7 l/s

						PROJECT: LAND NORTH OF SUN LANE, RISELEY, READING		
A	23.01.2026	INITIAL ISSUE	ZC	CPY	CPY	TITLE: PRELIMINARY DRAINAGE LAYOUT		
REV	DATE	DESCRIPTION	BY	CHK	APD			
CLIENT:  3West Group WELLINGTON								
DRAWING STATUS: PLANNING APPLICATION						PROJECT No: 2047		
						DRAWING No: 01-PDL-1001		REV: A
						SCALE @ A2: metres		



AWP (Exeter) LLP, Ada House, Pynes Hill, Exeter, EX2 5TU
Tel: 01392 409007 Web: www.awpexeter.com