

DRAINAGE STATEMENT

Trinity Hall, South Street, Reading, RG1 4QU



Prepared for: Hanslink Ltd
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Document History

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Hertfordshire | Oxfordshire | Cambridgeshire | Bristol
postbox@glanvillegroup.com | www.glanvillegroup.com



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1.0 Introduction

- 1.1 This Drainage Statement has been prepared by Glanville Consultants on behalf of Hanslink Ltd to accompany a full planning application for the proposed redevelopment, for residential purposes, of Trinity Hall, South Street, Reading, RG1 4QU ('the site').
- 1.2 In 2022, the site was subject to a planning application (Application No. 220385) submitted to Reading Borough Council (RBC) for the "Demolition of existing buildings and erection of 22 apartments".
- 1.3 The application was refused, with a Decision Notice issued on 23 June 2023 and was dismissed on Appeal on 18 July 2024 (Appeal Ref. APP/E0345/W/23/3334782). The Decision Notice included 11 Reasons for Refusal, reason 8 relating to drainage which was as follows:

*"The proposed development, in the absence of an acceptable **landscaping-led Sustainable Drainage Strategy**, has failed to provide for sustainable drainage, with consequent harm in respect of attenuating localised flooding, achieving ecological benefits, securing linkages to the existing Green Network and integration with tree planting and landscaping. Therefore, the proposal is contrary to Policy EN18 (Flooding and Sustainable Drainage Systems) of the Reading Borough Local Plan (2019) and the Sustainable Design and Construction SPD (2019)."*

- 1.4 The Appeal Inspector considered surface water drainage in paragraphs 43 - 45 of the Appeal Decision advising:

"43. Policy EN18 of the Local Plan states that all major developments, such as the appeal scheme, must incorporate sustainable drainage systems (SuDS) as appropriate. Wherever possible, SuDS provision should maximise ecological benefits, incorporate tree planting and landscaping and avoid damage to existing significant trees. The supporting text states that virtually any new development should be able to deliver SuDS due to the wide variety of techniques available.

44. No detailed investigations have been made in relation to possible SuDS methods and there would be extensive areas of hard surfacing at the site. Nonetheless, there is also no compelling evidence to indicate that the site would be unable to accommodate SuDS to at least some degree. If such systems are not possible at the site, no objection to connecting to the mains sewer system has been made from Thames Water. Moreover, there would be some areas of planting, which while not large, provides some scope to contribute to any system. A condition requiring further details, including looking through a hierarchy of systems could be imposed on any permission.

45. Therefore, the proposed development would make appropriate provision for surface water drainage, with regard to effects on flooding and biodiversity. It would be in accordance with Policy EN18 of the Local Plan and the Sustainable Design and Construction SPD where they seek to ensure flood risk is not increased and ecological benefits maximised where possible."

- 1.5 The purpose of this document is to demonstrate suitable drainage strategies for disposal of surface and foul water generated by the development proposals, taking into consideration local infrastructure and site constraints, and ensuring that a landscape-led surface water drainage system is proposed.

- 1.6 This report has been prepared in accordance with the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) to the NPPF. The report has also been prepared with reference to information provided or published by the following bodies:
- Ordnance Survey;
 - British Geological Survey;
 - CIRIA;
 - Cranfield University;
 - Department for Environment, Food and Rural Affairs;
 - Natural England; and
 - Environment Agency
- 1.7 The report demonstrates that suitable arrangements for the disposal of surface and foul water generated by the proposed development is capable of being provided, without increasing flood risk either on-site or elsewhere.



2.0 Existing Site Characteristics & Development Proposals

Site Description

- 2.1 The site is located within the centre of Reading at the intersection of Sidmouth Street and South Street. The approximate centre of the site is located at Ordnance Survey National Grid reference SU 72054 73146 and the postcode is RG1 4QU. A site location plan has been included in Appendix A.
- 2.2 The site is roughly rectangular in shape extending to approximately 0.09ha in area, comprising an existing building, formerly containing 24 bedspaces of student accommodation along with a warden's flat and office. Access is gained via a bellmouth junction from South Street and serves an existing off-street parking area comprising 11 car parking spaces and a detached garage.
- 2.3 The site is bound to the north by apartments that are nearing completion with parking, to the east by Sidmouth Street, to the south by South Street, and to the west by Livery Close.

Topographical Context

- 2.4 A topographical survey carried out by KND Surveys Ltd in November 2021 indicates that the site and surrounding area generally falls from south-west to north-east. Due to the topography, the highest point of the site is located within the south-western corner at 41.36m Above Ordnance Datum (AOD), whilst the lowest point is located within the north-eastern corner at 39.94m AOD. A copy of the topographical survey has been included in Appendix B.

Geological Context

- 2.5 Geological mapping published by the British Geological Survey (BGS) indicate that the site is underlain by a bedrock geology of Seaford and Newhaven Chalk Formation. There are also superficial deposits of Taplow Gravel Member comprised of sand and gravel located in the southwestern corner of the site.
- 2.6 Soils mapping provided by Cranfield University on behalf of DEFRA shows that the site falls on HOST class 6 soils described as freely draining, slightly acid, loamy soils. Extracts of the geological mapping are included in Appendix C.

Hydrological and Hydrogeological Context

- 2.7 The closest watercourse designated as a main river by the Environment Agency is the River Kennet, located approximately 150m to the north of the site.
- 2.8 The EA defines Source Protection Zones (SPZs) for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The SPZs mapping indicates that the site is not located within an SPZ.
- 2.9 A Nitrate Vulnerable Zone (NVZ) is a conservative designation for areas of land that drain to nitrate polluted waters or waters which could become polluted by nitrates. The NVZs mapping indicates that the site is not located within an NVZ.

- 2.10 The EA defines Drinking Water Safeguard Zones (SgZs) and Drinking Water Protected Areas (DWPAs) for water sources used for public drinking water supply. SgZs define areas where additional pollution control measures are needed to avoid deterioration in water quality. DWPAs are areas where water sources need to be protected to prevent pollution. The mapping indicates that the site is located within a surface water SgZ, but not a groundwater SgZ or a DWPA.
- 2.11 The bedrock Aquifer Designation Map published by the EA indicates that the chalk underlying the site is associated with a Principal Aquifer. Principal Aquifers are layers of rock or drift deposits that have intergranular and / or fracture permeability that provides a high level of water storage. They may support water supply and / or river base flow on a strategic scale.
- 2.12 The superficial deposit Aquifer Designation Map published by the EA indicates that the Taplow Gravel Member located to the south-west of the site is associated with a Secondary A Aquifer. Secondary A Aquifers are layers of rock or drift deposits that have intergranular and/or fracture permeability that provide a high level of water storage but can only support local water supplies.
- 2.13 Groundwater vulnerability mapping published by the EA indicates the risk to groundwater from any potential pollutants on site reaching the underlying aquifer. The mapping indicates the majority of the site to be at 'medium-low' risk of pollutant migration, with a small area to the south-west of the site indicated to be at 'medium-high' risk of pollutant migration, with the entirety of the site also shown to be within an area of soluble rock risks, associated with the underlying chalk.
- 2.14 It should be noted that none of the points listed above are considered a significant issue that would prevent the site from being redeveloped for residential purposes.

Existing Drainage Infrastructure

- 2.15 Thames Water is the incumbent sewerage undertaker for the locality. The Thames Water sewer records for the area surrounding the site have been obtained and are provided in Appendix D. The records show public foul water sewers located within Sidmouth Street and South Street to east and south of the site, with a 150mm diameter foul water sewer crossing the site to the north. Public surface water sewerage infrastructure is also indicated with two separate 300mm and 525mm diameter sewers located within Sidmouth Street.
- 2.16 Further review of the topographical survey for the site reveals there are a number of gullies, downpipes, drainage ducts and inspection chambers surrounding the existing building. Due to the presence of the public surface and foul water sewerage infrastructure within both Sidmouth Street and South Street, it is likely that the site benefits from existing connections to the local sewerage network.
- 2.17 Therefore to investigate the drainage infrastructure located within the site, a CCTV drainage survey was undertaken by Clearview Surveys Ltd in May 2024. The CCTV drainage layout produced following completion of the survey has been included in Appendix E.
- 2.18 The survey revealed that the site is served by separate surface and foul water drainage systems, with the associated drains ranging from 100mm – 150mm in diameter.
- 2.19 Surface water run-off generated by the impermeable surfaces across the site is collected by the various gullies and rainwater downpipes, prior to being conveyed and discharged by the surface water drains to the 525mm diameter public surface water sewer located within Sidmouth Street.

- 2.20 Foul water generated by the existing building is collected and conveyed by the foul water drains prior to being discharged to the public foul water sewer located within South Street.

Development Proposals

- 2.21 The proposals comprise the redevelopment of the existing site to provide 18 residential units in a housing mix as follows:

- seven x 1-bedroom flats;
- ten x 2-bedroom flats; and
- one x 3-bedroom flat.

- 2.22 The proposed floor plans are provided at Appendix F.



3.0 Surface Water Drainage

- 3.1 This section outlines the drainage strategy for the disposal of surface water from the proposed development. This strategy has been developed in-line with all relevant national and local standards and guidance, including the CIRIA SuDS Manual, Defra's Non-Statutory Technical Standards for Sustainable Drainage Systems, Technical Guidance to the NPPF, and Part H of the Building Regulations.

Design Guidance and Hierarchy

- 3.2 The PPG recommends that the priority should be given to the use of Sustainable Drainage Systems (SuDS) as they are designed to control surface water run-off where it falls and mimic natural drainage characteristics as closely as possible. SuDS also provide opportunities for the following:
- Reducing the causes and impacts of flooding;
 - Removing pollutants from urban run-off at source; and
 - Combining water management and green space with benefits of amenity, recreation and wildlife.
- 3.3 SuDS encompass a wide range of drainage techniques intended to minimise the rate of discharge, volume and environmental impact of run-off and include:
- Pervious pavements;
 - Swales and basins;
 - Green roof and rainwater reuse;
 - Infiltration trenches and filter drains; and
 - Ponds and wetlands.
- 3.4 When used across a site these techniques control the rate of discharge, attenuate flow, provide storage and improve water quality. The combination of techniques that are appropriate will be dependent upon ground conditions, topography, and other site-specific characteristics.
- 3.5 The Building Regulations part H3 stipulates that rainwater from roofs and paved areas is carried away from surface to discharge to one of the following, listed in order of priority:
- a) An adequate soakaway or some other adequate infiltration systems; where that is not practical;
 - b) A watercourse; or, where that is not practical
 - c) A sewer.

Outfall and Site Constraints

- 3.6 As discussed in Section 2, Thames Water's sewer records obtained for the area surrounding the site confirmed that two separate 300mm and 525mm diameter public surface water sewers are located within Sidmouth Street to the east of the site.
- 3.7 Further investigation into the existing drainage infrastructure serving the site revealed that surface water run-off generated by the impermeable surfaces across the site is collected by the various gullies and rainwater downpipes, prior to being conveyed and discharged by surface water drains to the 525mm diameter public surface water sewer located within Sidmouth Street.

- 3.8 Given the site benefits from an existing connection to the public surface water sewerage network, the proposed surface water drainage strategy will reuse the sewer connection, whilst providing significant betterment to the existing situation.

Proposed Surface Water Drainage Strategy

- 3.9 Further review of the CCTV drainage layout reveals that manhole ref. mh6 located to the north-east of the site which provides the existing point of connection to the public surface water sewer has recorded cover and invert levels of 40.08m and 38.65m AOD, respectively.
- 3.10 Given the manhole is in excess of 1m in depth and is located towards the low point of the site, a gravity-based surface drainage system can be utilised for the proposed development, whilst ensuring sufficient cover is provided for the upstream drainage infrastructure.
- 3.11 Following the sites aforementioned planning refusal and comments provided within the Decision Notice related to surface water drainage by RBC acting in its role as Local Planning Authority (LPA), and the Appeal Inspector's comments in paragraphs 43 - 45 of the Appeal decision, the proposed surface water drainage strategy utilises a landscape led sustainable drainage design.
- 3.12 The strategy employs a combination of gullies, channel drains and conventional piped networks to convey surface water run-off generated by the new building to rain gardens / shallow swales / water butts which will attenuate and slow flows prior to being discharged via the existing connection to the public surface water sewer within Sidmouth Street, as illustrated on drawing 8220157-C-1200 included in Appendix G, and in the Landscape Strategy Plan 8493/LSP Revision C by Aspect Landscape Planning provided in Appendix H.
- 3.13 The proposed surface water drainage strategy provides significant betterment to the existing situation by reducing the impermeable area of the site from pre-development at 875m² to post-development at 487m², providing an overall reduction of 388m² (44%). Therefore, significantly reducing the surface water run-off volume being discharged from the site into the local sewerage network.
- 3.14 In addition, the current drainage system serving the site freely discharges into the public surface water sewer, whereas through the inclusion of rain gardens / shallow swales / water butts, the surface water run-off will be slowed significantly compared to the existing situation prior to reaching the outfall.
- 3.15 The surface water drainage strategy has also been developed in tandem with the landscape proposals, whereby the rain gardens / shallow swales / water butts will consist of a mix of decorative pebbles and gravels interspersed with planting to create attractive SuDS features, as detailed within the proposed landscape strategy provided in Appendix H, whilst providing opportunities for the use of rainwater harvesting through the inclusion of water butts across the site.

Exceedance Flow Routes

- 3.16 Any surface water flooding caused by system failure or during extreme events above the design event which may overload the system will be routed away from the development proposals and follow the existing topography of the site flowing onto Sidmouth Street to the east, as per the existing situation. Exceedance flow routes from the proposed surface water system are shown on the drawing included in Appendix I.

4.0 Pollution Control Measures & Maintenance

Pollution Control Measures

- 4.1 Pollution control measures are designed to minimise the transmittal of any pollutants collected by run-off flowing over hard paved areas to the receiving infiltration features.
- 4.2 Table 26.2 of 'The SuDS Manual' indicates the minimum treatment indices for contributing pollution hazards for different land use classifications. The treatment indices for a residential roof, such as within the development, are shown in Table 1, below.
- 4.3 The pollution indices in Table 1 should be compared with mitigation indices in Table 2 and the following formulae applied.

$$\text{Total SuDS Mitigation} \geq \text{Pollution Hazards Index (for each contaminant type)}$$

$$\text{Total SuDS Mitigation Index} = \text{1st Stage Mitigation Index} + 0.5 \text{ (2nd Stage Mitigation Index)}$$

Table 1: Pollution Hazard Indices for Different Land Use Classifications (Table 26.2, CIRIA C753)

Land Use	Pollution Hazard Level	Pollution Hazard Indices		
		Total Suspended Solids (TSS)	Metals	Hydro-carbons
Residential roofs	Very Low	0.2	0.2	0.05

- 4.4 Run-off generated by the proposed development will be collected by the gullies, channel drains and conventional piped networks and conveyed to the rain gardens / shallow swales / water butts located within the site prior to being discharge via the existing connection to the 525mm diameter public surface water sewer located within Sidmouth Street. The SuDS mitigation indices from Tables 26.3 of CIRIA C753 are included in Table 2 and demonstrate that the proposed SuDS features mitigation indices exceed the pollution hazard indices.

Table 2: SuDS Mitigation Indices (Table 26.3, CIRIA C753)

SuDS Component	SuDS Mitigation Indices Table (CIRIA C753)	Mitigation Indices		
		Total Suspended Solids (TSS)	Metals	Hydro-carbons
Rain Garden / Swale	26.3	0.5	0.6	0.6

- 4.5 This assessment therefore confirms that the proposed surface water drainage system provides sufficient mitigation for the pollution risks from all on-site land uses. As such, an adequate level of treatment can be provided for the proposed development.

Maintenance and Responsibilities

- 4.6 All new surface water infrastructure will be designed and constructed in accordance with the Building Regulations and best practice, as appropriate. The surface water sewerage network could be managed by a private management company or offered to Thame Water for adoption, and as such, will also be designed in accordance with Appendix C of the Sewerage Sector Guidance. All surface water drainage infrastructure located within private areas will be the responsibility of the property owner.
- 4.7 Thames Water as local sewerage undertaker does not currently adopt SuDS features, and as such, the proposed rain gardens / shallow swales / water butts will remain under private ownership and be maintained by a private management company.
- 4.8 Suitable adoption and maintenance regimes for the proposed systems, incorporating advice from the system manufacturers and installers, will be developed by the site management company and implemented prior to occupation of the development. A summary of typical items to be included is given in Table 3.

Table 3: Typical Maintenance Schedule

Drainage Feature	Maintenance Activity	Frequency
Rain garden / swale / water butts	Remove any litter / debris.	Monthly, or as required
	Cut grass and manage other vegetation, reseeding areas of poor growth as appropriate.	Monthly, or as required
	Inspect and clear inlets and outlets of any blockages.	Annually
	Inspect for evidence of uneven surfacing or erosion and relevel/repair as appropriate.	Annually
Hardstanding areas	Sweep regularly to prevent silt being washed off the surface.	Regularly, as required
Gullies	Inspect and remove any sediment / debris	Annually
Conventional pipe network	CCTV survey to inspect pipework for blockages, root ingress, displaced joints, or other signs of differential settlement.	Annually, or as required
	Clear pipework for blockages, root ingress, repair joints or repair other signs of differential settlement.	Occasional (as required)
	Replacement of pipe system.	As required

**Refer to manufacturer's guidance for specific maintenance and instructions*

5.0 Foul Water drainage

- 5.1 This section of the report identifies the existing foul water drainage infrastructure on and in the vicinity of the site in order to assess the impact of the development on the existing infrastructure, and how the development could dispose of foul water.

Existing Foul Water Drainage Infrastructure

- 5.2 As discussed in Section 2, Thames Water's sewer records obtained for the area surrounding the site confirmed that public foul water sewers are located within Sidmouth Street and South Street to the east and south of the site respectively.
- 5.3 Further investigation into the existing drainage infrastructure serving the site revealed that foul water generated by the existing building is collected and conveyed by foul water drains prior to being discharged to the public foul water sewer located within South Street.
- 5.4 It should also be noted that the Thames Water records show only those sewers that are known to be maintained by Thames Water, other privately owned sewers may be present in the vicinity of the site that are not shown on public records.

Diversions, Easements, and Protection

- 5.5 Given that no Thames Water foul sewerage infrastructure is located within the site, it is not anticipated that any diversions will be necessary to facilitate the proposed development.

Proposed Foul Water Drainage Strategy

- 5.6 Whilst the site benefits from an existing foul water drainage system, the majority of the drainage system will be removed to facilitate the redevelopment of the site excluding the connection to the public foul water sewer within South Street.
- 5.7 Following further review of the Thames Water sewer records, manhole 0102 located downstream of the site's existing connection point has recorded cover and invert levels of 40.92m and 38.01m AOD, respectively, providing a total depth of 2.91m.
- 5.8 Comparing the recorded drainage levels to the topographical survey reveals that manhole 0102 is located at similar elevation to the site. On this basis, it is reasonable to conclude that the existing point of connection to the public foul water sewer in excess of 2m bgl and that a gravity-based foul drainage system can be utilised for the development, whilst ensuring sufficient cover is provided for the upstream drainage infrastructure.
- 5.9 On this basis, foul water generated by the development proposals will be conveyed by a conventional piped network prior to being discharged via the existing connection to the public foul water sewer within South Street. The proposed foul water drainage strategy is illustrated on drawing 8220157-C-1200 included in Appendix G.
- 5.10 To inform the proposed drainage strategy, levels information has been taken from both the topographical survey for the site and Thames Water sewer records. At the appropriate design stage, levels at the existing point of connection to the public foul water sewer will be verified prior to confirming the exact outfall location and connection method.

Maintenance and Adoption

- 5.11 All new foul water infrastructure constructed to serve the site will be designed in accordance with Building Regulations Part H, Appendix C of the Sewerage Sector Guidance, and current best practices as appropriate. The foul water network serving the site will be designed to be adoptable either by Thames Water or a private management company, with precise adoption regimes developed as part of the detailed design stage. All foul water drainage serving a single property and located within private areas will be the responsibility of the property owner.
- 5.12 A typical management and maintenance plan detailing the type and frequency of maintenance activities for the drainage features is provided within table 4. A more detailed plan incorporating advice from system manufacturers and installers will be developed at the appropriate design stage.

Table 4: Conventional Pipe Network – Typical Maintenance Activities

Schedule	Maintenance Activity	Inspection Frequency
Regular Maintenance	CCTV survey to inspect pipework for blockages, root ingress, displaced joints, or other signs of differential settlement.	Annually, or as required.
Remedial Actions	Clear pipework of blockages, root ingress, repair joints or repair other signs of differential settlement.	As required.
	Replacement of pipe system.	As required.

6.0 Summary & Conclusions

Summary

- 6.1 This Drainage Statement has been prepared by Glanville Consultants on behalf of Hanslink Ltd to accompany a full planning application for the proposed redevelopment, for residential purposes, of Trinity Hall, South Street, Reading, RG1 4QU.
- 6.2 The development proposals comprise the redevelopment of the existing site to provide 18 residential units.
- 6.3 Sewer records obtained for the area surrounding the site showed public foul water sewers located within Sidmouth Street and South Street to east and south of the site respectively, with two separate 300mm and 525mm diameter public surface water sewers located within Sidmouth Street.
- 6.4 CCTV drainage survey undertaken by Clearview Surveys Ltd revealed that the site is served by separate surface and foul water drainage systems. Surface water run-off generated by the site is discharged to the 525mm diameter public surface water sewer located within Sidmouth Street, whereas foul water is discharged to the public foul water sewer located within South Street.
- 6.5 Given the site benefits from existing connections to both the local foul and surface water sewerage networks, the proposed drainage strategies will reuse the existing connections and discharge surface and foul water generated by the development proposals via new gravity-based drainage systems.
- 6.6 Following comments provided within the Decision Notice related to surface water drainage and the Appeal Inspector's comments in paragraphs 43 - 45 of the Appeal Decision, the proposed surface water drainage strategy utilises a landscape led sustainable drainage design whereby surface water run-off will be attenuated through rain gardens / shallow swales / water butts prior to being discharged to the public surface water sewer within Sidmouth Street.
- 6.7 The proposed surface water drainage strategy provides significant betterment to the existing situation through the overall reduction in impermeable area by 388m² (44%), subsequently reducing the surface water run-off volumes and run-off flows.
- 6.8 Foul water generated by the proposed development will be conveyed by a conventional piped network prior to being discharged via the existing connection to the public foul water sewer within South Street.

Conclusions

- 6.9 In conclusion, this report has demonstrated that the proposed development:
- is in accordance with the National Planning Policy Framework;
 - will employ a surface water drainage strategy based on the principles of sustainable drainage;
 - will not increase flood risk elsewhere; and
 - will employ a suitable foul water drainage strategy.
- 6.10 On this basis, the proposals are considered to fully comply with National, Regional and Local Planning Policy.

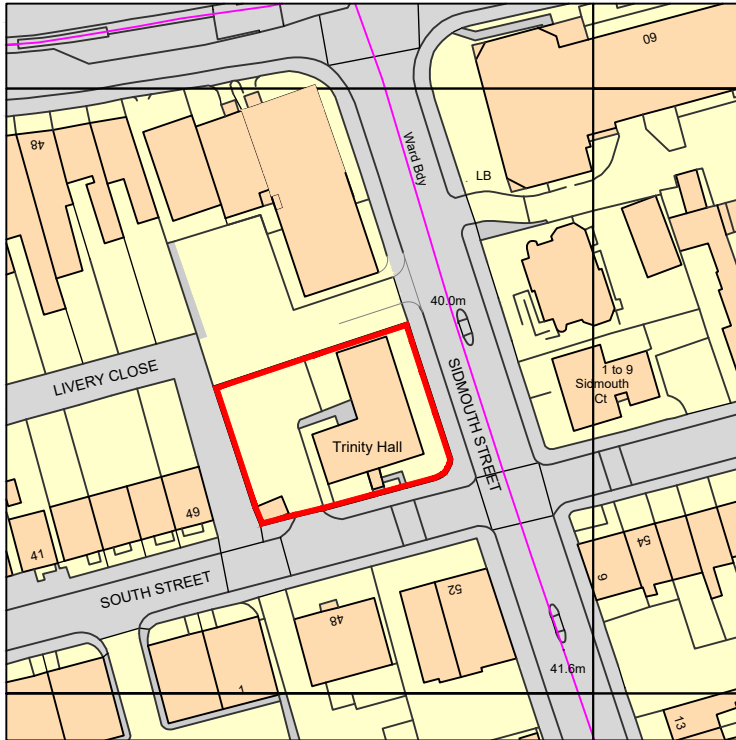
Appendices





Appendix A

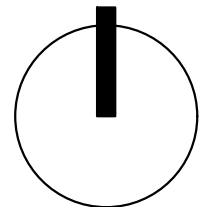
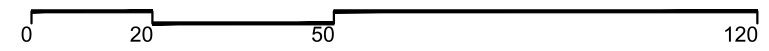
Site Location Plan



Ordnance Survey, (c) Crown Copyright 2021. All rights reserved. Licence number 100022432

location plan

Scale 1:1250 @ A4

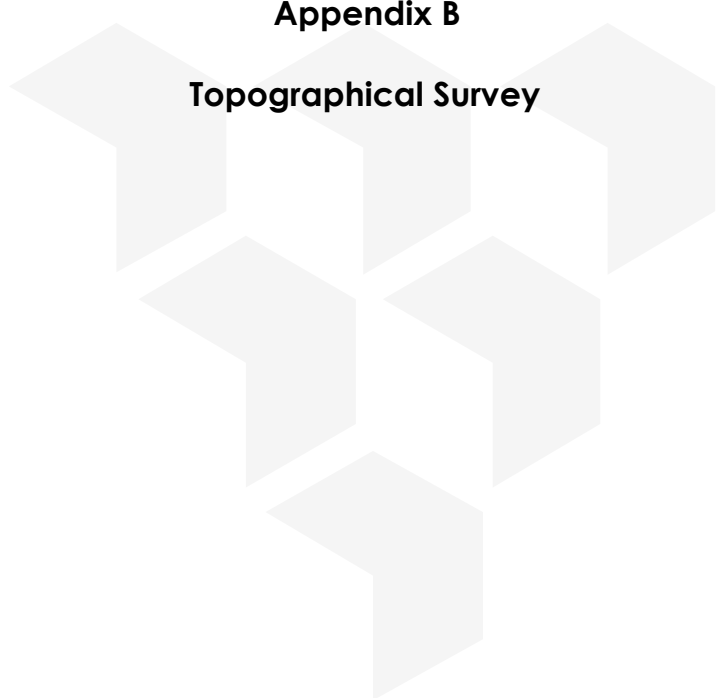


Hanslink Ltd

www.hanslink.co.uk

m.07984 671939

project	drawing title	scale	date	drawn by	checked by
Trinity Hall, South Street Reading RG1 4QU	Location Plan	1:1250@A4	21.06.2024	cbf	
client	drawing status	job no.	drawing no.	revision	
Hanslink Ltd	PLANNING	H17	AC01	A	



Appendix B

Topographical Survey



NOTES

1. LEVELS ARE RELATED TO CHANGHAI SURVEY BY GPS OBSERVATION.

2. SURVEYED INFORMATION IS THE PROPERTY OF CHANGHAI SURVEY.

3. OPEN, UNPAID, HEIGHTS AND SPACES OF THE SURVEYED AREA.

4. ALL INFORMATION IS TO BE USED AS A GUIDE ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

5. OFFICIAL INFORMATION IN THE AREA.

6. APPROXIMATE WEIR, WEIR FOR ACCESS.

7. CONVEYANCE LEVEL.

8. ALL INFORMATION IS TO BE USED AS A GUIDE ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

9. ALL INFORMATION IS TO BE USED AS A GUIDE ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

10. ALL INFORMATION IS TO BE USED AS A GUIDE ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

STATION CO-ORDINATES

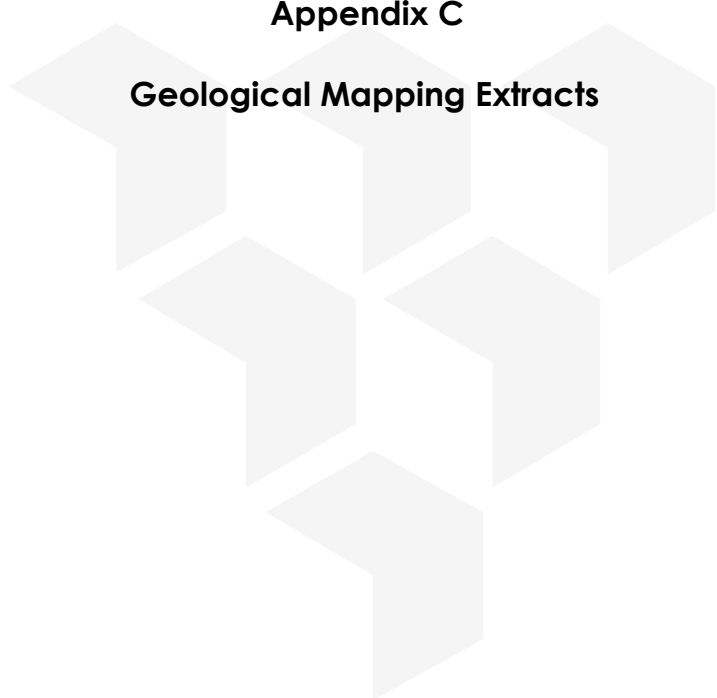
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STATION CO-ORDINATES

STATION	Easting	Northing
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STATION CO-ORDINATES

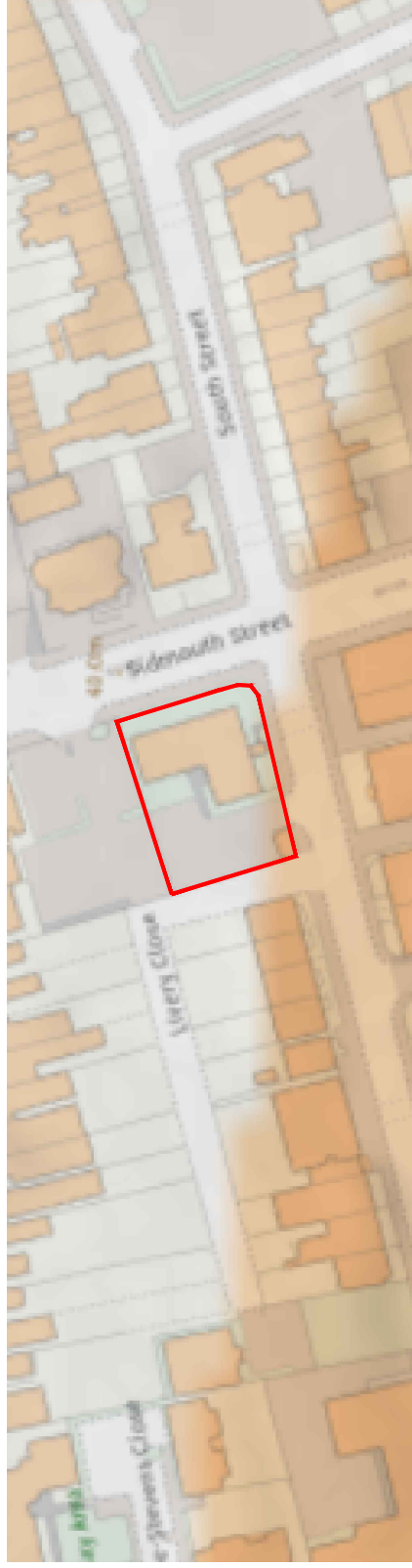
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Appendix C

Geological Mapping Extracts

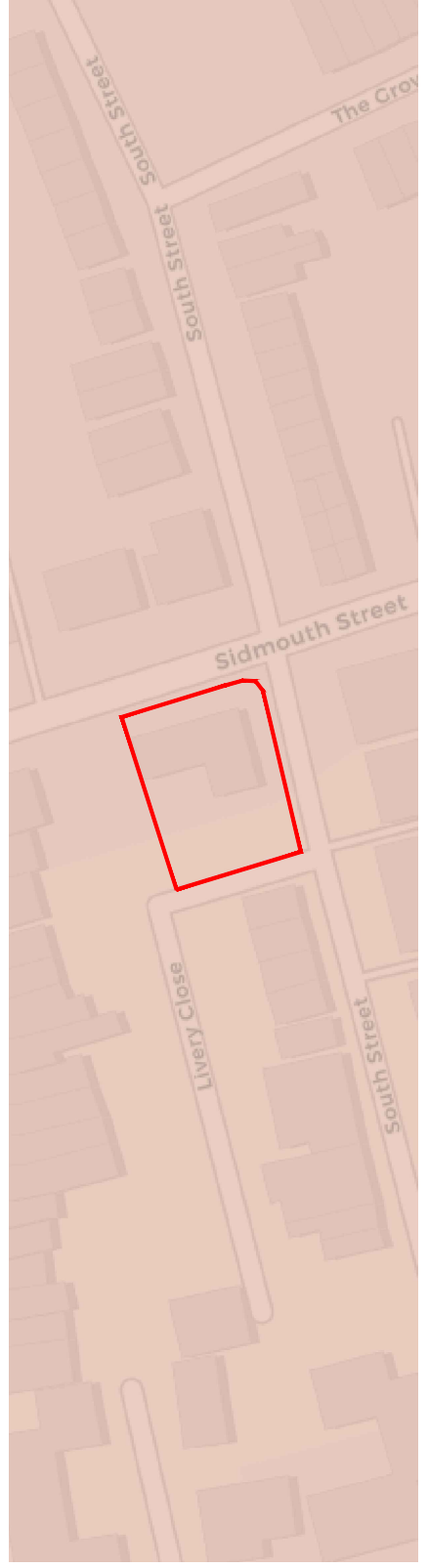
Superficial Geology



Bedrock Geology



Soilscape Mapping



NOTES

1. This drawing is to be read in conjunction with all other documents and specifications
2. Dimensions not to be scaled from drawing

KEY

- | | | | |
|----------------------------|---|---|---|
| Approximate Site Boundary |  |  |  |
| <u>Superficial Geology</u> | Tatlow Gravel Member - Sand and Gravel | Bedrock Geology | Soilscape Mapping |
| | Seaford and Newhaven Chalk Formation - Chalk | | HOST Soil Class & Freely Draining Slightly Acid Loamy Soils |



Appendix D

Thames Water Sewer Records

Asset Location Search



Property Searches

Glanville Consultants
Unit 3
Boundary Way
HEMEL HEMPSTEAD
HP2 7TE

Search address supplied Xy= 472006 , 173127
Trinity Hall
South Street
Reading
RG1 4QU

Your reference 8220157

Our reference ALS/ALS Standard/2024_4988308

Search date 14 May 2024

Notification of Price Changes

From 1st April 2024 Thames Water Property Searches will be increasing the prices of its CON29DW Residential and Commercial searches along with the Asset Location Search. Costs will rise in line with RPI as per previous years, which is sat at 6%.

Customers will be emailed with the new prices by February 28th 2024.

Any orders received with a higher payment prior to the 1st April 2024 will be non-refundable. For further details on the price increase please visit our website at www.thameswater-propertysearches.co.uk.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW



searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk



0800 009 4540

Search address supplied: Xy= 472006 , 173127, Trinity Hall, South Street, Reading, RG1 4QU

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, 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 address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk

Web: www.thameswater-propertysearches.co.uk

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.

This report 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.

Payment for this Search

A charge will be added to your suppliers account.

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. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational 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 operational issues or 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 200 m and the centre of the map is located at OS coordinates 472056,173151

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 (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 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
9254	38.69	n/a
911P	n/a	n/a
911O	n/a	n/a
911M	n/a	n/a
911N	n/a	n/a
911I	39.46	n/a
911J	39.12	n/a
9203	38.9	n/a
011F	39.058	36.163
011E	37.17	n/a
011A	39.952	37.946
011D	38.99	n/a
011G	39.24	n/a
0253	38.89	37.2
011B	39.887	37.188
0252	38.41	36.35
0202	39.02	34.26
0158	39.02	36.79
0157	39.31	n/a
011H	n/a	n/a
011C	39.901	36.458
0153	40.44	37.18
0151	40.94	38.85
0154	40.48	37.23
0102	40.88	38.01
0152	40.75	37.27
011I	n/a	n/a
0156	40.72	37.35
0101	41.64	38.82
911H	39.033	36.074
911G	39.18	n/a
911F	38.97	n/a
1008	43.06	41.27
1051	42.23	40.58
1251	38.86	37.36
1001	41.65	38.86
1052	40.62	38.57
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
	Foul Trunk Sewer
	Combined Trunk Sewer
	Surface Water Rising Main
	Vacuum
	Vent Pipe
	Sludge Sewer
	Surface Trunk Sewer
	Foul Rising Main
	Combined Rising Main
	Thames Water Proposed
	Gallery

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

	Sewer
	Proposed
	Content of this drainage network is currently unknown
	Culverted Watercourse
	Decommissioned Sewer
	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
	Dam Chase
	Fitting
	Meter
	Vent

Operational Controls

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

	Aucillary
	Control Valve
	Drop Pipe
	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
	Invert Level
	Public / Private Pumping Station
	Summit

Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Chamber
	Operational Site

Ducts or Crossings

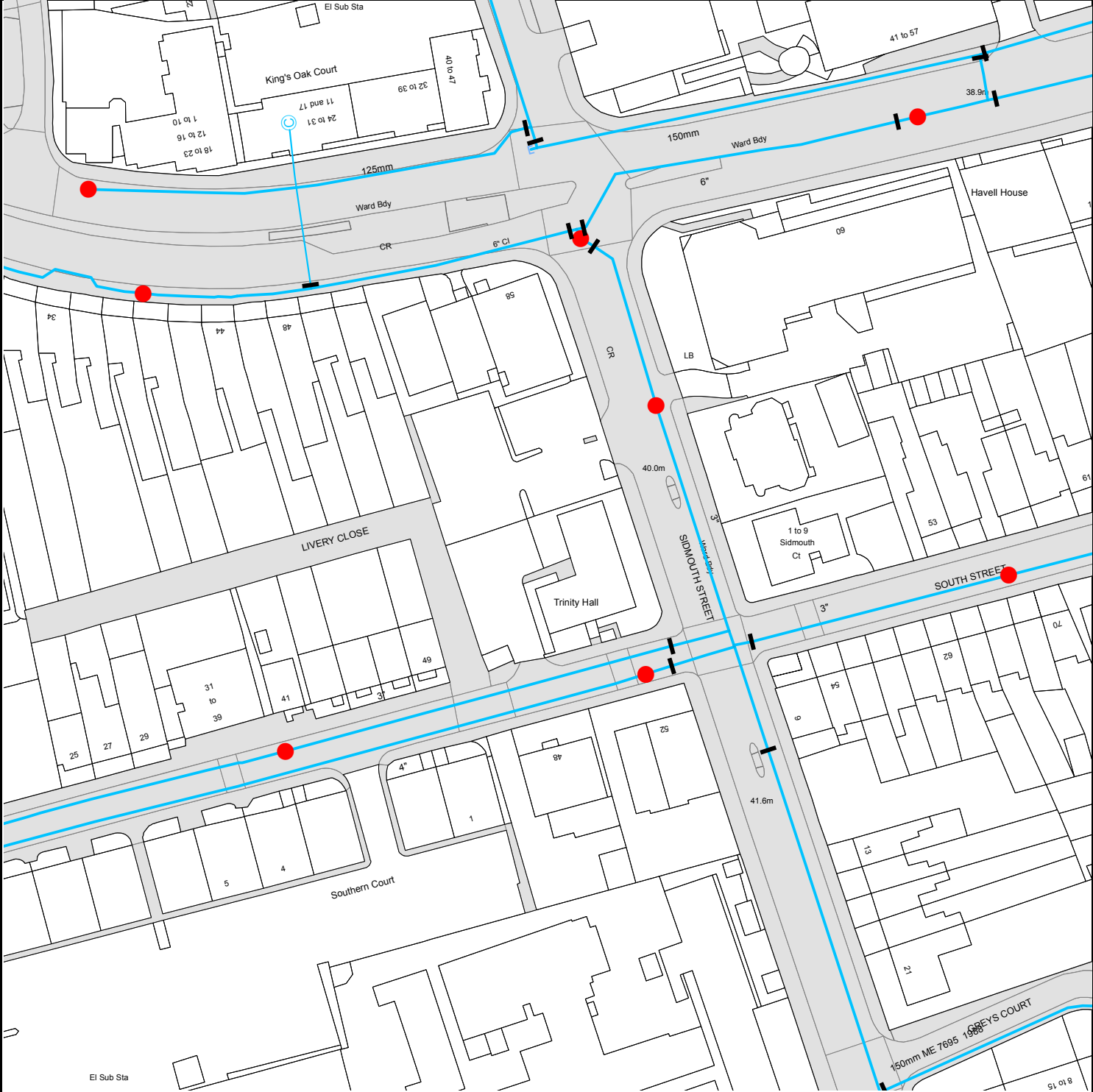
	Casement
	Conduit Bridge
	Subway
	Tunnel

Ducts may contain high voltage cables. Please check with Thames Water.

5) 'm' or 'ft' 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.

Asset Location Search Water Map - ALS/ALS Standard/2024 4988308



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 472056, 173151.

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 (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.



Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.

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.

Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.

Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.

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
- Caseament: 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.

Payment Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment within 14 days of the date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service or will be held to be invalid.
4. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
5. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
6. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 316 9800.

If you are unhappy with our service, you can speak to your original goods or customer service provider. If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager for resolution who will provide you with a response.

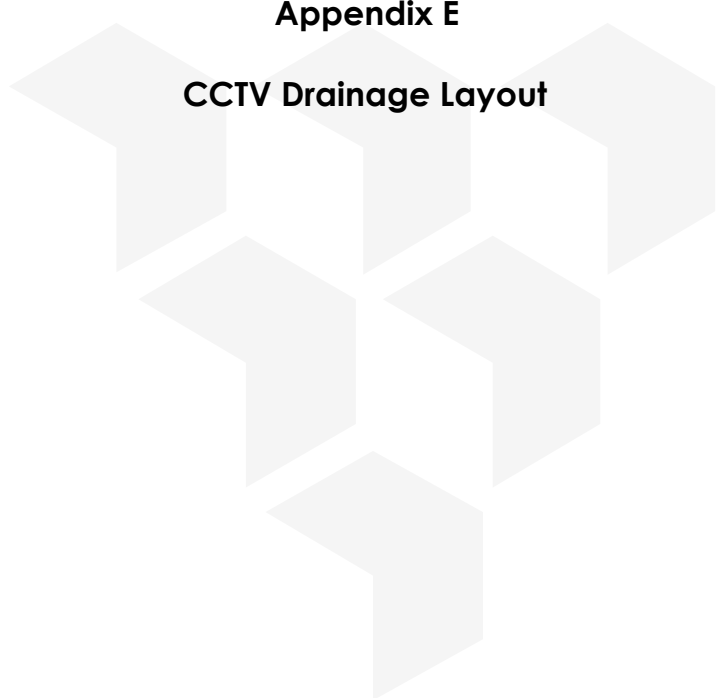
If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0300 034 2222 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking
Please Call 0800 009 4540 quoting your invoice number starting CBA or ADS	Account number 90478703 Sort code 60-00-01 A remittance advice must be sent to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW. or email ps.billing@thameswater.co.uk	By calling your bank and quoting: Account number 90478703 Sort code 60-00-01 and your invoice number

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.



Appendix E

CCTV Drainage Layout

The logo for ZINDICATIVE features a large, stylized 'Z' with a horizontal line passing through its center. To the right of the 'Z' is a large, stylized 'N' that also has a horizontal line passing through its center. Below the 'Z' and 'N' is the word 'INDICATIVE' in a bold, sans-serif font. Above the 'Z' and 'N' is the word 'ZINDICATIVE' in a smaller, sans-serif font.

Additional Notes

1. The first classification of the 18th century was the 1705's *Quadragesimae*. These were treated independently, without regard to cases in any category.
2. The 1710's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
3. The 1720's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
4. The 1730's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
5. The 1740's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
6. The 1750's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
7. The 1760's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
8. The 1770's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
9. The 1780's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.
10. The 1790's *Quadragesimae* were organized by the number of cases in any category, but they were not organized by the number of cases in any category.

Key

[illegible]

Linetype Key:



THIS AREA IS ALLOCATED TO
SHOW SHEET LOCATION OF THE
WHOLE SITE IF BROKEN DOWN
INTO MULTIPLE SHEETS

Hanslink Limited

SITE	TERRE HILL
	SOUTH SIDE
	REVENUE RD 40U
DRAWING TITLE	CC TYP DRAINAGE SURVEY
PROJECT NUMBER	14609
SUBPROJECT	08
DRAWING NUMBER	14609_F
DRAWN BY	DO
DATE	March 2007
CHECKED BY	AG
DRAWN SCALE	1" = 1'
SHEET SIZE	A1
SHEET	1 OF 1



UNIT 301, OLD BARN FARM ROAD
WOOD SIDGROVE INDUSTRIAL PARK
THREE LEGGED CROSS, WILMBORNE, BR21 6SP

T 01202 826261
F 01202 824777
E info@clearviewslunneys.co.uk
W www.clearviewslunneys.co.uk



Appendix F

Proposed Floor Plans

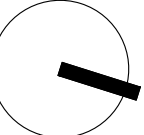
ACCOMMODATION SCHEDULE

Level	Type of Unit	Quantity	GIA m2
Ground floor	1 bed	3	50
	2 bed	1	72
	2 bed	1	80
		5 Units	



proposed ground floor plan

Scale 1:100 @ A2



ACCOMMODATION SCHEDULE

Level	Type of Unit	Quantity	GIA m2
1st floor	1 bed	1	50
	2 bed	1	70
	2 bed	1	72
	2 bed	2	81
5 Units			



proposed first floor plan

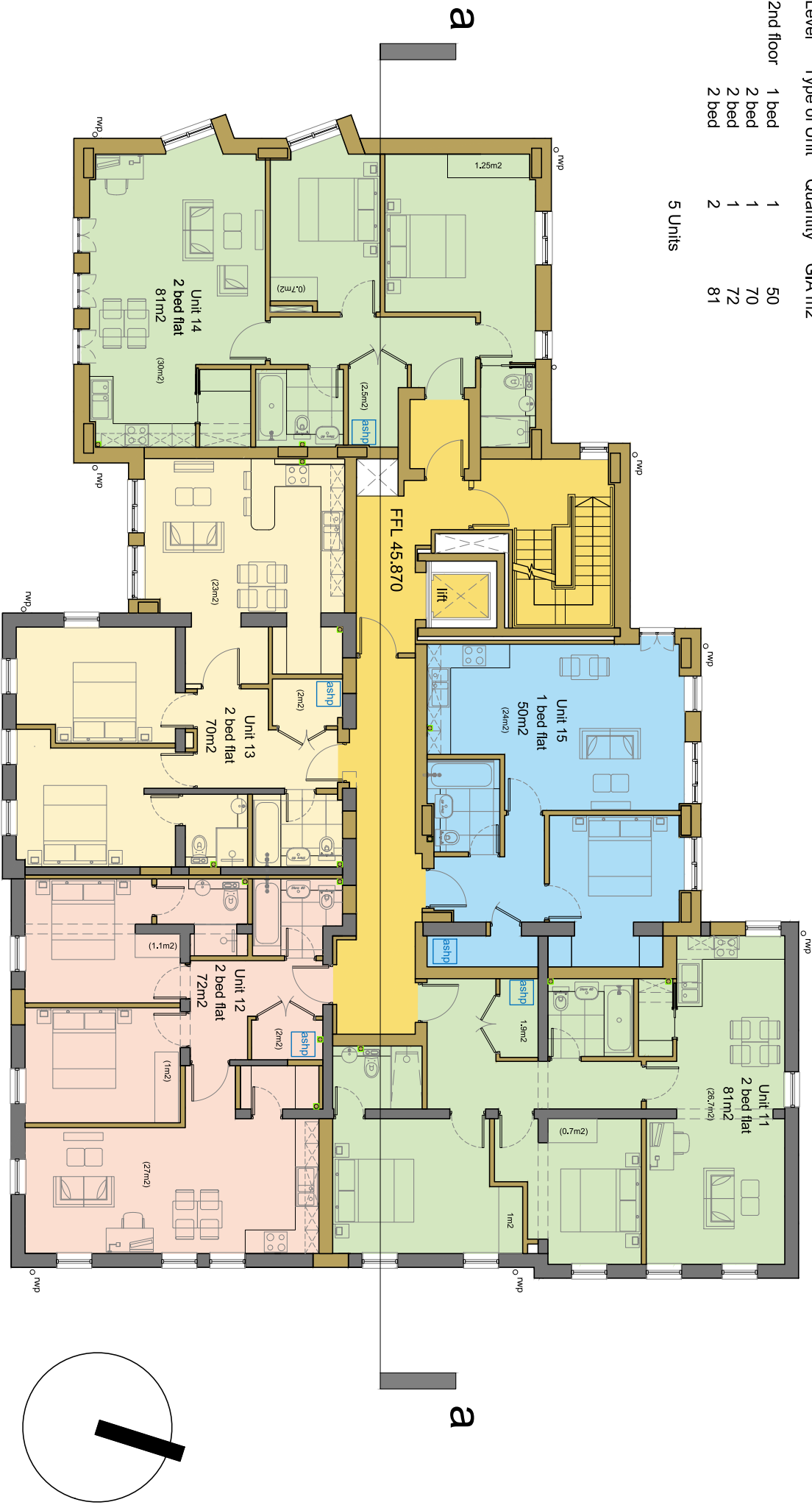
Scale 1:100 @ A3

Hanslink Ltd
www.hanslink.co.uk
m.07984 671939

project	Trinity House, South Street Reading	drawing title	Proposed First Floor Plan	scale	1:100@A3	date	03.07.2024	drawn by	CdF	checked by	
client	Hanslink Ltd	drawing status	PLANNING	job no.	H17	drawing no.	PL46	revision	-		

ACCOMMODATION SCHEDULE

Level	Type of Unit	Quantity	GIA m2
2nd floor	1 bed	1	50
	2 bed	1	70
	2 bed	1	72
	2 bed	2	81
5 Units			



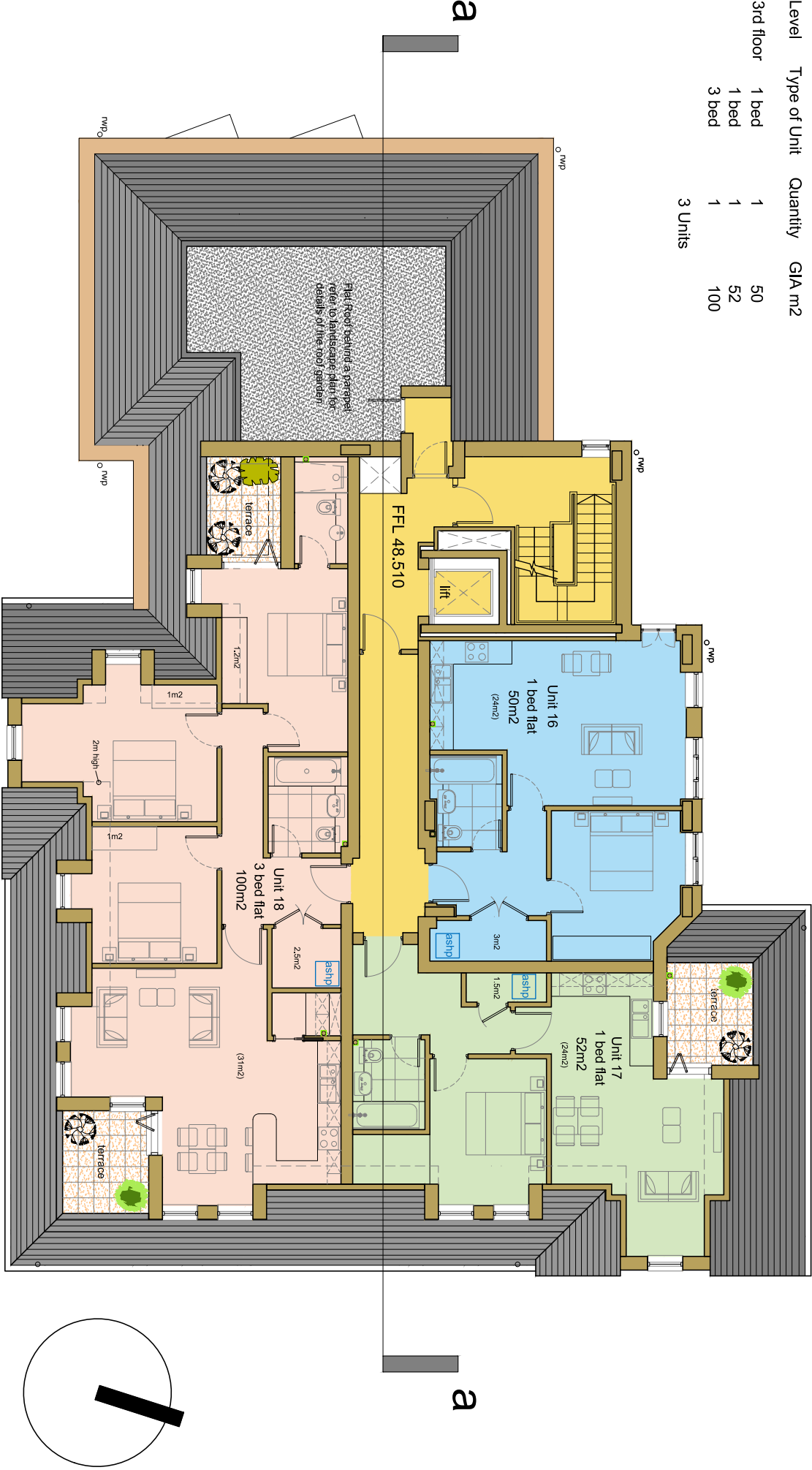
proposed second floor plan

Hanslink Ltd
www.hanslink.co.uk
m.07984 671939

project	drawing title	scale	date	drawn by	checked by
Trinity House, South Street Reading	Proposed Second Floor Plan	1:100@A3	03.07.2024	CdF	
client	drawing status	job no.	drawing no.	revision	
Hanslink Ltd	PLANNING	H17	PL47	-	

ACCOMMODATION SCHEDULE

Level	Type of Unit	Quantity	GIA m2
3rd floor	1 bed	1	50
	1 bed	1	52
	3 bed	1	100
		3 Units	

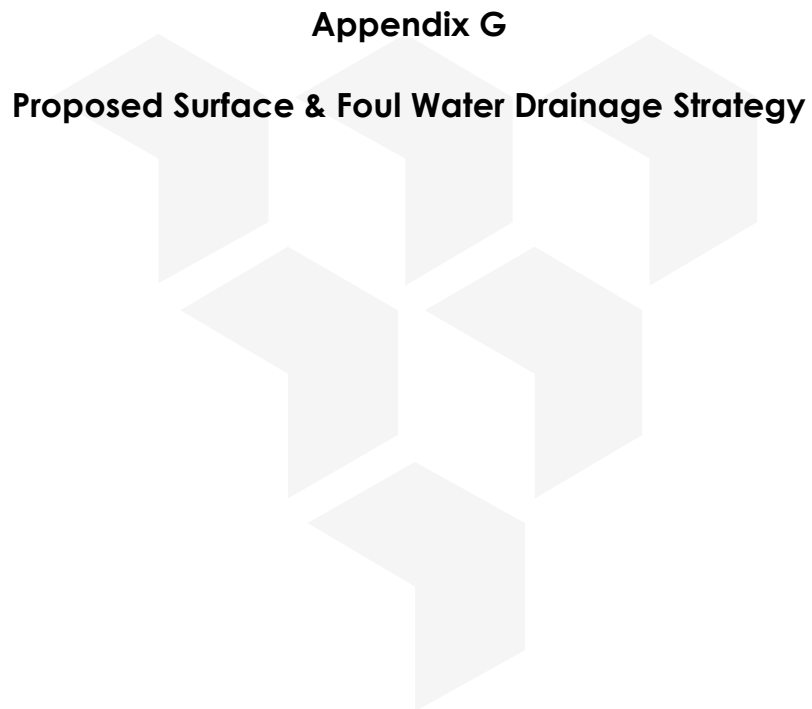


proposed third floor plan

Scale 1:100 @ A3

Hanslink Ltd
www.hanslink.co.uk
m.07984 671939

project	drawing title	scale	date	drawn by	checked by
Trinity House, South Street Reading	Proposed Third Floor Plan	1:100@A3	01.08.2024	CdF	
client	drawing status	job no.	drawing no.	revision	
Hanslink Ltd	PLANNING	H17	PL48	-	



Appendix G

Proposed Surface & Foul Water Drainage Strategy

LEGEND

NOTES

- This drawing to be read in conjunction with all relevant documents and specifications.
- Any discrepancy found between information shown on this or any other drawing shall be reported to the Engineer immediately and prior to work commencing on site.
- Any change to the design shall be reported to the Engineer immediately. For details of drainage down from first floor levels refer to level.
- Architect's drawings shall be used to determine the location of rain water pipe (RWP) and soil vent pipe (SVP) locations.
- Level levels of existing structures have been taken from third party information and should be confirmed on site prior to construction.
- Prior to commencing the work the contractor is to undertake the drainage investigation work as noted on the drawing.

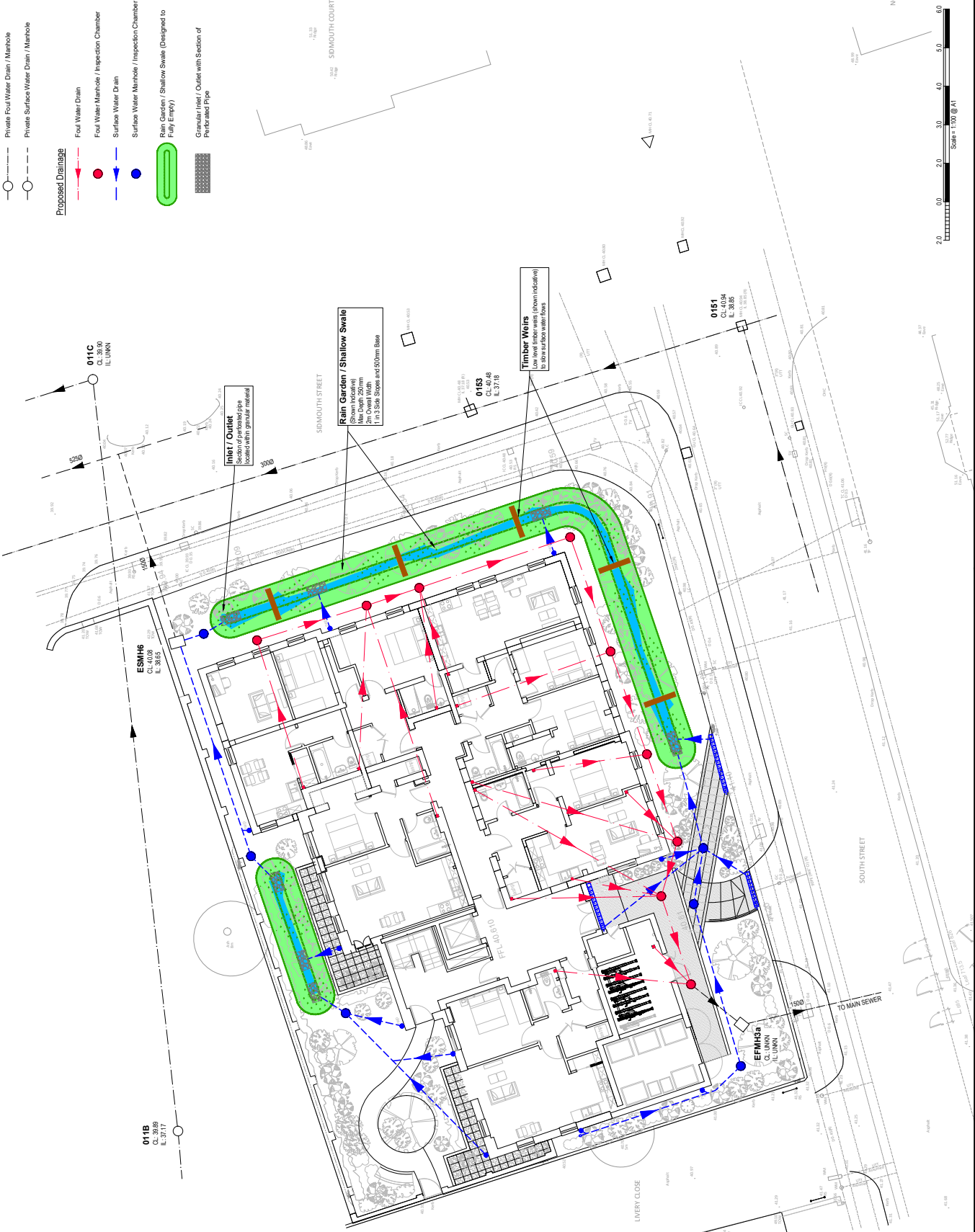
Development Boundary

Existing Drainage

- Adopted Foul Water Sewer / Manhole
- Adopted Surface Water Sewer / Manhole
- Private Foul Water Drain / Manhole
- Private Surface Water Drain / Manhole

Proposed Drainage

- Foul Water Drain
- Foul Water Manhole / Inspection Chamber
- Surface Water Drain
- Surface Water Manhole / Inspection Chamber
- Rain Garden / Shallow Swale (Designed to Fully Empty)
- Granular Inlet / Outlet with Section of Perforated Pipe

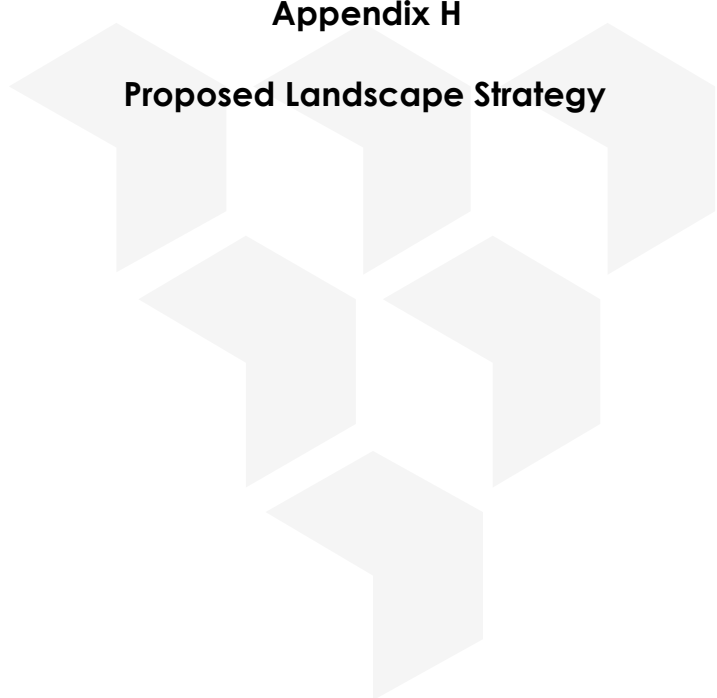


P2	Finalised for report issue.	01.08.2024	JD	MS
P1	Draw issue to client.	30.07.2024	MG	MS
Rev	Description	Date	By	Check

Glanville
Survey > Plan > Engineer

- Civil Engineering
- Highways Engineering
- Structural Engineering
- Building Surveying
- Transport Planning
- Geomatics
- Hydroinformatics
- Consultancies
- Comprehensive
- Intuitive

Client:	Hanslink Ltd
Project:	Trinity Hall, South Street Reading
Title:	Foul & Surface Water Drainage Strategy
Engineer:	MJD
Date:	JULY 2024
Scale:	1:100 @ A1
Sheet:	1F
Planning:	
Drawing No:	8220157-C-1200
Rev:	P2



Appendix H

Proposed Landscape Strategy

Ornamental Grass, Shrub and Bulb planting



Carex, Deschampsia, Skimmia, Pittosporum, Lavandula, Choisya, Pteronia, Cornus, Euonymus, Sarcococca confusa, Tulips, Narcissus, Galanthus nivalis

Structural Planting Blocks



Cornus, Choisya, Sarcococca, Euonymus, Phodina red robin

Green Walls



Clematis pubescens, Lonicera, Hydrangea petiolaris

Herbaceous Planting



Achillea, Alchemilla, Heuchera, Nepeta, Salvia, Euphorbia, Centaurea, Stachys

Defensible ornamental shrub planting is located around the rear of Units 4 and 5 from other occupiers using the communal outdoor space

A mix of flowering and scented climbers are proposed along the existing northern boundary wall to help screen the wall and create an attractive vegetated outlook for the occupiers of unit 1. This green wall also creates further habitat opportunities for birds to nest in once established.

Large focal feature Ornamental apple tree provides a key statement to the rear garden. This provides blossom, berries for wildlife and great autumn colour. The focal tree is surrounded by a sinuous footpath leading to Livery Close. A sculptural timber bench encourages residents to rest within the garden, framed by ornamental shrub and tree planting.

Private patio terraces are located on the 3rd floor which provide seating opportunities framed with contemporary planters filled with a mix or shrub and herbaceous planting.

Rooft terrace is located on the 3rd floor which provides seating opportunities framed with contemporary planters filled with a mix or shrub and herbaceous planting.

A variety of fastigate trees are to be located along the road corridor to create canopy cover along the road and soften the building. These trees will assist in providing dappled shade and species selected to reflect the locality.

Proposed rain garden approx 250mm depth consisting of a mix of decorative pebbles and gravel interspersed with planting is to be incorporated within the open space proposals to create attractive SuDS features along with opportunities for further rain water harvesting opportunities with the inclusion of water butts.

South Street and Sidmouth Street frontage is to provide a formal evergreen Osmanthus hedge which will provide flower, scent and a strong structural edge. As the ground slopes gently down towards the building, ornamental planting is proposed at the top of the bank to provide an attractive view for the residents and provides a greater visual separation from the road corridor.

Contemporary Planters and Bench Seating



Block Paving



Rain Garden



Hedge Planting

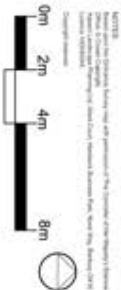


Tree Planting



Osmanthus burkwoodii

Carpinus betulus 'Lucas', Malus tibetica, Amelanchier lamarckii, Magnolia leonard messel, Malus hupehensis, Prunus cerasifera



Key:

Site Boundary

Proposed Tree Planting

Proposed Feature Focal Tree

Proposed Ornamental Shrub

Proposed Ornamental Hedge

Proposed Feature Shrub

Proposed Planter

Proposed Seating

Proposed Climbers

Proposed Rain Garden

Proposed Water Butts

Proposed Timber Weirs

Proposed Tree Species

- 1 Carpinus betulus 'Lucas'
- 2 Malus tibetica
- 3 Amelanchier lamarckii
- 4 Magnolia leonard messel
- 5 Malus hupehensis
- 6 Prunus cerasifera

aspect landscape planning

Trinity Hall, South Street, Reading
Landscape Strategy Plan

CLIENT			
Paul Butt Planning Ltd			
SCALE			
1:200 @ A3	DATE	DRAWN	CHECKED
1:200 @ A3	JULY 2024 AS	AS	CW
DRAWING NUMBER			
8493 / LSP			
REVISIONS			
REV			
1	20 07 24	AS	AS
2	20 07 24	AS	AS
NOTES			
1. All drawings are to be read in conjunction with the Landscape Strategy Plan.			
2. All drawings are to be read in conjunction with the Landscape Strategy Plan.			

Appendix I

Exceedance Flow Route Plan



NOTES

- Development Boundary

409

- Adopted Foul Water Sewer / Manhole
Adopted Surface Water Sewer / Manhole
Private Foul Water Drain / Manhole
Private Surface Water Drain / Manhole

Surface Water Drain
Surface Water Manhole / Inspection Chamber

- Rain Garden / Shallow Swale (Designed to Fully Empty)
- Granular Inlet / Outlet with Section of Perforated Pipe
- Exceedance Flow Path



p1	Issued to client.	09.08.2024	JD	MG
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- Civil Engineering
- Structural Engineering
- Highways Engineering
- Building Surveying

- Civil Engineering
 - Structural Engineering
 - Transport Planning
- Highways Engineering
 - Building Surveying
 - Geomatics

Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client: **Handlink Ltd**

Project: Trinity Hall, South Street
Reading

Exceedance Flow Route Plan

Engineer : M.J.G
Date : AUGUST 2024

Director: TF Scale: 100 @ A1

Preparation of 3.4.4a

8220157-C-1201

Hertfordshire

|

Oxfordshire

|

Cambridgeshire

|

Bristol

postbox@glanvillegroup.com | www.glanvillegroup.com



Glanville Consultants Ltd, Registered office: 3 Grovelands Business Centre,
Boundary Way, Hemel Hempstead, Hertfordshire, HP2 7TE

