



100 Chalk Farm Road

Flood Risk Assessment

Prepared by

Pell Frischmann

Submitted on behalf of Regal London

January 2024

P e l l F r i s c h m a n n

100 Chalk Farm Road, Camden, London

Flood Risk Assessment

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Prepared for

Regal Chalk Farm Ltd

4-5 Coleridge Gardens
London
NW6 3QH

Prepared by

Pell Frischmann

Suite 4.2 – 1 The Poynt
Wollaton Street
Nottingham
NG1 5FW

Pell Frischmann

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1 Introduction

1.1 Project Brief

- 1.1.1 Pell Frischmann has been appointed by Regal Chalk Farm Ltd to undertake a Flood Risk Assessment (FRA) to support a planning application for the redevelopment of The Site located at 100 Chalk Farm Road, within the London Borough of Camden (LBC), London.
- 1.1.2 The purpose of this FRA is to review available information and assess the flood risk posed to the site and proposed development from a range of sources, now and in the future. The FRA has been carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG), in respect to flood risk, coastal change and the London Plan and Camden water and Flooding CPG (2019).
- 1.1.3 To complete the Flood Risk Assessment, the following key stages of work have been undertaken:
- Collation of desk-based information and undertake a review of publicly available flood risk information including Environment Agency mapping and local data, policy, and guidance.
 - Desktop review of other data that has been made available such as topographical surveys, utility plans and proposed development layout options.
 - Consultation with relevant stakeholders to obtain further information on local risks and issues.
 - Provision advice on appropriate flood risk mitigation measures for the proposed development.
 - Completion of relevant Camden Flood Proforma and Camden SuDS Proforma in line with Council requirements (included as **Appendix C** and **Appendix D** respectively)

1.2 Sources of Information

- 1.2.1 A review of relevant information and guidance from a range of sources has been undertaken and includes the following key documents:
- National Planning Policy Framework (NPPF), December 2023
 - Planning Practice Guidance (PPG), August 2022
 - Environment Agency Flood Map for Planning and Risk of Flooding from Surface Water datasets from the DEFRA Spatial Data Catalogue
 - DEFRA MagicMap, 2023
 - British Geological Survey Geology Viewer, 2023
 - British Geological Survey GeoIndex, 2023
 - The London Plan, 2021
 - Camden Local Plan, 2017
 - London Borough of Camden Strategic Flood Risk Assessment, July 2014
 - London Borough of Camden Preliminary Flood Risk Assessment, April 2011
 - London Borough of Camden Surface Water Management Plan, July 2011
 - Camden Planning Guidance Water and Flooding, March 2019
 - Thames River Basin District Flood Risk Management Plan 2021-2027, December 2022
 - Thames Catchment Flood Management Plan, December 2009
- 1.2.2 A request for information was submitted to the Environment Agency on 28/10/2022 to obtain any site-specific flood risk data they may hold. Information was received on 17/11/2022.

2 Background & Site Context

2.1 Site Location & Existing Use

2.1.1 The site is located at 100 Chalk Farm Road, Camden, London. A site location plan is included for reference as **Figure 2.1**. In total, the site covers approximately 0.28 hectares.

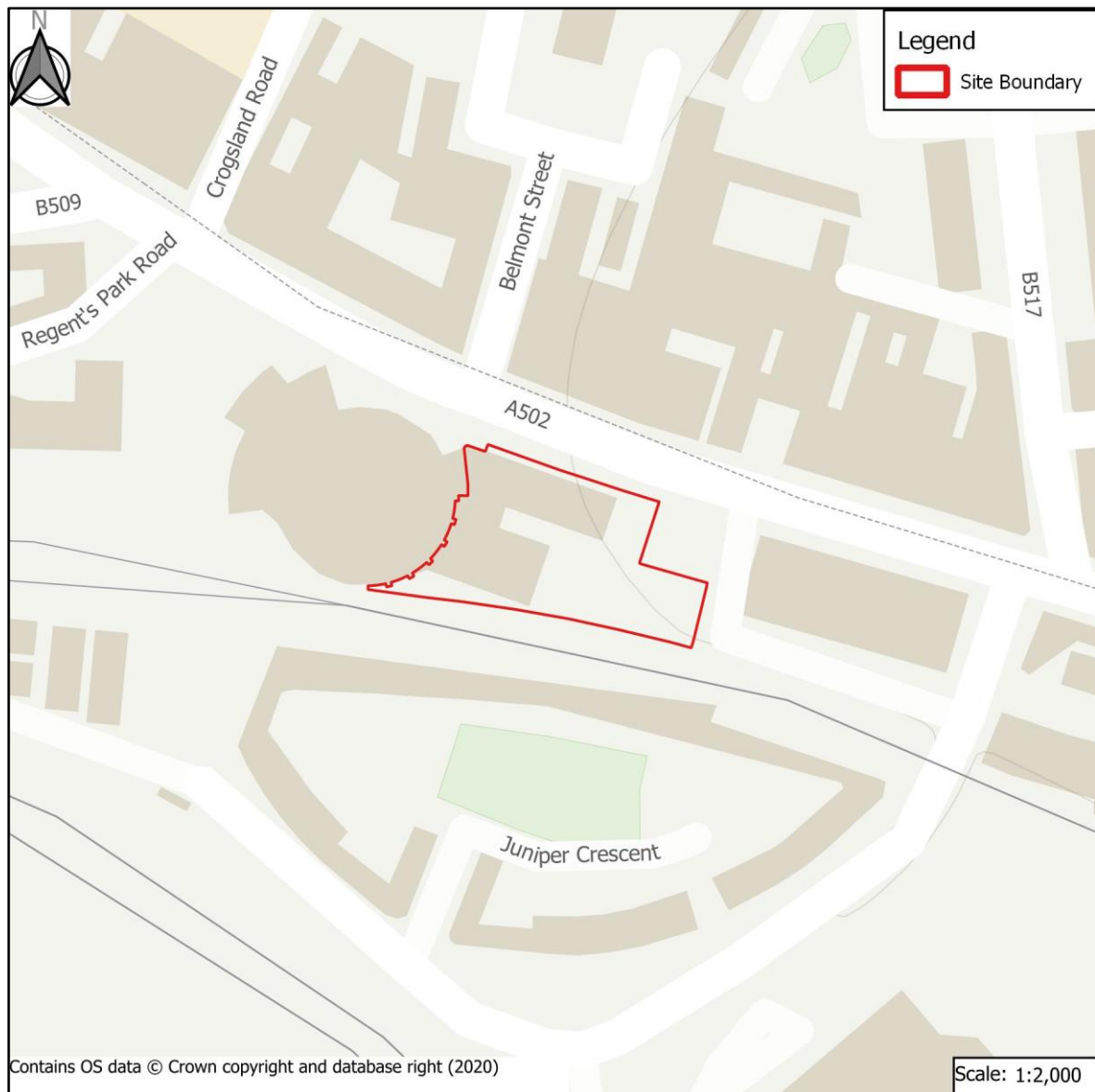


Figure 2.1 Site Location Plan

2.1.2 The northern boundary is formed by Chalk Farm Road, beyond which are several commercial developments. To the east is further commercial development comprising a temporary Morrisons supermarket (which is the subject of wider development known as Camden Goods Yard). The southern boundary is formed by the North London Line railway line, beyond which is an extensive network of railway lines including the; London Euston to Crewe Line, West Coast Main Line, and the Watford DC Line. To the west of the site is the Camden Roundhouse Theatre.

2.1.3 The entire site is occupied by existing office buildings and associated hardstanding. It is therefore considered that the existing site is subject to an engineered regime of drainage involving the positive drainage of large areas of impermeable surfacing and roof footprint.

2.2 Local Watercourses

2.2.1 A review of the OS OpenRivers dataset shows there are no watercourses found within the site boundary. The nearest watercourse, Regents Canal, is found approximately 350m to the south of the site. The River Thames is found approximately 4.50km to the south of the site.

2.2.2 **Figure 2.2** shows the locations of local watercourses for context.

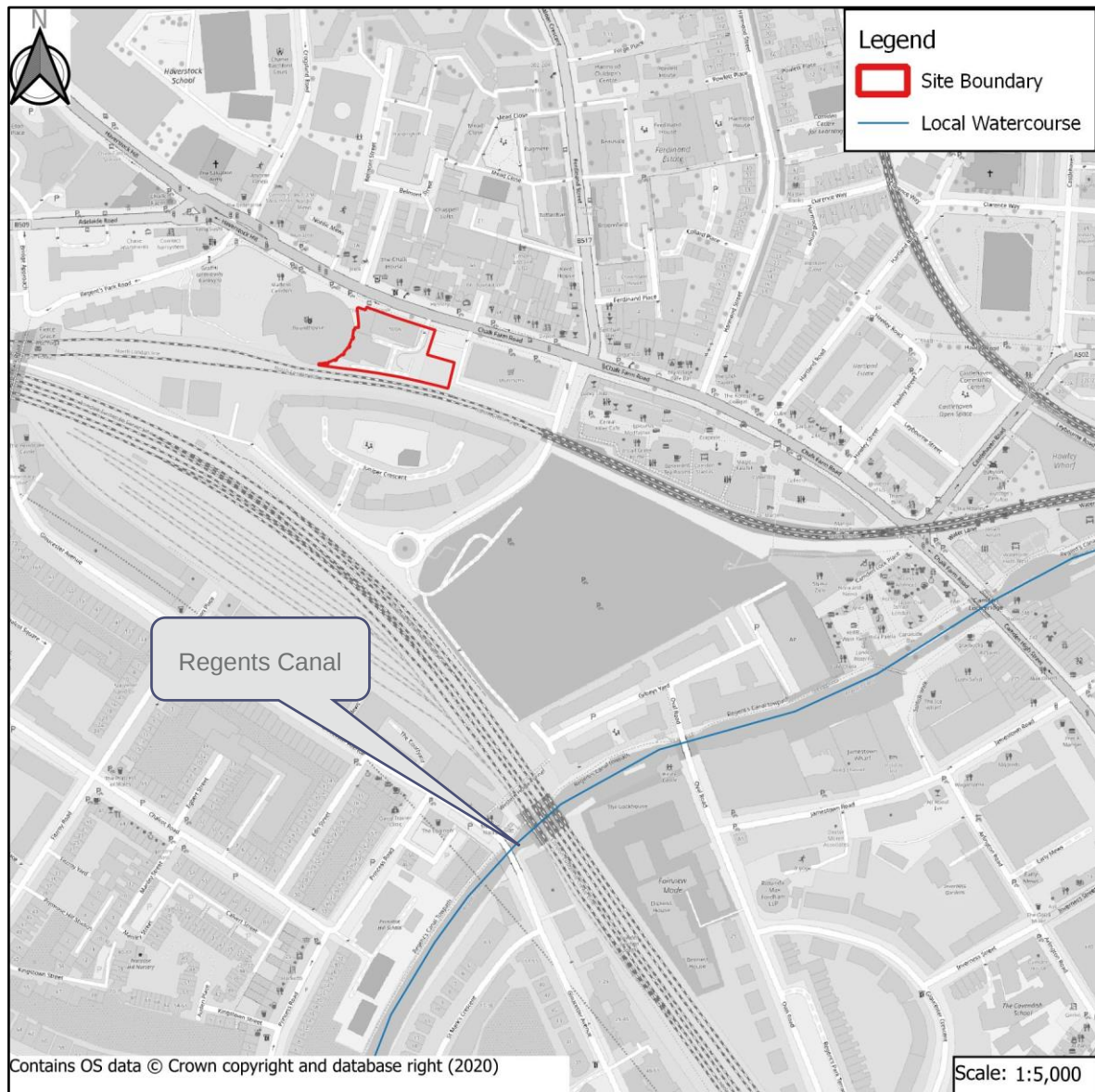


Figure 2.2 Local Watercourses

2.2.3 It is understood that sections of the River Fleet are located to the east of the site, forming one of London's 'Lost Rivers', which is now largely culverted on its route through the borough of Camden. It does not fall within the site, and flood risk associated with it is considered negligible at this site.

2.3 Topography

2.3.1 A topographic survey, included as **Appendix A**, suggests that the site generally falls from north to south with minimum elevations of approximately 28.41m AOD in the north entrance to the site, rising to a maximum elevation of approximately 34.50m AOD in the southwest corner of the site.

- 2.3.2 LiDAR data, provided by DEFRA, covering the wider area shown in **Figure 2.3**, provides a general overview of the site, suggesting the site does not contain major changes in elevation, apart from the small rise in elevation towards the north presented above. Generally, elevations to both the north and south of site fall.

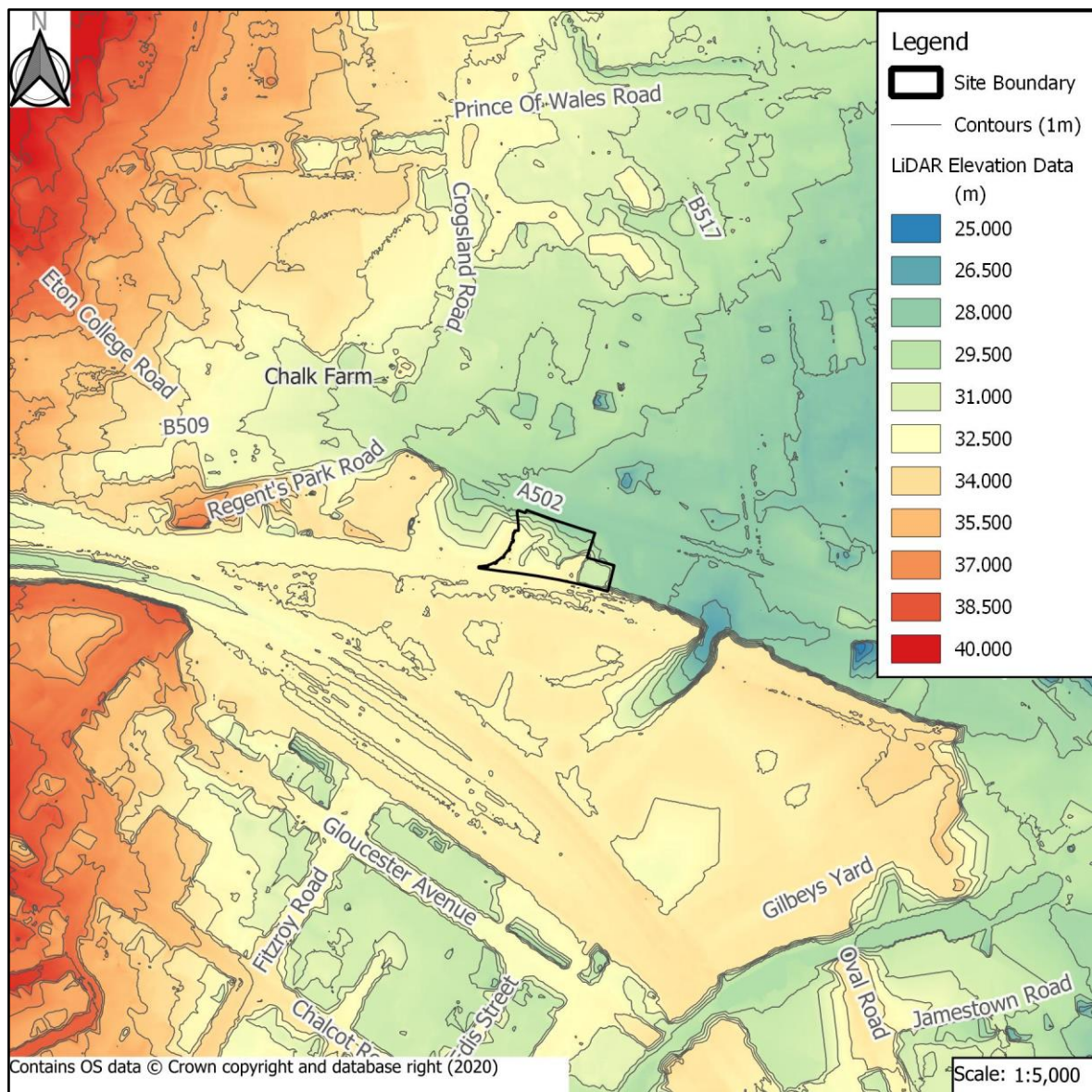


Figure 2.3 LiDAR Elevation Data

2.4 Geology

- 2.4.1 British Geological Survey (BGS) mapping suggests the site to be wholly underlain by a bedrock geology comprising London Clay Formation – clay, silt, and sand. This generally suggests a low potential for infiltration.
- 2.4.2 The BGS mapping has no recorded superficial geology for the site.
- 2.4.3 There are four historic borehole records available from within the site boundary. **Table 2.1** below provides information on the borehole and groundwater strikes.

Table 2.1 Borehole Information

Borehole Reference	Date Drilled	Depth (mbgl)	Water Struck (mbgl)
TQ28SE2032	January 1972	18.28	Not Recorded
TQ28SE2033	January 1972	12.49	5.4
TQ28SE2034	January 1972	21.33	5.4
TQ28SE2035	January 1972	18.28	4.5

- 2.4.4 Aquifer designations by DEFRA show both the superficial drift classification and bedrock classification to be Unproductive. This is defined as rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.
- 2.4.5 The Unproductive aquifer designation for both the superficial drift and bedrock geologies suggests very little to no water is available within both strata.
- 2.4.6 The site does not fall within a Source Protection Zone (SPZ), with the nearest extent of Zone II – Outer Protection Zone found approximately 500m to the southwest of the site.

2.5 Development Proposals

- 2.5.1 The development proposal comprises of the demolition of existing building and redevelopment of the site to provide two buildings ranging in height from 6 to 12 storeys containing purpose-built student accommodation (PBSA) with 265 rooms, associated amenity and ancillary space (Sui Generis), 24 affordable residential homes (Class C3), ground floor commercial space (Class E) together with public realm access, servicing, and other associated works. The proposed masterplan has been included as **Appendix E**.

3 Policy Context

3.1 National Planning Policy Framework

- 3.1.1 The National Planning Policy Framework¹ (NPPF) was first published in 2012, with a subsequent revision by the Ministry of Housing, Communities and Local Government, appended in July 2018, February 2019, and July 2021. The most recent update was made in December 2023 by the Department for Levelling Up, Housing, and Communities.
- 3.1.2 The NPPF is the primary source of national planning guidance in England, setting out the Government's planning policies for England, and how they are expected to be applied by local councils.
- 3.1.3 'Chapter 14: Meeting the challenge of climate change, flooding and coastal change' outlines the guiding principles for managing flood risk as part of the planning process, notably paragraphs 159-169.
- 3.1.4 The Planning Practice Guidance² (PPG) sets out the vulnerability to flooding of different land uses. It encourages development to be in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider catchment and states that alternative sources of flooding, other than fluvial (river flooding), should be considered when preparing a Flood Risk Assessment.
- 3.1.5 The Planning Practice Guidance includes a series of tables that define Flood Zones, the flood risk vulnerability classification of development land uses, and 'compatibility' of development within the defined Flood Zones.
- 3.1.6 Therefore, this Flood Risk Assessment has been completed in line with the guidance and requirements for the NPPF and Planning Practice Guidance.

3.2 Local Plan Policies

- 3.2.1 The Camden Local Plan³ was adopted in 2017 and sets out how land within the district can be used and developed, providing policies which the council use to determine application and regeneration activities.
- 3.2.2 The plan aims to oversee how the council will manage future growth, encourage sustainable development, and ensure changes are appropriate to local need now, and in the future.
- 3.2.3 More generally, the Local Plan lists policies that influence the design and principles of all development within the district. Those relevant to this FRA are as follows:
- Policy CC1 – Climate Change Mitigation
 - Policy CC2 – Adapting to Climate Change
 - Policy CC3 – Water and Flooding
- 3.2.4 Furthermore, due to the Borough's location within London, the Camden Local Plan must also align with the London Plan 2021⁴ which also includes policies developments will need to consider. Those relevant from the London Plan include;
- Policy G5 – Urban Greening
 - Policy SI5 – Water Infrastructure
 - Policy SI12 – Flood Risk Management

¹ Ministry of Housing, Communities and Local Government (September 2023); *The National Planning Policy Framework*

² Ministry of Housing, Communities and Local Government (August 2022); *Planning Practice Guidance on Flood risk and coastal change*

³ London Borough of Camden (2017); *Camden Local Plan*; prepared by LBC

⁴ London City Council (March 2021); *The London Plan 2021*; prepared by LCC

- Policy SI13 – Sustainable Drainage

3.3 Local SFRA

- 3.3.1 The London Borough of Camden Strategic Flood Risk Assessment⁵ (SFRA) was published in July 2014. The SFRA was prepared to provide an appropriate evidence base for local policymaking, a summary of flood risk issues across the area and to support the application of the sequential test for suitability of allocated sites.
- 3.3.2 The SFRA also includes relevant background flooding data and a summary of flood risk within the Borough and so appropriate references will be made throughout this site-specific FRA.

3.4 Local PFRA

- 3.4.1 The London Borough of Camden Preliminary Flood Risk Assessment⁶ (PFRA) was published in April 2011. The PFRA was prepared to assist LBC meet their duties to manage local flood risk and deliver any legal requirements placed on them as the LLFA under the Flood Risk Regulations 2009.
- 3.4.2 The PFRA also identifies the past and future flood risk for the County and includes an assessment of where within the County flooding, including overland flow and direct rainfall, will occur along with the number of properties potentially at risk.

3.5 Local Flood Risk Management Strategy

- 3.5.1 The London Borough of Camden Flood Risk Management Strategy⁷ (FRMS) was produced to comply with Section 9 of the Flood and Water Management Act 2010 and aims to provide a framework for meeting their requirements to develop, maintain, apply, and monitor a local strategy for flood risk management.
- 3.5.2 The LFRMS provides further information regarding surface water runoff, groundwater and sewer flooding and flood risk around the County and the introduction of flood risk alleviation schemes at various scales, including SuDS.

3.6 Surface Water Management Plan

- 3.6.1 The London Borough of Camden Surface Water Management Plan⁸ (SWMP) was published in July 2011. The SWMP was produced to understand the flood risks that can arise from local flooding, identifying where flood risk issues are, what impact they have, how they can be managed, as well as providing a full flood history of the plan area. This will provide a baseline for Camden Council aim to manage and improve surface water flood risks within the Borough.

3.7 River Basin District Flood Risk Management Plan

- 3.7.1 The Thames River Basin District Flood Risk Management Plan 2021-2027⁹ (RBMP) was prepared by the Environment Agency and published in December 2022. The purpose of this RBMP is to provide a framework for protecting and enhancing the benefits provided by the water environment.

⁵ London Borough of Camden (July 2014); *Strategic Flood Risk Assessment*; prepared by URS

⁶ London Borough of Camden (April 2011); *Preliminary Flood Risk Assessment*; prepared by LBC

⁷ London Borough of Camden (2013); *Camden Flood Risk Management Strategy*; prepared by LBC

⁸ London Borough of Camden (July 2011); *Surface Water Management Plan*; prepared by LBC

⁹ Environment Agency (December 2022); *Thames River Basin District Flood Risk Management Plan 2021-2027*; prepared by EA

3.8 Catchment Flood Management Plan

- 3.8.1 The River Thames Catchment Flood Management Plan¹⁰ (CFMP) was published in December 2009 by the Environment Agency. The CFMP aims to help the Environment Agency and local councils to understand the scale and extent of flooding now and in the future, whilst also setting policies for managing flood risk within the catchment.
- 3.8.2 The CFMP should be used to inform planning and decision making by key stakeholders including; The Environment Agency, local authorities, IDB's, water companies and utility providers, landowners, and the general public. The CFMP also aims to promote more sustainable approaches to managing flood risk.

3.9 Planning Guidance

- 3.9.1 LBC published the planning guidance document 'Water and Flooding'¹¹ in March 2019. This document was published to provide supplementary detail to policies within the Local Plan by providing detailed guidance on the application of policies from within the Local Plan and to help applicants make successful applications and to aid infrastructure delivery.
- 3.9.2 Policies from the Local Plan relevant to this FRA covered within the Water and Flooding document include;
- Policy CC1 – Climate Change Mitigation
 - Policy CC2 – Adapting to Climate Change

¹⁰ Environment Agency (December 2009); *Thames Catchment Flood Management Plan*; prepared by EA

¹¹ London Borough of Camden (March 2019); *Water and Flooding*; prepared by LBC

4 Assessment of Flood Risk

4.1 Desk-Based Information

4.1.1 The NPPF states that all potential sources of flood risk must be identified and appraised. Flooding can occur from a variety of sources individually, or in combination and can result from both natural and artificial processes.

4.1.2 **Table 4.1** provides an initial desk-based review of the level of flood risk from all sources, which are then assessed in further details where the risk is considered significant and merits further investigation.

Table 4.1 Desk-Based Assessment of Flood Risk

Sources of Flood Risk	Degree of Risk			Comments
	Significant	Moderate	Low	
Fluvial			X	The Site is wholly within Flood Zone 1.
Coastal & Tidal			X	The site is removed from the extent of tidal flooding, now and in the future.
Groundwater			X	Low potential susceptibility to groundwater flooding across the area.
Surface Water			X	Isolated area of surface water risk present around the boundary.
Sewers			X	Limited extent of sewers in the immediate vicinity with low risk from sewers along Chalk Farm Road.
Canals			X	None nearby.
Reservoirs & Waterbodies			X	Low risk posed.

4.2 Fluvial Flood Risk

4.2.1 The Environment Agency has produced a resource known as the Flood Map for Planning, which identifies areas at risk of flooding from Main Rivers and the sea. An extract of this mapping is included for reference as **Figure 4.1**.

4.2.2 The mapping shows the site to be wholly within Flood Zone 1 (Low Probability), which is defined in the NPPF as land having a less than 0.1% annual probability of river or sea flooding.

4.2.3 The nearest extent of Flood Zones 2 and 3 (Medium and High Probability respectively) are found approximately 4.2km south of the site and are associated with the River Thames.

4.2.4 As such, the site is considered to be at low risk of flooding from fluvial sources and other local watercourses.



Figure 4.1 Flood Map for Planning

4.3 Coastal & Tidal

- 4.3.1 The site is located within Flood Zone 1 (Low Probability) and is sufficiently set back from the coast to be unaffected by tidal influences.
- 4.3.2 Therefore, the risk of flooding from coastal or tidal related events is negligible.

4.4 Groundwater

- 4.4.1 Groundwater flooding occurs when the water table rises above ground elevations. It is most likely to happen in low lying areas underlain by permeable geology. This may be regional scale chalk or sandstone aquifers, or localised deposits of sands and gravels underlain by less permeable strata such as that in a river valley.
- 4.4.2 Previously mentioned boreholes having reported groundwater strikes at deep levels, alongside a superficial and bedrock aquifer designation of Unproductive, this suggests groundwater within the area will be relatively deep and have limited potential to move within the strata.

- 4.4.3 Mapping included as Appendix B – Figure 4e of the Camden SFRA (2014), suggests the site has not been previously recorded to have flooded due to groundwater and to fall within an area of the Borough not considered to be at an increased susceptibility to elevated groundwater.
- 4.4.4 The SFRA also includes information suggesting that flooding from groundwater within Camden Borough is unlikely due to the majority of the site being underlain by a bedrock geology comprising London Clay formation, with no recorded superficial geology. The SFRA concludes that areas underlain by London Clay formation are expected to have water tables of either >5m throughout the year or <3m for part of the year. Suggesting groundwater will remain relatively deep throughout the Borough.
- 4.4.5 A Basement Impact Assessment has been prepared under reference 106885-PF-ZZ-XX-RP-005-P03 which provides further detail on this matter, and recommends that the groundwater data is verified through further site investigation.
- 4.4.6 The site is not within a Source Protection Zone (SPZ), with the nearest Zone II – Subsurface Activity found approximately 575m to the southwest of the site.
- 4.4.7 Overall, considering the aquifer designations, underlying geology and information on groundwater provided within local documentation, the risk of flooding from groundwater is considered to be low.

4.5 Surface Water (Pluvial)

- 4.5.1 The risk of flooding from surface water has been mapped by the EA on a strategic scale to understand areas that may be susceptible to ponding of surface water during periods of extreme rainfall. An extract of the latest mapping is included for reference as **Figure 4.2**.
- 4.5.2 The mapping indicates the site to be predominantly at negligible risk of flooding from surface water. Areas of high risk are found to the north of the site, primarily confined to the carriageway of Chalk Farm Road. The mapping indicates some slight ingress into the site in the northwest corner where levels are lowest around the existing access. Surface water flood depth mapping, produced by the EA, suggests that under the high-risk event, flooding is generally isolated to the road channel of Chalk Farm Road with depths not generally exceeding 150mm. A standard curb is raised approximately 125mm above carriageway levels and coupled with a gradual slope from the site to the edge of the curb. Due to the elevation rise between the road and the site, the site remains at low risk of flooding.
- 4.5.3 It should be noted, the mapping used by the EA to provide the risk of flooding from surface water does not consider continual losses to the ground through infiltration, or through engineered drainage systems. Whilst infiltration rates are likely to be low, due to the underlying geology, the engineered highway drainage system under Chalk Farm Road, may provide a reduction in flows along the road.
- 4.5.4 Should the existing highway drainage network fail in the event of extreme rainfall events, exceedance flows will follow existing topography along Chalk Farm Road to the southeast, away from the proposed development.
- 4.5.5 The site falls within Group 3_003 Critical Drainage Area (CDA) as noted within the Camden SFRA, however, the site falls outside of local flood risk zones.
- 4.5.6 Given the above, the risk posed to the site from surface water flooding is considered to be low.
- 4.5.7 The LBC requires developments with basements located on streets which have been identified as being at high risk from surface water flooding, to produce a separate site-specific flood risk assessment, however, as it has been demonstrated above the risk posed by surface water flooding is low and, therefore, a site-specific flood risk assessment will not be required for the basement of the proposed building.

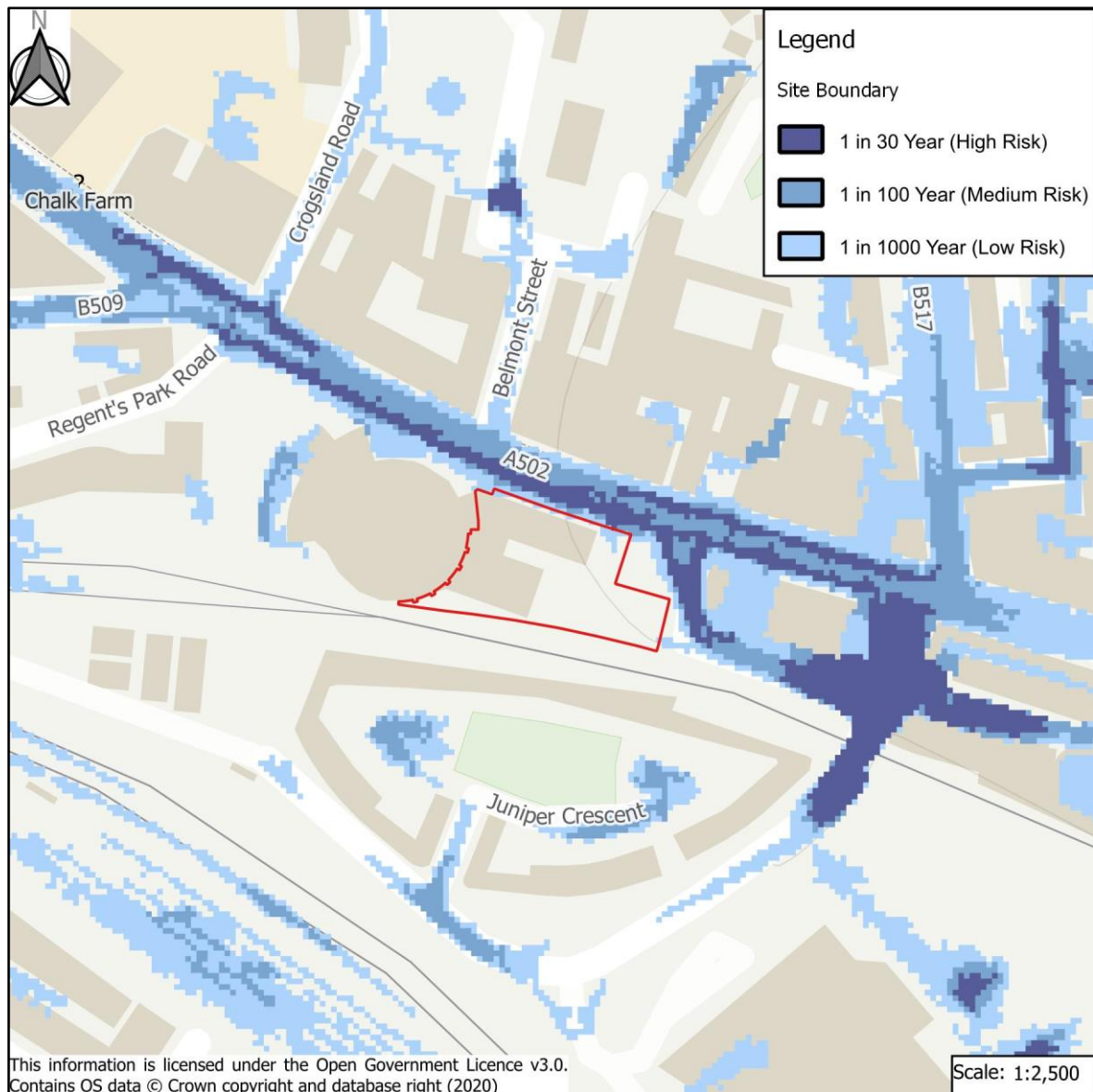


Figure 4.2 Surface Water Flooding

4.6 Sewers

- 4.6.1 Flooding from sewers typically results from the network capacity being exceeded or because of a blockage to key elements. Flooding usually occurs by way of surcharging manholes, gullies or other features that allow water from sewers to reach the surface, resulting in overland flows that can affect nearby properties.
- 4.6.2 Sewer asset records (shown in **Appendix B**) suggest there are no public sewers within the site boundary. The nearest public sewer to the site is an existing Combined Trunk sewer running under Chalk Farm Road adjacent to the site's northern boundary. This is identified on records as a 1600x1219 asset immediately upstream of the site.
- 4.6.3 Records do not show private sewer records and Thames Water are unable to rule out the existence of a private sewer network within the site boundary. It is likely that a network of private foul and surface water sewers serve the site in its current state.
- 4.6.4 If sewer flooding occurs from the Thames Water trunk asset, flows will be directed (with topography) away from the site, primarily within the carriageway channel of Chalk Farm Road.

4.6.5 Although private drainage assets are likely to be found within the site, the redevelopment will ensure any drainage is fit for purpose and designed and constructed to a modern standard.

4.6.6 Given the above, the site is considered to be at low risk from flooding from sewers.

4.7 Canals

4.7.1 The nearest canal to the site is the Regents canal found approximately 300m to the south of the site, however, due to the distance from the site and the topographical barriers between the site and the canal,

4.8 Reservoirs

4.8.1 The EA has produced strategic scale mapping showing the potential risk of flooding from the failure of large waterbodies and reservoirs, if the relevant impounding structure were to fail.

4.8.2 This mapping confirms the site is far removed from the extent of any modelled flooding from such sources. Furthermore, a review of OS mapping does not identify any other reservoirs or waterbodies near to the site that could pose a risk of flooding.

4.8.3 Therefore, the risk of flooding from reservoirs or large waterbodies is considered to be negligible.

5 Flood Risk Mitigation

5.1 Sequential Arrangement

- 5.1.1 All types of development are considered acceptable uses within Flood Zone 1 in line with the Sequential Test guidance included within the NPPF and PPG.
- 5.1.2 The site is inherently sequentially preferable due to its location within Flood Zone 1 and concluded to be at low risk from other sources and therefore passes the requirements of the Sequential Test.

5.2 Development Levels

- 5.2.1 There are no specific requirements for finished floor levels to address the low risk of fluvial flooding. However, it is recommended that appropriate design of external levels and their relation to building thresholds considers the residual risk from groundwater flooding and overland flows associated with extreme pluvial events and localised sewer surcharging.
- 5.2.2 Finished floor levels should be designed so there is a nominal threshold above surrounding ground levels, in accordance with the relevant building regulations and external levels should be designed so any surface flows shed away from buildings and towards positively drained areas.

5.3 Surface Water Drainage Strategy

- 5.3.1 A surface water drainage strategy has been prepared for the submitted scheme, and details are provided as part of the Drainage Strategy Report by Pell Frischmann (report reference: 106885-PEF-ZZ-XX-RP-CD-000001).
- 5.3.2 The strategy is based on discharging surface water runoff from the site at 2l/s, as the equivalent greenfield rate is considered too low and would risk maintenance/blockage issues, with the additional volume stored within below-ground attenuation tanks before being discharged to the local surface water sewerage network.
- 5.3.3 Additional SuDS features are recommended and could include features such as permeable paving, rainwater butts, tree pits and rain gardens. These will act as source control measures by capturing and managing runoff close to its source, while providing amenity and biodiversity improvements, as well as improving the quality of runoff.
- 5.3.4 Therefore, the development will not have an adverse impact on the flood risk elsewhere subject to the suitable management of surface water generated by the proposed development. As this report has demonstrated, there will be no adverse effect on the basement flooding due to extents of surface water flooding. Therefore, a separate site-specific Flood Risk Assessment focusing on the basement will not be required.

6 Conclusions & Recommendations

6.1.1 This Flood Risk Assessment has been written in support of a planning application for the development of a site known as 100 Chalk Farm Road, Camden, London. The development is considered more vulnerable due to land use and is considered a suitable development for Flood Zone 1.

6.1.2 To summarise the findings of the FRA:

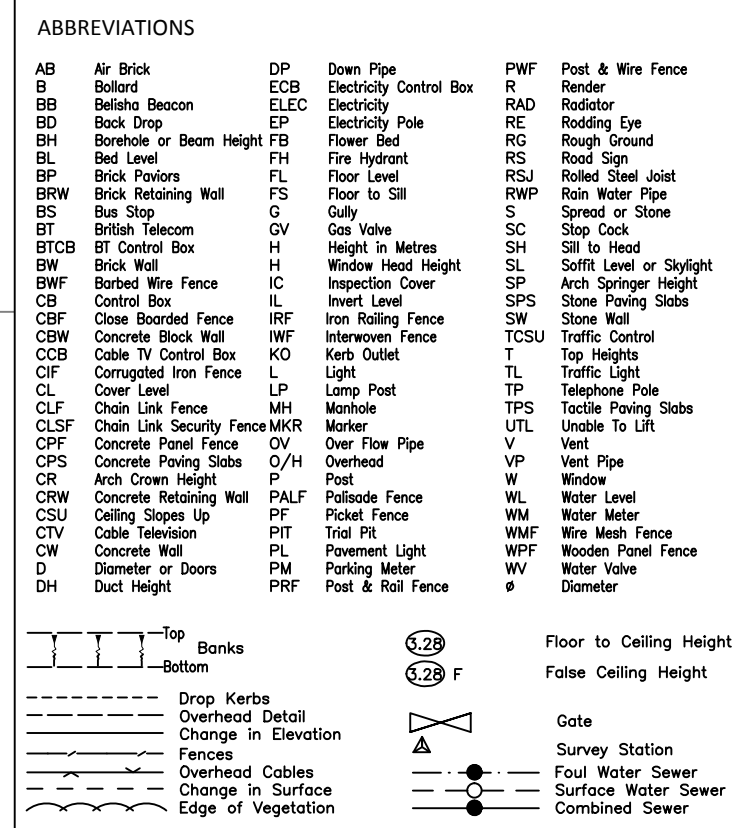
- The site is wholly within Flood Zone 1 (Low Probability) and so considered to be at low risk of flooding from Main Rivers and the sea.
- Local documentation and geology suggests the site is at low risk of groundwater flooding with deep groundwater, however, a residual risk may remain from elevated groundwater levels
- The site is considered to be at low risk of surface water flooding, with areas of high risk found along the northern boundary, but generally contained within the road channel and with topography encouraging flows away from the site.
- There are a limited number of public sewers found within the vicinity of the site and are mostly found along Chalk Farm Road. However, topography is likely to encourage surcharged flows away from the site.
- There are no canals nearby to the site that would pose a risk of flooding, therefore the risk of flooding from this source is low.
- Mapping provided by the EA suggests the site falls outside of any modelled flood extents from reservoir flooding and as such is at low risk of flooding from this source.

6.1.3 Recommendations are made in respect of appropriate consideration of finished floor levels and external level design to manage the residual risk of overland flows by conveying water away from dwellings and towards positively drained areas.

6.1.4 In accordance with the requirements of the National Planning Policy Framework, this FRA has demonstrated that development could proceed without being subject to significant flood risk and complies within relevant local plan policies.

6.1.5 Furthermore, the development will not result in increased flood risk to third parties if there is suitable management of surface water runoff.

Appendix A Topographical Survey



GRID & DATUM

Coordinates - related to OS grid via GPS observations
Levels - related to OS datum via GPS observations
Units - metres

COORDINATE SCHEDULE

Station	Easting	Northing	Level
A	528166.271	184402.096	39.895
B	528283.603	184355.049	28.966
C	528441.694	184303.315	28.003
D	528296.783	184315.715	47.793
E	528320.985	184306.094	47.789

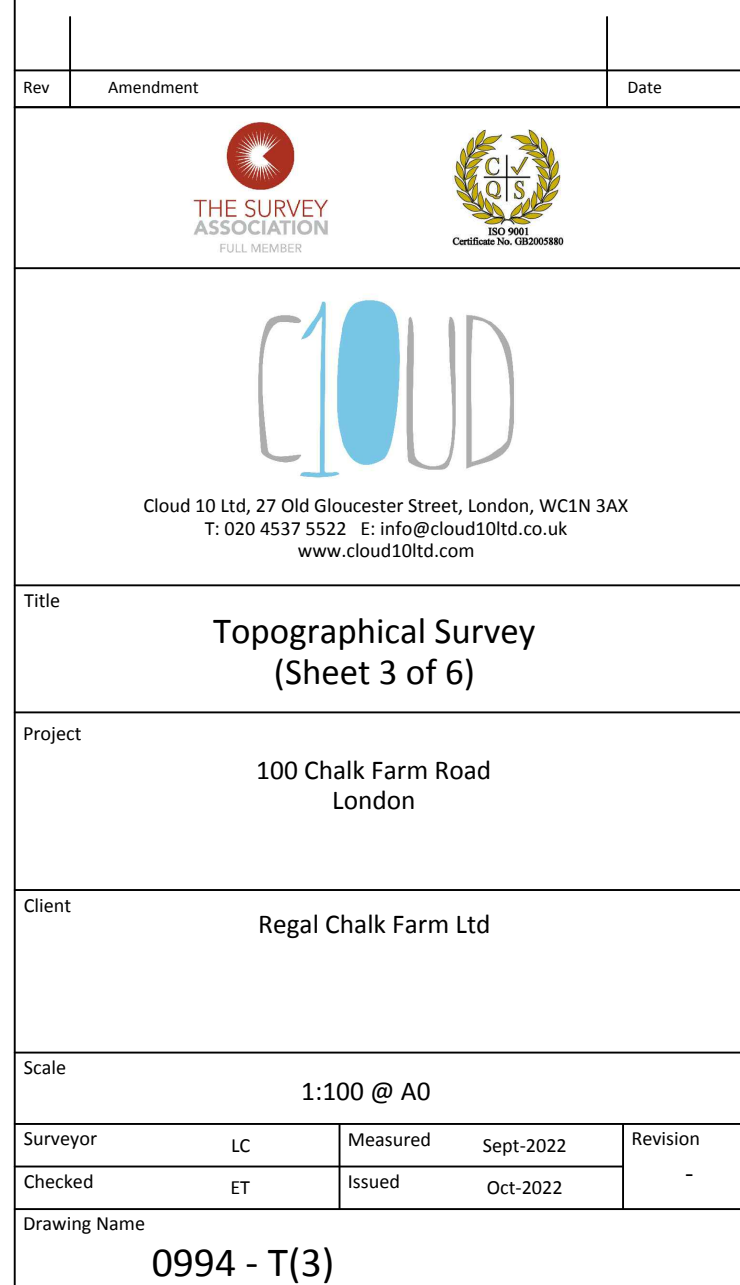


NOTES

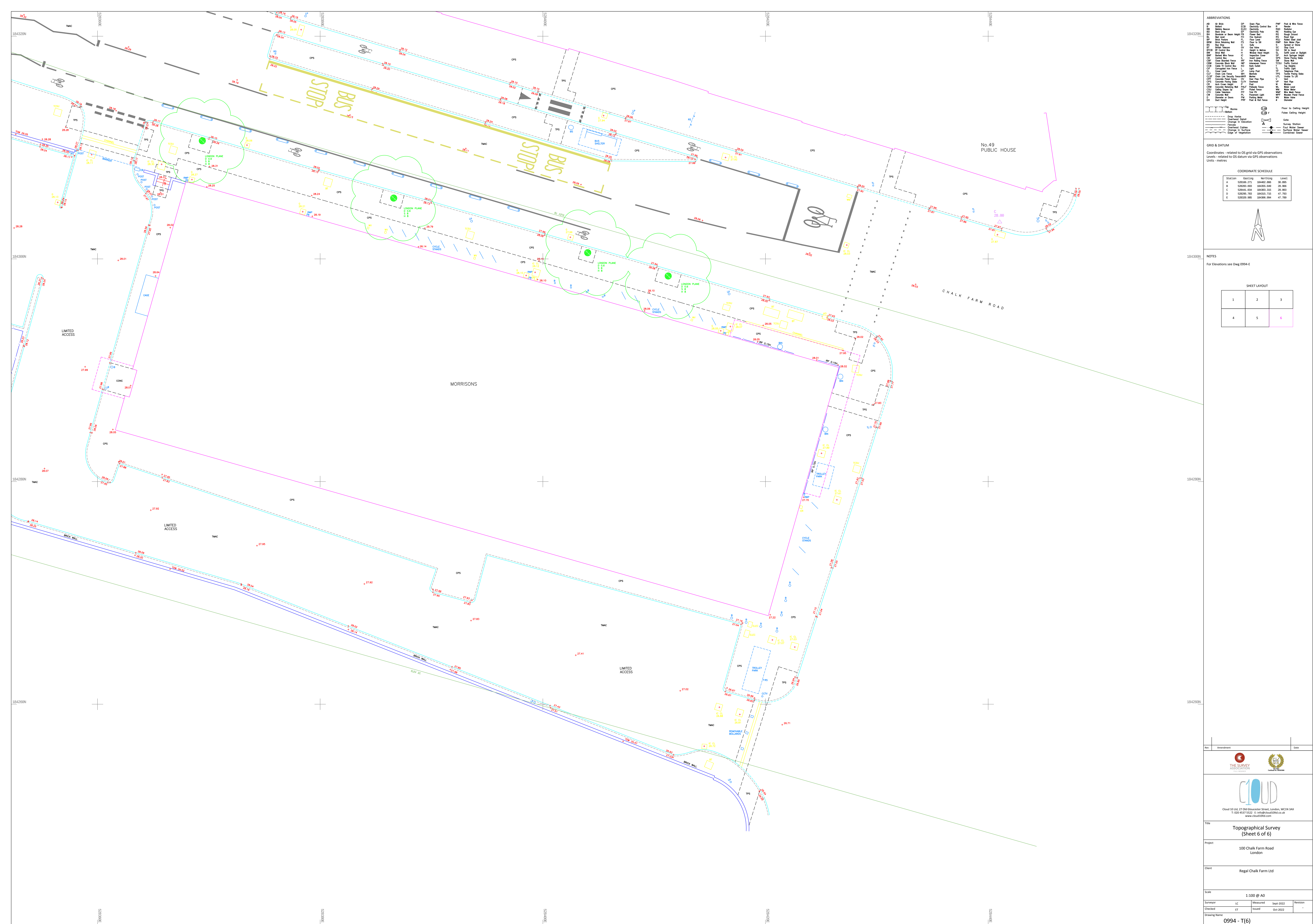
For Elevations see Dwg 0994-E

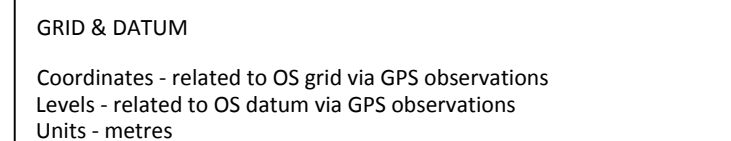
SHEET LAYOUT

1	2	3
4	5	6





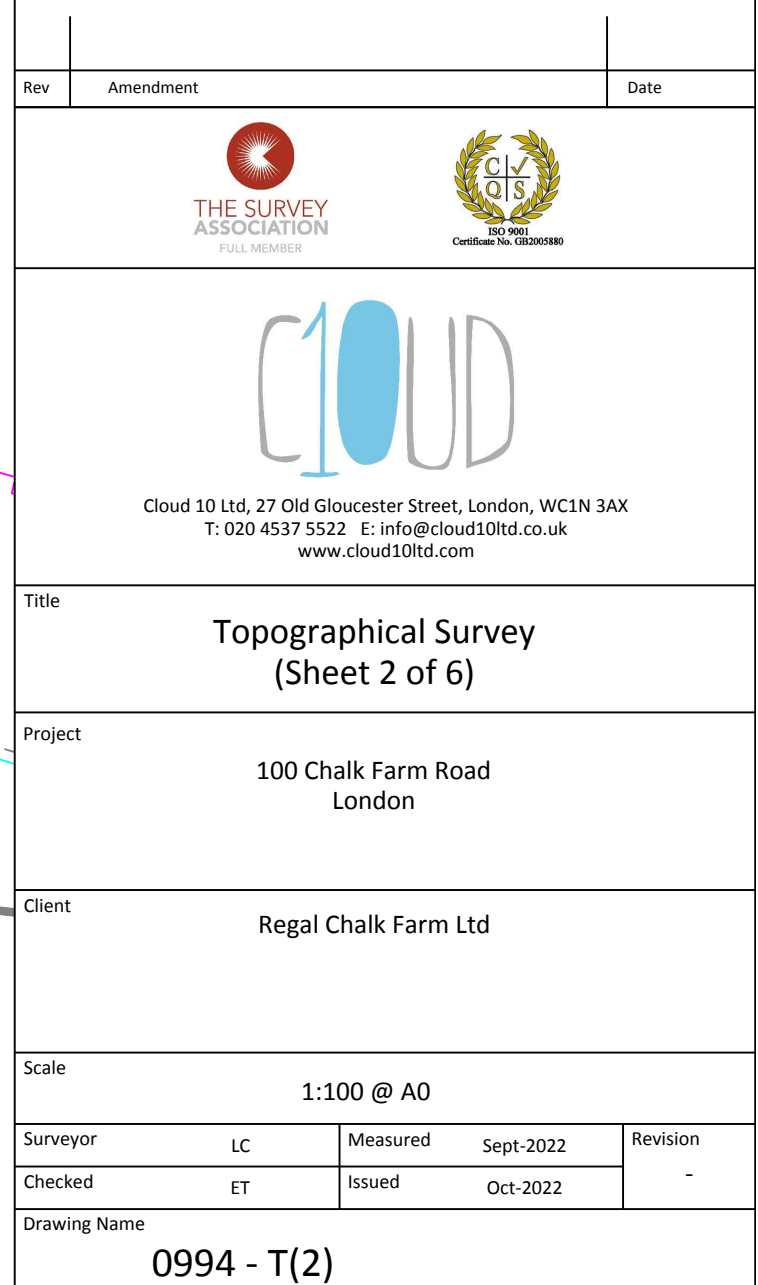




1	2	3
4	5	6

Rev	Amendment	Date
 THE SURVEY ASSOCIATION FPGA MEMBER  CIVIS FPGA MEMBER Contract No. 102010081		

Title Topographical Survey (Sheet 1 of 6)				
Project 100 Chalk Farm Road London				
Client Regal Chalk Farm Ltd				
Scale 1:100 @ A0				
Surveyor LC		Measured Sep-2022		Revision -
Checked IT		Issued Oct-2022		
Drawing Name 0994 - T(1)				



Appendix B Sewer Asset Plans

TM Property Service Ltd.
1200, Delta Business Park
Swindon
SN5 7XZ

Search address supplied	MULTISITESEARCH, 100, Chalk Farm Road, London, NW1 8EH
Your reference	23474141
Our reference	CDWS/CDWS Standard/2022_4661568
Received date	8 June 2022
Search date	13 June 2022

Keeping you up-to-date

Commercial Drainage and Water Enquiry

The Commercial Drainage and Water Enquiry is specifically designed for those purchasing or leasing land or commercial property.

With comprehensive information regarding water and sewerage services and infrastructure assets, combined with an appropriate guarantee for commercial property and land transactions, the Commercial Drainage and Water Enquiry mitigates risk and provides peace of mind for commercial property professionals and their advisers.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13



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



0800 009 4540

Search address supplied: MULTISITESEARCH, 100, Chalk Farm Road, London, NW1 8EH

Any new owner or occupier will need to contact Thames Water on 0800 316 9800 or log onto our website www.thameswater.co.uk and complete our online form to change the water and drainage services bills to their name.

The following records were searched in compiling this report: - the map of public sewers, the map of waterworks, water and sewer billing records, adoption of public sewer records, building over public sewer records, the register of properties subject to internal foul flooding, the register of properties subject to poor water pressure and the drinking water register. Thames Water Utilities Ltd (TWUL) holds all of these.

TWUL, trading as Property Searches, are responsible in respect of the following:-

- (i) any negligent or incorrect entry in the records searched
- (ii) any negligent or incorrect interpretation of the records searched
- (iii) any negligent or incorrect recording of that interpretation in the search report
- (iv) and compensation payments

Maps

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

A copy of an extract of the public sewer map is included, showing the public sewers, disposal mains and lateral drains in the vicinity of the properties.

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

A copy of an extract from the map of waterworks is included, showing water mains, resource mains or discharge pipes in the vicinity of the properties.

Drainage

2.1 Does foul water from the properties drain to a public sewer?

Records indicate that foul water from all of the properties drains to a public sewer.

2.2 Does surface water from the properties drain to a public sewer?

Records indicate that surface water from all of the properties drains to a public sewer.

2.3 Is a surface water drainage charge payable?

Records confirm that a surface water drainage charge is applicable for the following properties:

100, Chalk Farm Road, London, NW1 8EH

Records indicate that Thames Water does not levy charges direct to the following properties, a third party is billed for the water and/or sewerage charges. It is recommended therefore that the charging situation is checked with the vendor:

Subsidiary, 100, Chalk Farm Road, London, NW1 8EH

Third Floor Office, 100, Chalk Farm Road, London, NW1 8EH

Fourth Floor Office, 100, Chalk Farm Road, London, NW1 8EH

First Floor (Part East), 100, Chalk Farm Road, London, NW1 8EH

First Floor (Part West), 100, Chalk Farm Road, London, NW1 8EH

2.4 Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the properties?

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

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

The public sewer map included indicates that there is no public pumping station within the boundaries of the property.

2.5 Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the properties?

The public sewer map included indicates that there is a public sewer within 30.48 metres (100 feet) of a building within the property.

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

The public sewer map included indicates that there is no public pumping station within 50 metres of any buildings within the property.

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

Records confirm that Foul sewers serving the development, of which the property forms part are not the subject of an existing adoption agreement or an application for such an agreement.

The Surface Water sewer(s) and/or Surface Water lateral drain(s) are not the subject of an adoption agreement.

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

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

2.8 Is the building which is or forms part of the properties, at risk of internal flooding due to overloaded public sewers?

The property is not recorded as being at risk of internal flooding due to overloaded public sewers.

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

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

The nearest sewage treatment works is OLYMPIC PARK BLACKWATER PLANT which is 9.023 kilometres to the east of the property.

Water

3.1 Are the properties connected to mains water supply?

Records indicate that all of the properties are connected to the mains water supply.

3.2 Are there any water mains, resource mains or discharge pipes within the boundaries of the properties?

The map of waterworks indicates that there are water mains, resource mains or discharge pipes within the boundaries of the property.

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

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

3.4 Are the properties at risk of receiving low water pressure or flow?

Records confirm that the property is not recorded on a register kept by the water undertaker as being at risk of receiving low water pressure or flow.

3.5 What is the classification of the water supply for the property?

The water supplied to the property has an average water hardness of 109.2mg/l calcium which is defined as HARD by ThamesWater.

3.6 Is there a meter installed at this property?

Records indicate that there is a no meter installed at the following properties:

Subsidiary, 100, Chalk Farm Road, London, NW1 8EH
Third Floor Office, 100, Chalk Farm Road, London, NW1 8EH
Fourth Floor Office, 100, Chalk Farm Road, London, NW1 8EH
First Floor (Part East), 100, Chalk Farm Road, London, NW1 8EH

Records indicate that there is a meter installed at the following properties:

100, Chalk Farm Road, London, NW1 8EH
First Floor (Part West), 100, Chalk Farm Road, London, NW1 8EH

3.7 Please include details of the location of any water meter serving the properties.

Records indicate that the following properties are not served by a water meter.

Subsidiary, 100, Chalk Farm Road, London, NW1 8EH
Third Floor Office, 100, Chalk Farm Road, London, NW1 8EH
Fourth Floor Office, 100, Chalk Farm Road, London, NW1 8EH
First Floor (Part East), 100, Chalk Farm Road, London, NW1 8EH

Records indicate that the following properties are served by a water meter, which is not located within the property.

100, Chalk Farm Road, London, NW1 8EH
First Floor (Part West), 100, Chalk Farm Road, London, NW1 8EH

Charging

4.1.1 – Who is responsible for providing the sewerage services for the property?

Thames Water Utilities Limited, Clearwater Court, Reading, RG1 8DB is the sewerage undertaker for the area.

4.1.2 – Who is responsible for providing the water services for the property?

Thames Water Utilities Limited, Clearwater Court, Reading, RG1 8DB is the water undertaker for the area.

4.2 Who bills the properties for sewerage services?

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

4.3 Who bills the properties for water services?

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

Trade Effluent

5.1 Are there any trade effluent consents relating to this site/property for disposal of chemically enhanced waste?

The following properties do not have a trade effluent consent:
100, Chalk Farm Road, London, NW1 8EH
Subsidiary, 100, Chalk Farm Road, London, NW1 8EH
Third Floor Office, 100, Chalk Farm Road, London, NW1 8EH
Fourth Floor Office, 100, Chalk Farm Road, London, NW1 8EH
First Floor (Part East), 100, Chalk Farm Road, London, NW1 8EH
First Floor (Part West), 100, Chalk Farm Road, London, NW1 8EH

Wayleaves, Easements, Manhole Cover and Invert levels

6.1 Is there a wayleave/easement agreement giving Thames Water the right to lay or maintain assets or right of access to pass through private land in order to reach the Company's assets?

No.

6.2 On the copy extract from the public sewer map, please show manhole cover, depth and invert levels where the information is available.

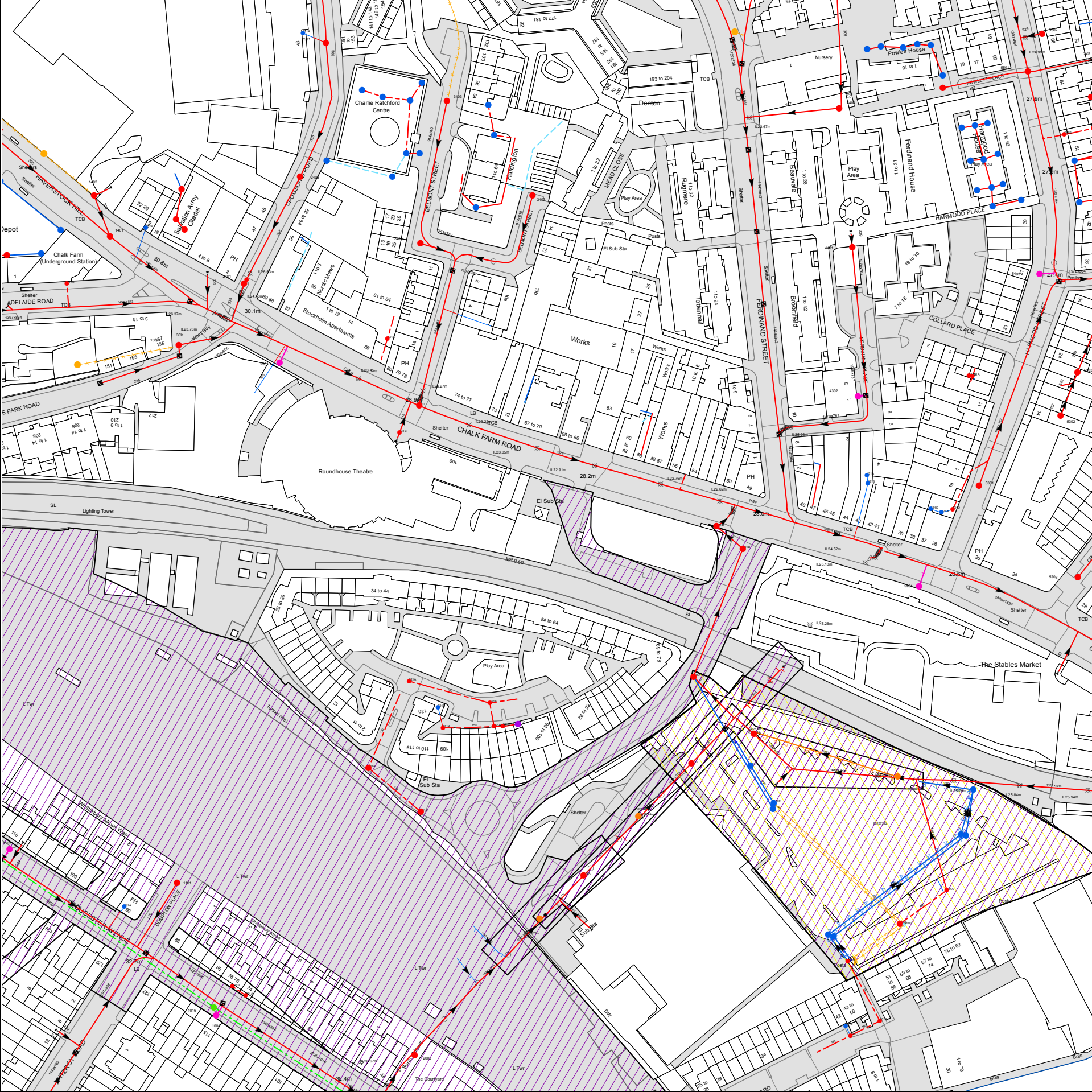
Details of any manhole cover and invert levels application to this site are enclosed.

Payment for this Search

A charge will be added to your suppliers account.

Please note that none of the charge made for this report relate to the provision of
ordnance Survey mapping information

CommercialDW Drainage and Water Enquiry Sewer Map- CDWS/CDWS Standard/2022 4661568



The width of the displayed area is 500m

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 no survey information is available.

Manhole Reference	Manhole Cover Level	Manhole Invert Level
411C	n/a	n/a
411E	n/a	n/a
421B	n/a	n/a
421C	n/a	n/a
n/a	n/a	n/a
211B	n/a	n/a
211A	n/a	n/a
411F	n/a	n/a
411B	33.14	25.1
411A	33.52	25.39
321A	n/a	n/a
321B	n/a	n/a
321D	n/a	n/a
321C	n/a	n/a
221B	n/a	n/a
321E	n/a	n/a
221A	n/a	n/a
421A	n/a	n/a
2301	n/a	n/a
231A	n/a	n/a
231B	n/a	n/a
231C	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.



Con29DW Commercial Drainage and Water 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.

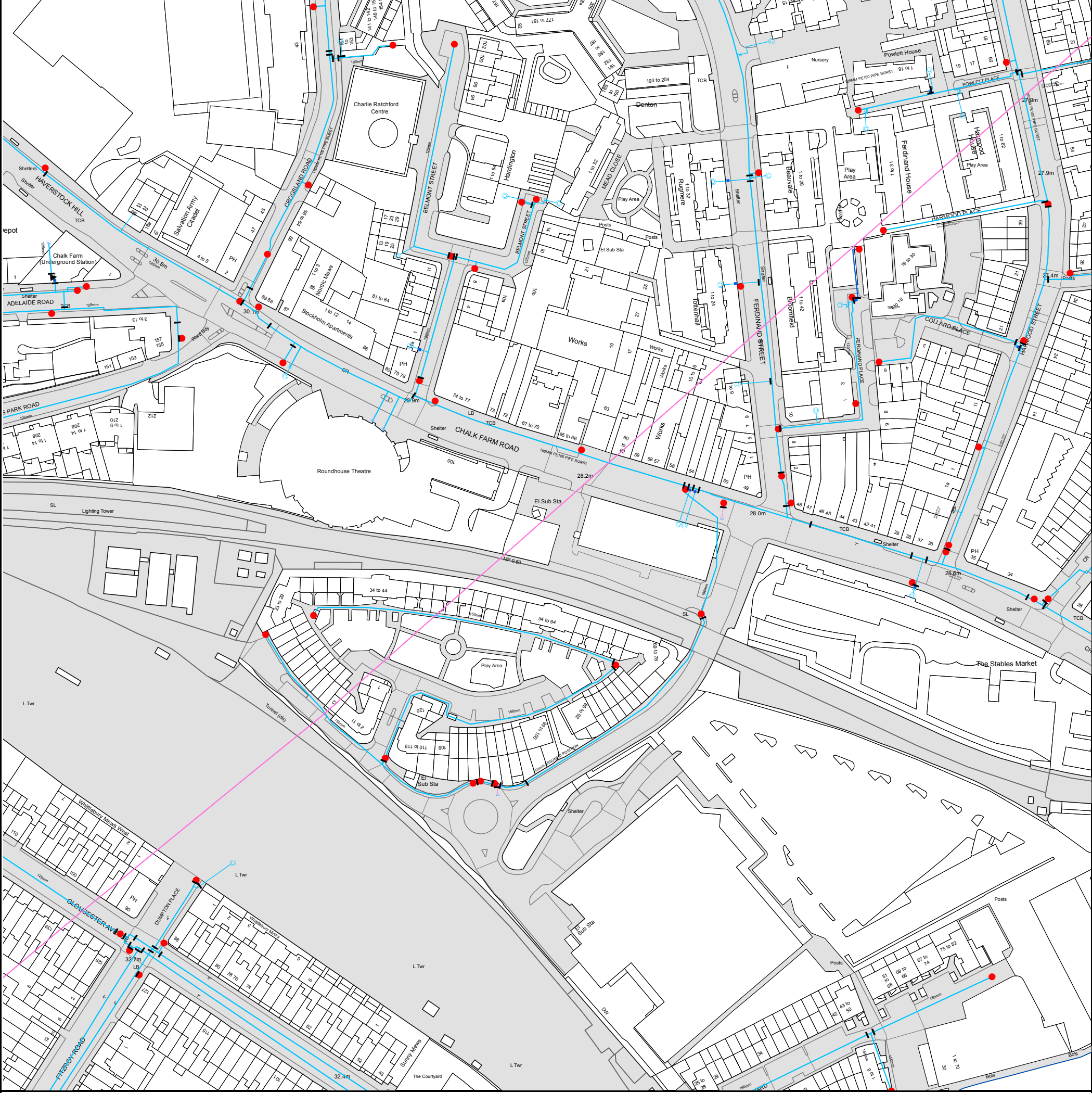
	Agreement
	Chamber
	Operational Site

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 500m

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.



Con29DW Commercial Drainage and Water Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

-

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.

For your guidance:

- Thames Water Property Searches Complaints Procedure:
 - Thames Water Property Searches offers a robust complaints procedure. Complaints can be made by telephone, in writing, by email (searches@thameswater.co.uk) or through our website (www.thameswater-propertysearches.co.uk)

As a minimum standard Thames Water Property Searches will:

- endeavour to resolve any contact or complaint at the time of receipt. If this isn't possible, we will advise of timescales;
- investigate and research the matter in detail to identify the issue raised (in some cases third party consultation will be required);
- provide a response to the customer within 10 working days of receipt of the complaint;
- provide compensation, if no response or acknowledgment that we are investigating the case is given within 10 working days of receipt of the complaint;
- keep you informed of the progress and, depending on the scale of investigation required, update with new timescales as necessary;
- provide an amended search, free of charge, if required;
- provide a refund if we find your complaint to be justified; take the necessary action within our power to put things right.

If you want us to liaise with a third party on your behalf, just let us know.

If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager, for resolution, who will respond again within 5 working days.

If you remain dissatisfied with our final response you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk

Question 1.1

For your guidance:

- The Water Industry Act 1991 defines Public Sewers as those which Thames Water have responsibility for. Other assets and rivers, watercourses, ponds, culverts or highway drains may be shown for information purposes only.
- 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.
- Assets other than public sewers may be shown on the copy extract, for information.

Question 1.2

For your guidance:

- The “water mains” in this context are those, which are vested in and maintainable by the water company under statute.
- Assets other than public water mains may be shown on the plan, for information only.
- Water companies are not responsible for private supply pipes connecting the property to the public water main and do not hold details of these. These may pass through land outside of the control of the seller, or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Question 2.1

For your guidance:

- Water companies are not responsible for any private drains that connect the property to the public sewerage system and do not hold details of these. The property owner will normally have sole responsibility for private drains serving the property. These may pass through land outside the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.
- If foul water does not drain to the public sewerage system, the property may have private facilities in the form of a cesspit, septic tank or other type of treatment plant.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 2.2

For your guidance:

- Sewerage Undertakers are not responsible for any private drains that connect the property to the public sewerage system, and do not hold details of these.
- The property owner will normally have sole responsibility for private drains serving the property. These private drains may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.
- In some cases, 'Sewerage Undertakers' records do not distinguish between foul and surface water connections to the public sewerage system.
- At the time of privatisation in 1989, Sewerage Undertakers were sold with poorly-kept records of sewerage infrastructure. The records did not always show which properties were connected for surface water drainage purposes. Accordingly, billing records have been used to provide an answer for this element of the drainage and water search.
- Due to the potential inadequacy of 'Sewerage Undertakers' infrastructure records with respect to surface water drainage, it is the customer's responsibility to inform the Sewerage Undertaker that they do not receive the surface water drainage service. If on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. If you wish to know who bills the sewerage services for this property then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk.
- If surface water from the property does not drain to the public sewerage system, the property may have private facilities in the form of a soakaway or private connection to a watercourse.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 2.3

For your guidance:

- If surface water from the property drains to a public sewer, then a surface water drainage charge is payable.
- Where a surface water drainage charge is currently included in the property's water and sewerage bill but, on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. If you wish to know who bills the sewerage services for this property then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk.

Question 2.4

For your guidance:

- Thames Water has a statutory right of access to carry out work on its assets. Employees of Thames Water or its contractors may, therefore, need to enter the property to carry out work.
- Please note if the property was constructed after 1st July 2011 any sewers and/or lateral drain within the boundary of the property are the responsibility of the householder.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public sewer running within the boundary of the property may restrict further development. The Company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the Company, or its contractors, needing to enter the property to carry out work.
- 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.

Question 2.4.1

For your guidance:

- Private pumping stations installed before 1st July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public pumping station within the boundary of the property may restrict further development. The company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the company, or its contractors, needing to enter the property to carry out work.
- 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.

Question 2.5

For your guidance:

- From the 1st October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property.
- The presence of a public sewer within 30.48 metres (100 feet) of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.
- 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.

Question 2.5.1

For your guidance:

- Private pumping stations installed before 1st July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The presence of a public pumping station within 50 metres of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.
- 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.

Question 2.6

For your guidance:

- Any sewers and/or lateral drains within the boundary of the property are not the subject of an adoption agreement and remain the responsibility of the householder. Adoptable sewers are normally those situated in the public highway.
- This enquiry is of interest to purchasers who will want to know whether or not the property will be linked to a public sewer.
- Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.
- Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991 and meeting the requirements of 'Sewers for Adoption' 6th Edition.

Question 2.7

For your guidance:

- From the 1st October 2011 most private sewers, disposal mains and lateral drains were transferred into public ownership and the sewerage undertaker may not have been approved or consulted about any plans to erect a building or extension on the property over or in the vicinity of these.
- Buildings or extensions erected over a sewer in contravention of building controls may have to be removed or altered.

Question 2.8

For your guidance:

- For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.
- A sewer is “overloaded” when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding as a result of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.
- “Internal flooding” from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.
- “At Risk” properties are those that the water company is required to include in the Regulatory Register that is presented annually to the Director General of Water Services. These are defined as properties that have suffered, or are likely to suffer, internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Company’s reporting procedure.
- Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included on the At Risk Register.
- Properties may be at risk of flooding but not included on the Register where flooding incidents have not been reported to the Company.
- Public Sewers are defined as those for which the Company holds statutory responsibility under the Water Industry Act 1991.
- It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Company. This report excludes flooding from private sewers and drains and the Company makes no comment upon this matter.
- For further information please contact Thames Water Utilities Ltd on Tel: 0800 316 9800 or website www.thameswater.co.uk

Question 2.9

For your guidance:

- The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated.
- The sewerage undertaker’s records were inspected to determine the nearest sewage treatment works.
- It should be noted that there may be a private sewage treatment works closer than the one detailed above that has not been identified.
- As a responsible utility operator, Thames Water Utilities Ltd seeks to manage the impact of odour from operational sewage works on the surrounding area. This is done in accordance with the Code of Practice on Odour Nuisance from Sewage Treatment Works issued via the Department of Environment, Food and Rural Affairs (DEFRA). This Code recognises that odour from sewage treatment works can have a detrimental impact on the quality of the local environment for those living close to works. However DEFRA also recognises that sewage treatment works provide important services to communities and are essential for maintaining standards in water quality and protecting aquatic based environments. For more information visit www.thameswater.co.uk

Question 3.1

For your guidance:

- The Company does not keep details of private supplies. The situation should be checked with the current owner of the property.

Question 3.2

For your guidance:

- The boundary of the property has been determined by reference to the plan supplied. Where a plan was not supplied, the Ordnance Survey Record was used. If the Water undertaker mentioned in Question 4.1.2 is not Thames Water Utilities Ltd the boundary of the property has been determined by the Ordnance Survey.
- The presence of a public water main within the boundary of the property may restrict further development within it. Water companies have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the Company, or its contractors, needing to enter the property to carry out work.

Question 3.3

For your guidance:

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

Question 3.4

For your guidance:

- “Low water pressure” means water pressure below the regulatory reference level, which is the minimum pressure when demand on the system is not abnormal.
- Water Companies are required to include in the Regulatory Register that is presented annually to the Director General of Water Services, properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level)
- The reference level of service is a flow of 9 litres/minute at a pressure of 10metres / head on the customer's side of the outside stop valve (osv). The reference level of service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap. The reference level applies to a single property. Where more than one property is served by a common service pipe, the flow assumed in the reference level must be appropriately increased to take account of the total number of properties served. For two properties, a flow of 18 litres/minute at a pressure of 10metres/head on the customers' side of the osv is appropriate. For three or more properties the appropriate flow should be calculated from the standard loadings provided in BS806-3 or the Institute of Plumbing handbook.
- **Allowable exclusions** The Company is required to include in the Regulatory Register properties receiving pressure below the reference level, provided that allowable exclusions listed below do not apply.
- **Abnormal demand:** This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand, which are normally expected. Companies should exclude from the reported figures properties which are affected by low pressure only on those days with the highest peak demands. During the report year companies may exclude, for each property, up to five days of low pressure caused by peak demand.
- **Planned maintenance:** Companies should not report low pressures caused by planned maintenance. It is not intended that companies identify the number of properties affected in each instance. However, companies must maintain sufficiently accurate records to verify that low-pressure incidents that are excluded because of planned maintenance are actually caused by maintenance.
- **One-off incidents:** This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as pressure reducing valves or booster pumps); firefighting; and action by a third party. However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded.
- **Low-pressure incidents of short duration:** Properties affected by low pressure, which only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the course of the year, may be excluded from the reported figures.
- Please contact your water undertaker mentioned in Question 4.1.2 if you require further information on water pressure.

Question 3.5

For your guidance:

- Water hardness can be expressed in various indices for example the hardness settings for dishwashers are commonly expressed in Clark's degrees, but check with the manufacturer as there are also other units. The following table shows the normal ranges of hardness.

Thames Water Hardness Category	Calcium (mg/l)	Calcium Carbonate (mg/l)	English Clarke degrees	French degrees	General/ German degrees
Soft	0 to 40	0 to 100	0 to 7	0 to 10	0 to 5.6
Medium	41 to 80	101 to 200	8 to 14	11 to 20	5.7 to 11.2
Hard	Over 80	Over 200	Over 14	Over 20	over 11.2

- Please contact your water undertaker mentioned in Question 4.1.2 if you require further information on water hardness.

Question 3.6

For your guidance:

- The Water Industry Act 1991 Section 150, The Water Resale Order 2001 provides protection for people who buy their water or sewerage services from a person or company instead of directly from a water or sewerage company. Details are available from the Office of Water Services (OFWAT) website is www.ofwat.gov.uk.
- The Company may install a meter at the premises where a buyer makes a change of use of the property or where the buyer uses water for:
 - Watering the garden other than by hand (this includes the use of sprinklers).
 - Automatically replenishing a pond or swimming pool with a capacity greater than 10,000 litres.
 - A bath with a capacity in excess of 230 litres.
 - A reverse osmosis unit Where a meter does not serve the property and the customer wishes to consider this method of charging, they should contact the current owner if they wish to know who bills the sewerage and water services for this property. For a list of all potential retailers of sewerage and water services for the property please visit www.open-water.org.uk.

Question 3.7

For your guidance:

- Where a meter does not serve the property and the customer wishes to consider this method of charging, they should contact the current owner if they wish to know who bills the water services for this property. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk.

Question 5.1

For your guidance:

- If a Trade effluent consent applies to the premises which are the subject of this search, it is for the applicant to satisfy itself as to the suitability of the consent for its client's requirements. The occupier of any trade premises in the area of a sewerage undertaker may discharge any trade effluent proceeding from those premises into the undertaker's public sewers if he does so with the undertaker's consent. If, in the case of any trade premises, any trade effluent is discharged without such consent or other authorisation, the occupier of the premises shall be guilty of an offence.
- Please note any existing consent is dependent on the business being carried out at the property and will not transfer automatically upon change of ownership.
- For further information regarding Trade Effluent consents please contact: Trade Effluent Control, Crossness STW, Belvedere Road, Abbey Wood London SE2 9AQ.

Question 6.1

For your guidance:

- This question relates only to private agreements between the water company acting in a private capacity and a landowner. Such contracts may often be part of a conveyance or land transfer, or a deed of grant of easement.
- If there is no formal easement, then a sewer or water main may have been constructed following the service of notice under the provisions of the Public Health Act 1936, Water Act 1945, Water Act 1989 or Water Industry Act 1991 as applicable. The company does not hold copies of these notices. However, in the absence of evidence to the contrary there is a legal presumption that all matters were properly dealt with. All rights and obligations relating to sewers and water mains are now covered by the Water Industry Act 1991. Where rights exist at the boundary of the property, but we are not sure of the exact correlation, we will answer "Yes" to this question. A documentary right can exist even if the physical asset itself has not yet been laid, or has been moved, or removed. Likewise the position of the right and of the asset may differ.
- You may also find that an asset is protected both with contractual rights and statutory rights. Please consult your solicitor as to why this may happen, and its effects.
- We refer to "defined" assets for the following reasons: Often a contract may give the water company an expressed right to install and maintain assets within an area but without stating the exact position or route of such assets. Also, the law may imply rights where none have been mentioned specifically in a related contract, such as a conveyance. Finally, rights may come into being through long use. In any of these cases the rights are undefined, and although the water company may need to rely on them from time to time, as we cannot map the rights accurately, we will answer "no" to this question.
- Information obtainable from physical inspection (including Trial Bore Holes) overrides information contained in the report.
- Any error in answering this question is not to be regarded as a waiver of the water company's rights or title, or an agreement or representation that the water company is prepared to vary or discharge any of its rights or title.

CommercialDW Drainage and Water Enquiry Terms and Conditions

Customer and Clients are asked to note these terms, which govern the basis on which this CommercialDW Drainage & Water Enquiry is supplied

Definitions

'Client' means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.

'Company' means a water service company or their data service provider producing the Report.

'Customer' means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.

'Order' means any request completed by the Customer requesting the Report.

'Property' means the address or location supplied by the Customer in the Order.

'Report' means the drainage and/or water report prepared by The Company in respect of the Property.

'Thames Water' means Thames Water Utilities Limited registered in England and Wales under number 2366661 whose registered office is at Clearwater Court, Vastern Road, Reading, Berks, RG1 8DB;

Agreement

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

The Report

2. Whilst Thames Water will use reasonable care and skill in producing the Report, it is provided to the Customer and the Client on the basis that they acknowledge and agree to the following:-

2.1 The information contained in the Report can change on a regular basis so Thames Water cannot be responsible to the Customer and the Client for any change in the information contained in the Report after the date on which the Report was produced and sent to the Client.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy, completeness and legibility of the address and other information supplied by the Customer or Client.

2.4 The Report provides information as to the location and connection of existing services and should not be relied on for any other purpose. The Report may contain opinions or general advice to the Customer and the Client and Thames Water cannot ensure that any such opinion or general advice is accurate, complete or valid and accepts no liability therefore.

2.5 The position and depth of apparatus shown on any maps attached to the Report are approximate, and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes and the maps must not be relied on in the event of excavation or other works made in the vicinity of apparatus shown on any maps.

Liability

3 Thames Water shall not be liable to the Client for any failure, defect or non-performance of its obligations arising from any failure of, or defect in any machine, processing system or transmission link or anything beyond Thames Water's reasonable control or the acts or omissions of any party for whom Thames Water are not responsible.

3.1 Where the Customer sells this report to a Client (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) Thames Water shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss or damage whatsoever and the Customer shall indemnify Thames Water in respect of any claim by the Client.

3.2 Where a report is requested for an address falling within a geographical area where Thames Water and another Company separately provide Water and Sewerage Services, then it shall be deemed that liability for the information given by Thames Water or the Company as the case may be will remain with Thames Water or the Company as the case may be in respect of the accuracy of the information supplied. Where Thames Water is supplying information which has been provided to it by another Company for the purposes outlined in this agreement Thames Water will therefore not be liable in any way for the accuracy of that information and will supply that information as agent for the Company from which the information was obtained.

3.3 Except in respect of death or personal injury caused by negligence, or as expressly provided in these Terms:

3.3.1 The entire liability of Thames Water or the Company as the case may be in respect of all causes of action arising under or in connection with the Report (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) shall not exceed £2,000,000 (two million pounds); and

3.3.2 Thames Water shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss of profit, loss of goodwill, loss of

reputation, loss of business or any indirect, special or consequential loss, damage or other claims, costs or expenses;

Copyright and Confidentiality

4. The Customer and the Client acknowledge that the Report is confidential and is intended for the personal use of the Client. The copyright and any other intellectual property rights in the Report shall remain the property of Thames Water or the Company as the case may be. No intellectual or other property rights are transferred or licensed to the Customer or the Client except to the extent expressly provided

4.1 The Customer or Client is entitled to make copies of the Report but is not permitted to copy any maps contained in, or attached to the Report

4.2 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

4.3 The Customer and Client agree (in respect of both the original and any copies made) to respect and not to alter any trademark, copyright notice or other property marking which appears on the Report.

Payment

5. Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay for the price of the Report specified by Thames Water, without any set off, deduction or counterclaim.

5.1 Unless payment has been received in advance, Customers shall be invoiced for the agreed fee once their request has been processed. Any such invoice must be paid within 14 days. Where the Customer has an account with Thames Water, payment terms will be as agreed with Thames Water.

5.2 No payment shall be deemed to have been received until Thames Water has received cleared funds.

5.3 If the Customer fails to pay Thames Water any sum due Thames Water shall be entitled but not obliged to charge the Customer interest on the sum from the due date for payment at the annual rate of 2% above the base lending rate from time to time of Natwest Bank, accruing on a daily basis until payment is made. Thames Water reserves the right to claim interest under the Late Payment of Commercial Debts (Interest) Act 1998.

5.4 Thames Water reserves the right to increase fees on reasonable prior written notice at any time.

Cancellations or Alterations

6. Once an Order is placed, Thames Water shall not be under any obligation to accept any request to cancel that Order and payment for the Order shall still be due upon completion of the Report. In cases where an error has been made in the original Order (e.g. the Customer has supplied an incorrect address), the Customer will need to place a second Order, detailing the correct information, and shall be liable to pay a second charge in accordance with clause 5 above.

Delivery

7. On receiving your order the reports will be posted to you within 10 working days from receipt.

7.1 Delivery is subject to local post conditions and regulations. All items should arrive within 12 working days, but Thames Water cannot be held responsible should delays be caused by local post conditions, postal strikes or other causes beyond the control of Thames Water.

General

8. If any provision of these terms is or becomes invalid or unenforceable, it will be taken to be removed from the rest of these terms to the extent that it is invalid or unenforceable. No other provision of these terms shall be affected.

8.1 These terms shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

8.2 Nothing in this notice shall in any way restrict the Customer or Clients statutory or any other rights of access to the information contained in the Report.

These Terms & Conditions are available in larger print for those with impaired vision.

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 TWUL 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 14 days from due 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. TWUL does not accept post-dated cheques-any cheques received will be processed for payment on date of receipt.
5. In case of dispute TWUL's terms and conditions shall apply.
6. 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'.
7. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
8. A charge may be made at TWUL's discretion for increased administration costs.

A copy of TWUL'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 not satisfied with the response, your complaint will be reviewed by the Customer Services Director. You can write to her at: Thames Water Utilities Ltd. PO Box 492, Swindon, SN38 8TU.

If the goods or services covered by this invoice falls under the regulation of the Water Industry Act 1991, and you remain dissatisfied you can refer your complaint to CC Water on 0845 039 2837 (it will cost you the same as a local call) or write to them at 11 Belgrave Road, London SW1V 1RB.

Ways to pay your bill

By Post – Cheque only, made payable to 'Thames Water Utilities Ltd' writing your Thames Water account number on the back. Please fill in the payment slip below and send it with your cheque to Thames Water Utilities Ltd., PO Box 223, Swindon SN38 2TW	By BACS Payment direct to our bank on account number 90478703, sort code 60-00-01 may be made. A remittance advice must be sent to Thames Water Utilities Ltd., PO Box 223, Swindon SN38 2TW. Or fax to 01793 424599 or email: cashoperations@thameswater.co.uk	Telephone Banking By calling your bank and quoting your invoice number and the Thames Water's bank account number 90478703 and sort code 60-00-01	By Swift Transfer You may make your payment via SWIFT by quoting NWBKGB2L together with our bank account number 90478703, sort code 60-00-01 and invoice number
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Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.

Appendix C Camden Flood Proforma

All yellow boxes **must** be completed on this and all relevant tabs
Complete peach cells with source document and section/page references, required to support/justify responses
Do not edit grey cells
Please note guidelines / notes in column M
Complete all relevant tabs

Introduction: This Proforma is intended to help you understand the Sustainable Drainage and Flood Risk considerations that the Lead Local Flood Authority (LLFA) and Local Planning Authority (LPA) will take into account when considering an application in Camden, as well as helping us to consider the application. This does not replace the need also to provide where required a Drainage Statement, Flood Risk Assessment, and GLA-Camden SuDS Pro-forma, and observe the detailed guidance in 'Camden Planning Guidance (CPG) Water & Flooding'. Any information provided should be referenced to the relevant section of submitted supporting documents. This summary page will help provide key details on the application. Note that certain cells on this and other tabs will be populated automatically from previous answers given.

Planning reference (if known)			
Scheme name	100 Chalk Farm Road		
Scheme address	100 Chalk Farm Road, Camden		
Postcode	NW1 8AP		
Scale of development as registered	Major		
Scale - policy subcategory	Major - largescale	Residential parts	Non-residential parts
Type(s) of development	Residential	new/re-build and refurb/change o	
Site area, hectares	0.28	100%	
Of which total permeable area, to nearest 0.0001 ha	0	0%	
Of which total impermeable area, to nearest 0.0001 ha	0.28	100%	

	Existing	Proposed				
	TOTAL pre-development	For demolition	New-build incl. infills, re-build, extensions	Retained (refurbished or change of use)	TOTAL post-development	Net UPLIFT post-development
Total floor area of development (GIA)	0	0	0	0	0	0
of which residential	0	0	0	0	0	0
of which non- residential		0	0	0	0	0
Number of residential units						
List all use class(es)						
Drainage Statement document details	106885-PEF-ZZ-XX-RP-CD-000001					
Flood Risk Assessment document details	106885-PEF-ZZ-XX-RP-YE-000010					

[illegible]

Site area 1 hectare or greater?	<i>No</i>	
Major application?	<i>Yes</i>	
In Critical Drainage Area?	Yes	
In or bordering (<50m) Local Flood Risk Zone(s)?	No	
Name of LFRZ(s):		
On Historically Flooded Street 1975 or 2002?	No	
Name of HFS(s):		
Area at risk of flooding (surface water)?	<i>No</i>	
Elevated groundwater susceptibility or <50m of GW incidence?	No	
In area with recorded sewer flooding incident?	No	
In street with historical underground watercourse?	No	
Area at risk of flooding (other relevant types)?	<i>No</i>	
Basement proposed - new, enlarged or change of use?	Yes	
<i>IF YES, list proposed basement uses (all spaces):</i>	Cinema & Spa	
<i>IF YES, are habitable or vulnerable use(s) included?</i>		
<i>IF NO, is other (non-basement) vulnerable development proposed?</i>	Yes	
Vulnerable development in flood-prone area?	<i>Yes</i>	
Site-specific Flood Risk Assessment (FRA) required?	<i>CHECK SITE DETAILS</i>	
Site-specific FRA submitted?	Yes	If Yes, go to Flood Risk Proposals tab
Drainage Statement (DS) required?	<i>CHECK SITE DETAILS</i>	
DS submitted?	Yes	If Yes, go to Flood Risk Proposals tab
Sustainable drainage (SuDS) proposals required?	<i>CHECK SITE DETAILS</i>	
SuDS proposals submitted?	Yes	If Yes, go to SuDS Proposals tab
FRA/DS/SuDS supporting evidence required?	<i>CHECK SITE DETAILS</i>	
Supporting evidence submitted?	Yes	If Yes, go to Flood Risk Proposals &/or SuDS Proposals tabs

Flood Risk Assessment, Proposals & Evidence

Recommendation (Council to complete)	Assessments	Required?	Document submitted?	Document title	Page/ section reference	Guidelines / notes
	Site-specific Flood Risk Assessment	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010		Policy CC3 c. consider the impact of development in areas at risk of flooding
	Drainage Statement	CHECK SITE DETAILS	Yes			Policy CC3 c. consider the impact of development in areas at risk of flooding
	SuDS Proposals tab completed	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-CD-000001		(including drainage);
	SuDS Proposals	CHECK SITE DETAILS	Yes	104878-PEF-ZZ-XX-RP-D-100017		Policy CC3 b. avoid harm to the water environment and improve water quality& e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible
	SuDS Proposals tab completed	CHECK SITE DETAILS	Yes	104878-PEF-ZZ-XX-RP-D-100017		
Recommendation (Council to complete)	Policy compliance	Required?	Requirement met?	Document title	Page/ section reference	
	Assessments address local, regional & national policies	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 3	including Local Plan CC3, CPG, new London Plan, National Planning Policy Framework
	include suitable research & quantification of site flood risks	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 4	including Strategic Flood Risk Assessment, Update LFRZ Map & EA Mapping
	address cumulative impact of developments	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 2	Policy CC3 c. consider the impact of development in areas at risk of flooding
	propose suitable flood ingress internal coping measures	CHECK SITE DETAILS	No			Policy CC3 d. incorporate flood resilient measures in areas prone to flooding;
	propose suitable flood risk mitigation measures	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 5	Policy CC3 d. incorporate flood resilient measures in areas prone to flooding;
	Internal water consumption target 105 l/p/d (residential)	Yes	N/A			Policy CC3 a. incorporate water efficiency measures
	External water consumption target 5 l/p/d (residential)	Yes	N/A			Policy CC3 a. incorporate water efficiency measures
	BREEAM Excellent water consumption target (non-resi. >500m2)	No	Residential			Policy CC3 a. incorporate water efficiency measures
	Will not locate vulnerable development in flood-prone areas	Yes	No	106885-PEF-ZZ-XX-RP-YE-000010	Section 5	Policy CC3 f. not locate vulnerable development in flood-prone areas.
	Scheme does not increase flood risk on & off site	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 6	Policy CC3 The Council will seek to ensure that development does not increase flood risk
	Scheme reduces on&off-site flood risk where possible	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 5	Policy CC3 The Council will seek to ensure that development...reduces the risk of flooding where possible
Recommendation (Council to complete)	Evidence supporting Assessments & Proposals	Required?	Evidence submitted?	Document title	Page/ section reference	
	Drawings showing site-specific flood risk up to 100yr+40%	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-YE-000010	Section 4	allowing 300mm freeboard to potential water ingress points
	Drawings showing proposed internal coping measures	CHECK SITE DETAILS	No			
	Drawings showing proposed flood mitigation measures	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-CD-000000	Appendix D	
	Drawings showing proposed basement/ground floor uses	CHECK SITE DETAILS	Yes	Submitted Layout Plans		
	Building flood risk emergency evacuation plan		No			
	Drawings showing on&off-site overland exceedance flows	CHECK SITE DETAILS	Yes	106885-PEF-ZZ-XX-RP-CD-000000	Appendix F	
	Internal water calculations & proposals (resi)	Yes	No			Policy CC3 a. incorporate water efficiency measures
	External water calculations & proposals (resi)	Yes	No			Policy CC3 a. incorporate water efficiency measures
	BREEAM water calculations & proposals (non-resi. >500m2)	No	Residential			Policy CC3 a. incorporate water efficiency measures

Sustainable Drainage (SuDS) Assessment, Evidence and Proposals

Recommendation (Council to complete)

Assessments

Drainage Statement (DS)

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GLA-Camden SuDS Pro-forma (fully completed)

Recommendation (Council to complete)

Policy compliance

DS must include identification of flood risk
DS must include assessment of existing, greenfield & proposed runoff rates
DS must include identification of measures, in line with the drainage hierarchy, to reduce runoff rates

Achieve greenfield runoff rates wherever feasible, or as close as possible
Constrain runoff volumes to greenfield for 100yr 6hr event where feasible
Backstop target for unaltered buildings: >50% reduction in existing run-off

Developments must include SuDS unless inappropriate
Development should follow the detailed London Plan drainage hierarchy
EA climate change factor applied: 2080s upper rainfall intensity allowance (40%)

Recommendation (Council to complete)

Evidence supporting Assessments & Proposals

Drawings detailing SuDS extent & position (incl. outfalls, control points, levels)
Blue-green roof details with area & minimum 150mm substrate for storage
Results of cross-site infiltration rate or similar tests to show soil (in)compatibility
Professional run-off calculations supporting rates & volumes reported in DS
Drawings showing on&off-site overland exceedance flows
Evidence of site surveys and investigations relating to drainage
Lifetime maintenance and adoption arrangements (and maintenance owner)
Management of health & safety risks related to SuDS design
Confirmation of discharge capacity (or correspondence) from relevant body eg TW

Document submitted?
Yes

Yes

Requirement met?
Yes
Yes
Yes

Yes
Yes
Yes

Yes
Yes
Yes

Evidence submitted?
Yes
No
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes

Document title	Page/ section reference
106885-PEF-ZZ-XX-RP-CD-000001	

106885-PEF-ZZ-XX-RP-CD-000001	Appendix E & F
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Document title	Page/ section reference
106885-PEF-ZZ-XX-RP-YE-000010	FRA document
106885-PEF-ZZ-XX-RP-CD-000001	Section 3
106885-PEF-ZZ-XX-RP-CD-000001	Section 3

106885-PEF-ZZ-XX-RP-CD-000001	Sections 3, 4 & 5
106885-PEF-ZZ-XX-RP-CD-000001	Sections 3, 4 & 5
106885-PEF-ZZ-XX-RP-CD-000001	Sections 3, 4 & 5

106885-PEF-ZZ-XX-RP-CD-000001	Section 3.5
106885-PEF-ZZ-XX-RP-CD-000001	Section 3.1
106885-PEF-ZZ-XX-RP-CD-000001	Appendix C

Document title	Page/ section reference
106885-PEF-ZZ-XX-RP-CD-000001	Appendix D
Geo-Environmental Report	
106885-PEF-ZZ-XX-RP-CD-000001	Appendix C and Section 2
106885-PEF-ZZ-XX-RP-CD-000001	Appendix F
106885-PEF-ZZ-XX-RP-CD-000001	Appendix A, B and E
106885-PEF-ZZ-XX-RP-CD-000001	Section 3
106885-PEF-ZZ-XX-RP-CD-000001	Section 3
106885-PEF-ZZ-XX-RP-CD-000001	Appendix E

Guidelines / notes

Policy CC3 c. consider the impact of development in areas at risk of flooding (including drainage);

Download from www.london.gov.uk/what-we-do/environment/climate-change/surface-

Policy CC3 e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible
& Policy CC3 supporting text §8.67

Policy CC3 e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible
& Policy CC3 supporting text §8.66

Policy CC3 e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible
& Policy CC3 supporting text §8.68

Appendix D Camden SuDS Proforma

The London Sustainable Drainage Proforma

Introduction

This proforma is intended to accompany a drainage strategy prepared for a planning application where required by national or local planning policy. It should be used to summarise the key outputs from the strategy to allow assessing officers at the Lead Local Flood Authority (LLFA) to quickly assess compliance with sustainable drainage (SuDS) planning

The proforma is divided into 4 sections, which are intended to be used as follows:

1. Site and project information - Provide summary details of the development, site and drainage
2. Proposed discharge arrangement – Summarise site ground conditions to determine potential for infiltration. Select a surface water discharge method (or mix of methods) following the hierarchical approach set out in the London Plan.
3. Drainage strategy – Prioritise SuDS measures that manage runoff as close to source as possible and contribute to the four main pillars of SuDS; amenity, biodiversity, water quality and water quantity.
4. Supporting information – Provide cross references to the page or section of the drainage strategy report where the detailed information to support each element can be found. This may be more than one reference for each

Policy

Drainage strategies for developments in the London Borough of [insert borough] need to comply with the following policies on SuDS:

1. [Camden Local Plan Policy CC3](#)
2. [London Plan policy 5.13](#) and draft [New London Plan policy SI13](#)
3. [The National Planning Policy Framework \(NPPF\)](#)

Technical Guidance

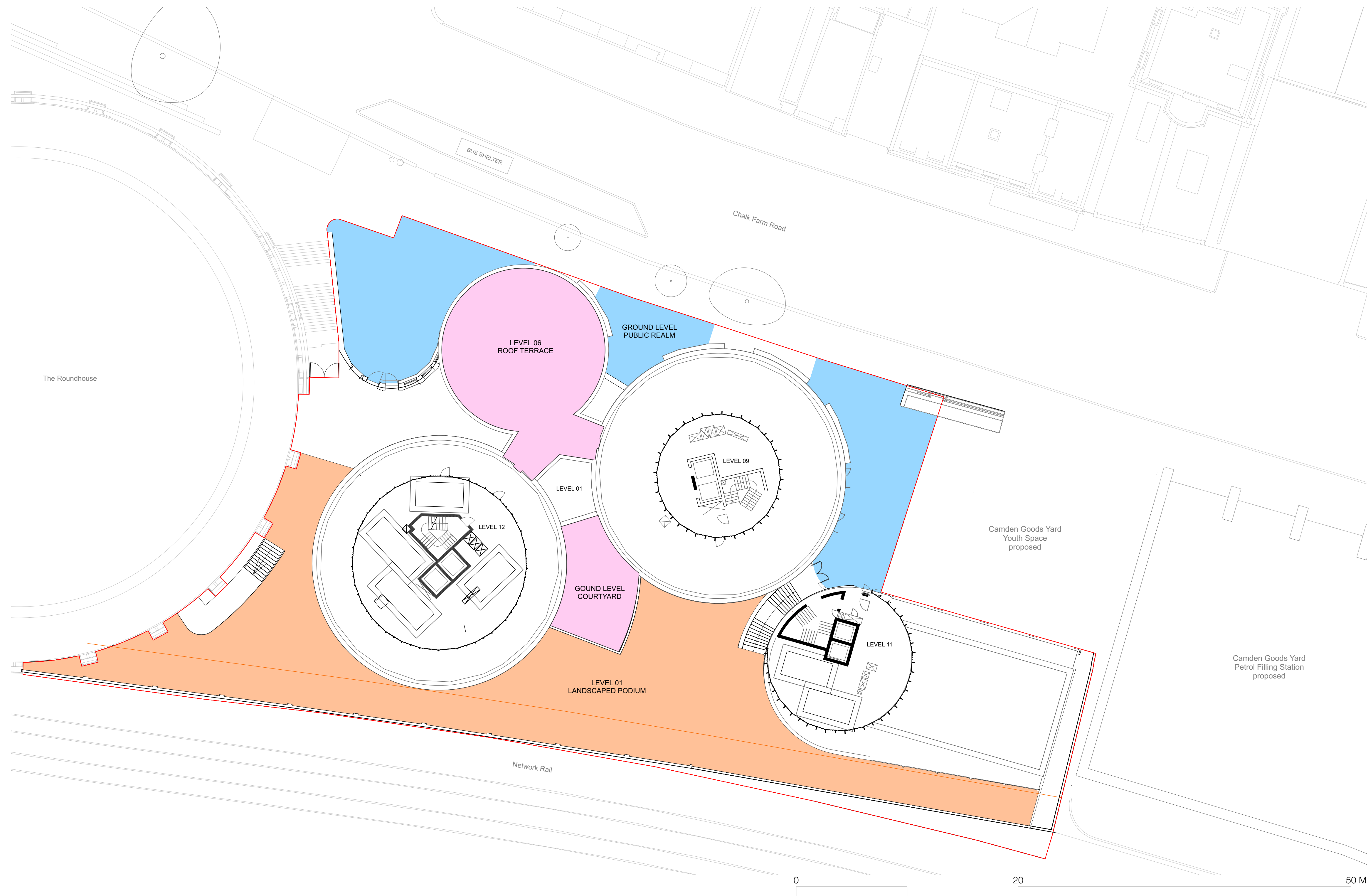
- Post-development surface water discharge rate should be limited to greenfield runoff rates. Proposals for higher discharge rates should be agreed with the LLFA ahead of submission of the Planning Application. Clear evidence should be provided with the Planning Application to show why greenfield rates cannot be achieved.
- Greenfield runoff rate is the runoff rate from a site in its natural state, prior to any development. This should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS Manual.
- Attenuation storage volumes required to reduce post-development discharge rates to greenfield rates should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS Manual.
- 'CC' refers to climate change allowance from the current Environment Agency guidance.
- An operation and maintenance strategy for proposed SuDS measures should be submitted with the Planning Application and include the details set out in section 32.2 of CIRIA C753 The SuDS Manual. The manual should be site-specific and not directly reproduce parts of The SuDS Manual.
- Other useful sources of guidance are:
 - o [Camden Planning Guidance 'Water and Flooding'](#)
 - o [The London Plan Sustainable Design and Construction SPG](#)
 - o [DEFRA non-statutory technical standards for sustainable drainage](#)
 - o [Environment Agency climate change guidance](#)
 - o [CIRIA C753 The SuDS Manual](#)
 - o [Camden's 'SuDS in planning applications' webpage](#)

1. Project & Site Details	Project / Site Name (including sub-catchment / stage / phase where appropriate)	100 Chalk Farm Road, Camden, London
	Address & post code	100 Chalk Farm Road, Camden, London, NW1 8EH
	OS Grid ref. (Easting, Northing)	E 528303 N 184315
	LPA reference (if applicable)	
	Brief description of proposed work	The development proposal comprises of the demolition of existing building and redevelopment of the site to provide two buildings ranging in height from 6 to 12 storeys containing purpose-built student accommodation (PBSA) with 265 rooms,
	Total site Area	2800 m ²
	Total existing impervious area	2800 m ²
	Total proposed impervious area	2800 m ²
	Is the site in a surface water flood risk catchment (ref. local Surface Water Management Plan)?	No
	Existing drainage connection type and location	Combined
	Designer Name	Santino Paoli
	Designer Position	Graduate Civil Engineer
Designer Company	Pell Frischmann	

2. Proposed Discharge Arrangements	2a. Infiltration Feasibility		
	Superficial geology classification	No recorded superficial geology (Unproductive Aquifer)	
	Bedrock geology classification	London Clay Formation (Unproductive Aquifer)	
	Site infiltration rate	0	m/s
	Depth to groundwater level	5.4	m below ground level
	Is infiltration feasible?	No	
	2b. Drainage Hierarchy		
		<i>Feasible (Y/N)</i>	<i>Proposed (Y/N)</i>
	1 store rainwater for later use	Y	N
	2 use infiltration techniques, such as porous surfaces in non-clay areas	N	N
	3 attenuate rainwater in ponds or open water features for gradual release	N	N
	4 attenuate rainwater by storing in tanks or sealed water features for gradual release	Y	Y
	5 discharge rainwater direct to a watercourse	N	N
	6 discharge rainwater to a surface water sewer/drain	Y	Y
	7 discharge rainwater to the combined sewer.	Y	Y
2c. Proposed Discharge Details			
Proposed discharge location	into an existing manhole and a new proposed		
Has the owner/regulator of the discharge location been consulted?	Planning enquiry application has been sent to		

3. Drainage Strategy	3a. Discharge Rates & Required Storage				
		Greenfield (GF) runoff rate (l/s)	Existing discharge rate (l/s)	Required storage for GF rate (m ³)	Proposed discharge rate (l/s)
	Qbar	1.5			
	1 in 1	1.3		265	2
	1 in 30	3.4		2051	2
	1 in 100	4.9		3048	2
	1 in 100 + CC			4605	2
	Climate change allowance used		40%		
	3b. Principal Method of Flow Control		Hydrobrake Manhole		
	3c. Proposed SuDS Measures				
			Catchment area (m ²)	Plan area (m ²)	Storage vol. (m ³)
	Rainwater harvesting		0		0
	Infiltration systems		0		0
	Green roofs		0	0	0
	Blue roofs		2800	376	57
	Filter strips		0	0	0
	Filter drains		0	0	0
	Bioretention / tree pits		0	0	0
	Pervious pavements		0	0	0
Swales		0	0	0	
Basins/ponds		0	0	0	
Attenuation tanks		2800		215	
Total		5600	376	272	

4. Supporting Information	4a. Discharge & Drainage Strategy	Page/section of drainage report
	Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	Section 3 Surface Water Drainage Strategy
	Drainage hierarchy (2b)	Section 3.1 Drainage Hierarchy
	Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	Section 2.2
	Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	Section 3.2
	Proposed SuDS measures & specifications (3b)	Section 3.4 & 3.6
	4b. Other Supporting Details	Page/section of drainage report
	Detailed Development Layout	Appendix F
	Detailed drainage design drawings, including exceedance flow routes	Appendix E
	Detailed landscaping plans	Appendix F
	Maintenance strategy	Section 3.6
	Demonstration of how the proposed SuDS measures improve:	
	a) water quality of the runoff?	Section 3.5
	b) biodiversity?	Section 3.5
	c) amenity?	Section 3.5



- KEY:**
- site boundary
 - 3m network rail boundary
 - public open space
337 sq m
 - outdoor amenity accessed by
C3 housing and PBSA residents
470 sq m
 - outdoor amenity space
accessed by PBSA residents
260 sq m

DRAFT 22.01.24

FOR PLANNING

CDM :
In addition to the hazards / risks normally associated with the
types of work detailed on this drawing, note the following:

1. xxxxx

Do not scale from the drawing. Any discrepancies to be reported
to the landscape architect. All dimensions will be taken on site
prior to ordering and construction. Copyright remains with the
landscape architect. This drawing is to be read in conjunction
with the specification and all other relevant drawings.

BBUK
LANDSCAPE ARCHITECTURE

BBUK Studio Ltd
unit 10, The Dove Centre
109 Bartholomew Road
London NW5 2BJ

t: +44 (0)207 4854649
e: info@bbukstudio.com
www.bbukstudio.com



project
100 Chalk Farm Road

drawing
Open Space & Amenity Space Plan

drawing nr
22226-BBUK-XX-ZZ-DR-L-0700

date
Jan'24

scale
200@A1
400@A3

rev
P01

work stage
2

drawn
as/km

checked
mb



FOR PLANNING

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London NW5 2BU

t: +44 (0)207 4854649
e: info@bbukstudio.com
www.bbukstudio.com



project
100 Chalk Farm Road

drawing
Proposed Landscape GA Plan - Ground Level

drawing nr
22226-BBUK-XX-00-DR-L-0100

date
Jan'24

scale
200@A1
400@A3

rev
P01

work stage
2

drawn
as/km

checked
mb

DRAFT 22.01.24



- KEY:**
- site boundary
 - 3m network rail boundary
 - +28.480(ex) existing levels
 - +28.480 proposed levels
 - 1:60 proposed gradient
- PLANTING**
- proposed trees, medium size
 - proposed trees, medium-small size
 - ornamental planting in raised planters
 - privacy shrub planting
 - species-rich grass mix
 - supported vertical climbing plants
vertical structure assumed to be 2m high
 - intensive green roof
- MATERIALS**
- stone pavers on pedestals
 - concrete pavers on pedestals
 - permeable poured play safety surface
- FURNITURE**
- bench with backrest and armrest
 - timber chaise long
 - pedestrian gate to residents private terraces
 - pedestrian gate for emergency escape route only
- PLAY EQUIPMENT**
- multiplay unit for ages 5-11
 - hexagonal climbing blocks for ages 5-11
 - doorsrep play: timber horse & cart for ages 0-4
 - doorstep play: wood sheep and pig for ages 0-4

DRAFT 22.01.24

FOR PLANNING

CDM :
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project
100 Chalk Farm Road

drawing
Proposed Landscape GA Plan - Upper Levels

drawing nr
22226-BBUK-XX-ZZ-DR-L-0110

date
Jan'24

scale
200@A1
400@A3

rev
P01

work stage
2

drawn
as/km

checked
mb