

# Flood Risk Assessment

Riverside House, Woolwich

26 July 2021

Prepared for  
Shall Do Stoke Road Ltd



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Project Number: 21206  
Doc Number: 21206-MA-XX-XX-RP-D-FR01

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
	Final	DR	DM	DR	AKS	05.07.21
A	Final	DR	DM	DR	AKS	20.07.21
B	Final	DR	DM	DR	AKS	26.07.21

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## 1. Introduction

1.1.1 Markides Associates (MA) has been instructed by Shall Do Stoke Road Ltd (the Applicant) to prepare a Flood Risk Assessment (FRA) in support of their development proposals for Riverside House.

### 1.2 FRA Requirement & Scope

1.2.1 The Town and Country Planning (General Permitted Development) (England) Order 2015, which came into force on the 15th of April 2015, and its subsequent 2016 Amendment which came into force on the 6th April 2016, sets out the permitted development rights for the conversion of offices to residential development under Class O. Development of this nature (Class O) will consist of “a change of use of a building and any land within its curtilage from a use falling within Class B1(a) (offices) of the Schedule to the Use Classes Order, to a use falling within Class C3 (dwelling houses) of that Schedule.”

1.2.2 The Order states that the local planning authority must also have regard to the National Planning Policy Framework (NPPF), so far as relevant to the subject matter of the prior approval. The order states that development consisting of a change of use of a building and any land within its curtilage is permitted, subject to the condition that before the beginning of the development, the Applicant will apply to the local planning authority for a determination as to whether the prior approval of the authority will be required, with one of the considerations being flooding risks on the site.

1.2.3 In the preparation of this FRA, all sources of flooding have been assessed which may affect the development proposals and the surrounding areas, in accordance with the requirements of the current national and local flood risk management policy.

### 1.3 Site Details

1.3.1 The site is located in Woolwich, south of the A206, within the Royal Borough of Greenwich (RBG). Refer to **Table 1.1** below for site details and **Figure 1.1** for a site location plan.

**Table 1.1 Site Characteristics**

Site Address	Beresford Street, London, SE18 6BU	
Grid reference	543475mE, 179195mN (TQ 43475 79195)	
General Topography	Generally flat	
Site Area	0.429 ha	
Existing Use	Vacant commercial building	
Boundaries	North	Woolwich High Street
	East	Beresford Street
	South	Bunton Street
	West	Callis Close

**Figure 1.1 Site Location Plan**



## **1.4 Planning History**

- 1.4.1 In January 2019, prior approval was granted for a permitted development scheme relating to the “change of use of the site from office (Class B1a) to Residential (Class C3) forming 199 residential units” (planning reference: 18/4120/PN2).
- 1.4.2 The delegated report confirmed that the site is located in Flood Zone 1, at low risk of flooding. The application was reviewed by the Environment Agency and the RGB Flood Risk Manager, with neither consultee raising an objection in regard to flood risk. Thames Water were also consulted and raised no objection with respect to waste water infrastructure capacity.

## **1.5 Development Proposals**

- 1.5.1 The development proposals supported by this FRA are comprised of a change of use of the existing office floor space to residential (C3 land use), with the provision of 209no. residential units. Refer to Appendix A for the proposed development plans.

## 2. Baseline Conditions

### 2.1 Topography

2.1.1 Levels across the site are generally flat, falling east to west.

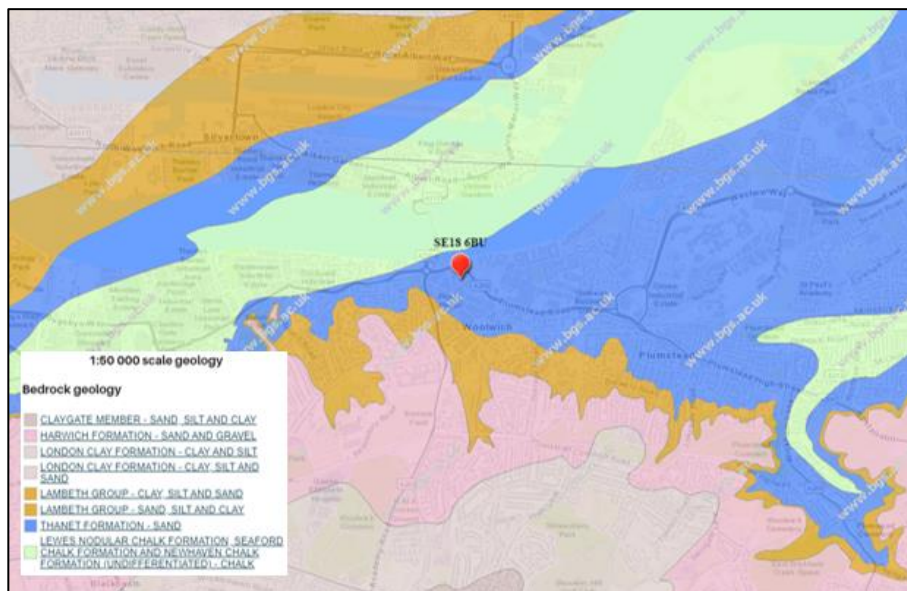
### 2.2 Hydrology

2.2.1 The River Thames is approximately 120m north of the site.

### 2.3 Geology

2.3.1 Based on the British Geological Survey (BGS) online dataset the site appears to be underlain by Head (Clay, Silt, Sand, and Gravel) over Thanet Formation (Sand) bedrock. Refer to **Figure 2.1** below.

**Figure 2.1** British Geological Survey

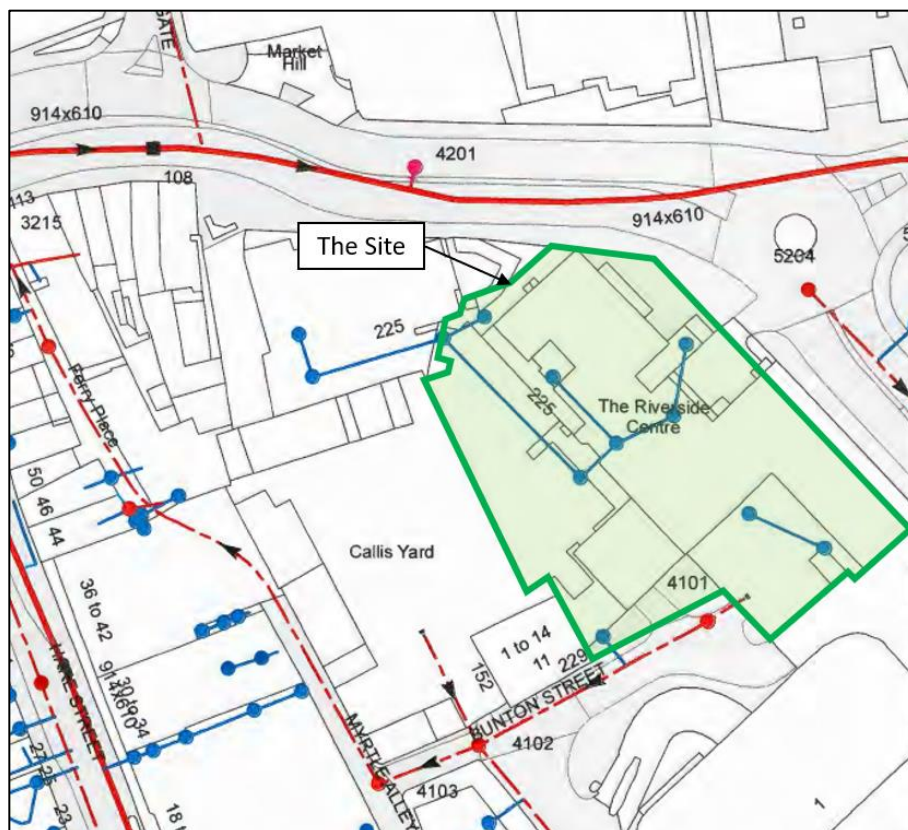


2.3.2 Based on Defra's MAGIC map application, the site is not located in a Groundwater Source Protection Zone.

## 2.4 Existing Drainage Infrastructure

- 2.4.1 Based on Thames Water sewer records, the site appears to be served by a number of private combined sewers. Based on the site's topography, the sewers will likely convey flows to the Thames Water 225mm dia. foul sewer in Bunton Street. Refer to **Figure 2.2** below for an extract of the map. The full search is included in **Appendix B**.

**Figure 2.2** Thames Water Sewer Record



### 3. Flood Risk Assessment

3.1.1 Based on the EA Flood map for planning, the site appears to be located in Flood Zone 1, refer to **Figure 3.1** below.

**Figure 3.1 EA Flood map for planning**



3.1.2 Areas within Flood Zone 1 are considered to have a less than 1 in 1,000 year annual probability of flooding (0.1%). Therefore, the risk of tidal/fluvial flooding is assessed as low.

### 3.2 Pluvial Flooding

3.2.1 Based on the EA long term flood risk information, the majority of the site appears to be at very low risk of surface water flooding, with a small area at medium risk of flooding. Refer to **Figure 3.2** below for the EA Flood risk from surface water map.

**Figure 3.2 EA Flood risk from surface water**



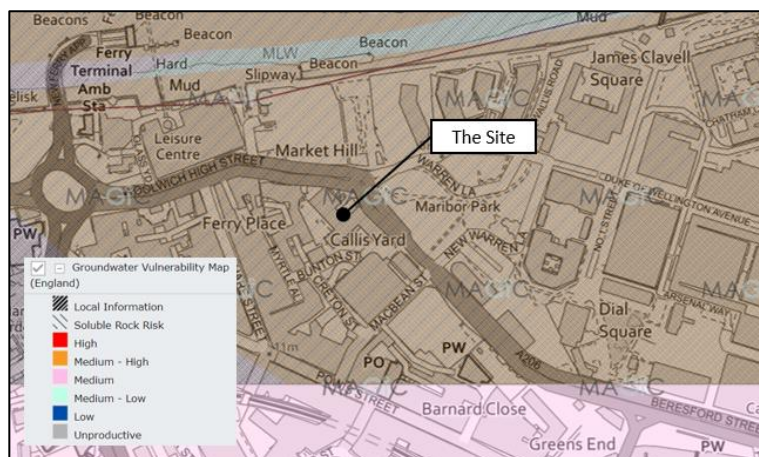
3.2.2 This risk will be managed by the existing drainage and gullies in this area. Therefore, the risk of surface water flooding is assessed as low.



### 3.3 Groundwater Flooding

3.3.1 Based on Defra's MAGIC Map application, the site appears to have a Medium-High vulnerability to groundwater, based on the permeable sand bedrock. Refer to **Figure 3.3** below.

**Figure 3.3** Groundwater Vulnerability Map



3.3.2 The proposals are comprised primarily of internal modifications, with no significant groundworks. Therefore, the risk of groundwater flooding is assessed as low.

### 3.4 Flooding from Sewers

3.4.1 Based on Thames Water's sewer flooding history records, there have been no incidents of flooding from sewer surcharge at the site. Refer to **Appendix B** for Thames Water sewer flooding history records.

3.4.2 Therefore, the risk of flooding from sewer surcharge is assessed as low.

### 3.5 Artificial Sources

3.5.1 The site is not located in an area at risk of flooding from artificial sources. Therefore, the risk of flooding from reservoirs, lakes, and artificial sources is assessed as low.

### 3.6 Strategic Flood Risk Assessment

3.6.1 The Royal Borough of Greenwich has completed a Strategic Flood Risk Assessment (SFRA), dated October 2011.

3.6.2 Data within the SFRA confirms that the site is not located within a Critical Drainage Area (CDA).

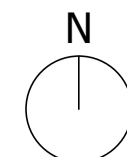
## **4. Conclusion**

- 4.1.1 Markides Associates has been instructed to prepare a Flood Risk Assessment (FRA) in support of their development proposals for Riverside House, Beresford Street, Woolwich, SE18 6BU.
- 4.1.2 The development proposals are comprised of a change of use of the existing office floor space to provide 209no. residential units.
- 4.1.3 Based on the EA Flood map for planning, the site appears to be located in Flood Zone 1. Sites in Flood Zone 1 are considered to have a less than 1 in 1,000 year annual probability of flooding (0.1%). The flood risk from all other sources is assessed as low.
- 4.1.4 In conclusion, this report demonstrates that the proposals are consistent with the aims of the NPPF and the Local Flood Risk Management Strategy. The site can be developed without increasing the risk of flooding on site or elsewhere, and the proposed units will not be at an unacceptable risk of flooding from rivers, surface water, groundwater, sewers, or artificial sources.

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# APPENDIX A – PROPOSED DEVELOPMENT PLANS

SCALE 1:200  
SCALE 1:1



THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK OF ANY KIND. NO DIMENSIONS TO BE SCALED FROM THIS DRAWING.

REV.	DATE	REVISION
A	12.07.21	Daylight / sunlight amendments
B	15.07.21	Daylight / sunlight amendments
P4	21.07.21	Cycles and bins added
P5	22.07.21	Landscape note added



key

- 1B1P
- 1B2P
- 2B4P

Unit schedule

- Block A**  
 3 x 2 bedroom / 3 person  
 1 x 1 bedroom / 2 person  
 1 x 1 bedroom / 1 person  
 Sub-total = 5 units
- Block B**  
 2 x 2 bedroom / 3 person  
 7 x 1 bedroom / 2 person  
 1 x 1 bedroom / 1 person  
 Sub-total = 10 units  
 Total = 16 units

NB: Hard and soft landscaping will be the subject of a separate planning application.

**PLANNING**

**Osel architecture**

PROJECT:  
RIVERSIDE HOUSE,  
BERESFORD ST, WOOLWICH  
LONDON SE18 6BU

CLIENT:  
MDPL (Woolwich)  
LIMITED

DRAWING:  
PERMITTED DEVELOPMENT  
GROUND FLOOR  
PLAN

DRAWING No.: **E21-027-PD000** REV: **P5**

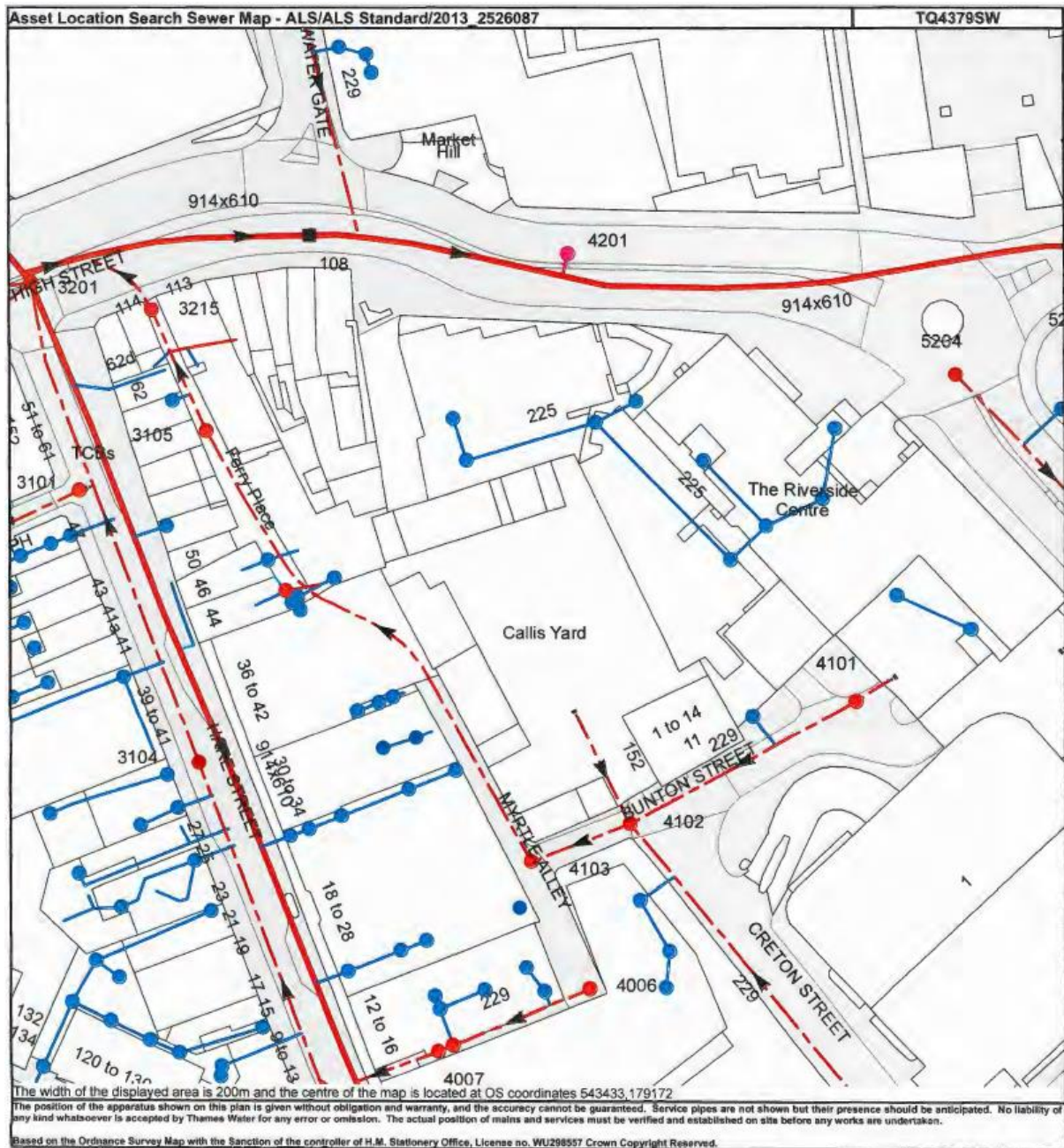
SCALE: 1:200@A1  
 DRAWN: WTM DATE: 18.06.21  
 CHECKED: - DATE: -  
 G.04 | The Record Hall | 16-16A Baldwin's Gardens | London | EC1N 7RJ  
 Tel: 020 7224 2447

E-mail: admin@oselarch.co.uk Web: www.oselarchitecture.co.uk  
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**0** Ground Floor Plan  
Scale 1:200

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# **APPENDIX B – THAMES WATER RECORDS & CORRESPONDENCE**



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

Manhole Reference	Manhole Cover Level	Manhole Invert Level
3201	n/a	2.24
3215	6.86	4.56
32WWW	n/a	n/a
42ZV	n/a	n/a
42ZW	n/a	n/a
31TY	n/a	n/a
31TW	n/a	n/a
31UV	n/a	n/a
31UU	n/a	n/a
31UT	n/a	n/a
3101	7.17	4.73
31YB	n/a	n/a
31TZ	n/a	n/a
31UQ	n/a	n/a
31WWW	n/a	n/a
30WT	n/a	n/a
30WV	n/a	n/a
30WU	n/a	n/a
30WR	n/a	n/a
30WQ	n/a	n/a
31XY	n/a	n/a
31QX	n/a	n/a
4201	10.14	n/a
40TW	n/a	n/a
41YT	n/a	n/a
41YR	n/a	n/a
41XV	n/a	n/a
41YS	n/a	n/a
41XW	n/a	n/a
41XX	n/a	n/a
4101	10.76	7.53
51YR	n/a	n/a
5204	10.1	8.9
51YS	n/a	n/a
52YY	n/a	n/a
30VT	n/a	n/a
30YR	n/a	n/a
30WX	n/a	n/a
4007	9.85	7.14
40WS	n/a	n/a
30WW	n/a	n/a
30VZ	n/a	n/a
40WU	n/a	n/a
40WT	n/a	n/a
40TU	n/a	n/a
40WV	n/a	n/a
4006	10	7.46
40TX	n/a	n/a
40US	n/a	n/a
40TV	n/a	n/a
40UR	n/a	n/a
41ZQ	n/a	n/a
31QZ	n/a	n/a
41YZ	n/a	n/a
41YV	n/a	n/a
31UX	n/a	n/a
4103	n/a	n/a
31QV	n/a	n/a
31QW	n/a	n/a
31YE	n/a	n/a
4102	10.08	7.09
31ZA	n/a	n/a
31YF	n/a	n/a
41YX	n/a	n/a
31ID	n/a	n/a
41YY	n/a	n/a
3104	8.3	5.45
41XR	n/a	n/a
41XQ	n/a	n/a
31YA	n/a	n/a
41YW	n/a	n/a
41XT	n/a	n/a
31QT	n/a	n/a
31QS	n/a	n/a
31QR	n/a	n/a
31VU	n/a	n/a
31ZB	n/a	n/a
31VX	n/a	n/a
31SY	n/a	n/a
41XZ	n/a	n/a
3105	7.27	5.07
41XY	n/a	n/a
41YQ	n/a	n/a
32WV	n/a	n/a
42ZU	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.

# Sewer Flooding

History Enquiry



Property Searches

Markides Associates

81 Southwark Bridge Road

**Search address supplied** Riverside House  
Riverside House  
Beresford Street  
London  
SE18 6BU

**Your reference** 21153 Riverside House

**Our reference** SFH/SFH Standard/2021\_4434160

**Received date** 21 May 2021

**Search date** 21 May 2021



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



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[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



0800 009 4540



# Sewer Flooding

History Enquiry



Property Searches

**Search address supplied:** Riverside House, Riverside House, Beresford Street, London, SE18 6BU

**This search is recommended to check for any sewer flooding in a specific address or area**

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) and any negligent or incorrect recording of that interpretation in the search report
- (iv) compensation payments



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Property Searches, PO Box 3189, Slough SL1 4WW  
DX 151280 Slough 13



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[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



0800 009 4540

### History of Sewer Flooding

#### **Is the requested address or area at risk of flooding due to overloaded public sewers?**

The flooding records held by Thames Water indicate that there have been no incidents of flooding in the requested area as a result of surcharging public sewers.

For your guidance:

- 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 on Tel: 0800 316 9800 or website [www.thameswater.co.uk](http://www.thameswater.co.uk)



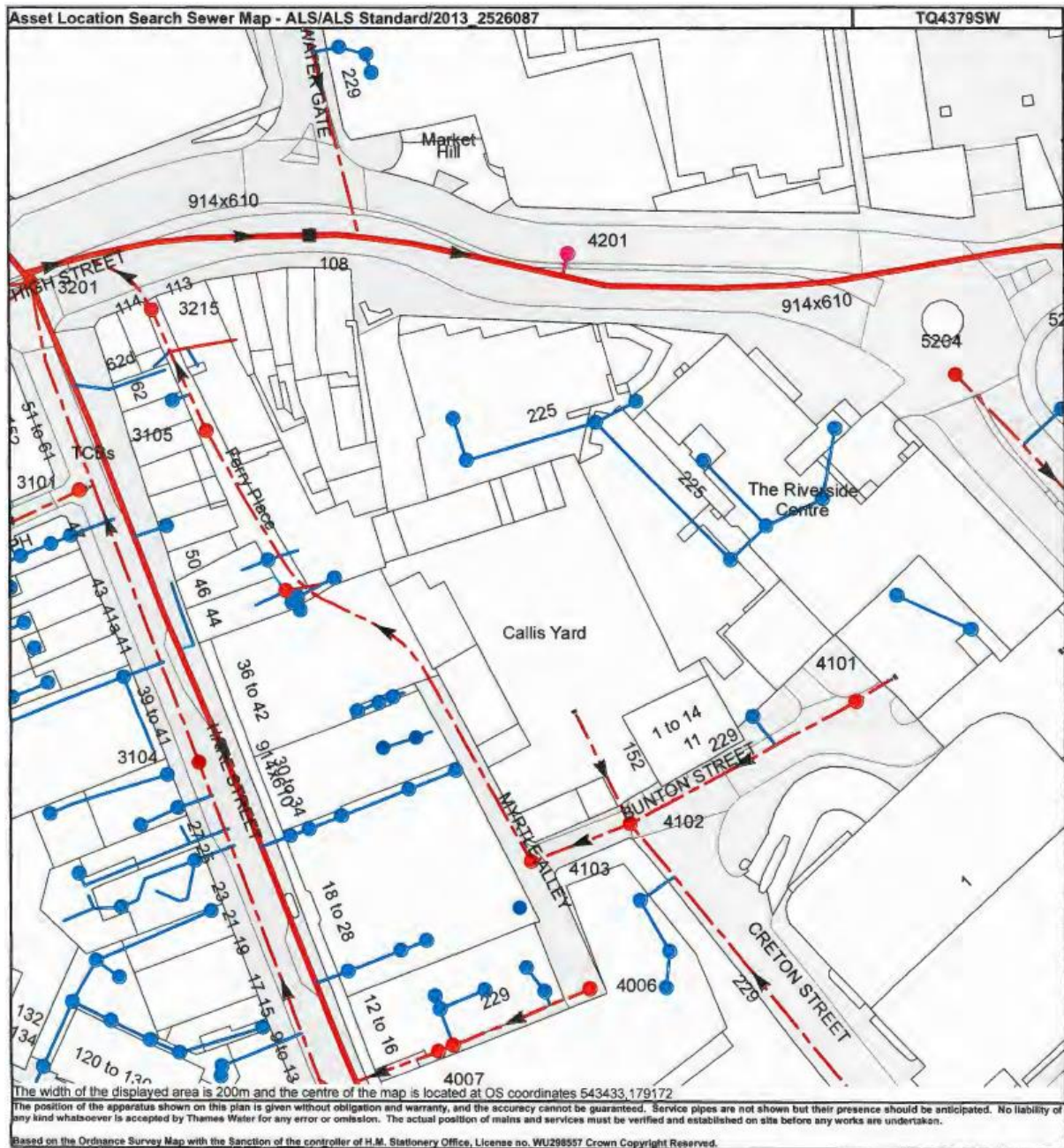
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0800 009 4540



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

Manhole Reference	Manhole Cover Level	Manhole Invert Level
3201	n/a	2.24
3215	6.86	4.56
32WWW	n/a	n/a
42ZV	n/a	n/a
42ZW	n/a	n/a
31TY	n/a	n/a
31TW	n/a	n/a
31UV	n/a	n/a
31UU	n/a	n/a
31UT	n/a	n/a
3101	7.17	4.73
31YB	n/a	n/a
31TZ	n/a	n/a
31UQ	n/a	n/a
31WWW	n/a	n/a
30WT	n/a	n/a
30WV	n/a	n/a
30WU	n/a	n/a
30WR	n/a	n/a
30WQ	n/a	n/a
31XY	n/a	n/a
31QX	n/a	n/a
4201	10.14	n/a
40TW	n/a	n/a
41YT	n/a	n/a
41YR	n/a	n/a
41XV	n/a	n/a
41YS	n/a	n/a
41XW	n/a	n/a
41XX	n/a	n/a
4101	10.76	7.53
51YR	n/a	n/a
5204	10.1	8.9
51YS	n/a	n/a
52YY	n/a	n/a
30VT	n/a	n/a
30YR	n/a	n/a
30WX	n/a	n/a
4007	9.85	7.14
40WS	n/a	n/a
30WW	n/a	n/a
30VZ	n/a	n/a
40WU	n/a	n/a
40WT	n/a	n/a
40TU	n/a	n/a
40WV	n/a	n/a
4006	10	7.46
40TX	n/a	n/a
40US	n/a	n/a
40TV	n/a	n/a
40UR	n/a	n/a
41ZQ	n/a	n/a
31QZ	n/a	n/a
41YZ	n/a	n/a
41YV	n/a	n/a
31UX	n/a	n/a
4103	n/a	n/a
31QV	n/a	n/a
31QW	n/a	n/a
31YE	n/a	n/a
4102	10.08	7.09
31ZA	n/a	n/a
31YF	n/a	n/a
41YX	n/a	n/a
31ID	n/a	n/a
41YY	n/a	n/a
3104	8.3	5.45
41XR	n/a	n/a
41XQ	n/a	n/a
31YA	n/a	n/a
41YW	n/a	n/a
41XT	n/a	n/a
31QT	n/a	n/a
31QS	n/a	n/a
31QR	n/a	n/a
31VU	n/a	n/a
31ZB	n/a	n/a
31VX	n/a	n/a
31SY	n/a	n/a
41XZ	n/a	n/a
3105	7.27	5.07
41XY	n/a	n/a
41YQ	n/a	n/a
32WV	n/a	n/a
42ZU	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.