

Toutley Depot – Phase 4

Flood Risk Assessment

● 2250437-EWP-ZZ-XX-RP-C-000001

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Project name	Toutley Depot – Phase 4
Client	Reading Borough Council
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QF084 1

Document Control

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Date: 18.02.26	Signature:		Signature:		Signature:	

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1. Executive Summary

Elliott Wood Partnership has been commissioned by Reading Borough Council (herein referred to as the 'Applicant') to prepare this Flood Risk Assessment (FRA) to support the planning application for the proposed redevelopment of Toutley Depot, North Wokingham.

The site is located to the northwest of Wokingham Town Centre, close to Junction 10 of the M4, and occupies a well-connected position within the surrounding area. It is bound by the A329(M) to the north, undeveloped agricultural land to the east which is separated from the site by a vegetated ditch, and the Ashridge Stream to the south, beyond which lies a recently constructed residential development. To the west, the site adjoins Toutley Industrial Estate. Vehicular access to the site is provided via Old Forest Road at the north-western corner.

The proposed redevelopment will see the erection of highways, street cleaning and waste facilities along with associated parking for each department.

Areas of the site are located within Flood Zone 1, 2 and 3, however the existing buildings (which are to be retained), are located within Flood Zone 1 and outside of all of sources of flooding extent lines.

2. Introduction

Elliott Wood Partnership has been commissioned by Reading Borough Council (herein referred to as the 'Applicant') to prepare this Flood Risk Assessment (FRA) to support the planning application for the proposed redevelopment of Toutley Depot, North Wokingham.

The application seeks planning permission for the following description of development (the 'Proposed Development'):

The proposed redevelopment will see the erection of highways, street cleaning and waste facilities along with associated parking for each department.

This report reviews all potential sources of flooding to the proposed development, evaluates the sensitivity of the site to flooding and considers any impact to the surrounding area that the proposed development may cause. This is in line with the requirements of the National Planning Policy Framework (NPPF).

The flood risk mechanisms being considered as part of this FRA are as follows:

- Fluvial and tidal
- Surface water and overland flow
- Groundwater
- Flooding from artificial waterbodies
- Infrastructure failure and sewer flooding

3. Site Context

3.1 Site Location

The site is located within the administrative boundary of Wokingham Borough Council at Toutley Depot, Old Forest Road, Wokingham RG41 1QW.

The site is located to the northwest of Wokingham Town Centre, close to Junction 10 of the M4, and occupies a well-connected position within the surrounding area. It is bound by the A329(M) to the north, undeveloped agricultural land to the east which is separated from the site by a vegetated ditch, and the Ashridge Stream to the south, beyond which lies a recently constructed residential development. To the west, the site adjoins Toutley Industrial Estate. Vehicular access to the site is provided via Old Forest Road at the north-western corner.

The site is approximately centred on OS National Grid reference 480336E, 170509N, with an application boundary covering approximately 4.13ha.

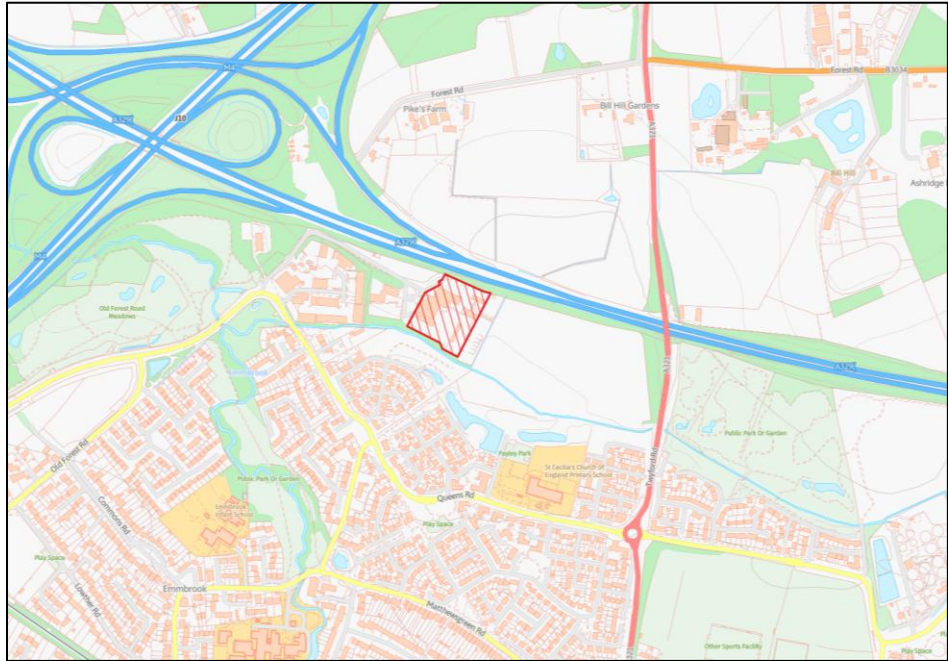


Figure 1: Site location (SU 803705)

3.2 Existing Development

The site is presently occupied by Wokingham Borough Council’s depot, used for highways maintenance and waste collection services. The site includes several office buildings and warehouses used by Council contractors, along with extensive hardstanding areas for vehicle maintenance and parking. There are also fuel storage tanks and chemical storage areas.

The majority of the site is impermeable, with only limited areas of vegetation located along the western edge.



3.3 Existing Site Topography

Ground levels fall from north to south, towards the Ashridge Stream, with levels as high as 46.5mAOD in the northwest corner to as low as the 43.1mAOD along the southern edge of the site.

The topographical survey is located within **Appendix A** of this report.

3.4 Underlying Site Geology and Hydrology

3.4.1 Geology

The British Geological Survey (BGS) mapping indicates that the site's bedrock geology consists of clay, silt and sand, forming part of the London Clay Formation. Towards the south of the site, there are superficial deposits of clay, silt, sand and gravel known as Alluvium.

BGS historic borehole data taken from 300m south of the site appears to confirm these anticipated ground conditions. The records are designated SU87SW21 on the GeoIndex maps.

In addition, site investigation works was carried out by Hydrock in 2019. The findings from their investigations were consistent with the conditions detailed in the BGS records and the BGS online mapping tools. The results of the site investigation suggest the following ground conditions:

- 0.0m to 0.3m – Made Ground (Surfacing)
0.3m to 3.0m – Made Ground
0.6m to 3.45m+ - Head Deposits (silty sandy gravelly CLAY)
0.2m to 5.45m+ - London Clay Formation (silty sandy CLAY)

3.4.2 Hydrology

The nearest watercourse to the site is the Ashbridge Stream, which borders the south of the site, running from east to west. The Emm Brook is also in close proximity, located approximately 145m west of the site of the site.

From the site investigation work carried out by Hydrock in 2019, it is understood that high ground water was encountered. This has been identified as being perched water on top of the London Clay layer. It should also be noted that groundwater levels are subject to variations

caused by local drainage and seasonal effects.

The Department for Environment, Food & Rural Affairs (DEFRA) Magic Maps indicates that the area is not located within a groundwater Source Protection Zone (SPZ).

3.5 Critical Drainage Area

A Critical Drainage Area (CDA) is a specific area of significant flood risk characterised by the amount of surface run-off that drains into the area, the topography, hydraulic conditions of the pathway (e.g. sewer, river system), and the receptors (people, properties, and infrastructure) that may be affected.

As noted within the Wokingham Borough Council SFRA, there are currently no CDA's identified within Wokingham Borough.



The proposed redevelopment will see the erection of highways, street cleaning and waste facilities along with associated parking for each department. The site will be arranged to allow for one way movement traffic throughout, with the entrance located to the north (blue) and the exit located to the south (red arrow).

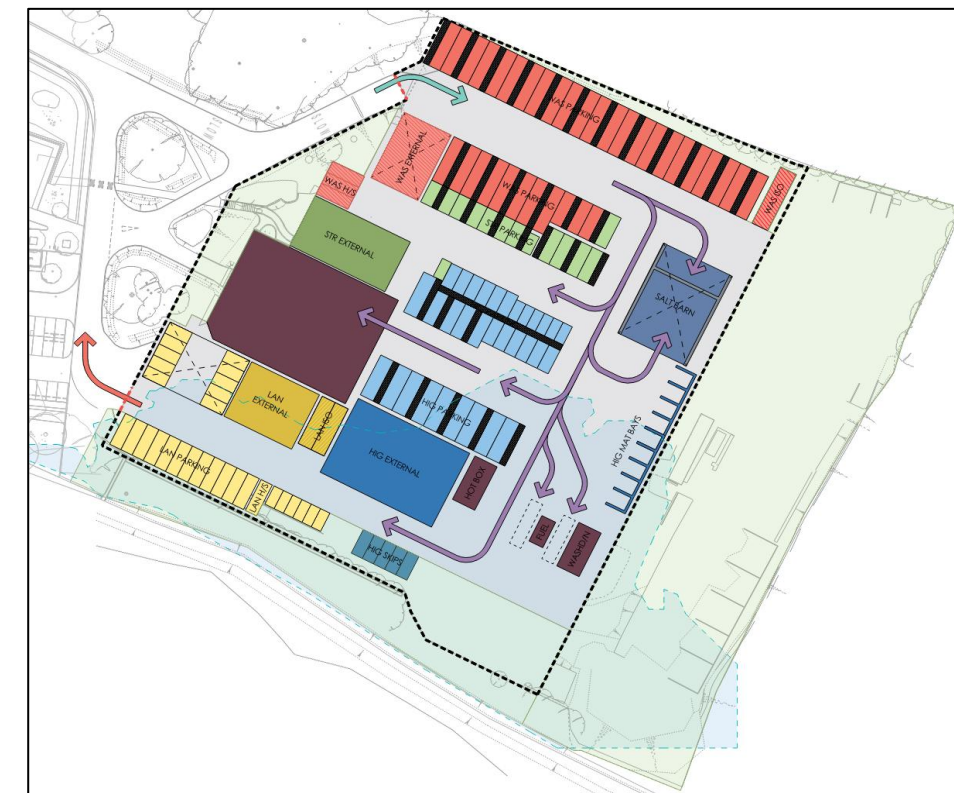


Figure 3: Proposed development

5. Planning & Flood Risk Management Policy

5.1 Policy Summary

It is important to assess the flood risk posed to the development of this site from all sources of flooding, in accordance with National Planning Policy Framework (NPPF) requirements.

The flood risk sources being considered as part of this FRA are as follows:

- Fluvial and Tidal
- Surface Water and Overland Flow
- Groundwater
- Flooding from Artificial Waterbodies
- Infrastructure Failure / Sewer Flooding

The following documents have been reviewed in the preparation of this FRA:

- National Planning Policy Framework (NPPF) 2025
- Planning Practice Guidance (PPG) 2024
- Wokingham Borough Council Level Strategic Flood Risk Assessment 2023

5.2 Flood Risk Vulnerability

When considering the flood risk vulnerability, the proposed development consists of industrial use which is considered “less vulnerable”.

The proposed development is to be located across Flood Zones 1, 2 and 3. In line with paragraph 079 of the National Planning Practice Guidance (NPPG) for Flood risk and coastal change published on 25th August 2022 (see **Table 1**) the proposed development is considered acceptable.

Table 1: Flood risk vulnerability and flood zone ‘incompatibility’, as taken from Gov.uk website

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	X	Exception Test required	✓	✓
Zone 3b	Exception Test required	X	X	X	✓

5.3 Sequential and Exception Test

The aim of the sequential test is to steer new development to areas with the lowest risk of flooding. Where there are no reasonably available sites in Flood Zone 1, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2 & 3 (areas with a medium or high probability of river or sea flooding), applying the Exception Test if required.

The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

Although parts of the site are located within Flood Zone 3, since the site is classified as less vulnerable and all buildings are located within Flood Zone 1, it is concluded that neither a sequential test nor exception test are required.

6. Sources of Potential Flooding

6.1 Historic Flooding

Historic Flood Data provided by the EA indicates that flooding has occurred on site on three separate occasions: 1947, 1974 and 1981. The cause of the flooding was due to the channel capacity being exceeded.

The SFRA mapping that was provided by WBC, does not show any historic flooding to have taken place at the site.

6.2 Fluvial and Tidal Flooding

Flood zone information published by GOV.uk shows that the development is mainly located within Flood Zone 1, with the south of the site partially located in Flood Zones 2 and 3.

An extract of the flood risk map for planning is shown in **Figure 4**.

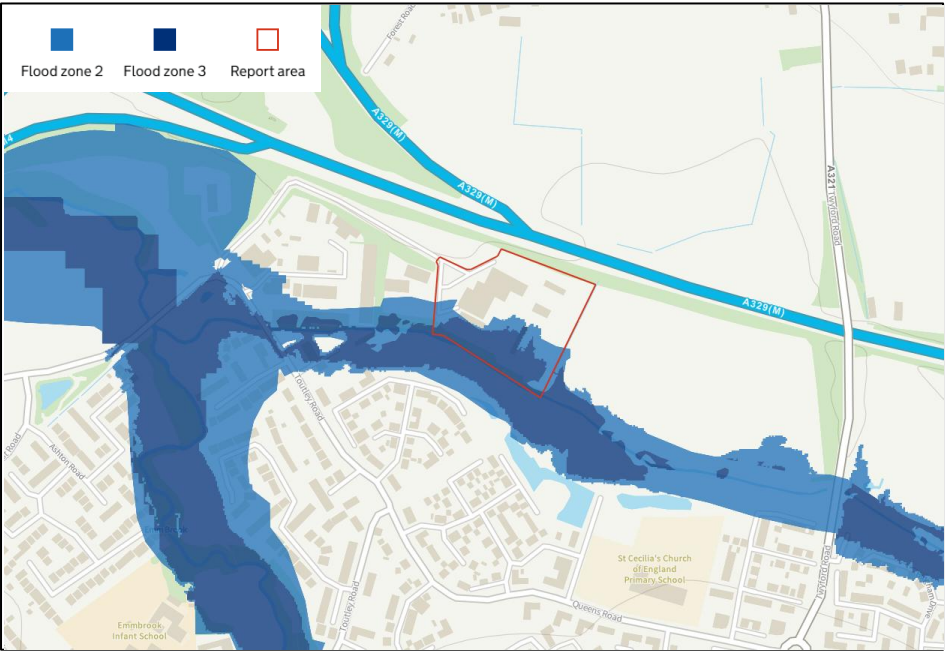


Figure 4: Extract of EA flood risk map for planning

The area within Flood Zone 3 is proposed act as a functional floodplain, with all buildings and critical areas to be positioned towards the north of the site. There are no new buildings to be located within Flood Zone 2 or 3.

Given the above mitigation measures, the risk of flooding from tidal and fluvial sources is considered to be **low**.

6.3 Surface Water Flooding and Overland Flow

Surface water flooding may occur during intense or prolonged rainfall events where there is insufficient capacity within the existing drainage infrastructure which leads to overland flows.

The EA has undertaken hydraulic modelling of LiDAR topography to map areas which could be subject to flooding from surface water and overland flows. An extract from the Environment Agency’s surface water flood risk maps is shown in Error! Reference source not found..

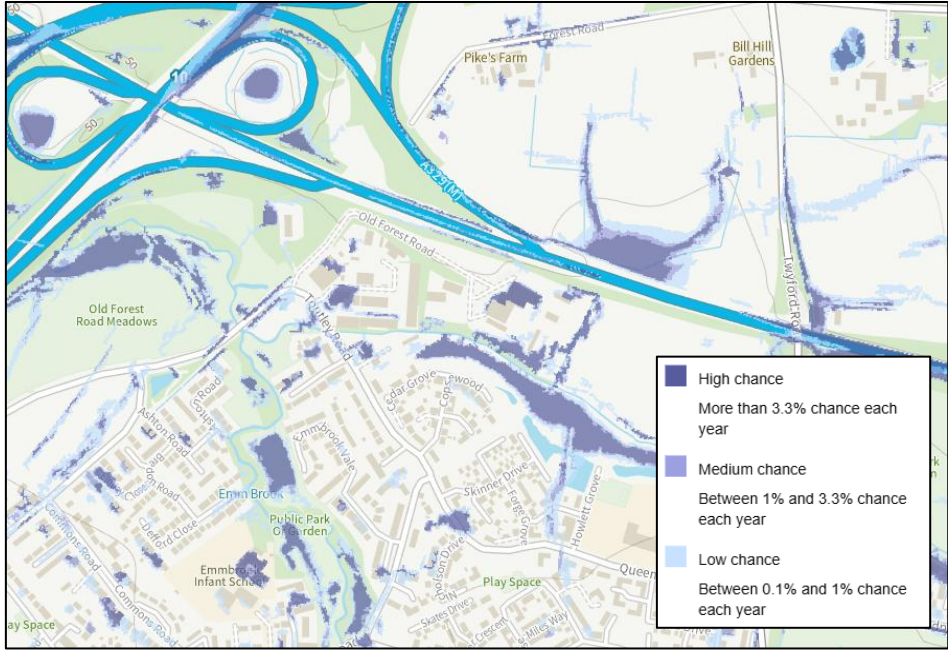


Figure 5: Extract of EA mapping – Surface Water Flood Extent

The EA's Flood Risk from Surface Water mapping, shows the southern portions of the site to be at risk of surface water flooding. Whilst such mapping is considered likely to be representative of fluvial flooding, potential overland flow routes are also shown to enter the site along its eastern boundary and flow southwestwards across the site.

The potential source of overland flow routes is identified as the open ditch running parallel to the eastern site boundary. However, review of the site's Topographical Survey indicates that bank levels along the opposite (left) bank are consistently lower than those of the right bank for the section of the ditch adjacent to the site. Accordingly, any surcharged flows from the ditch are likely to be preferentially directed eastwards into the undeveloped agricultural land beyond the site boundary.

Any overland flows generated within the site are expected to follow the prevailing topography southwards and discharge into the Ashridge Stream, rather than ponding within the site. Furthermore, there are no new buildings to be located within the modelled surface water extents.

On this basis, the site is considered to be at low risk of surface water flooding when assessed in isolation, with the identified fluvial flood risk representing the worst-case and dominant flood mechanism affecting the site.

The mapping does show surface water flooding to the north of the main building (highlighted in orange), however there is an existing building located here and so this area of the modelling should be disregarded.

After review of the above information, the risk of flooding from surface water and overland flow is considered to be **low**.

6.4 Groundwater Flooding

Groundwater flooding can occur following an extended prolonged period of low intensity rainfall, when water levels in the ground rise above surface levels. The future risk from this source is more uncertain than surface water as climate change predictions indicates that although sea levels will rise, thus possibly raising groundwater levels, overall summer rainfall will decrease, therefore having a long-term effect of lowering the groundwater levels. However, long periods of wet weather are predicted to increase, and these are the type of weather patterns that can cause groundwater flooding to occur.

British Geological Survey mapping indicates that the southern margin of the site is underlain by Alluvium comprising clay, silt, sand and gravel, overlying the London Clay Formation. This geological succession may be conducive to the development of a perched groundwater table within the superficial Alluvium deposits in the southern part of the site.

Given the presence of the adjacent Ashridge Stream, any perched groundwater table is likely to be influenced by water levels within the channel, resulting in groundwater level fluctuations corresponding to stream levels. On this basis, the fluvial flood risk identified at the site is considered representative of the worst-case groundwater flooding scenario, with the southern and southeastern portions of the site identified as being at potential risk of groundwater flooding.

However, since the site has not recorded any historical flooding due to groundwater, the risk of flooding from groundwater is considered to be **low**.

6.5 Flooding from Artificial Waterbodies

6.5.1 Reservoir Flooding

Reservoirs are artificially created lakes that are usually formed by building a dam across a river. If one of the dams failed then water could escape from the reservoir, resulting in land or property being flooded.

The EA has mapped areas which could be subject to flooding in the event of reservoir failure, however only within a small section along the southern boundary - see **Figure 6**.

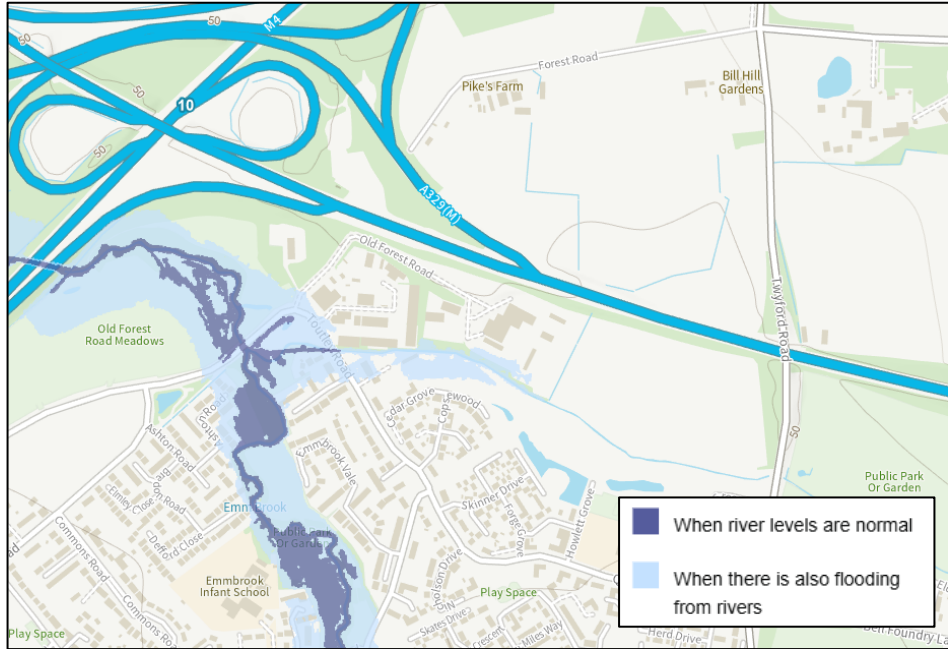


Figure 6: Extract of EA mapping – reservoir flood risk

It should be noted that the reality of a flood occurring due to a reservoir failure is considered to be extremely low. Reservoirs must be properly maintained and will be regulated under the Reservoirs Act 1975. This legislation is enforced by the EA which requires reservoirs to be routinely inspected and maintained to an appropriate standard.

The risk of flooding from reservoirs is considered to be **low**.

6.5.2 Waterway/Canal Flooding

Both a waterway and a canal can be defined as an artificially constructed water channel. The nearest canal to the Site is the Kennet & Avon Canal which is located approx. 9.0km away to the west in Reading.

Due to distance between the known canal and the Site, the risk of flooding from canal / water is considered to be **low**.

6.6 Infrastructure Failure and Sewer Flooding

6.6.1 Water Main Failure

South East Water is the principal water supply provider for the area, however mapping was not provided to highlight where their services are. Since there has been no historic flooding related to water main failure the risk of flooding from water main failure is considered to be **low**.

6.6.2 Private Drainage

Since the site has not experienced flooding directly due private drains failing and much of the existing drainage is to be removed an upgraded, the risk of flooding from private drainage is considered to be **low**.

7. Flooding Mitigation Measures

7.1 Flood Warning

The site is located in an area that can receive free flood alerts via the GOV.uk “Flood Information Service”.

Subscribers to this service are eligible to receive free warnings by telephone, mobile, email, text message or fax, whichever is most convenient. It is recommended that the occupier/proprietor of each property on the site subscribes to this warning service. Those who sign up for the telephonic service, for instance, will receive an automated message via the phone telling them that flooding is expected and giving advice as to what actions should be taken.

7.2 Flood Mitigation and Resilience Measures

7.2.1 Fluvial and Tidal Flooding

Since all existing buildings are located outside of Flood 2 and 3 and no development is proposed to be located within these flood extents, the risk of flooding from fluvial and tidal sources is reduced to **low**.

7.2.2 Surface Water Flooding and Overland Flow

The risk of flooding from surface water and overland flows is considered **low**.

7.2.3 Groundwater Flooding

No mitigation measures are to be incorporated as part of the development proposals since the risk of flooding from groundwater is considered **low**.

7.2.4 Flooding from Artificial Waterbodies

It is recommended that the building be registered to the “Flood Information Service” to receive advanced warnings of a flood event. This will allow preparations (e.g. evacuations) to be made should a reservoir flood event occur at the same time that river levels are high.

Considering that the risk of flooding from reservoirs is **low**, mitigation measures are not required.

7.2.5 Infrastructure Failure and Sewer Flooding

The proposed development will incorporate sustainable drainage systems (SuDS) to attenuate water on the site and enhance water quality. The surface water drainage system will be designed such that there is no flooding on site for the 1 in 30-year storm event, and all flows for the 1 in 100-year storm event plus an appropriate allowance for climate change will be contained safely within the site boundary with no breach of building thresholds.

For any existing private drainage which is proposed for reuse, it is recommended that remedial measures are undertaken to improve the operability and/or structural condition as required. This may include (but is not limited to) high pressure jetting to remove siltation and settled deposits, pipe relining and patch repairs.

Details of the proposed surface water drainage strategy are outlined in report 2250437-EWP-ZZ-XX-RP-C-000002.

If the above mitigation measures are incorporated, the risk of flooding from infrastructure failure and sewers is reduced to **low**.

8. Conclusions

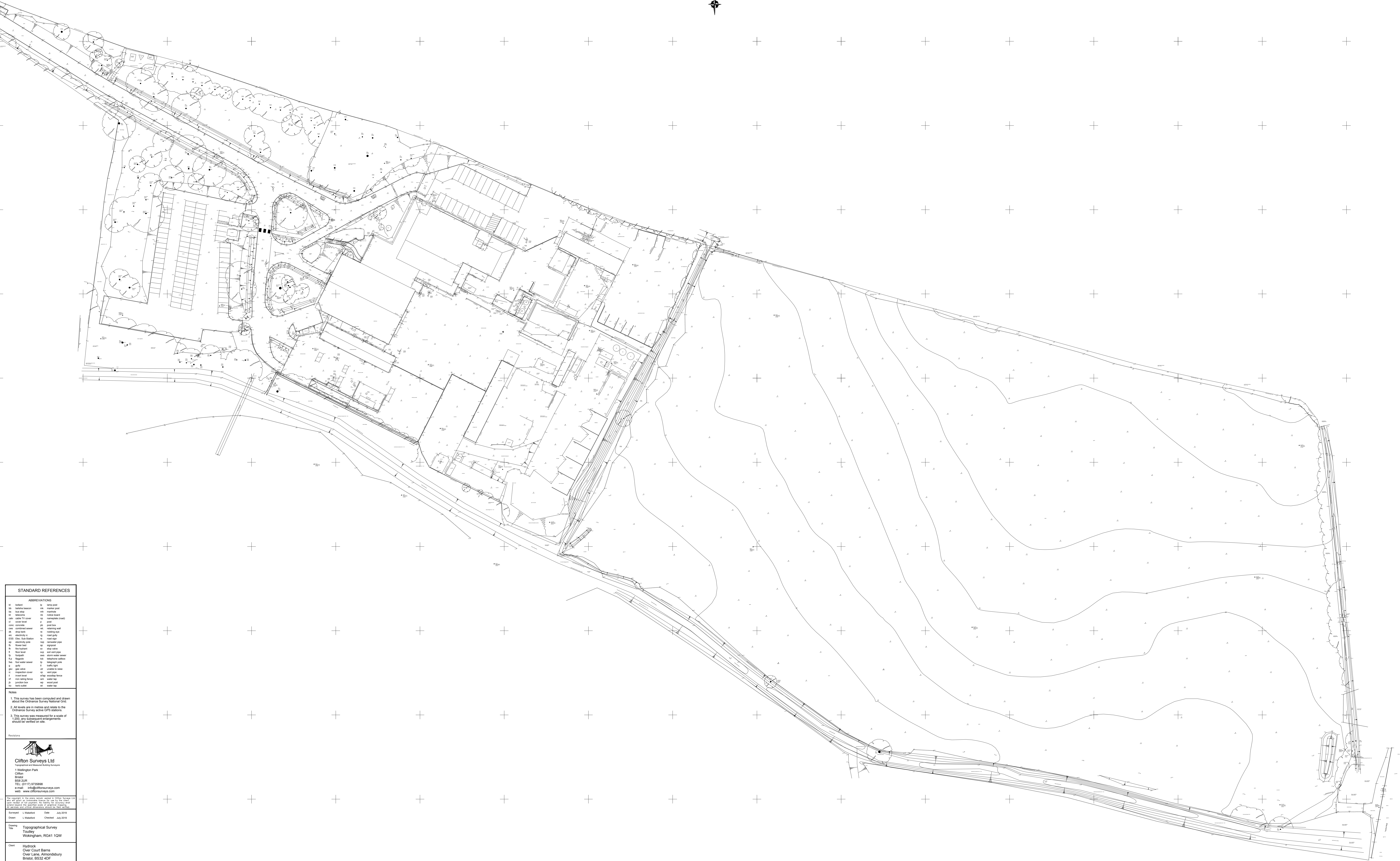
The site is located within the administrative boundary of Wokingham Borough Council at Toutley Depot, Old Forest Road, Wokingham RG41 1QW.

The proposed redevelopment will see the erection of highways, street cleaning and waste facilities along with associated parking for each department.

Areas of the site are located within Flood Zone 1, 2 and 3, however the existing buildings (which are to be retained), are located within Flood Zone 1 and outside of all of sources of flooding extent lines.

Appendices

Appendix A: Topographic survey



STANDARD REFERENCES

ABBREVIATIONS

10	Isolated	10	Long post
11	Isolated house	11	Long post
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NOTES

1. This survey has been compiled and drawn
about the Ordnance Survey National Grid.
2. All levels are in metres and relate to the
Ordnance Survey datum (OSD).
3. This survey was measured for a scale of
1:200. Any subsequent enlargements
should be verified on site.

Clifton Surveys Ltd

Topographical and Planning Surveyors

1 Watlington Park

Clifton

BS2 3JL

Tel: 0117 9739968

Email: info@cliftonsurveys.com

Web: www.cliftonsurveys.com

Drawn: L. Walsby

Check: L. Walsby

Date: July 2015

Created: July 2015

Project: Topographical Survey

Site: Watlington Park

Client: Watlington Park

122/4140/1

1:200

Appendix B: EA Product data

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change



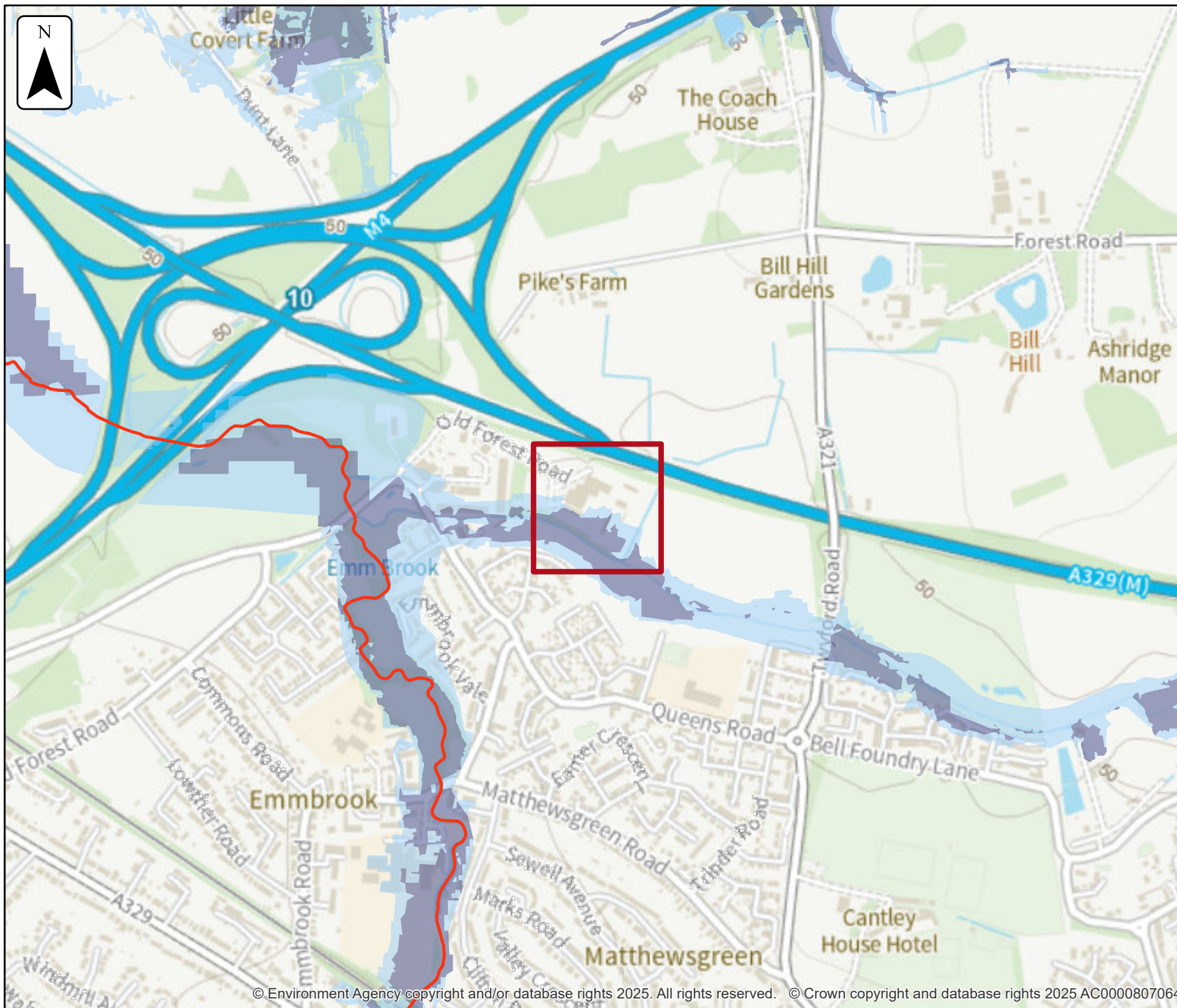
Flood map for planning

Location (easting/northing)
480314/170499

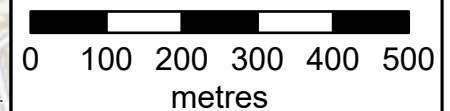
Scale
1:10,000

Created
14 Oct 2025

-  Selected area
-  Main river
-  Flood Zone 3
-  Flood Zone 2



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Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

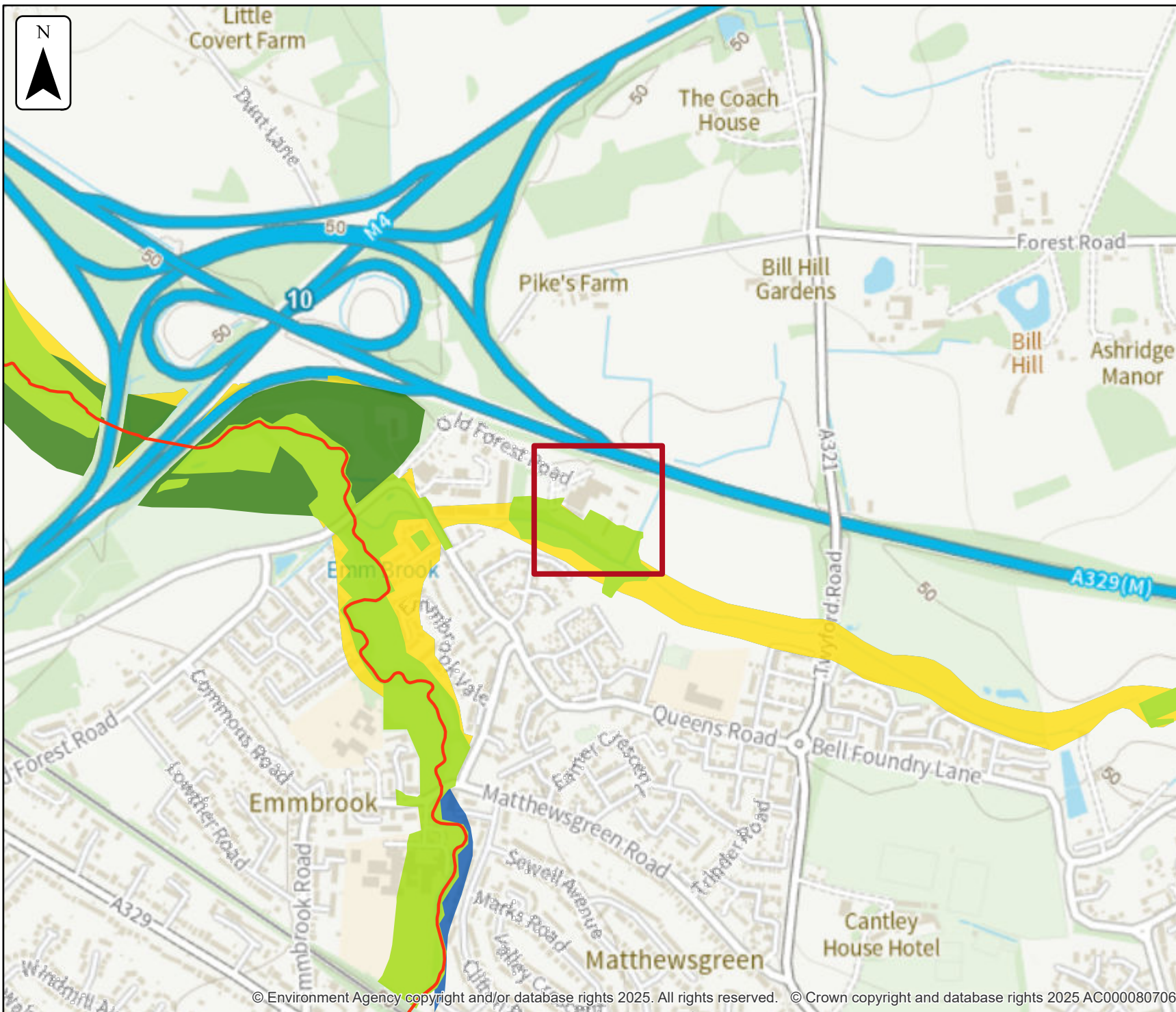
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

Get flood information from other organisations

Contact Wokingham Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



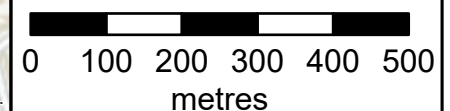
Past floods

Location (easting/northing)
480314/170499

Scale
1:10,000

Created
14 Oct 2025

-  Selected area
-  Main river
- Date of flood event
 -  July, 2007
 -  1991
 -  1981
 -  1974
 -  1947



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
20 July 2007	21 July 2007	main river	channel capacity exceeded (no raised defences)	Yes
1991	1991	main river	channel capacity exceeded (no raised defences)	No
1981	1981	main river	channel capacity exceeded (no raised defences)	Yes
1974	1974	main river	channel capacity exceeded (no raised defences)	Yes
1947	1947	main river	channel capacity exceeded (no raised defences)	Yes

Flood defences and attributes

The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



Flood defences

Location (easting/northing)
480314/170499

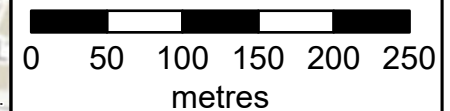
Scale

1:5,000

Created

14 Oct 2025

-  Selected area
-  Main river
-  Flood defence



Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	772290	Embankment					
2	771690	Wall					

Any blank cells show where a particular value has not been recorded for an asset.

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

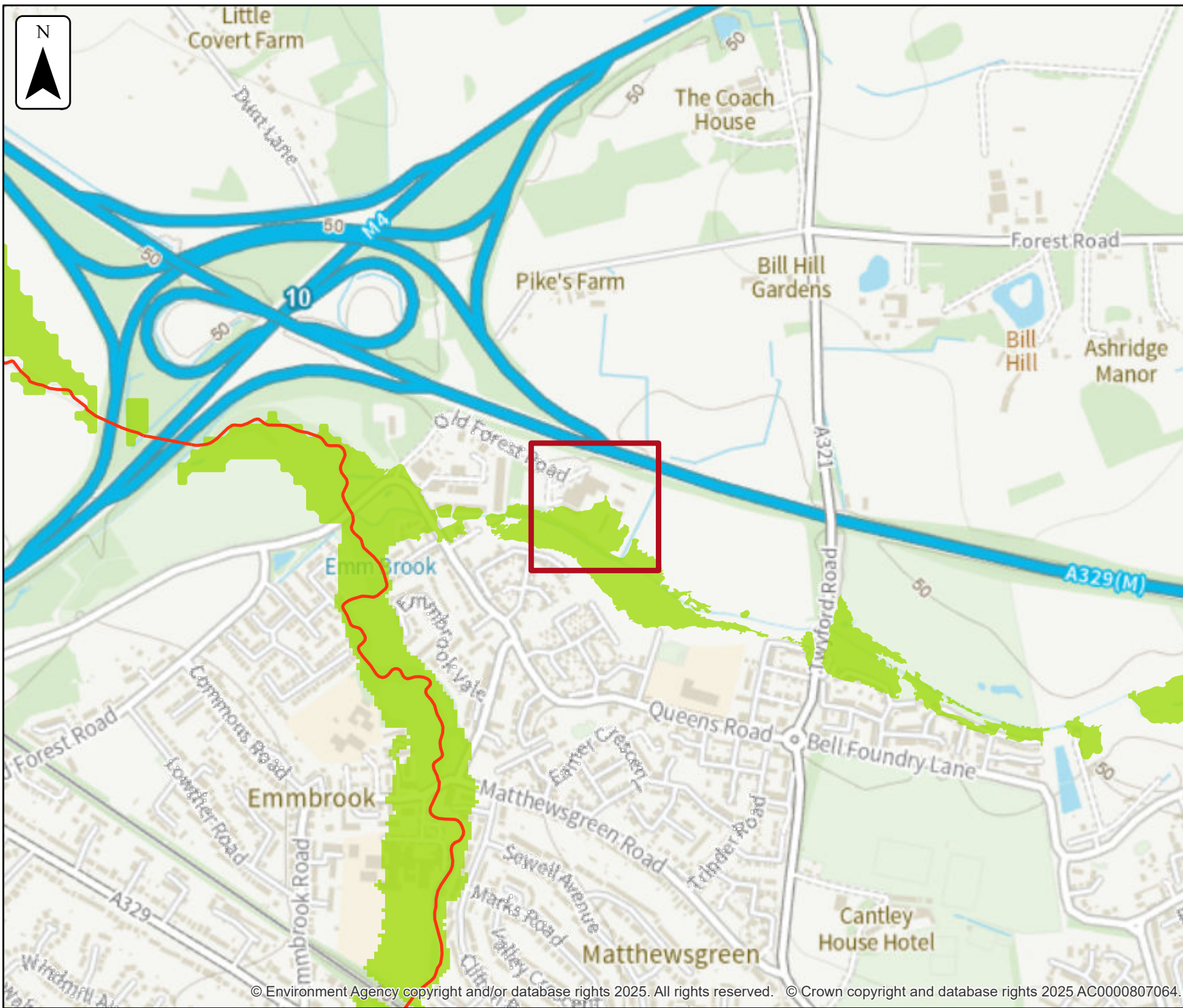
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



**No defences exist
climate change
modelled fluvial extent**

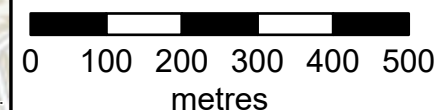
Location (easting/northing)
480314/170499

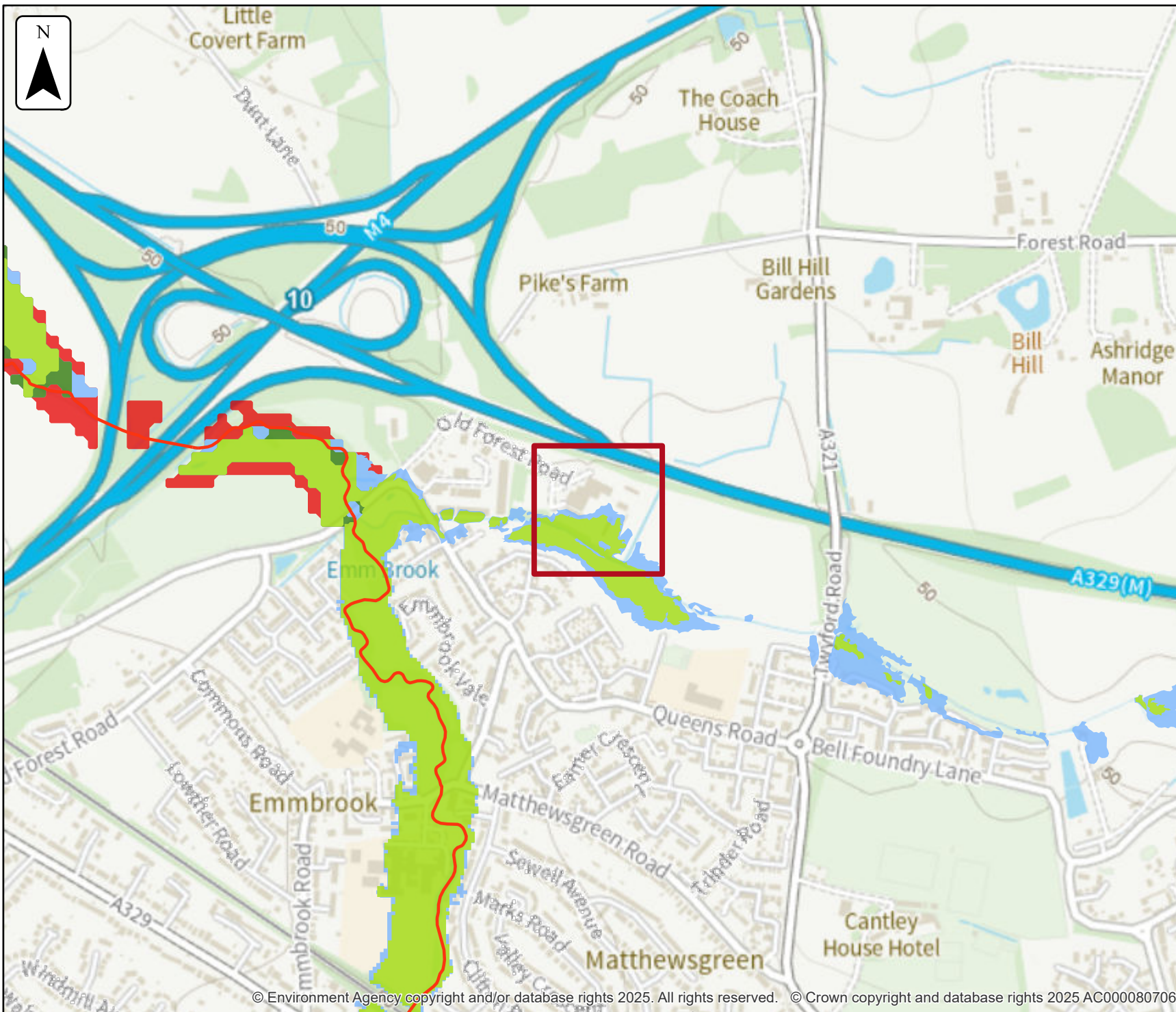
Scale Created
1:10,000 14 Oct 2025

Model name
Loddon (Lower) 2009

- Selected area
- Main river
- Modelled flood extent
 - 1% AEP (+20%)

Flood extents may not be
visible where they overlap
other return periods





No defences exist modelled fluvial extent

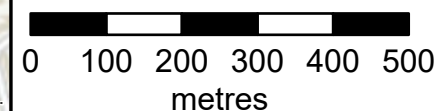
Location (easting/northing)
480314/170499

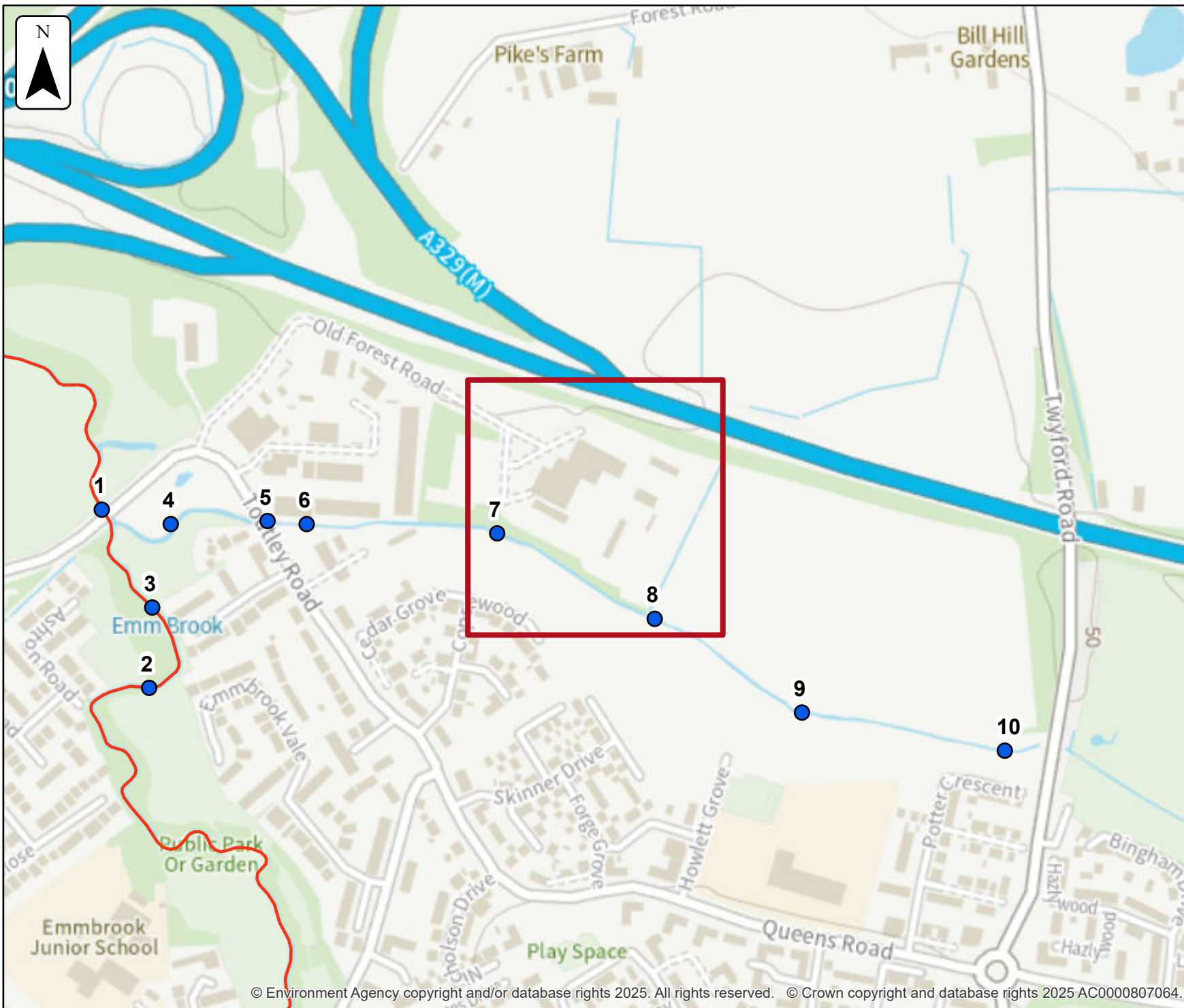
Scale Created
1:10,000 14 Oct 2025

Model name
Loddon (Lower) 2009

- Selected area
- Main river
- Modelled flood extent**
- 5% AEP
- 2% AEP
- 1% AEP
- 0.1% AEP

Flood extents may not be
visible where they overlap
other return periods





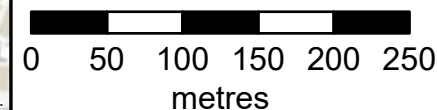
**No defences exist
climate change
modelled fluvial
node locations**

Location (easting/northing)
480314/170499

Scale Created
1:5,000 14 Oct 2025

Model name
Loddon (Lower) 2009

- Selected area
- Modelled location
- Main river



Modelled node locations data

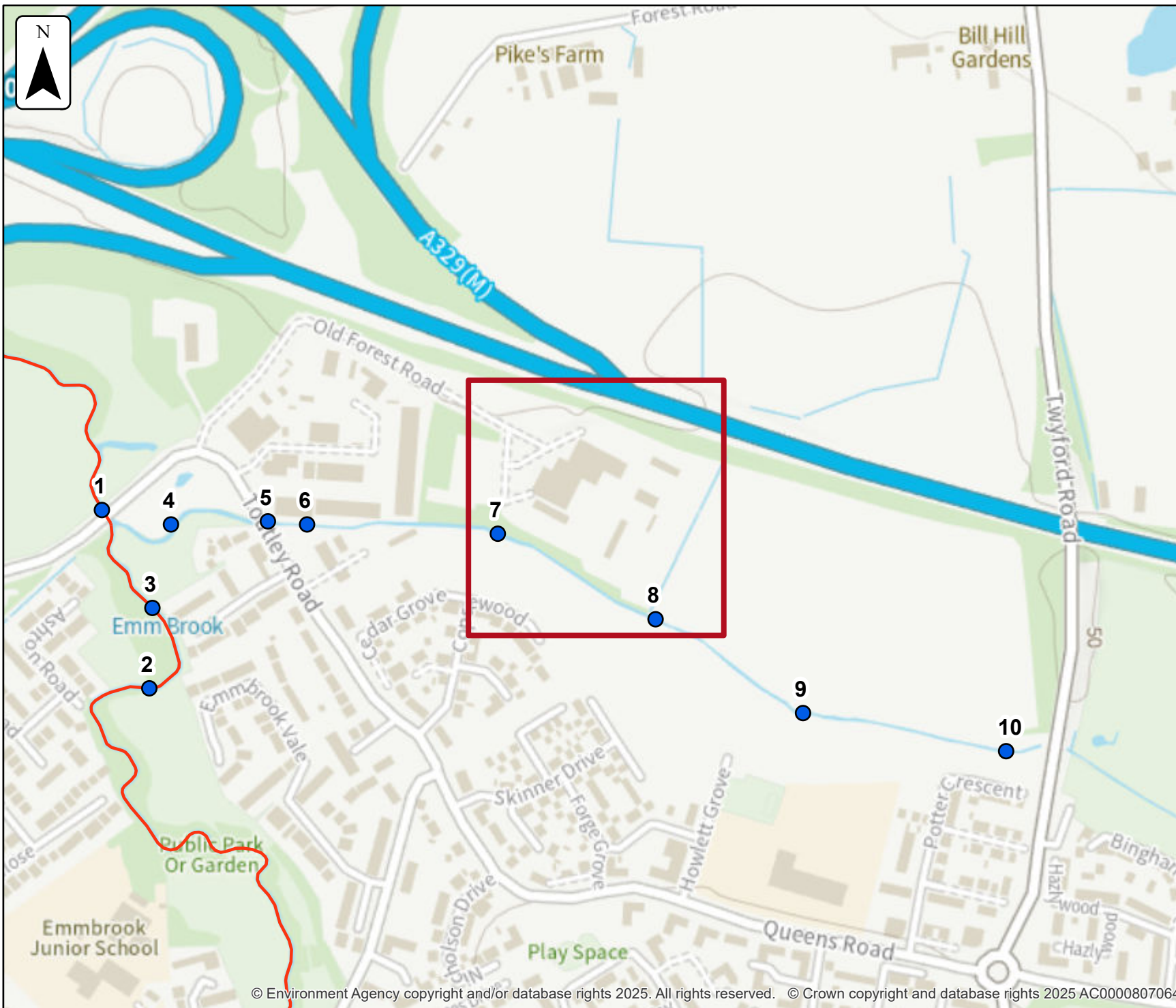
No defences exist climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+20%)
				Level
1	1207635	479835	170497	42.62
2	1207347	479881	170324	42.84
3	1207354	479884	170402	42.80
4	1207776	479902	170483	42.84
5	1207619	479996	170486	43.08
6	1207285	480034	170483	43.12
7	1207473	480219	170474	43.66
8	1207155	480372	170391	43.94
9	1207382	480515	170300	44.28
10	1207486	480712	170263	44.97

Data in this table comes from the Loddon (Lower) 2009 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.



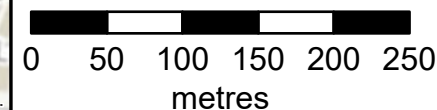
No defences exist modelled fluvial node locations

Location (easting/northing)
480314/170499

Scale Created
1:5,000 14 Oct 2025

Model name
Loddon (Lower) 2009

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

No defences exist

Label	Modelled location ID	Easting	Northing	20% AEP	5% AEP	2% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Level	Level
1	1207635	479835	170497	42.03	42.43	42.50	42.55	42.96
2	1207347	479881	170324	42.38	42.55	0.0	42.75	0.0
3	1207354	479884	170402	42.31	42.49	0.0	42.71	0.0
4	1207776	479902	170483	42.31	42.53	0.0	42.76	0.0
5	1207619	479996	170486	42.45	42.87	0.0	43.05	0.0
6	1207285	480034	170483	42.49	42.89	0.0	43.08	0.0
7	1207473	480219	170474	43.05	43.26	0.0	43.62	0.0
8	1207155	480372	170391	43.48	43.64	0.0	43.90	0.0
9	1207382	480515	170300	43.92	44.02	0.0	44.24	0.0
10	1207486	480712	170263	44.40	44.57	0.0	44.90	0.0

Data in this table comes from the Loddon (Lower) 2009 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is Wokingham.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

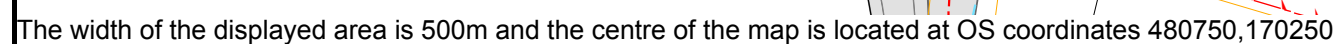
[Find out more about flood risk activity permits](#)

Help and advice

Contact the Thames Environment Agency team at enquiries_thm@environment-agency.gov.uk for:

- [more information about getting a product 5, 6, 7 or 8](#)
- general help and advice about the site you're requesting data for

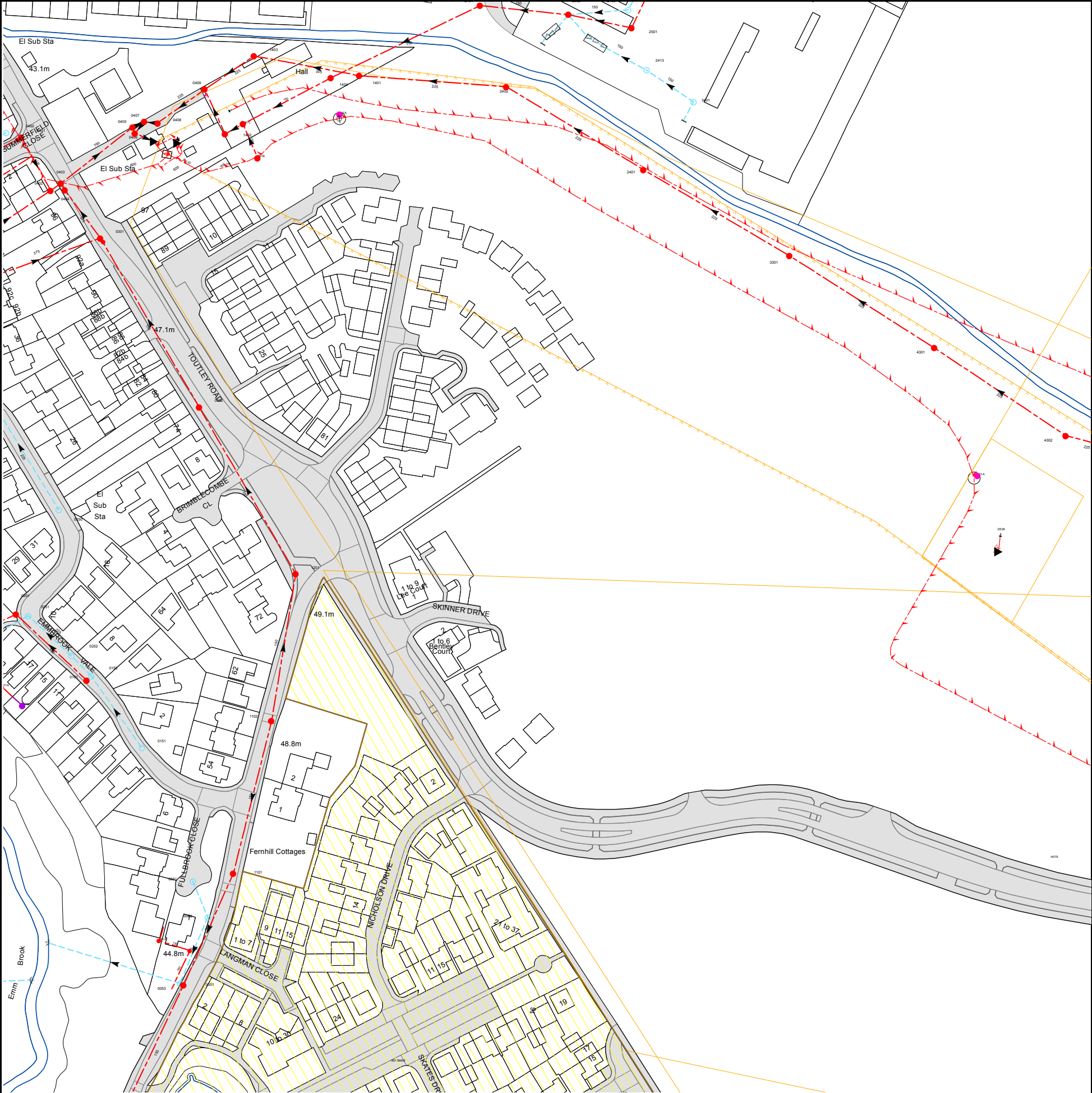
Appendix C: Sewer asset records



Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

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

Manhole Reference	Manhole Cover Level	Manhole Invert Level
7001	49.45	46.66
7101	46.98	45.28
7201	n/a	n/a
7050	49.74	48.67
5201	44.4	43.29
501A	n/a	n/a
6201	44.84	43.56
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.		



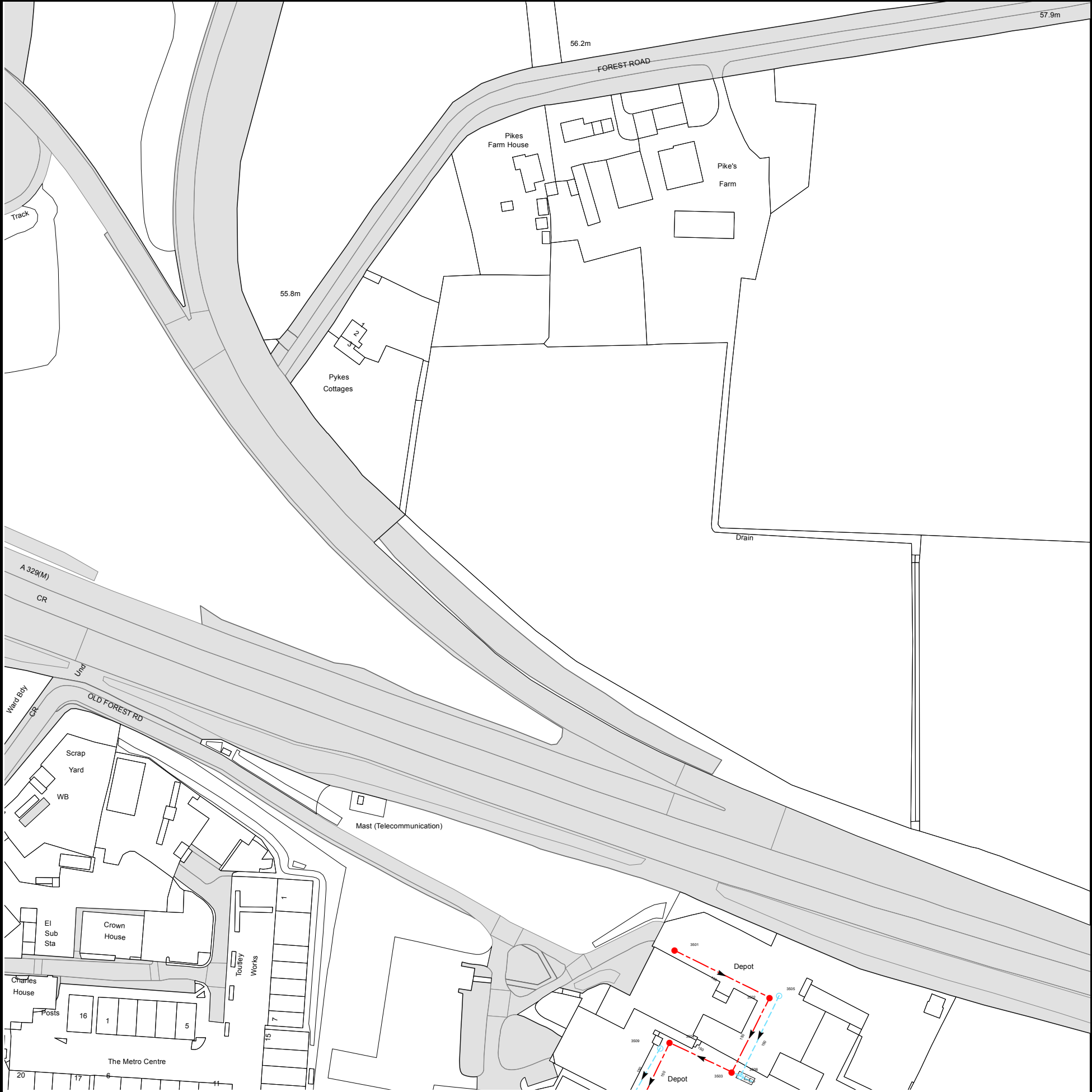
The width of the displayed area is 500m and the centre of the map is located at OS coordinates 480250,170250

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

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

Manhole Reference	Manhole Cover Level	Manhole Invert Level
0402	n/a	n/a
0404	43.95	40.2
0403	43.85	39.33
0401	43.18	40.28
0406	43.356	40.92
0450	n/a	n/a
0405	43.33	38.8
0408	43.32	41.04
0407	43.3	38.77
0409	43.398	40.05
0250	n/a	n/a
0302	47.58	46
0301	44.85	40.33
1402	43.33	40.25
141C	43.31	40.44
1403	44.19	43.16
141B	43.3	40.54
1201	49.14	47.1
1404	43.13	40.66
141A	n/a	n/a
1401	42.99	41.57
2404	n/a	n/a
2402	42.84	41.84
2502	n/a	n/a
2405	n/a	n/a
2501	n/a	n/a
2401	42.96	42
2413	n/a	n/a
3401	n/a	n/a
3301	43.4	42.46
4301	43.56	42.69
421A	n/a	n/a
4302	44.19	43.16
0001	n/a	n/a
0053	n/a	n/a
001B	n/a	n/a
001A	n/a	n/a
0052	n/a	n/a
0051	n/a	n/a
1101	n/a	n/a
0151	n/a	n/a
1102	49.19	47.65
011B	n/a	n/a
011A	n/a	n/a
0101	47.81	46.9
0150	n/a	n/a
0252	104.85	103.32
0251	104.85	103.12
0201	47.6	46.22
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.		



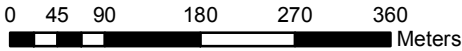
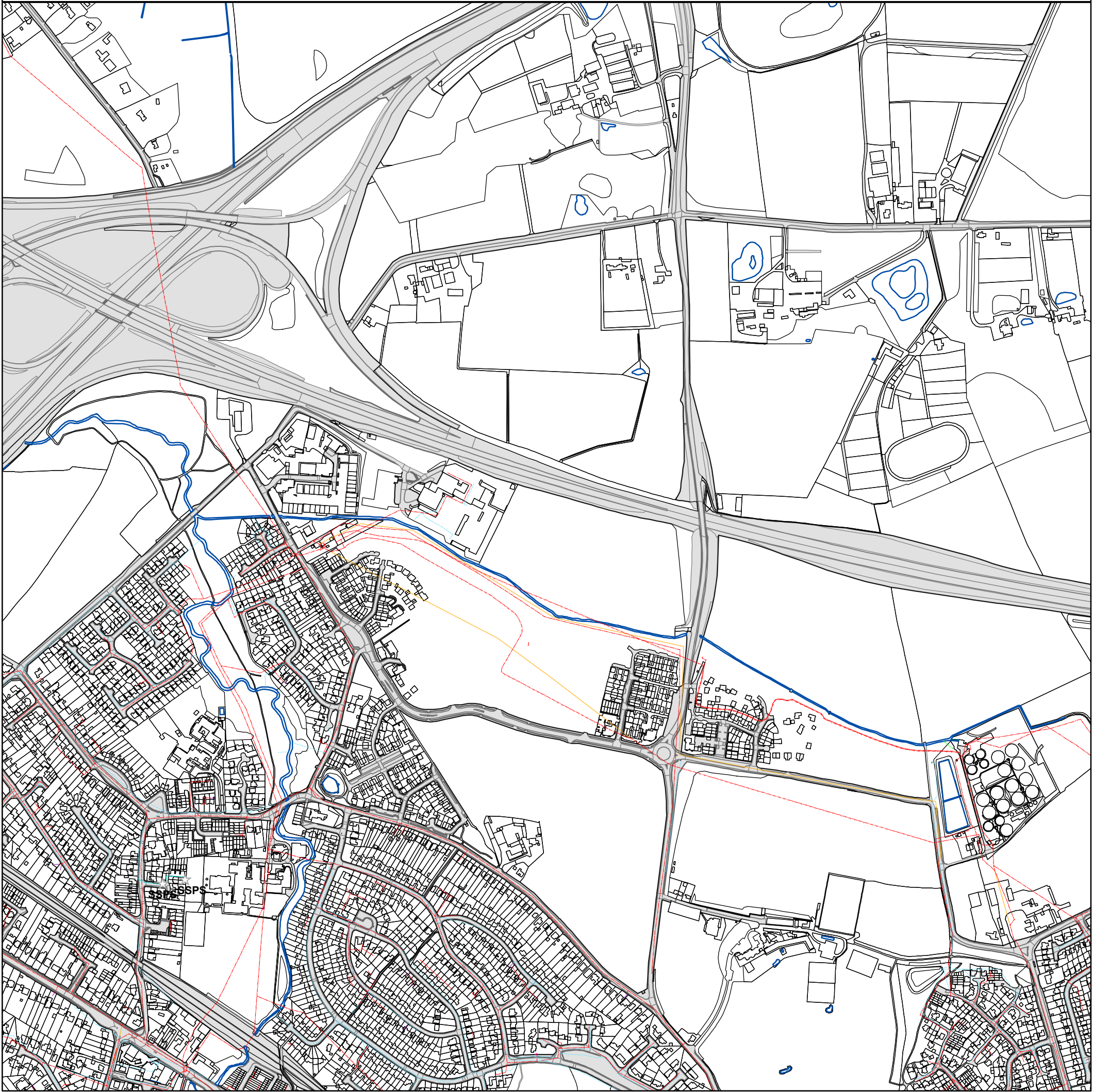
The width of the displayed area is 500m and the centre of the map is located at OS coordinates 480250,170750

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.

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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
3509	n/a	n/a
3504	n/a	n/a
3501	n/a	n/a
3503	n/a	n/a
3506	n/a	n/a
3502	n/a	n/a
3505	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.		



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 before any works are undertaken. Crown copyright Reserved

Scale: 1:7158
Width: 2000m
Printed By: G1KANAGA
Print Date: 28/06/2019
Map Centre: 480488,170429
Grid Reference: SU8070SW

Comments:



ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

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

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.

Sewer Fittings

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

	Air Valve
	Dam Chase
	Fitting
	Meter
	Vent Column

Operational Controls

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

	Control Valve
	Drop Pipe
	Ancillary
	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.

	Outfall
	Undefined End
	Inlet

Other Symbols

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

	Public/Private Pumping Station
	Change of characteristic indicator (C.O.C.I.)
	Invert Level
	Summit

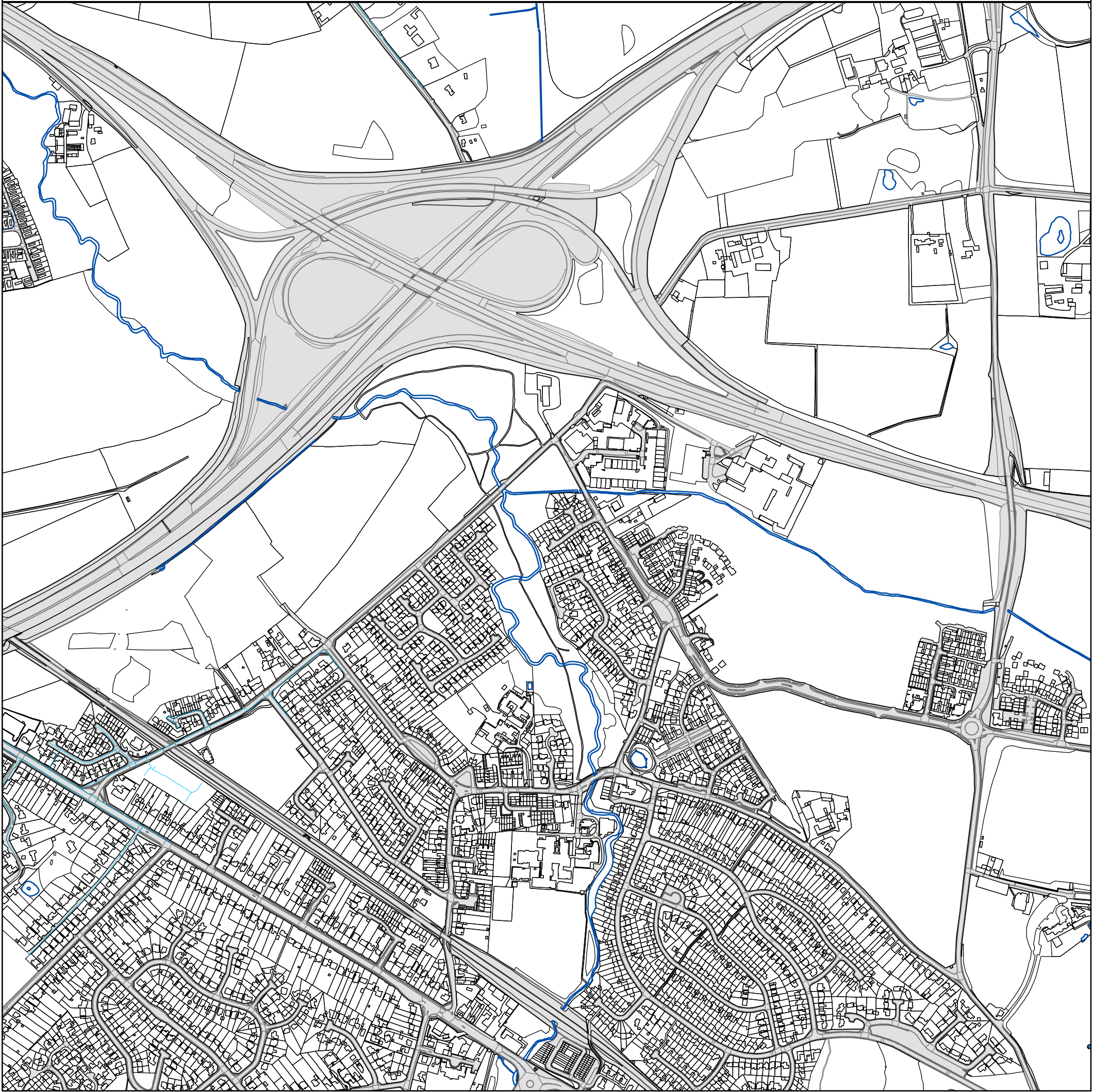
Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Operational Site
	Chamber
	Tunnel
	Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)

	Foul Sewer		Surface Water Sewer
	Combined Sewer		Gully
	Culverted Watercourse		Proposed
			Abandoned Sewer



0 45 90 180 270 360
Meters

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 before any works are undertaken. Crown copyright Reserved

Scale: 1:7158
Width: 2000m
Printed By: G1KANAGA
Print Date: 28/06/2019
Map Centre: 479922,170383
Grid Reference: SU7970SE

Comments:



ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)

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

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

Valves

	General Purpose Valve
	Air Valve
	Pressure Control Valve
	Customer Valve

Hydrants

	Single Hydrant
--	----------------

Meters

	Meter
--	-------

End Items

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

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

Operational Sites

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

Other Symbols

	Data Logger
--	-------------

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.

Terms and Conditions

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

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment 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. Thames Water 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 the discretion of the company for increased administration costs.

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

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

If you are unhappy with our service you can speak to your original goods or customer service provider. If you are 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 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0121 345 1000 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking	Cheque
Call 0845 070 9148 quoting your invoice number starting CBA or ADS / OSS	Account number 90478703 Sort code 60-00-01 A remittance advice must be sent to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW. or email ps.billing@thameswater.co.uk	By calling your bank and quoting: Account number 90478703 Sort code 60-00-01 and your invoice number	Made payable to ' Thames Water Utilities Ltd ' Write your Thames Water account number on the back. Send to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW or by DX to 151280 Slough 13

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- elliottwood.co.uk

