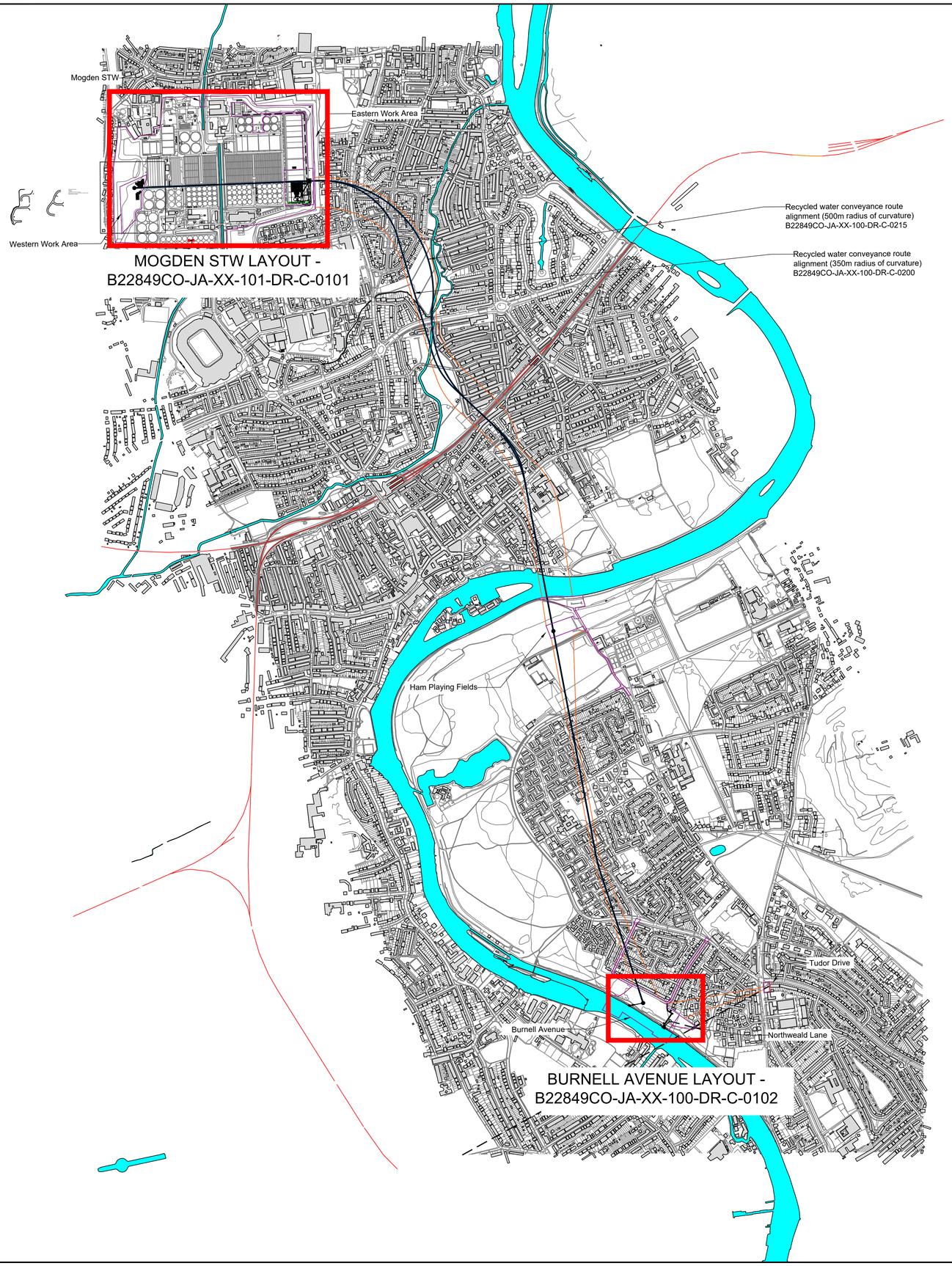
Teddington Direct River Abstraction

Preliminary Environmental Information Report
Appendix 5.2 – Flood Risk Assessment

Volume: 3

Date: June 2025

Annex D1. Proposed Plans



NOTES:
1. DRAWING SHALL NOT BE SCALED FOR DIMENSIONS.
2. DIMENSIONS AND LOCATION OF TUNNEL AND SHAFTS ARE INDICATIVE ONLY.

REFERENCE DRAWINGS:
B22849CO-JA-XX-101-DR-C-0101
B22849CO-JA-XX-100-DR-C-0102
B22849CO-JA-XX-100-DR-C-0215
B22849CO-JA-XX-100-DR-C-0200

KEY

- Boundary of Above Ground Site Area
- EIA Scoping Boundary
- Railway Line

0 100 200 300 400 500 600 700 800 900 1000

SCALE 1:10,000 (A1)
SCALE 1:20,000 (A3)
METRES

C:\pwworking\jacobs-emea-01\d0244146\B22849CO-JA-XX-100-DR-C-0100.dwg - 20/12/2024 09:59:59 - LAYOUT - patelpr

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	PM	GBR	NG	NG

Jacobs
2nd Floor Cottons Centre, Cottons Lane, London, SE1 2QG
United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client: Thames Water

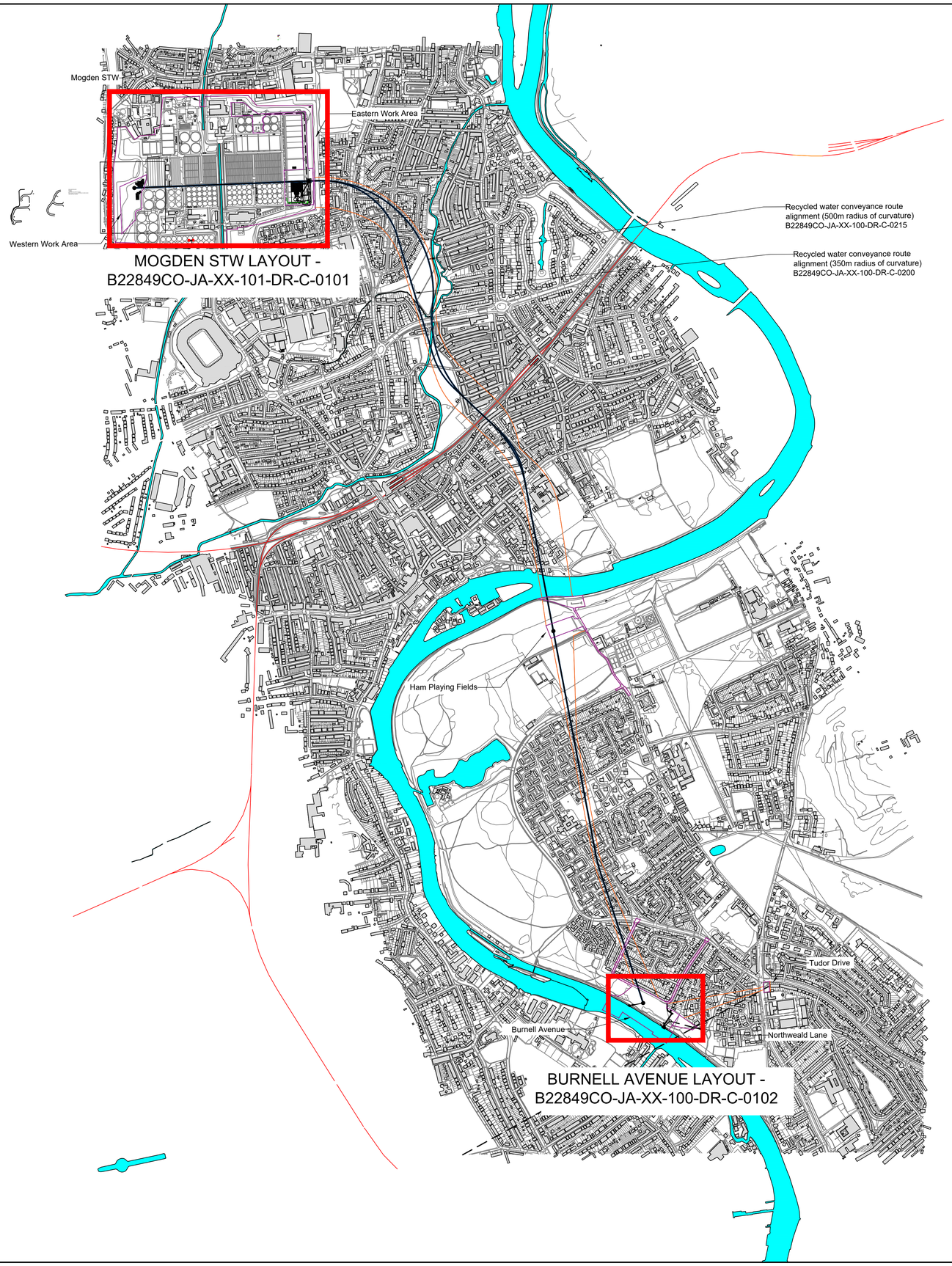
Project: **LONDON WATER RECYCLING**

Drawing title: **TEDDINGTON DRA GATE 3 PROJECT AREA GENERAL LAYOUT**

Drawing status: **Issued for co-ordination**

Scale	1:10000	DO NOT SCALE	
Jacobs No.	B22849CO	Rev	P01.1
Client no.			

Drawing number: **B22849CO-JA-XX-100-DR-C-0100**



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REFERENCE DRAWINGS:
B22849CO-JA-XX-101-DR-C-0101
B22849CO-JA-XX-100-DR-C-0102
B22849CO-JA-XX-100-DR-C-0215
B22849CO-JA-XX-100-DR-C-0200

KEY

- Boundary of Above Ground Site Area
- EIA Scoping Boundary
- Railway Line

0 100 200 300 400 500 600 700 800 900 1000

SCALE 1:10,000 (A1)
SCALE 1:20,000 (A3)
METRES

C:\pwworking\jacobs-emea-01\d0244146\B22849CO-JA-XX-100-DR-C-0100.dwg - 20/12/2024 09:59:59 - LAYOUT - patelpr

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	PM	GBR	NG	NG

Jacobs
2nd Floor Cottons Centre, Cottons Lane, London, SE1 2QG
United Kingdom T+44 (0)203 980 2000
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Client: Thames Water

Project: **LONDON WATER RECYCLING**

Drawing title: **TEDDINGTON DRA GATE 3 PROJECT AREA GENERAL LAYOUT**

Drawing status: **Issued for co-ordination**

Scale	1:10000	DO NOT SCALE	
Jacobs No.	B22849CO	Rev	P01.1
Client no.			

Drawing number: **B22849CO-JA-XX-100-DR-C-0100**

N

Mogden STW

Eastern Work Area

Interception Shaft

Drive Shaft

Western Work Area

Recycled Water Conveyance Route Alignment (500m Radius Curvature) B22849CO-JA-XX-100-DR-C-0216

Recycled Water Conveyance Route Alignment (350m Radius Curvature) B22849CO-JA-XX-100-DR-C-0201

Tertiary Treatment Plant B22849CO-JA-XX-100-DR-C-0107

0 50 100 200

SCALE 1:2,000 (A1)
SCALE 1:4,000 (A3)

METRES

NOTES:
1. DRAWING SHALL NOT BE SCALED FOR DIMENSIONS.
2. DIMENSIONS AND LOCATION OF TUNNEL AND SHAFTS ARE INDICATIVE ONLY.

REFERENCE DRAWINGS:
B22849CO-JA-XX-100-DR-C-0107
B22849CO-JA-XX-100-DR-C-0201
B22849CO-JA-XX-100-DR-C-0216

KEY

- Boundary of Above Ground Site Area
- EIA Scoping Boundary

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	BT	MP	NG	NG

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Client: Thames Water

Project: **LONDON WATER RECYCLING**

Drawing title: **TEDDINGTON DRA GATE 3 MOGDEN STW EASTERN AND WESTERN WORK AREA LAYOUT**

Drawing status: **Issued for co-ordination**

Scale	1:2000	DO NOT SCALE	
Jacobs No.	B22849CO	Rev	P01.1
Client no.			

Drawing number: **B22849CO-JA-XX-100-DR-C-0101**

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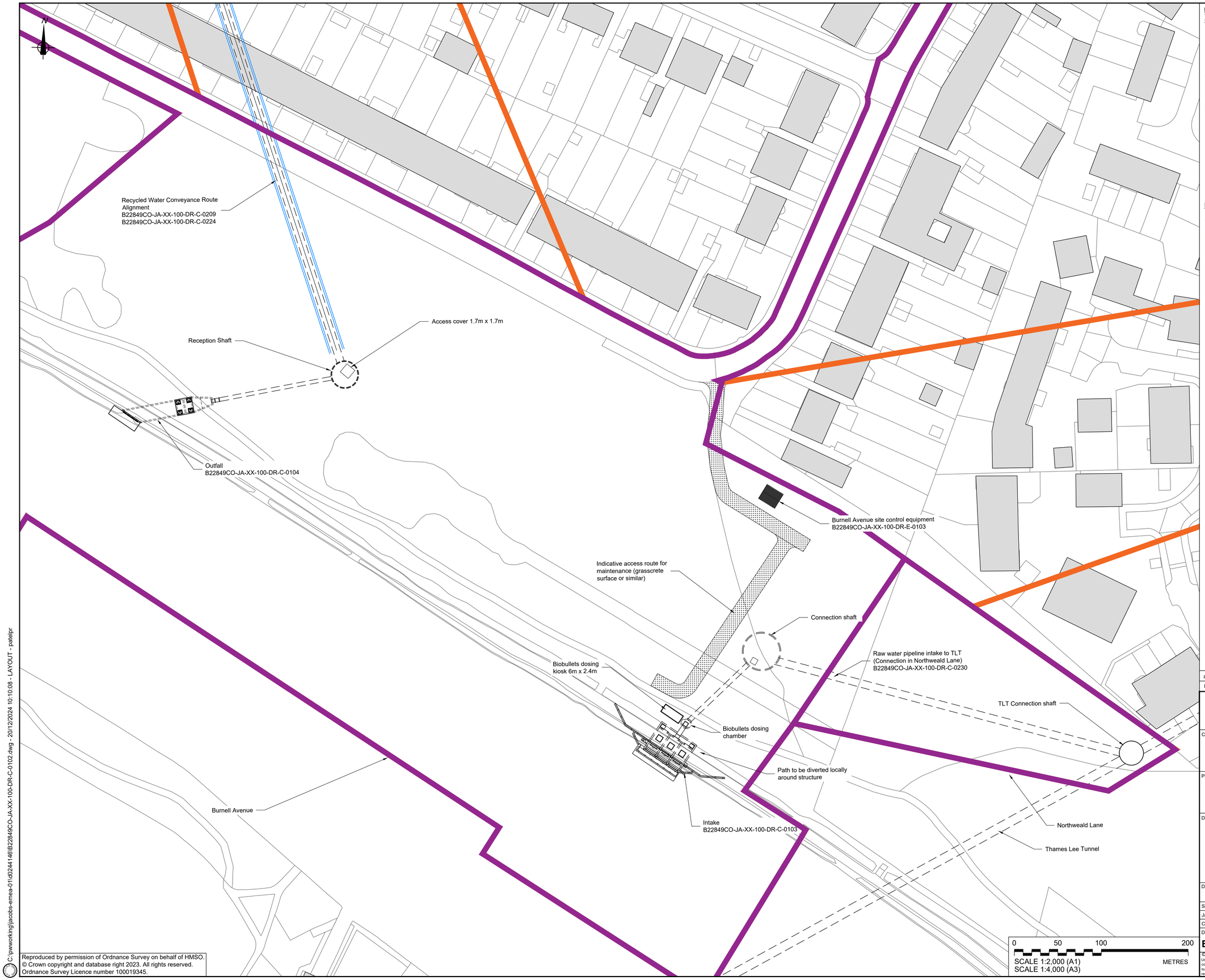

NOTES:
1. DRAWING SHALL NOT BE SCALED FOR DIMENSIONS.
2. DIMENSIONS AND LOCATION OF TUNNEL AND SHAFTS ARE INDICATIVE ONLY.

REFERENCE DRAWINGS:
B22849CO-JA-XX-100-DR-C-0209
B22849CO-JA-XX-101-DR-C-0224
B22849CO-JA-XX-100-DR-C-0104
B22849CO-JA-XX-100-DR-E-0103
B22849CO-JA-XX-100-DR-C-0103
B22849CO-JA-XX-100-DR-C-0230

KEY

Boundary of Above Ground Site Area

EIA Scoping Boundary

Rev	Rev. Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'v'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	GBR	MP	CF	NG

Jacobs
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www.jacobs.com

Client: Thames Water

Project: **LONDON WATER RECYCLING**

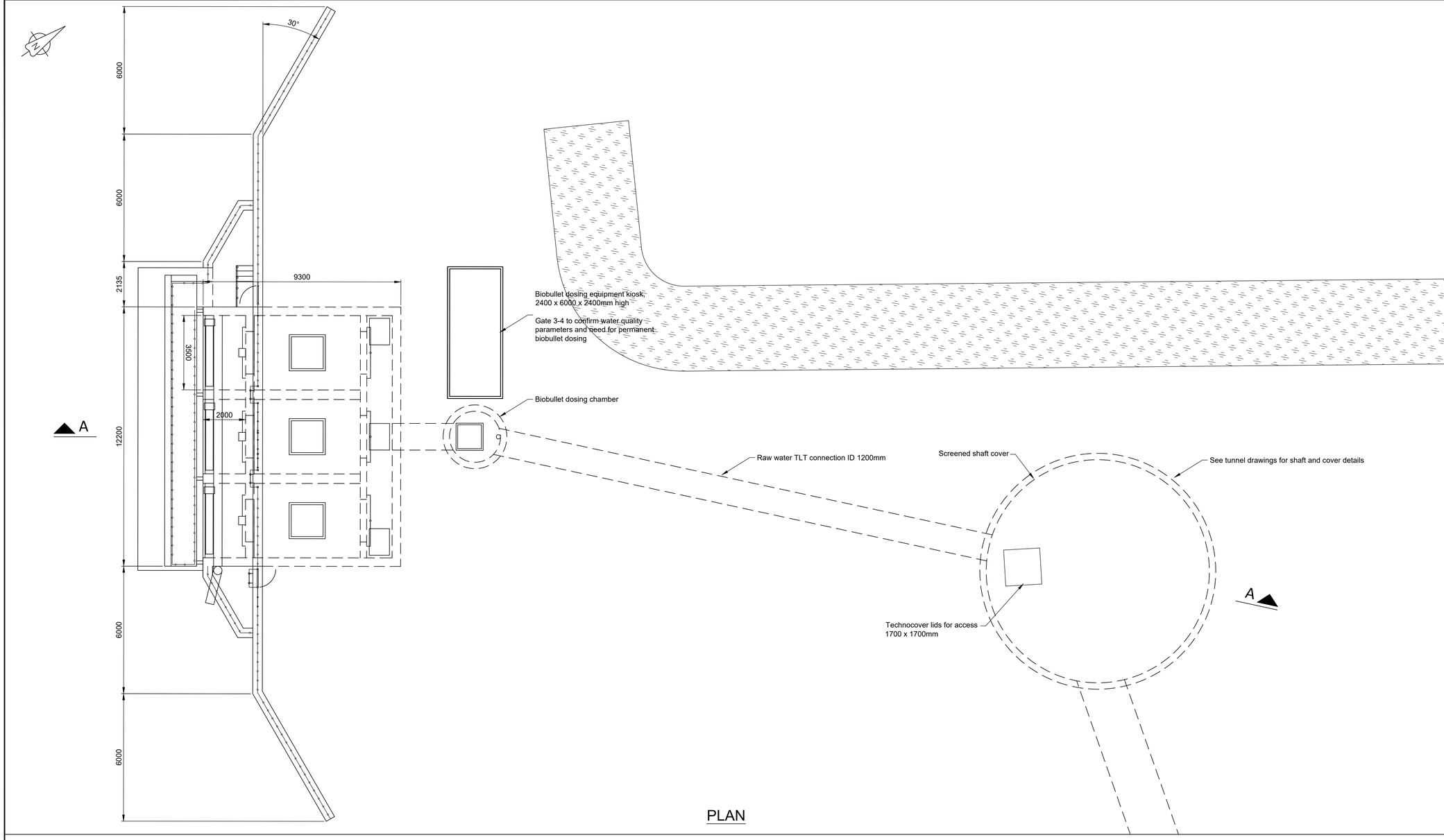
Drawing title: **TEDDINGTON DRA GATE 3 BURNELL AVENUE SITE LAYOUT**

Drawing status: **Issued for co-ordination**

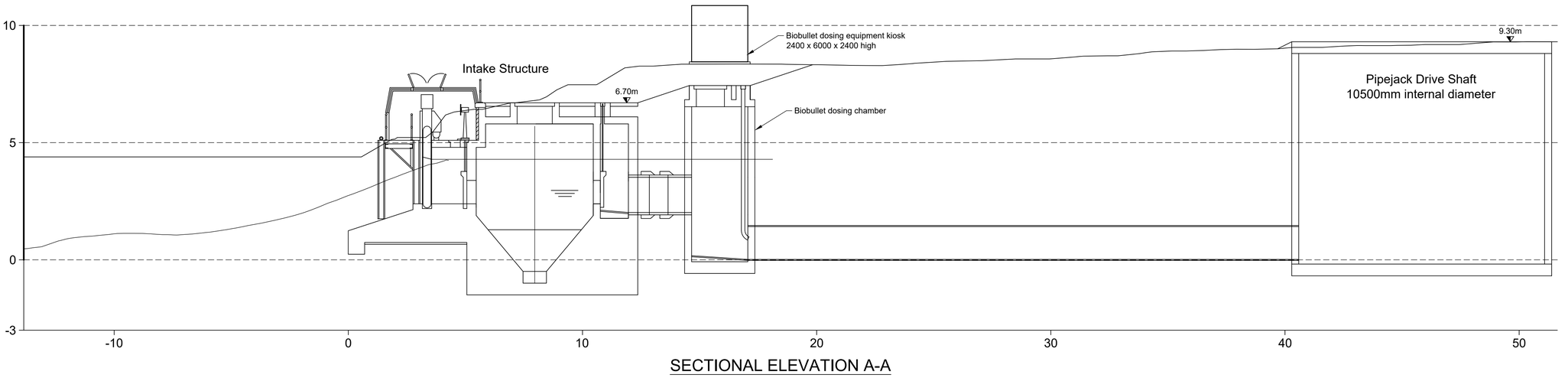
Scale	1:2000	DO NOT SCALE
Jacobs No.	B22849CO	Rev P01.1
Client no.		

Drawing number: **B22849CO-JA-XX-100-DR-C-0102**

0 50 100 200
METRES
SCALE 1:2,000 (A1)
SCALE 1:4,000 (A3)



PLAN



SECTIONAL ELEVATION A-A

NOTES:

1. DESIGNS ON THIS DRAWING ARE INDICATIVE ONLY FOR CONSULTATION AND ARE SUBJECT TO CHANGE.
2. DO NOT SCALE FROM THIS DRAWING.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
4. ALL LEVELS ARE IN METRES ABOVE ORDINANCE DATUM NEWYLN (mAOD).
5. FLOW MEASUREMENT SYSTEM TO BE DESIGNED AND INCORPORATED INTO THE INTAKE DRAWING DURING SUBSEQUENT DESIGN PHASES.
6. DETAILS OF ISOLATION AND CONNECTION INTO THE TLT TO BE CONFIRMED.
7. DESIGN DERIVED FROM COMPLETED BIRMINGHAM RESILIENCE PROJECT. AGREEMENT WITH NAU REQUIRED ON FINALISED DESIGN FOR GATE 3-4
8. GROUND PROFILE DERIVED FROM OPEN SOURCE DATA PROFILE AND LANDSCAPING WILL NEED TO BE UPDATED WITH ACTUAL TOPOGRAPHICAL SURVEY DATA

0 5 10

SCALE 1:100 (A1)
SCALE 1:200 (A3)
METRES

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	BT	MP	CF/AM	NG

Jacobs
2nd Floor Cottons Centre, Cottons Lane, London, SE1 2QG
United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client: Thames Water

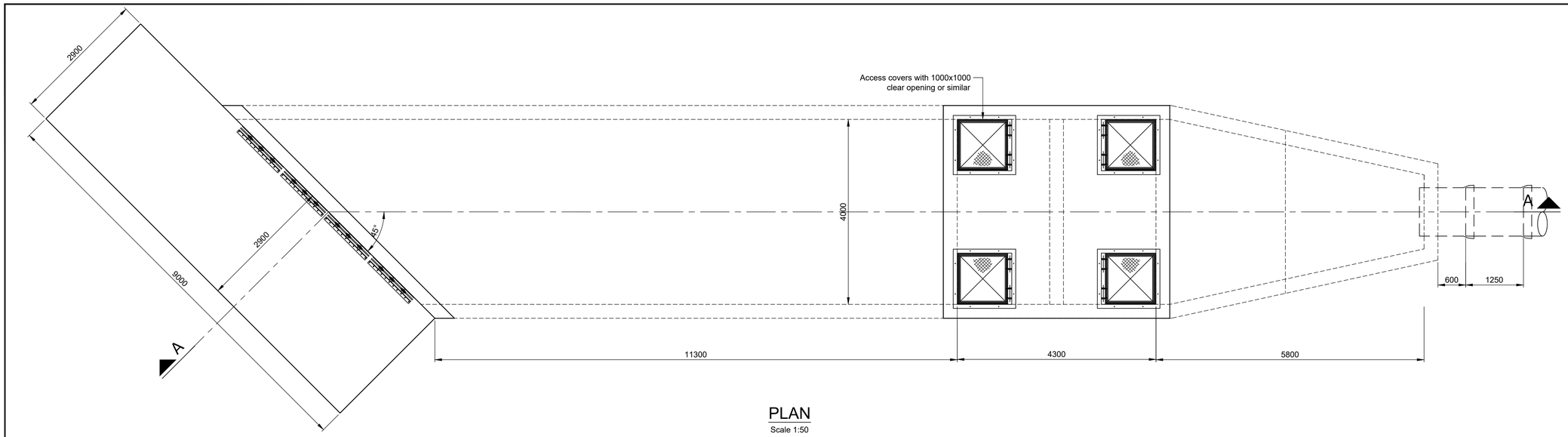
Project: LONDON WATER RECYCLING

Drawing title:
TEDDINGTON DRA GATE 3
INTAKE
GENERAL ARRANGEMENT

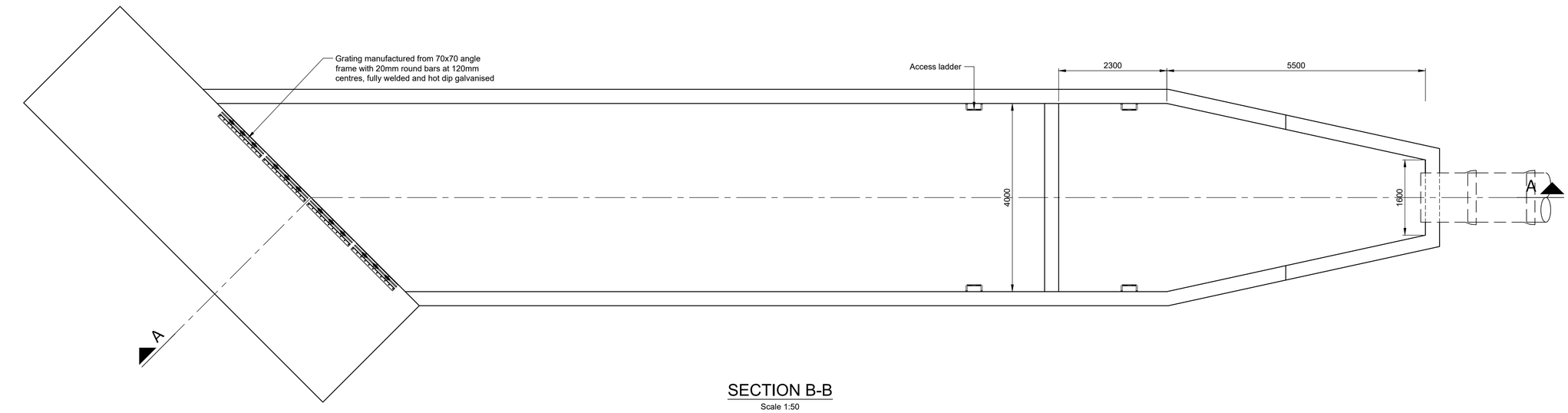
Drawing status: Issued for co-ordination

Scale	1:100	DO NOT SCALE
Jacobs No.	XXXXXXXX	Rev P01.1
Client no.		

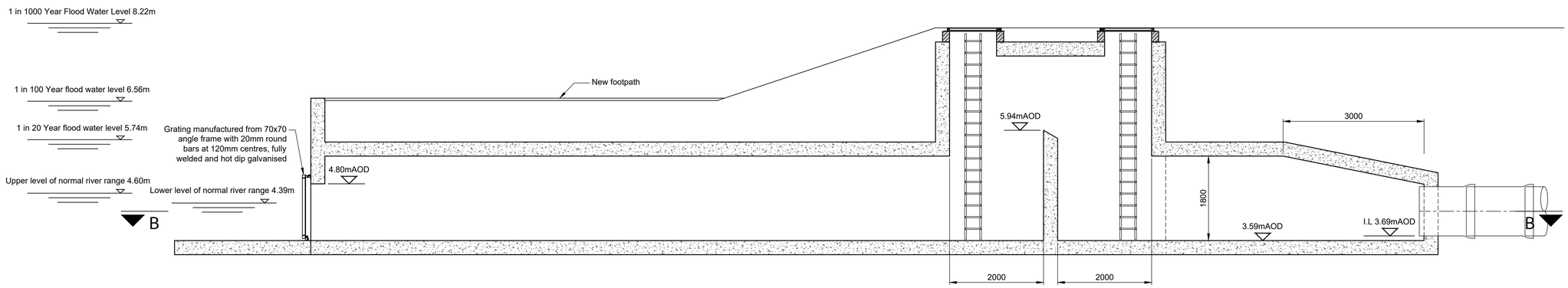
Drawing number: B22849CO-JA-XX-100-DR-C-0105



PLAN
Scale 1:50



SECTION B-B
Scale 1:50



SECTIONAL ELEVATION A-A
Scale 1:50

0 1000 2000 3000 4000 5000

SCALE 1:50 (A1)
SCALE 1:100 (A3)

MILLIMETRES

NOTES:

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3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
4. ALL LEVELS ARE IN METRES ABOVE ORDINANCE DATUM NEWYLN (MAOD).

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01.1	28/11/24	GATE 3 DESIGN FREEZE	SP	MP	CF/AM	NG

Jacobs
2nd Floor Cottons Centre, Cottons Lane, London, SE1 2QG
United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client: Thames Water

Project: LONDON WATER RECYCLING

Drawing title: TEDDINGTON DRA GATE 3 OUTFALL GENERAL ARRANGEMENT (BANKSIDE OPTION)

Drawing status: Issued for co-ordination

Scale	1:50	DO NOT SCALE
Jacobs No.	XXXXXXXX	Rev P01.1
Client no.		

Drawing number: B22849CO-JA-XX-100-DR-C-0104

Topsoil storage
Welfare
Onsite parking
M&E Containers and stores
Segment storage
COSHH and waste
Topsoil storage
Laydown/storage area
Grout batching plan
Conveyance route reception shaft
Tally hut
Excavated material storage
Outfall/intake preparation works area/public footpath
Laydown area
Topsoil storage
Excavated material storage
Segment storage
River water connection shaft
Tally hut
Burnell Avenue

Notes:

1. Designs on this drawing are indicative only for consultation and are subject to change.
2. Do not scale from this drawing.
3. All dimensions in millimetres unless otherwise stated.
4. All levels are in metres above Ordinance Datum Newlyn (mAOD).

Legend:

= Body path
= Wheel path
= Boundary of Above Ground Site Area

Utilities Legend:

= Thames Water Main
= Thames Water Trunk Main
= Thames Water Surface Water Sewer
= UK Power Networks (HV)
= UK Power Networks (LV)
= Cadent Gas LP
= BT Openreach
= Virgin Media
= Lamppost
= Road Gully

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01	20/12/24	GATE 3 DESIGN FREEZE	SP	MB	NG	NG

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United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client: Thames Water

Project: **LONDON WATER RECYCLING**

Drawing title:

TEDDINGTON DRA GATE 3
BURNELL AVE SITE CONSTRUCTION COMPOUND INDICATIVE LAYOUT
RECEPTION SHAFT CONSTR. PHASE

Drawing status: **Issued for co-ordination**

Scale	1:500	DO NOT SCALE
Jacobs No.	B22849CO	Rev P01
Client no.		

Drawing number: **B22849CO-JA-XX-100-DR-C-0312**

0 10 20 30 40 50 METRES
SCALE 1:500 (A1)
SCALE 1:1000 (A3)

Ham Street
Playing Fields

Topsoil storage

Site welfare

Temporary, alternative
public car parking area

Site entrance

10.5m
Intermediate
shaft

Plant operating area

Waste and
COSHH

M&E
Containers

M&E
Equipment

Topsoil storage

Spoil storage

Laydown area

0 10 20 30 40 50

SCALE 1:500 (A1)
SCALE 1:1000 (A3)

METRES

Notes:

1. Designs on this drawing are indicative only for consultation and are subject to change.
2. Do not scale from this drawing.
3. All dimensions in millimetres unless otherwise stated.
4. All levels are in metres above Ordinance Datum Newyln (mAOD).

Legend:

= Thames Water Rising Main
= Thames Water Surface Water Sewer
= UK Power Networks (HV)
= UK Power Networks (LV)
= Cadent Gas LP
= BT Openreach
= Lamppost
= Boundary of Above Ground Site Area

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01	20/12/24	GATE 3 DESIGN FREEZE	SP	MB	NG	NG

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United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client

Thames Water

Project

LONDON WATER RECYCLING

Drawing title

TEDDINGTON DRA GATE 3 HAM PLAYING FIELDS SITE CONSTRUCTION COMPOUND INDICATIVE LAYOUT

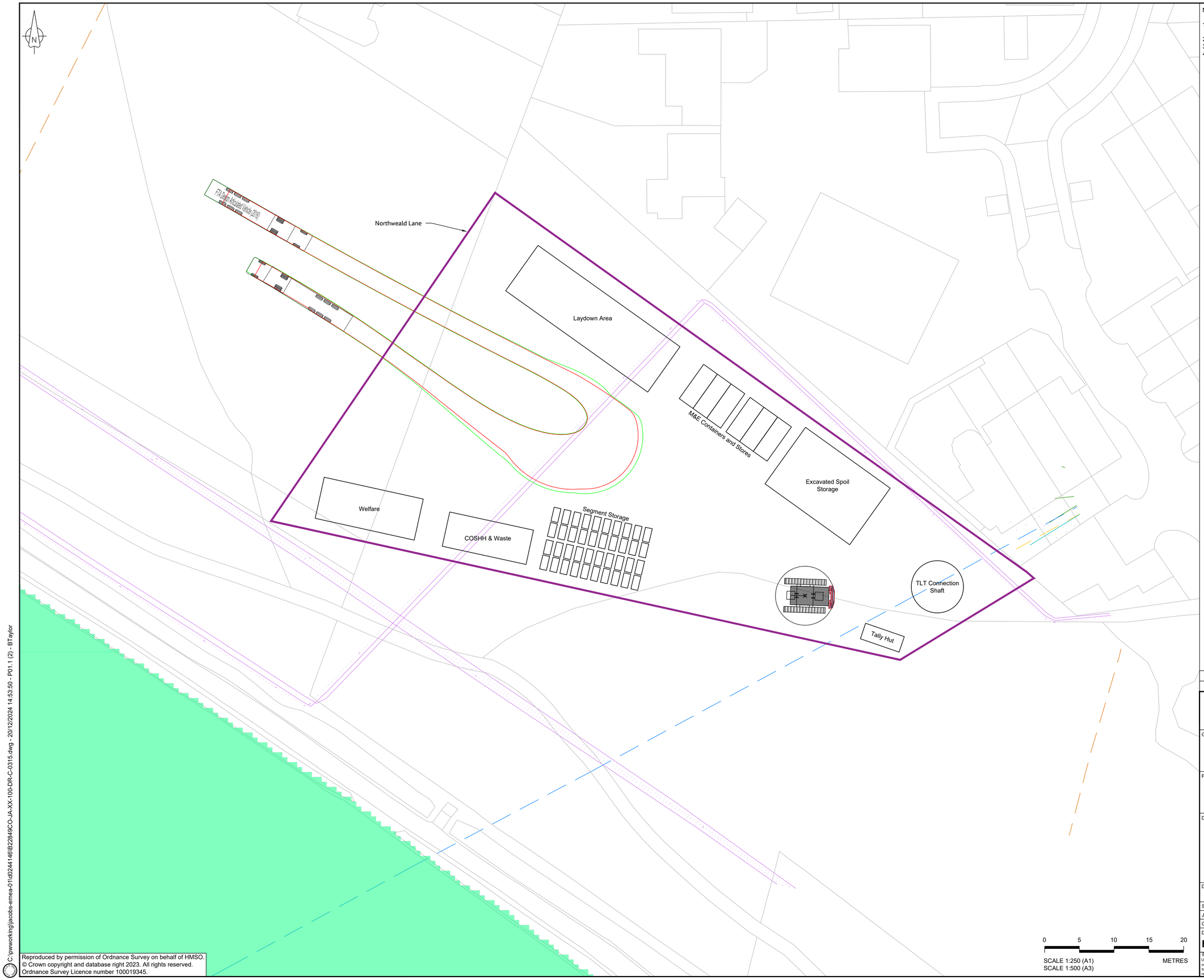
Drawing status

Issued for co-ordination

Scale	1:500	DO NOT SCALE
Jacobs No.	B22849CO	Rev P01
Client no.	J698	

Drawing number

B22849CO-JA-XX-100-DR-C-0313



Notes:

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2. Do not scale from this drawing.
3. All dimensions in millimetres unless otherwise stated.
4. All levels are in metres above Ordinance Datum Newyln (mAOD).

Legend:

- = Body path
- = Wheel path
- = Boundary of Above Ground Site Area

Utilities Legend:

- = Thames Water Main
- = Thames Water Trunk Main
- = Thames Water Surface Water Sewer
- = UK Power Networks (HV)
- = UK Power Networks (LV)
- = Cadent Gas LP
- = BT Openreach
- = Virgin Media
- = Lamppost

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
P01	20/12/24	GATE 3 DESIGN FREEZE	SP	MB	NG	NG

Jacobs
2nd Floor Cottons Centre, Cottons Lane, London, SE1 2QG
United Kingdom T+44 (0)203 980 2000
www.jacobs.com

Client: Thames Water

Project: **LONDON WATER RECYCLING**

Drawing title:

TEDDINGTON DRA GATE 3 NORTHWEALD LANE SITE CONSTRUCTION COMPOUND INDICATIVE LAYOUT

Drawing status: **Issued for co-ordination**

Scale	1:250	DO NOT SCALE
Jacobs No.	B22849CO	Rev P01
Client no.	J698	

Drawing number: **B22849CO-JA-XX-100-DR-C-0315**

0 5 10 15 20 METRES

SCALE 1:250 (A1)
SCALE 1:500 (A3)

C:\pwworking\jacobs-emea-01\d02441461\B22849CO-JA-XX-100-DR-C-0315.dwg - 20/12/2024 14:53:50 - P01.1 (2) - BTaylor

Annex E1. Environmental Agency Product 4 Data

Cannard, Phil

From:	NET Enquiries <HNLenquiries@environment-agency.gov.uk>
Sent:	22 July 2024 16:39
To:	Cannard, Phil
Subject:	FW: HNL 369072 BF - 240705/rg04 Product 4 data for a site in the London Borough of Hounslow
Attachments:	HNL Guidance on using Product 6 data in a Flood Risk Assessment v5.pdf

Dear Phil

Enquiry regarding Product 5 & 6 for Whitton Dene, Worton, London Borough of Hounslow

Thank you for your enquiry which was received on 04 July 2024.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

Please note that we have recently changed our process for responding to modelled data requests, please read the information within this letter for further details.
Your request for a Product 4 falls under the exemption in provision 6(1)(a) and (b) of the Environmental Information Regulations 2004 (EIR) which states that
'……6.—(1) Where an applicant requests that the information be made available in a particular form or format, a public authority shall make it so available, unless—
(a) it is reasonable for it to make the information available in another form or format; or
(b) the information is already publicly available and easily accessible to the applicant in another form or format……'
On this occasion we are not providing the information in the Product 4 format for the following reasons:

- Complying with the preference would incur a significant cost, which the public authority [The Environment Agency] cannot pass on to the requester;
- Providing shapefiles used to create a Product 4 allows us to make the information available at a lower cost; and
- The impact on the available resources of the public authority [The Environment Agency], of supplying shapefiles used to create a Product 4, is therefore much less.

We are licensing the supplied data to you under the Environment Agency Conditional Licence.
You must first check this supporting information, to determine if the conditions of use are suitable for your purposes. If the conditions for use are not suitable for your purposes, this information is not provided with a licence for use, and the data is provided for the right to read only.

Product 4 data is derived from the shapefiles supplied above and the following open data sources:

Flood Zone 3 https://data.gov.uk/dataset/flood-map-for-planning-rivers-and-sea-flood-zone-3

Flood Zone 2 https://data.gov.uk/dataset/flood-map-for-planning-rivers-and-sea-flood-zone-2

Historic Flood Map https://data.gov.uk/dataset/historic-flood-map1

Please note, that the Flood Map for Planning is available to view and export maps for your site at: https://flood-map-for-planning.service.gov.uk/

Please note that our historic flood event maps may not be comprehensive. We would therefore advise that you make further enquiries locally with specific reference to flooding at your location.

You should consider contacting the relevant Local Planning Authority and/or water/sewerage undertaker for the area.

Please be aware that flooding can come from different sources. Examples of these are:

- from rivers or the sea.
- surface water (i.e. rainwater flowing over or accumulating on the ground before it is able to enter rivers or the drainage system) Please contact the Lead Local Flood Authority London Borough of Hounslow.
- overflowing or backing up of sewer or drainage systems which have been overwhelmed. Please contact the local Water Company.
- groundwater rising up from underground aquifers.

Currently the Environment Agency can only supply flood risk data relating to the chance of flooding from rivers or the sea.

Please find attached guidance on how to use this data.

The following information is not available under the Open Government Licence but we may be able to license it to you under the Environment Agency Conditional Licence:

P5,6	https://ea.sharefile.com/d-s249817189f5e4b9db96b546066246569
Name	River Crane Mapping Study (Halcrow 2008)
Description	Product 5,6
Licence	Environment Agency Conditional Licence
Conditions	1.0 You may use the Information for your internal or personal purposes and may only sublicense others to use it if you do so under a written licence which includes the terms of these conditions and the agreement and in particular may not allow any period of use longer than the period licensed to you. 2.0 Notwithstanding the fact that the standard wording of the Environment Agency Conditional Licence indicates that it is perpetual, this Licence has a limited duration of 5 years at the end of which it will terminate automatically without notice. 3.0 We have restricted use of the Information as a result of legal restrictions placed upon us to protect the rights or confidentialities of others. In this instance it is because of third party data. If you contact us in writing (this includes email) we will, as far as confidentiality rules allow, provide you with details including, if available, how you might seek permission from a third party to extend your use rights.

	4.1 The Information may contain some data that we believe is within the definition of “personal data” under the Data Protection Act 1998 but we consider that we will not be in breach of the Act if we disclose it to you with conditions set out in this condition and the conditions above. This personal data comprises names of individuals or commentary relating to property that may be owned by an individual or commentary relating to the activities of an individual. 4.2 Under the Act a person who holds and uses or passes to others personal data is responsible for any compliance with the Act and so we have no option but to warn you that this means you have responsibility to check that you are compliant with the Act in respect of this personal data. 5.0 The location of public water supply abstraction sources must not be published to a resolution more detailed than 1km2. Information about the operation of flood assets should not be published. 6.1 Where we have supplied model data which may include model inputs or outputs you agree to supply to the Environment Agency copies of any assessments/studies and related outputs, modifications or derivatives created pursuant to the supply to you of the Information, all of which are hereinafter referred to as “the Data”. 6.2 You agree, in the public interest to grant to the Environment Agency a perpetual royalty free non-exclusive licence to use the Data or any part thereof for its internal purposes or to use it in any way as part of Environment Agency derivative products which it supplies free of charge to others such as incorporation into the Environment Agency's Open Data mapping products.
Information Warnings	Please be aware that model data is not raw, factual or measured but comprises of estimations or modelled results based on the data available to us. It is important to note that this model has been designed for catchment wide flood risk mapping, with an intended use on a strategic/appraisal/design scale. It was not created specifically for Flood Risk Assessments, or to produce flood levels for particular development sites within the catchment. If you are intending to use the model for planning purposes, you must review and update the model where necessary to ensure it is site specific, fit for your intended purpose, and to best practice standards. Please also note that any model changes will need to be reviewed by the Environment Agency as part of the Flood Risk Assessment submission. Further guidance around undertaking hydraulic modelling can be found here: River modelling: technical standards and assessment - GOV.UK (www.gov.uk).

	Please be aware that model data is not raw, factual, or measured, but comprises of estimations or modelled results based on the data available to us. Defended modelled outlines take into account catchment wide defences.
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. May contain Ordnance Survey data © Crown copyright 2024 Ordnance Survey 100024198.

However, you MUST first check the supporting information and the above link to determine if the conditions on use are suitable for your purposes. If they aren't, this information is not provided with a licence for use, and the data is provided for read right only.

Here is the link to the climate change allowances:
https://www.gov.uk/government/publications/peak-river-flow-climate-change-allowances-by-management-catchment

Further details about the Environment Agency information supplied can be found on the GOV.UK website:

https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather

If you have requested this information to help inform a development proposal, then you should note the information on GOV.UK on the use of Environment Agency Information for Flood Risk Assessments:

https://www.gov.uk/planning-applications-assessing-flood-risk
https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion

Data Available Online

Many of our flood datasets are available online:

- **You can view and download flood risk maps from our website at:** http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?topic=floodmap#x=357683&y=355134&scale=2
- **Flood Map For Planning** (Flood Zone 2, Flood Zone 3 ,Flood Storage Areas, Flood Defences)
- Risk of Flooding from Rivers and Sea
- Historic Flood Map

- Assets and Defences
- Current Flood Warnings
- Open data

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Kind regards

Becca Field

Product 4 (Detailed Flood Risk) for: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA
Requested by: Phil Cannard
Reference: KSL 370976 RL
Date: 28/10/2024

Contents

The information provided is based on the best data available as of the date of this letter.

You may feel it is appropriate to contact our office at regular intervals, to check whether any amendments/ improvements to the data for this location have been made. Should you re-contact us after a period of time, please quote the above reference in order to help us deal with your query.

Please note. Due to the location of your site you may also need to obtain the Lower Thames Flood Modelling Study. This can be done by contacting enquiries_THM@environment-agency.gov.uk .

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Flood Map for Planning (Rivers and Sea)

The Flood Map:

Our Flood Map shows the natural floodplain for areas at risk from river and tidal flooding. The floodplain is specifically mapped ignoring the presence and effect of defences (including any tidal barriers). Although flood defences reduce the risk of flooding they cannot completely remove that risk as they may be over topped or breached during a flood event.

The Flood Map indicates areas with a 1% (0.5% in tidal areas), Annual Exceedance Probability (AEP) - the probability of a flood of a particular magnitude, or greater, occurring in any given year, and a 0.1% AEP of flooding from rivers and/or the sea in any given year. In addition, the map also shows the location of some flood defences.

The Flood Map is intended to act as a guide to indicate the potential risk of flooding. When producing it we use the best data available to us at the time and also take into account historic flooding and local knowledge. The Flood Map is updated on a quarterly basis to account for any amendments required. These amendments are then displayed on the internet at https://www.gov.uk/check-flood-risk

At this Site:

The Flood Map shows that this site lies within the outline of Flood Zone 3. This zone comprises land assessed as having a 0.5% (1 in 200) or greater annual probability of tidal flooding.

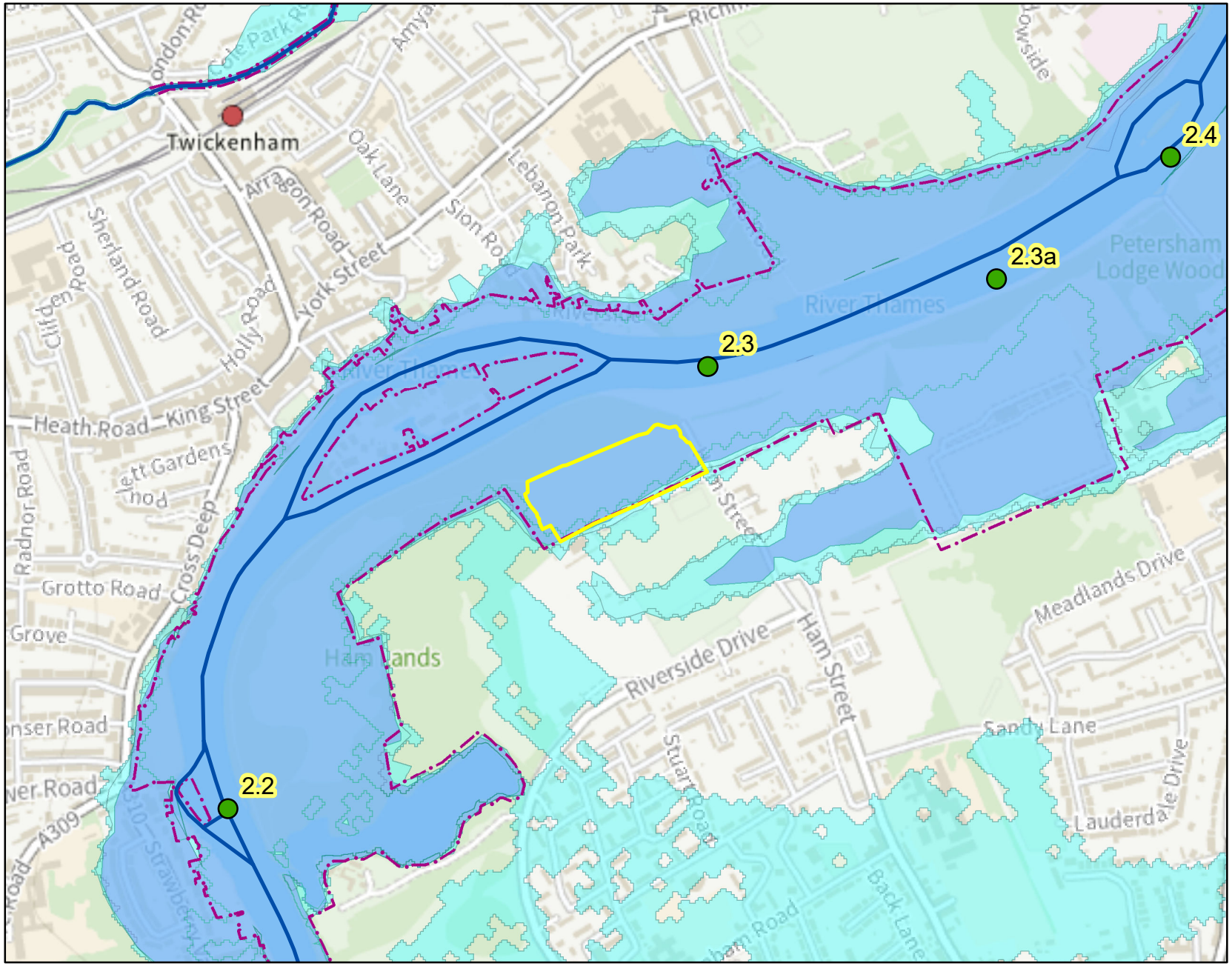
Enclosed is an extract of our Flood Map which shows this information for your area.

Method of production

The Flood Map at this location has been derived using detailed modelling of the tidal River Thames through the Thames Tidal Defences Study completed in 2006 by Halcrow Ltd.

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

FRA Map centred on TW10 7QA created 28 October 2024 [Ref: KSL 370976 RL]



Environment Agency

Scale 1: 10,000

0 75 150 300

Meters

Legend

- NodeLocations
- Main Rivers
- Site
- TE2100 Model Nodes
- Flood Map - Defences
- Flood Map - Flood Zone 3
- Flood Map - Flood Zone 2

Flood Map for Planning (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:
- from the sea with a 0.5% or greater chance of occurring each year
- or from a river with a 1% or greater chance of occurring each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 0.1% chance of occurring each year.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Thames Estuary 2100 (TE2100)

You have requested in-channel flood levels for the tidal river Thames. These have been taken from the Thames Estuary 2100 10 year review study completed by Jacobs in 2022. The modelled node closest to your site is **2.3**; the locations of nearby nodes are also shown on the enclosed map.

Details about the TE2100 plan

The Plan sets out how the Environment Agency and our partners can work together to manage tidal flood risk, from now until the end of the century. The Plan covers the Thames Estuary from Teddington in the west to the mouth of the estuary at Shoeburyness (north bank) and Sheerness (south bank) in the east. It is an adaptive plan for managing the estuary, including the tidal defence system, until 2100 so that current standards of flood protection are maintained or improved taking into account climate change effects e.g. sea level rise. The Plan has 3 phases of activity:

Phase 1 (2010 to 2035): maintain defences, establish the vision for future adaptation and plan for the future

Phase 1a (2010 to 2022):

- decide how to manage defences
- maintain defences to required standards and prepare to adapt them in the future

Phase 1b (2023 to 2035):

- develop visions for future riversides, including upgraded defences, more wildlife habitat and better access for the public
- plan for defence upgrades
- maintain defences to required standards

Phase 2 (2035 to 2050): reshaping riversides and delivering wider benefits

- upgrade defences in line with visions for future riversides, taking a carbon net zero approach and enabling climate resilient growth
- decide on an option for the future of the Thames Barrier (the end-of-century option) by 2040

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Phase 3 (2050 to 2100): the future of the Thames Barrier

- put in place the preferred option for the future of the Thames Barrier by 2070
- make further upgrades to flood defences before the year 2100

The Thames Estuary 2100 Plan can be found at: Thames Estuary 2100 (TE2100) - GOV.UK (www.gov.uk)

Details about the TE2100 in-channel levels

The TE2100 in-channel levels take into account operation of the Thames Barrier when considering future levels. The Thames Barrier requires regular maintenance and with additional closures the opportunity for maintenance will be reduced. When this happens, river levels – for which the Barrier would normally shut for the 2020 epoch – will have to be allowed through to ensure that the barrier is not shut too often. For this reason, levels upriver of the barrier will increase and the tidal walls will need to be raised to match.

Why is there no return period for levels upriver of the barrier?

The levels upriver of the barrier are the highest levels permitted by the operation of the Thames Barrier. If levels and flows are forecast to be any higher, the Thames Barrier would shut, ensuring that the tide is blocked and the river maintained to a low level. For this reason the probability of any given water level upriver of the Barrier is controlled and therefore any associated return period becomes irrelevant. The Thames Barrier and associated defence system has a 1 in 1000 year standard which means it ensures that flood risk is managed up to an event that has a 0.1% annual probability. The probability of water levels upriver is ultimately controlled by the staff at the Thames Barrier.

Why are the levels in west London higher than the defence crest levels?

In west London there is a heavy influence from upriver flows (fluvial flows). The flood defences are built to manage tidal flood risk only. With very high fluvial flows, the river levels in west London could be above the 0.1% annual probability tidal level.

For further information about the Thames Barrier please visit our website at:

https://www.gov.uk/the-thames-barrier

Where to find the in-channel levels and defence crest level data from the 2022 TE2100 study

The TE2100 in-channel levels and defence crest levels documents can be downloaded from ShareFile at the following link:
https://ea.sharefile.com/d-s7b0ef6e26d3f41c0891dd26e28d685e0

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Thames Estuary Extreme Water Levels

The table below displays in-channel modelled flood levels near your site. As your site is not in an area benefitting from defences, we do not provide the Thames Tidal Upriver Breach Inundation Modelling Study 2017 for it. Instead, we provide the Thames Estuary Extreme Water Levels obtained from Thames Estuary 2100 10 year review study completed by Jacobs in 2022.

	National Grid Reference		Modelled levels in mAODN for Max Likely Water Level		
Node	**Easting**	**Northing**	**2022**	**2065***	**2100***
2.2	172438	516154	7.05	6.00	6.45
2.3	173227	517010	6.88	5.97	6.42
2.3a	173383	517525	6.84	5.95	6.40
2.4	173600	517837	6.80	5.93	6.38

* tidal only, without taking into account extreme fluvial events

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Defence Details

The design standard of protection of the flood defences in this area of the Thames is 0.1% AEP; they are designed to defend London up to a 1 in 1000 year **tidal** flood event. The defences are all raised, man-made and privately owned. It is the riparian owners' responsibility to ensure that they are maintained to a crest level of 6.10 m AODN (the Statutory Flood Defence Level in this reach of the Thames). Information relating the TE2100 Plan and any future defence crest levels can be found on ShareFile at following link: https://ea.sharefile.com/d-s5e564014724448219331e780c91c4ac2

Please note that your site is **not** in an area benefitting from defences.

For more information on your rights and responsibilities as a riparian owner, please see our document 'Living on the edge' found on our website at:

https://www.gov.uk/government/publications/riverside-ownership-rights-and-responsibilities

Areas Benefiting from Flood Defences

The Environment Agency has taken the decision to retire this dataset and remove it from the Flood Map for Planning portal. This is because we have determined that it no longer meets the customer needs and creates a false sense of security for users.

To understand the long-term risk of flooding to an area, you can use the Check Your Long Term Flood Risk portal: this will provide an understanding of flood risk from rivers and sea, taking into account the presence and condition of defences, and other sources of flood risk such as from surface water and reservoirs.

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Recorded Flood Events Data

We hold records of historic flood events from rivers and the sea. Information on the floods that may have affected the area local to your site is provided below and in the enclosed map (if relevant).

Flood Event Data

We do not hold records of historic flood events from rivers and/or the sea affecting the area local to this site. However, please be aware that this does not necessarily mean that flooding has not occurred here in the past, as our records are not comprehensive.

Due to the fact that our records are not comprehensive, we would advise that you make further enquiries locally with specific reference to flooding at this location. You should consider contacting the relevant Local Planning Authority and/or water/sewerage undertaker for the area.

We map flooding to land, not individual properties. Our historic flood event record outlines are an indication of the geographical extent of an observed flood event. Our historic flood event outlines do not give any indication of flood levels for individual properties. They also do not imply that any property within the outline has flooded internally.

Please be aware that flooding can come from different sources. Examples of these are:

- from rivers or the sea;
- surface water (i.e. rainwater flowing over or accumulating on the ground before it is able to enter rivers or the drainage system);
- overflowing or backing up of sewer or drainage systems which have been overwhelmed,
- groundwater rising up from underground aquifers

Currently the Environment Agency can only supply flood risk data relating to the chance of flooding from rivers or the sea. However you should be aware that in recent years, there has been an increase in flood damage caused by surface water flooding and drainage systems that have been overwhelmed.

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Additional Information

Information Warning - OS background mapping

The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.

Environment Agency planning guidance and pre application service

- Planning Practice Guidance - provides information about planning considerations in areas at risk of flooding. https://www.gov.uk/guidance/flood-risk-and-coastal-change
- Planning applications: assessing flood risk - information about completing Flood Risk Assessments. https://www.gov.uk/planning-applications-assessing-flood-risk
- Site specific flood risk assessment: Checklist – a checklist to help ensure you have considered all the relevant factors in your flood risk assessment. http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/site-specific-flood-risk-assessment-checklist/
- Climate change allowance guidance https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

We recommend that you discuss your proposals with the Local Planning Authority at the earliest opportunity. They will be able to advise you on a wide range of planning matters in addition to flood risk.

Please see our website for details on how to get planning advice, including charged-for discretionary advice, from the Environment Agency https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals#when-to-consult. Our planning team can be contacted at kslplanning@environment-agency.gov.uk

You should also consult the Strategic Flood Risk Assessment and flood risk local plan policies produced by your local planning authority.

You should note that:

1. Information supplied by the Environment Agency may be used to assist in producing a Flood Risk Assessment where one is required, but does not constitute such an assessment on its own.

2. This information covers flood risk from main rivers and the sea, and you will need to consider other potential sources of flooding, such as groundwater or overland runoff. You should discuss surface water management with your Lead Local Flood Authority.

3. Where a planning application requires a FRA and this is not submitted or deficient, the Environment Agency may well raise an objection due to insufficient information

Environment Agency, Orchard House, Endeavour Park, London Road, West Malling, ME19 5SH
Customer services line: 020 8474 6848
Email: kslenquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Cannard, Phil

From: KSL PSO SW London and Mole <PSO.SWLondonandMole@environment-agency.gov.uk>
Sent: 10 January 2025 11:35
To: Cannard, Phil
Cc: KSL Enquiries
Subject: RE: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Follow Up Flag: Follow up
Flag Status: Completed

Hello Phil

Thank you for your enquiry.

I confirm that we do not advise considering any other Thames Estuary scenarios for your site except for the breach inundation scenario provided in the Product 4. We do not provide undefended flood levels for Tidal Thames upriver of the Thames Barrier as we consider them irrelevant.

King regards,

Nikita Kopa-Ovdienko
Flood & Coastal Risk Management Officer | SW London & Mole PSO
Environment Agency | 2 Marsham Street, London SW1P 4DF
Mobile: 07721 628682

From: Cannard, Phil <[redacted]
Sent: 09 January 2025 14:54
To: KSL Enquiries <KSLE@environment-agency.gov.uk>
Subject: RE: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Hi Robyn

Thank you for providing the Product 4 data.

The Product 4 data provides flood levels in the future based on a single defended scenario where the Thames Barrier is operational. Since the TE2100 plan is currently determining the future flood defences along the Thames Estuary (including potentially changing the use of the Thames Barrier), are there any other Thames Estuary scenarios available that we would need to consider in the Flood Risk Assessment for this site? Are there any undefended flood levels available for this site for the future scenarios?

Kind Regards,
Phil

From: KSL Enquiries <KSLE@environment-agency.gov.uk>
Sent: Tuesday, October 29, 2024 8:24 AM

To: Cannard, Phil <[redacted]>
Subject: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Dear Phil,

RE: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Thank you for your enquiry which was received on 06 August 2024.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

Please note that we have changed our process for responding to flood product data requests, in that where appropriate we supply the data in its raw form as opposed to in the Product 4 PDF formats. This is to improve efficiency within our area of the Environment Agency and to provide customers with a more rapid and flexible response. Where customers are unable to use the Model Output Data (Product 6), or if the data is particularly complex, we will continue to produce Product 4 and 8 formats, until an alternative process is confirmed.

Please find attached the Product 4.

Please refer to the Open Government Licence which explains the permitted use of this information.

Please be aware that the Environment Agency supply data, but we do not interpret it for use in a Flood Risk Assessment. Flood Risk Assessment's should be completed by a suitably competent and qualified person.

Surface water flooding maps can be downloaded from our Partner Data Catalogue (http://environment.data.gov.uk/ds/partners/#/partners/login). The Lead Local Flood Authority is responsible for surface water flooding issues. Please contact them for further information or for details on groundwater flood risk.

You may be interested in the following guidance / information publically available:

- **'Planning Practice Guidance'** - provides information about planning considerations in areas at risk of flooding. http://planningguidance.planningportal.gov.uk/
- **'Planning applications: assessing flood risk'** - information about completing Flood Risk Assessments. https://www.gov.uk/planning-applications-assessing-flood-risk
- **'Site specific flood risk assessment: Checklist'** – a checklist to help ensure you have considered all the relevant factors in your flood risk assessment. http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/site-specific-flood-risk-assessment-checklist/

Please refer to https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for Climate Change allowance guidance.

We recommend that you discuss your proposals with the Local Planning Council at the earliest opportunity. They will be able to advise you on a wide range of planning matters in addition to flood risk.

Environment Agency pre application service

We are able to supply a preliminary opinion outlining the key environmental issues and opportunities which is free. For more detailed advice, guidance, review of draft report, meetings etc we can organise a cost recovery agreement which is chargeable.

We encourage early discussions to ensure environmental issues and opportunities are considered early in the planning process. If you would like a free preliminary opinion or our cost recovery service please complete the form and email back to kslplanning@environment-agency.gov.uk.

If you have any further queries or if you'd like us to review the information we have provided under the Freedom of Information Act 2000 and Environmental Information Regulations 2004 please contact us within two months.

Kind regards,

Robyn

Robyn Latter
Customer & Engagement Officer
Customer and Engagement Team – Kent, South London and East Sussex Area
Environment Agency | Orchard House, London Road, Addington, West Malling, ME19 5SH |
KSLE@environment-agency.gov.uk | 0208 474 6848

Environment Agency

From: Cannard, Phil <[redacted]>
Sent: 21 October 2024 13:40
To: KSL PSO SW London and Mole <PSO.SWLondonandMole@environment-agency.gov.uk>
Cc: KSL Enquiries <KSLE@environment-agency.gov.uk>
Subject: RE: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Hi Nikita

The file sizes are so large that we have had trouble downloading and extracting the files. Can you send us Product 4 data as we cannot process the data in this form? Alternatively, can you send us the GIS flood levels and extents for each of the models so we can review. The data is for both the Thames Tidal Upriver Breach Inundation Model (2017) and Thames (Datchet to Teddington) (2023).

The timescales on this project are tight so please can you send us this data asap. Thanks.

Kind Regards,
Phil

From: KSL PSO SW London and Mole <PSO.SWLondonandMole@environment-agency.gov.uk>
Sent: Tuesday, August 6, 2024 9:45 AM
To: Cannard, Phil <[redacted]>
Cc: KSL Enquiries <KSLE@environment-agency.gov.uk>
Subject: RE: KSL 370976 RL: Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Dear Phil Cannard

Re: KSL 370976 RL – Ham Street Playing Fields, St Margarets, Richmond, TW10 7QA

Thank you for your enquiry which was received on 6 August 2024.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

You have requested a Product 4, please see Appendix 1 below detailing each product.

Your request for a Product 4 falls under the exemption in provision 6(1)(a) and (b) of the Environmental Information Regulations 2004 (EIR), and on this occasion we are not providing the information in the requested format, but in an alternative format. Further detail of the provisions under the EIR can be found in Appendix 2.

Please find below the links containing the Product 5 and 6

Thames Tidal Upriver Breach Inundation Modelling 2017: https://defra.sharefile.com/d-s278738904084ccb9
Thames (Datchet to Teddington) 2023: https://ea.sharefile.com/d-s2bac80053a1f4cb49e7694cb46d46bb0

We have also enclosed Thames Estuary 2100 information.

We are licensing the supplied data to you under the Environment Agency Conditional Licence, details of which are included in the ShareFile link. You must first check this supporting information, to determine if the conditions of use are suitable for your purposes. If the conditions for use are not suitable for your purposes, this information is not provided with a licence for use, and the data is provided for the right to read only.

The information provided in the ShareFile link is based on the best data available as of the date of this letter. You may feel it is appropriate to contact us at regular intervals, to check whether any amendments/ improvements have been made to the data for this location. Should you re-contact us after a period of time, please quote the above reference in order to help us deal with your query.

Please be aware that the Environment Agency supply data, but we do not interpret it for use in a Flood Risk Assessment. Flood Risk Assessment's should be completed by a suitably competent and qualified person.

Requests for flood products in Kent, South London and East Sussex

Please note that we changed our process in December 2019 for responding to flood product data requests. Where appropriate, we supply the data in its raw form (Product 6), as opposed to in the Product 4 and/or 8 PDF format. This is to improve efficiency within our area of the Environment Agency, and to provide customers with a more rapid and flexible response. Where customers are unable to use the Model Output Data (Product 6), or if the data is particularly complex, we will continue to produce Product 4 and 8 formats.

The Product 4 and 8 itself is not a direct requirement in the planning process, but the data that goes into the Product 4 and 8 is required to inform your Flood Risk Assessment. This data can be extracted from the Product 6 data provided in the ShareFile link and in open data sources listed below. Instructions on how to use the appropriate data are provided on the ShareFile link.

Other flood data sources

The Flood Map for Planning is available to view and export maps for your site at: https://flood-map-for-planning.service.gov.uk/

Flood Zone 3 https://data.gov.uk/dataset/flood-map-for-planning-rivers-and-sea-flood-zone-3
Flood Zone 2 https://data.gov.uk/dataset/flood-map-for-planning-rivers-and-sea-flood-zone-2
Historic Flood Map https://data.gov.uk/dataset/historic-flood-map1

Please note that our historic flood event maps may not be comprehensive. We would therefore advise that you make further enquiries locally with specific reference to flooding at your location. You should consider contacting the relevant Local Planning Authority and/or water/sewerage undertaker for the area.

Please be aware that flooding can come from different sources. Examples of these are:
- from rivers or the sea
- surface water (i.e. rainwater flowing over or accumulating on the ground before it is able to enter rivers or the drainage system)
- overflowing or backing up of sewer or drainage systems which have been overwhelmed
- groundwater rising up from underground aquifers

Currently the Environment Agency can only supply flood risk data relating to the chance of flooding from rivers or the sea. The Lead Local Flood Authority is responsible for surface water flooding issues. Please contact them for further information or for details on groundwater flood risk.

Defence Information

The design standard of protection of the flood defences in this area of the Thames is 0.1% AEP; they are designed to defend London up to a 1 in 1000 year **tidal** flood event. The defences are all raised, man-made and privately owned. It is the riparian owners' responsibility to ensure that they are maintained to a crest level of **6.10** m AODN (the Statutory Flood Defence Level in this reach of the Thames).

Environment Agency planning guidance and pre application service.

- Planning practice guidance - provides information about planning considerations in areas at risk of flooding https://www.gov.uk/guidance/flood-risk-and-coastal-change
- Planning applications: assessing flood risk - information about completing flood risk assessments https://www.gov.uk/planning-applications-assessing-flood-risk
- Site specific flood risk assessment checklist - a checklist to help ensure you have considered all the relevant factors in your flood risk assessment http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/site-specific-flood-risk-assessment-checklist/
- Climate change allowance guidance - https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

We recommend that you discuss your proposals with the Local Planning Authority at the earliest opportunity. They will be able to advise you on a wide range of planning matters in addition to flood risk.

Please see our website for details on how to get planning advice from the Environment Agency, including charged-for discretionary advice https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals#when-to-consult. Our planning team can be contacted at kslplanning@environment-agency.gov.uk

If you have a new enquiry or would like us to review the information we have provided under the Freedom of Information Act 2000 and Environmental Information Regulations 2004 please contact us within two months by email at KSLE@environment-agency.gov.uk

Kind Regards,

Nikita Kopa-Ovdienko
Flood & Coastal Risk Management Officer
Partnership & Strategic Overview - South West London and Mole
Kent, South London and East Sussex Area
Environment Agency

Appendix 1

Product 4	Detailed Flood Risk Assessment Map, including flood zones, defences and storage areas, areas benefiting from defences, statutory main river designations, historic flood event outlines and more detailed information from hydraulic models (including model extents and 2D flood level data for specific points)
Product 5	Reports, including flood modelling reports, model user logs and guides, hydrology reports, etc
Product 6	Model Output Data, including product 5. • flood outlines usually provided in shapefile format • 2D grids (level (h), depth (d) velocity (v) and hazard ZKU0) usually provided in ASCII or GeoTIFF format • 1D flow and level data Requires GIS software such as ArcGIS, MapInfo, QGIS or similar.
Product 7	Calibrated and Verified Model Input Data (CaVMID), including product 5. Enables customer to re-run and/or make changes to a hydraulic model. Requires specific hydraulic modelling software such as Flood Modeller, TUFLOW, or ICM InfoWorks.
Product 8	Breach Hazard Map Provides a hazard map of breaches in PDF format including, maximum flood depth, maximum flood velocity and maximum flood hazard. Please note product 8 is not available for fluvial models.

Appendix 2

The exemption in provision 6(1)(a) and (b) of the Environmental Information Regulations 2004 (EIR) states that

'……6.—(1) Where an applicant requests that the information be made available in a particular form or format, a public authority shall make it so available, unless—
(a) it is reasonable for it to make the information available in another form or format; or
(b) the information is already publicly available and easily accessible to the applicant in another form or format……'

On this occasion we are not providing the information in the requested format, for the following reasons:

- Complying with the preference would incur a significant cost, which the public authority [The Environment Agency] cannot pass on to the requester;
- Using a Product 5/6/7 allows us to make the information available at a lower cost; and
- The impact on the available resources of the public authority [The Environment Agency], of supplying a Product 5/6/7, is therefore much less.

From: Cannard, Phil <[redacted]>
Sent: Thursday, August 1, 2024 2:11 PM
To: Enquiries, Unit <enquiries@environment-agency.gov.uk>
Subject: 240805/ic03 Product 4 data for a site in the London Borough of Richmond upon Thames

Good Afternoon

Please can you provide me with Product 4 data for a site at Ham Street Playing Fields, St Margarets, London Borough of Richmond upon Thames, London. The site location details and red line boundary are shown below:

OS X (Eastings)	517012
OS Y (Northings)	172823
Nat Grid	TQ170728 / TQ1701272823
Nearest Post Code	TW10 7QA
Lat (WGS84)	N51:26:32 (51.44232237403174)
Long (WGS84)	W0:19:04 (-0.3177679675401405)
Lat,Long (WGS84)	51.44232237403174,-0.3177679675401405

Due to tight project timescales, a prompt response would be appreciated. Thanks.

Best Regards,

Phil Cannard
BSc (Hons), MSc, MCIWEM
Senior Consultant
Water & Environment Practice

Email:
Mobile: [redacted]

Ricardo Energy & Environment
21 Prince Street, Bristol, BS1 4PH
Website: ee.ricardo.com

Ricardo Energy & Environment, a trading name of Ricardo-AEA Ltd
Registered Office: Shoreham Technical Centre, Shoreham-by-Sea, West Sussex, BN43 5FG, UK

Company Registration No. 08229264

VAT Registration No. 212 8365 24

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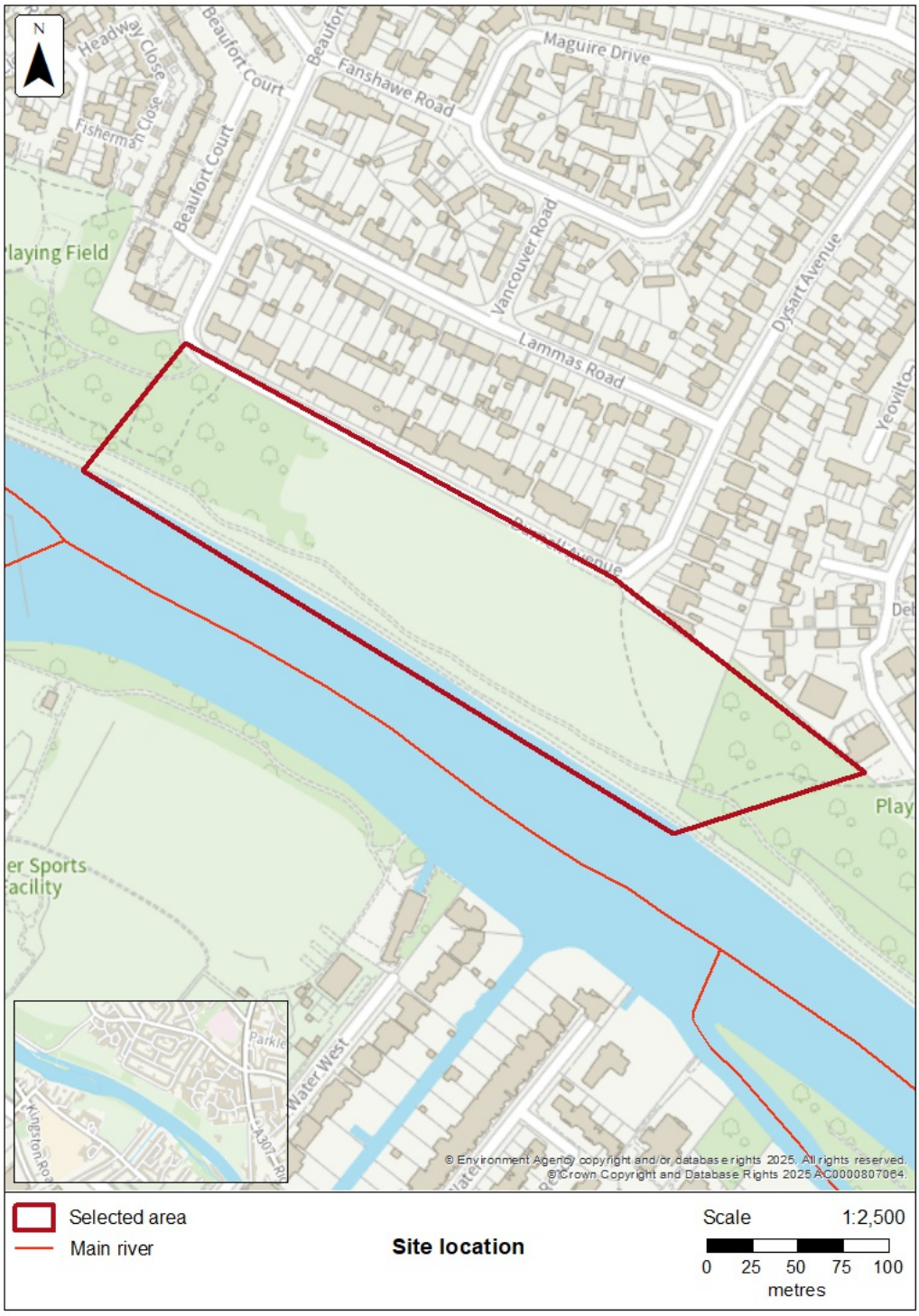
Flood risk assessment data

Location of site: 517273 / 171368 (shown as easting and northing coordinates)
Document created on: 17 January 2025
This information was previously known as a product 4.
Customer reference number: UGDBG6T94AKT

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- climate change modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Surface water and other sources of flooding

Use the long term flood risk service to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

Or you can contact your Lead Local Flood Authority for further information.

Your Lead Local Flood Authority is Richmond upon Thames London Borough.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Thames (Datchet to Teddington) 2023
Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial
Date: 1 November 2023

This model contains the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occuring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

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

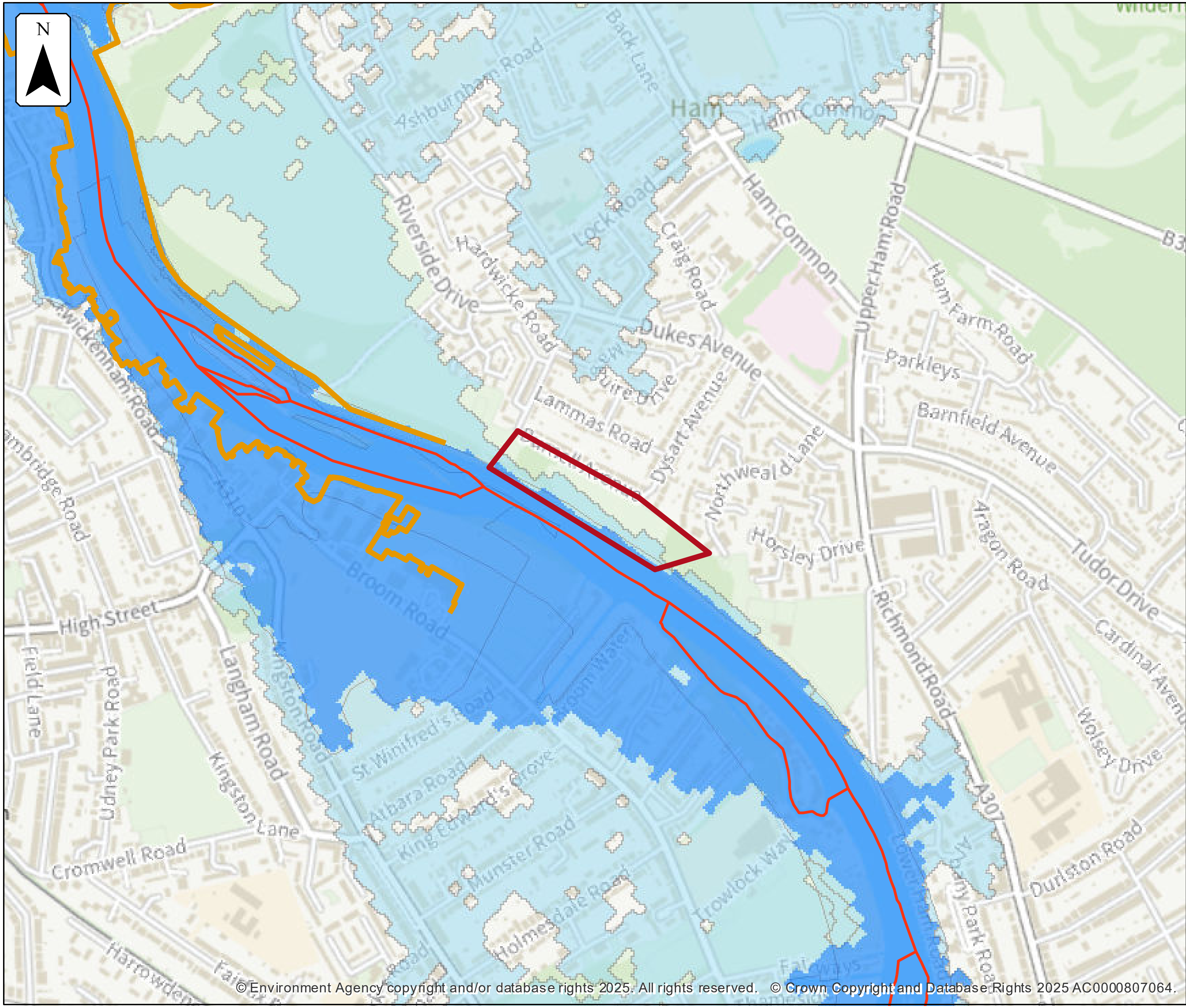
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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

The flood zones are not currently being updated. The last update was in November 2023. Some of the flood zones may have changed, however all source data is included in the models below.


N
Ham
Ham Common
Ashburnham Road
Back Lane
Riverside Drive
Hardwicke Road
Lock Road
Craig Road
Dukes Avenue
Lammas Road
Dysart Avenue
Northweald Lane
Horsley Drive
Upper Ham Road
Ham Farm Road
Parkleys
Barnfield Avenue
Aragon Road
Tudor Drive
Cardinal Avenue
Richmond Road
Wolsey Drive
Durlston Road
Twickenham Road
Cambridge Road
High Street
Field Lane
Udney Park Road
Langham Road
Kingston Lane
Cromwell Road
Broom Road
St Winifred's Road
Atbara Road
King Edward's Grove
Munster Road
Holmesdale Road
Trowlock Way
Broom Water
A307

Environment Agency

Flood map for planning

Location (easting/northing)
517273/171368

Scale
1:10,000

Created
17 Jan 2025

Selected area
Main river
Flood defence
Flood zone 3
Flood zone 2

0 100 200 300 400 500
metres

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

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

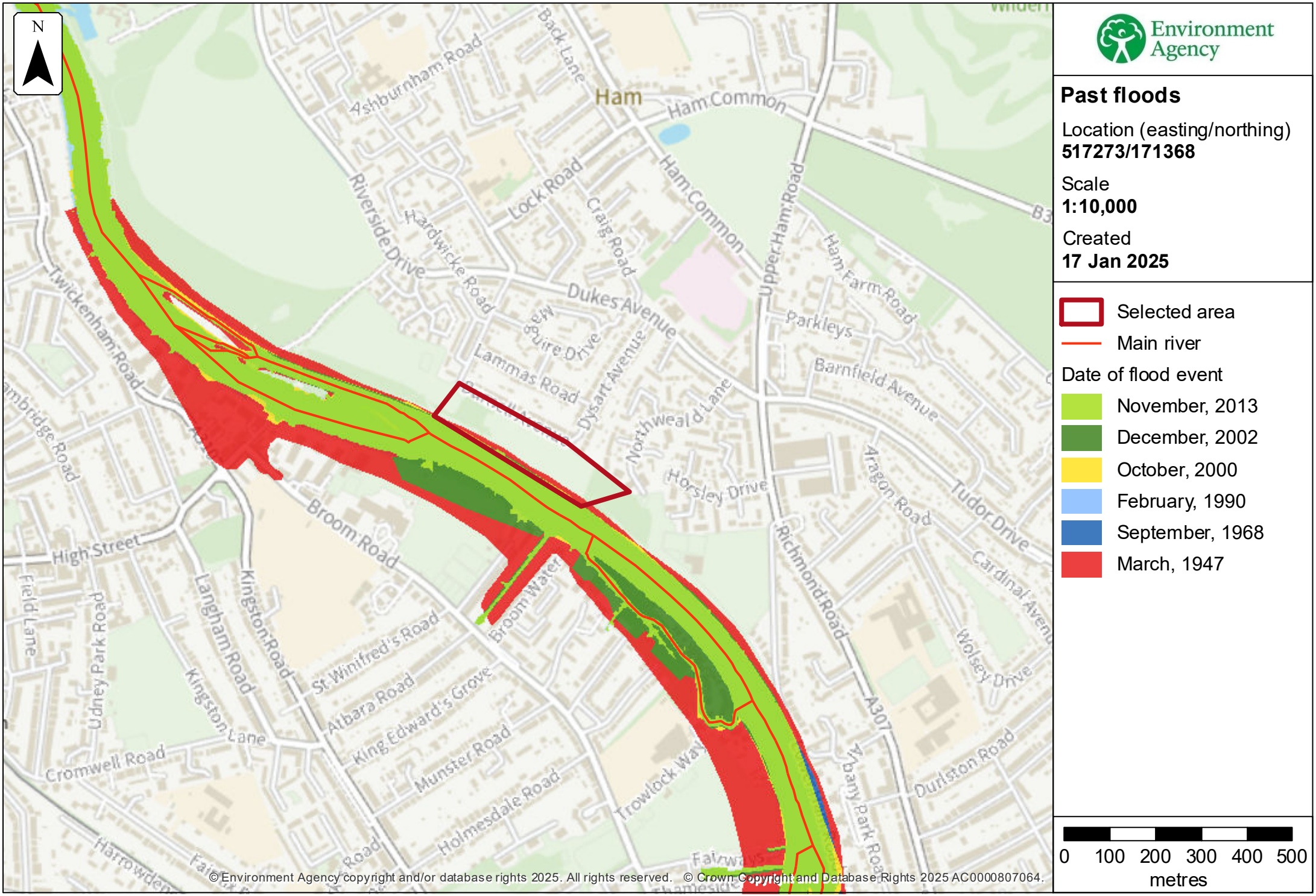
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- 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 Richmond upon Thames London Borough Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



Environment Agency

Past floods

Location (easting/northing)
517273/171368

Scale
1:10,000

Created
17 Jan 2025

- Selected area
- Main river

Date of flood event

- November, 2013
- December, 2002
- October, 2000
- February, 1990
- September, 1968
- March, 1947

Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
23 November 2013	28 February 2014	main river	channel capacity exceeded (no raised defences)	Yes
23 December 2002	12 January 2003	main river	channel capacity exceeded (no raised defences)	Yes
31 October 2000	10 November 2000	main river	channel capacity exceeded (no raised defences)	Yes
February 1990	February 1990	main river	channel capacity exceeded (no raised defences)	No
14 September 1968	19 September 1968	main river	channel capacity exceeded (no raised defences)	No
7 March 1947	24 March 1947	main river	channel capacity exceeded (no raised defences)	Yes

Flood defences and attributes

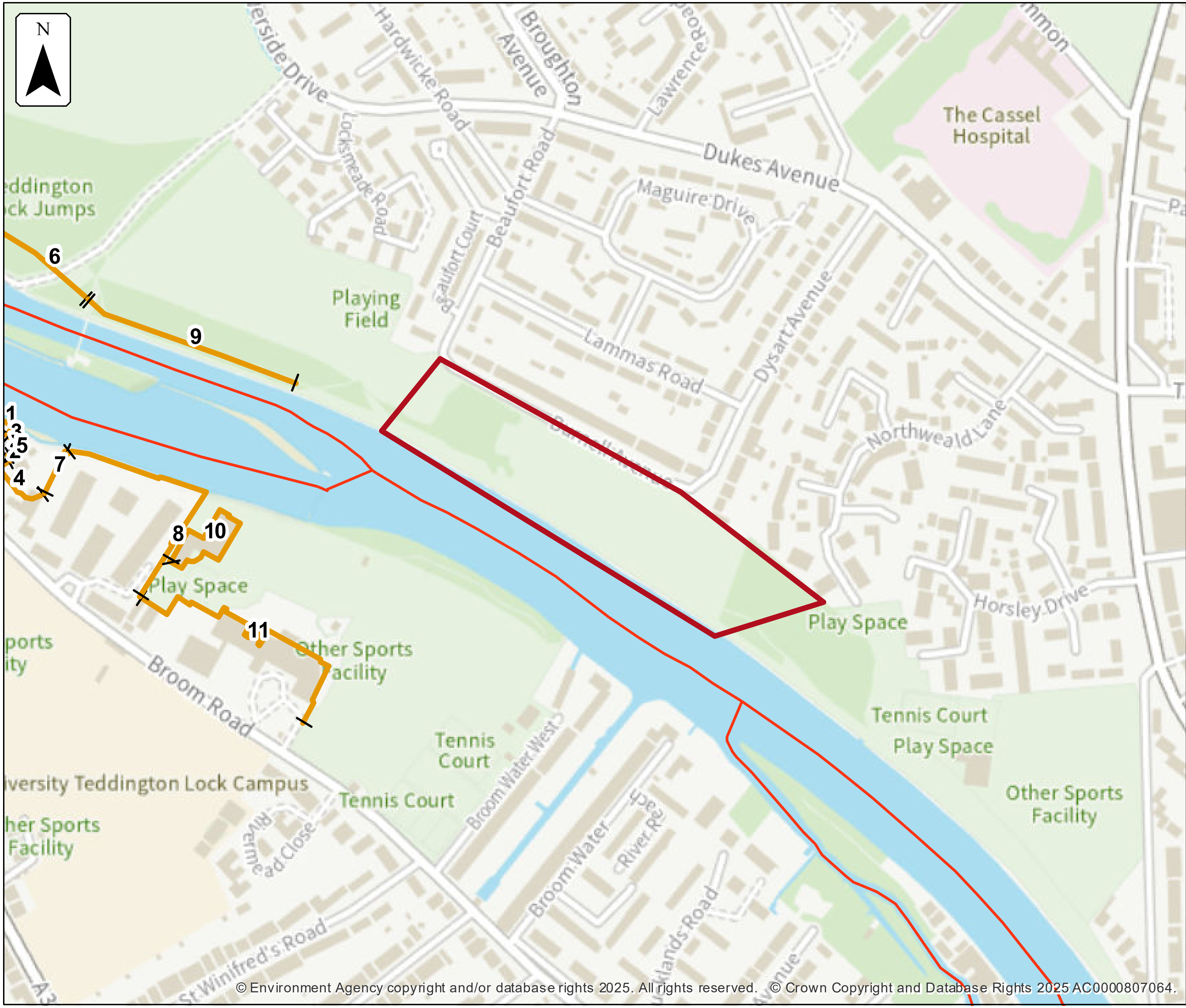
The flood defences map shows the location of the flood defences present.

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


N
Dukes Avenue
Maguire Drive
Lammas Road
Dysart Avenue
Northweald Lane
Horsley Drive
The Cassel Hospital
Playing Field
Play Space
Tennis Court
Other Sports Facility
Broom Road
Broom Water West
Broom Water
St Winifred's Road
Beaufort Road
Hardwicke Road
Broughton Avenue
Lawrence Road
Locksmeade Road
Beaufort Court
Rivermead Close
River Reach
Teddington Lock Jumps
University Teddington Lock Campus
1
2
3
4
5
6
7
8
9
10
11

Environment Agency

Flood defences

Location (easting/northing)
517273/171368

Scale
1:5,000

Created
17 Jan 2025

Selected area
Main river
Flood defence

0 50 100 150 200 250
metres

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	13206	Wall	1000		6.23	6.23	
2	16676	Wall	1000		6.10	6.10	
3	13207	Wall	1000		6.23	6.20	
4	13208	Wall	1000		6.12	6.15	
5	16892	Wall	1000		6.20	6.20	
6	16947	Embankment	1000		7.21	6.52	
7	13232	Wall	1000		6.10	6.12	
8	16677	Wall	1000		6.16	6.29	
9	16946	Embankment	1000		6.52	7.21	
10	16678	Wall	1000		6.10	6.10	
11	16546	Wall	1000		6.18	6.31	

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

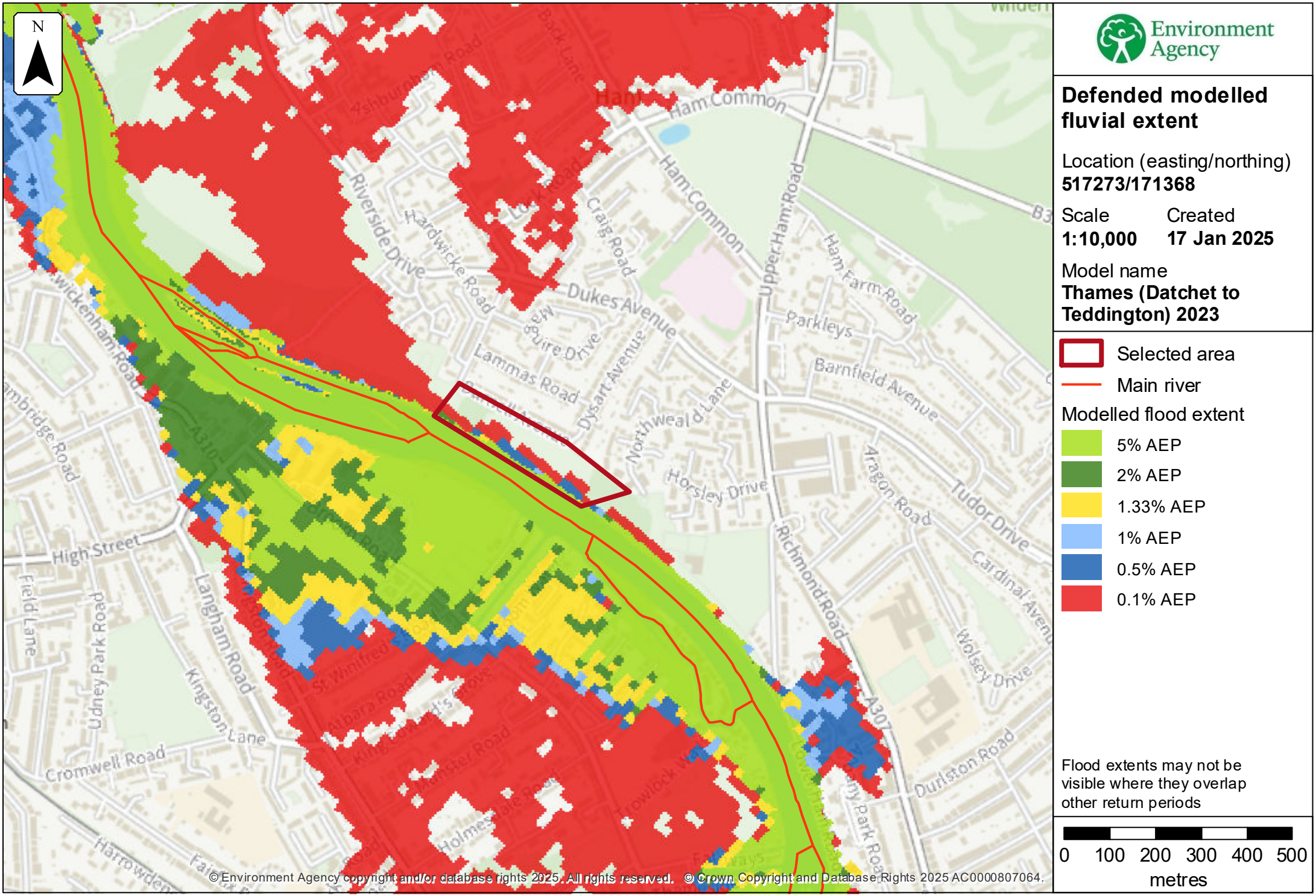
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

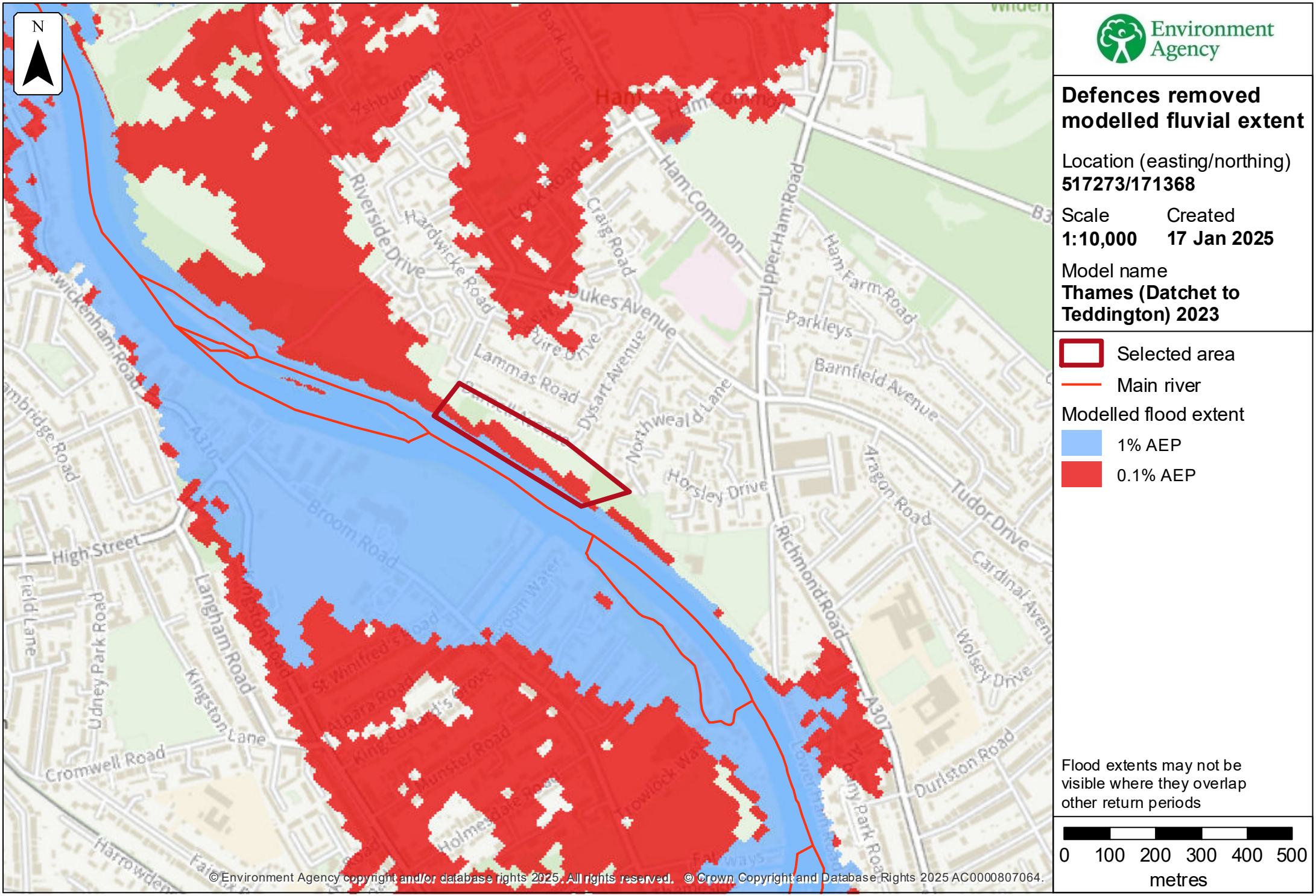
The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change




N
Environment Agency
Defences removed modelled fluvial extent
Location (easting/northing)
517273/171368
Scale
1:10,000
Created
17 Jan 2025
Model name
Thames (Datchet to Teddington) 2023
Selected area
Main river
Modelled flood extent
1% AEP
0.1% AEP
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
Ham Common
Upper Ham Road
Ham Farm Road
Parkleys
Barnfield Avenue
Riverside Drive
Hardwicke Road
Craig Road
Dukes Avenue
Lammas Road
Dysart Avenue
Northweald Lane
Horsley Drive
Richmond Road
Aragon Road
Tudor Drive
Cardinal Avenue
Wolsey Drive
Durlston Road
A307
Broom Road
High Street
Langham Road
Kingston Lane
Cromwell Road
Udney Park Road
Field Lane
Twickenham Road
Ambridge Road
A310
Harrowden
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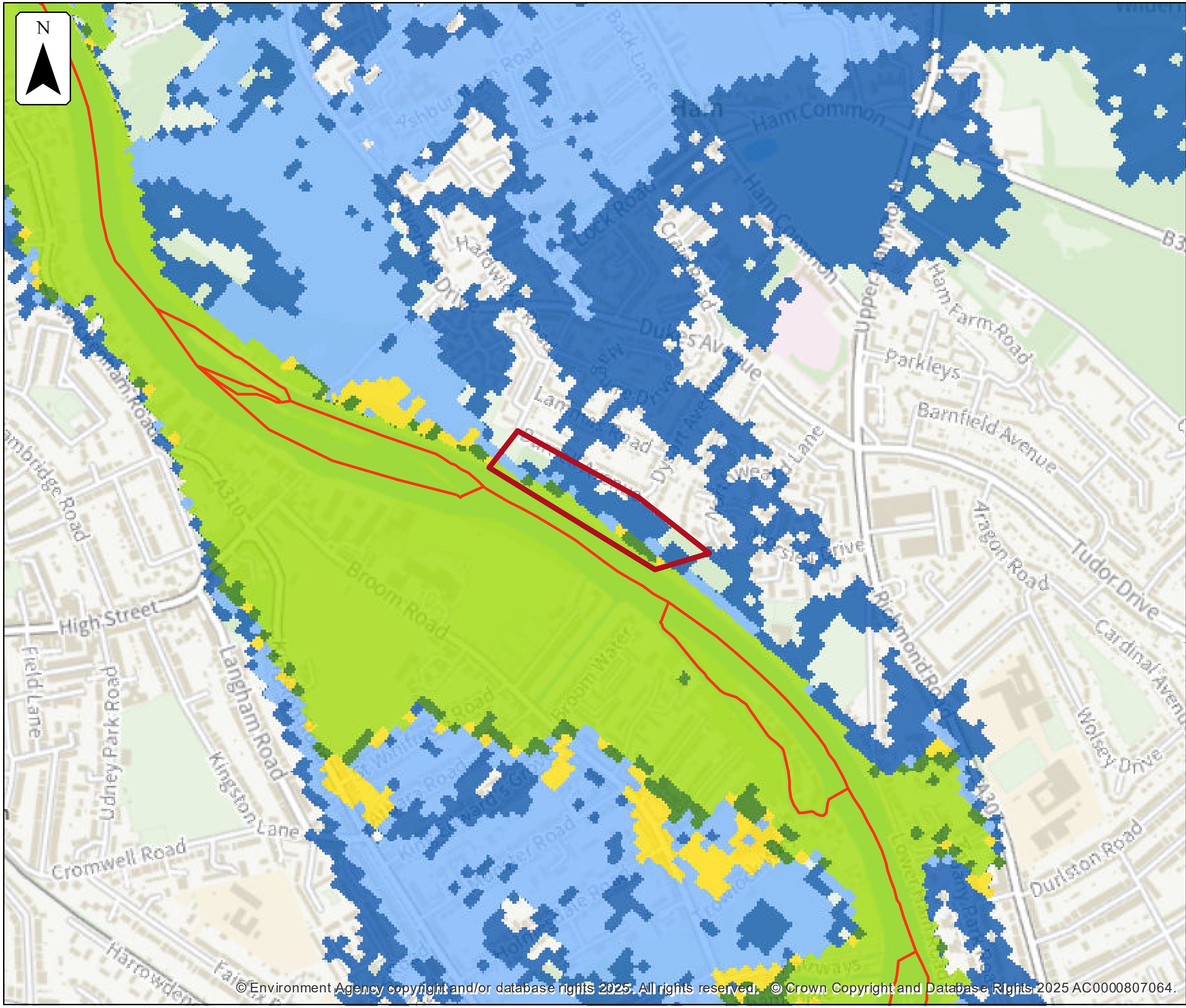


Environment Agency

Defended climate change modelled fluvial extent

Location (easting/northing)
517273/171368

Scale **1:10,000**

Created **17 Jan 2025**

Model name
Thames (Datchet to Teddington) 2023

Selected area

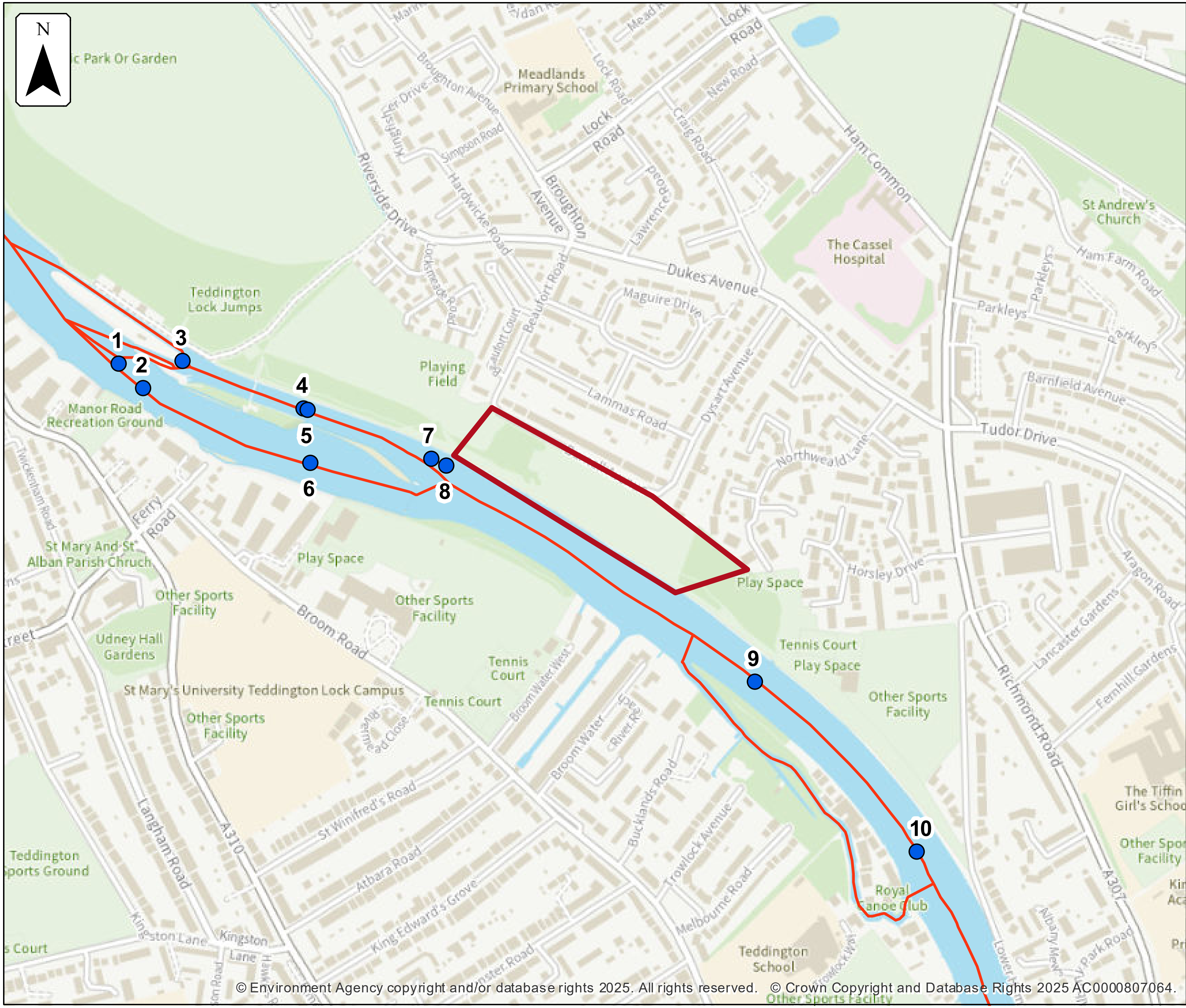
Main river

Modelled flood extent

- 1.0% AEP (+10%)
- 1.0% AEP (+20%)
- 1.0% AEP (+25%)
- 1.0% AEP (+35%)
- 1.0% AEP (+81%)

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

0 100 200 300 400 500
metres



Environment Agency

Defended modelled fluvial node locations

Location (easting/northing)
517273/171368

Scale **1:7,500**

Created **17 Jan 2025**

Model name
Thames (Datchet to Teddington) 2023

- Selected area
- Modelled location
- Main river

0 100 200 300
metres

Modelled node locations data

Defended

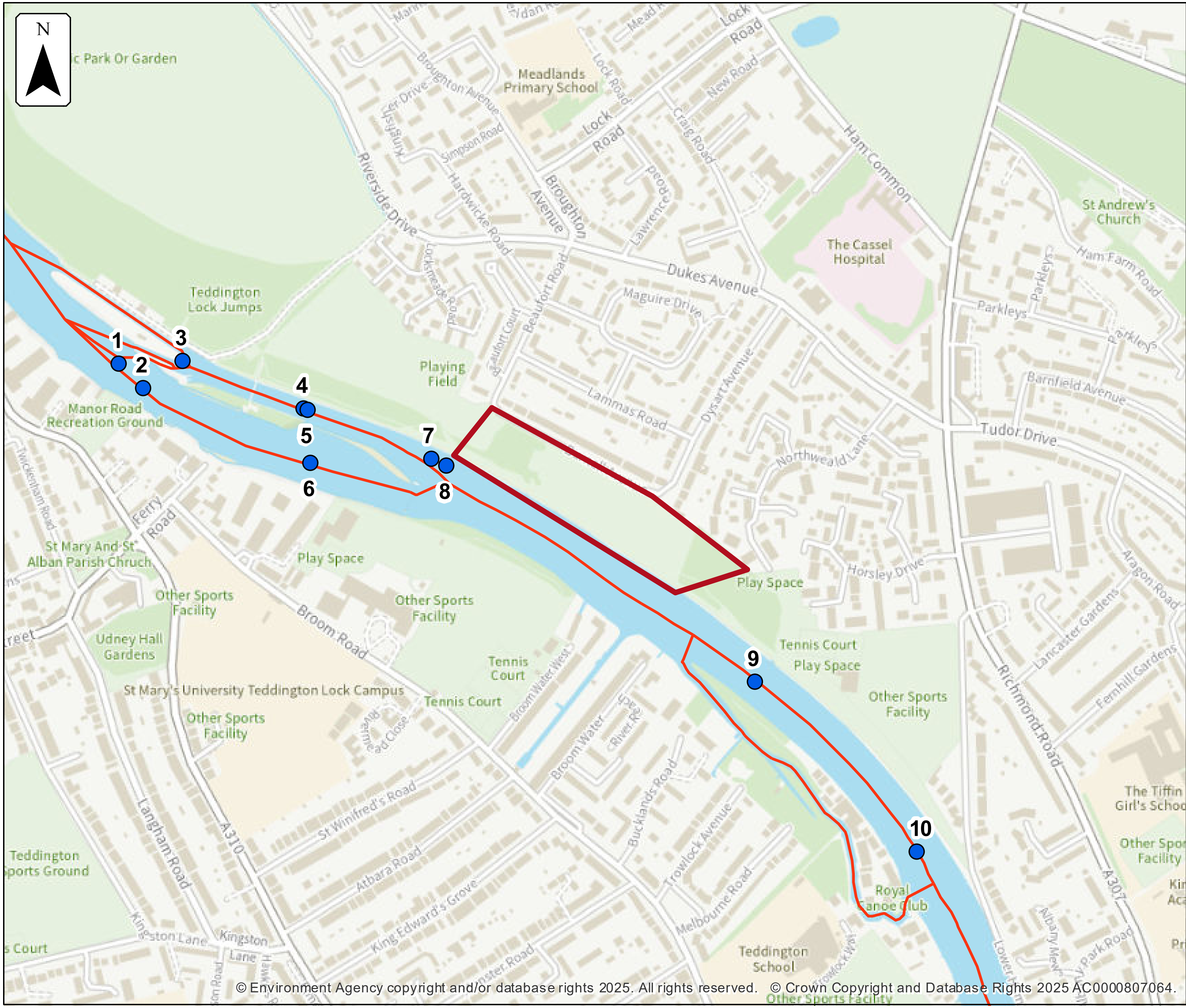
Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level	Level	Level
1	1524856	516578	171571	5.09	5.31	5.50	5.69	5.85	6.02	6.19	6.26	6.54	7.23
2	1525203	516614	171536	5.09	5.31	5.50	5.69	5.85	6.02	6.19	6.26	6.54	7.23
3	1525834	516671	171576	5.20	5.45	5.68	5.91	6.11	6.34	6.57	6.68	7.10	10.35
4	1524928	516848	171507	5.19	5.44	5.67	5.89	6.08	6.29	6.50	6.61	6.97	8.14
5	1526060	516855	171504	5.19	5.44	5.67	5.89	6.08	6.29	6.50	6.61	6.97	8.14
6	1524830	516858	171428	5.16	5.43	5.66	5.88	6.08	6.29	6.50	6.60	6.97	8.03
7	1524977	517034	171433	5.23	5.47	5.71	5.94	6.13	6.35	6.58	6.68	7.05	8.03
8	1526240	517056	171423	5.23	5.47	5.71	5.94	6.13	6.35	6.58	6.68	7.05	8.03
9	1525173	517508	171108	5.26	5.53	5.77	6.01	6.20	6.41	6.63	6.73	7.07	7.94
10	1525802	517744	170859	5.30	5.58	5.84	6.08	6.29	6.50	6.72	6.83	7.18	8.10

Data in this table comes from the Thames (Datchet to Teddington) 2023 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.
If no level or flow data is available for a scenario, no table will be shown.

Defended

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1524856	516578	171571	396.08	456.27	518.72	595.13	650.66	708.01	757.71	788.68	878.61	1237.87
2	1525203	516614	171536	396.08	453.91	514.64	588.23	640.60	694.57	741.36	769.39	851.64	1163.20
3	1525834	516671	171576	2.72	4.48	6.49	8.85	11.18	13.92	17.42	19.30	26.98	105.33
4	1524928	516848	171507	18.72	22.64	38.15	55.87	73.35	94.31	119.72	134.82	193.18	1100.76
5	1526060	516855	171504	89.67	90.81	109.83	132.45	149.43	164.97	199.30	205.93	219.38	401.69
6	1524830	516858	171428	382.39	454.98	505.73	540.34	562.71	583.33	588.13	592.07	592.37	712.31
7	1524977	517034	171433	86.25	90.35	109.53	132.28	149.42	164.96	199.30	205.93	219.40	576.21
8	1526240	517056	171423	365.27	452.22	514.48	581.38	626.54	672.05	702.52	710.01	748.89	1179.67
9	1525173	517508	171108	379.28	450.36	516.67	594.37	650.08	708.84	762.98	795.73	892.85	1373.24
10	1525802	517744	170859	358.70	450.54	516.33	594.06	649.93	708.64	764.68	799.24	905.92	1280.61

Data in this table comes from the Thames (Datchet to Teddington) 2023 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.
If no level or flow data is available for a scenario, no table will be shown.


N
1
2
3
4
5
6
7
8
9
10
Teddington Lock Jumps
Playing Field
Manor Road Recreation Ground
Meadlands Primary School
The Cassel Hospital
St Andrew's Church
Dukes Avenue
Tudor Drive
Ham Common
Riverside Drive
Broom Road
Ferry Road
Lammas Road
Northweald Lane
Horsley Drive
Richmond Road
Play Space
Other Sports Facility
Tennis Court
St Mary's University Teddington Lock Campus
St Mary And St Alban Parish Chruch
Udney Hall Gardens
Teddington Sports Ground
Royal Canoe Club
Teddington School
The Tiffin Girl's School
Langham Road
Kingston Lane
A310
A307

Environment Agency

Defences removed modelled fluvial node locations

Location (easting/northing)
517273/171368

Scale **1:7,500**

Created **17 Jan 2025**

Model name
Thames (Datchet to Teddington) 2023

Selected area

Modelled location

Main river

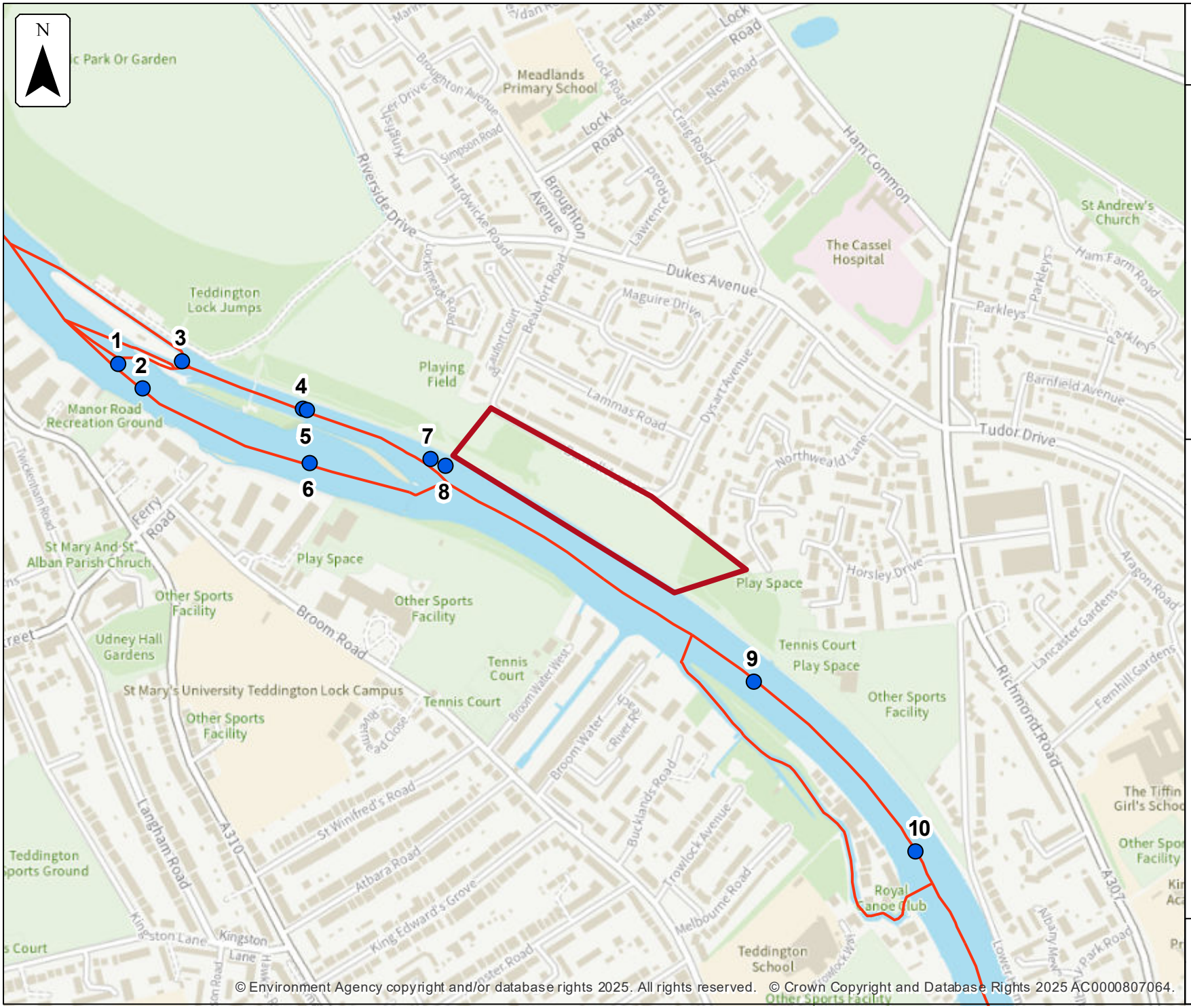
0 100 200 300
metres

Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	1% AEP	0.1% AEP	1% AEP	0.1% AEP
				Level	Level	Flow	Flow
1	1524856	516578	171571	6.28	6.94	787.22	1249.82
2	1525203	516614	171536	6.28	6.94	767.89	1174.27
3	1525834	516671	171576	6.70	8.83	19.40	108.11
4	1524928	516848	171507	6.62	7.68	135.44	1118.29
5	1526060	516855	171504	6.62	7.68	205.40	415.62
6	1524830	516858	171428	6.61	7.64	589.63	713.51
7	1524977	517034	171433	6.69	7.66	205.51	603.68
8	1526240	517056	171423	6.69	7.66	707.90	1200.04
9	1525173	517508	171108	6.74	7.62	794.60	1388.63
10	1525802	517744	170859	6.83	7.72	798.23	1289.89

Data in this table comes from the Thames (Datchet to Teddington) 2023 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.
If no level or flow data is available for a scenario, no table will be shown.


N
Environment Agency
Defended climate change modelled fluvial node locations
Location (easting/northing)
517273/171368
Scale
1:7,500
Created
17 Jan 2025
Model name
Thames (Datchet to Teddington) 2023
Selected area
Modelled location
Main river
0
100
200
300
metres
1
2
3
4
5
6
7
8
9
10
Meadlands Primary School
Teddington Lock Jumps
Manor Road Recreation Ground
Playing Field
The Cassel Hospital
St Andrew's Church
St Mary And St Alban Parish Chruch
Udney Hall Gardens
St Mary's University Teddington Lock Campus
Teddington Sports Ground
Teddington School
Royal Canoe Club
Riverside Drive
Broughton Avenue
Lock Road
Ham Common
Dukes Avenue
Tudor Drive
Broom Road
Ferry Road
Richmond Road
Play Space
Other Sports Facility
Tennis Court
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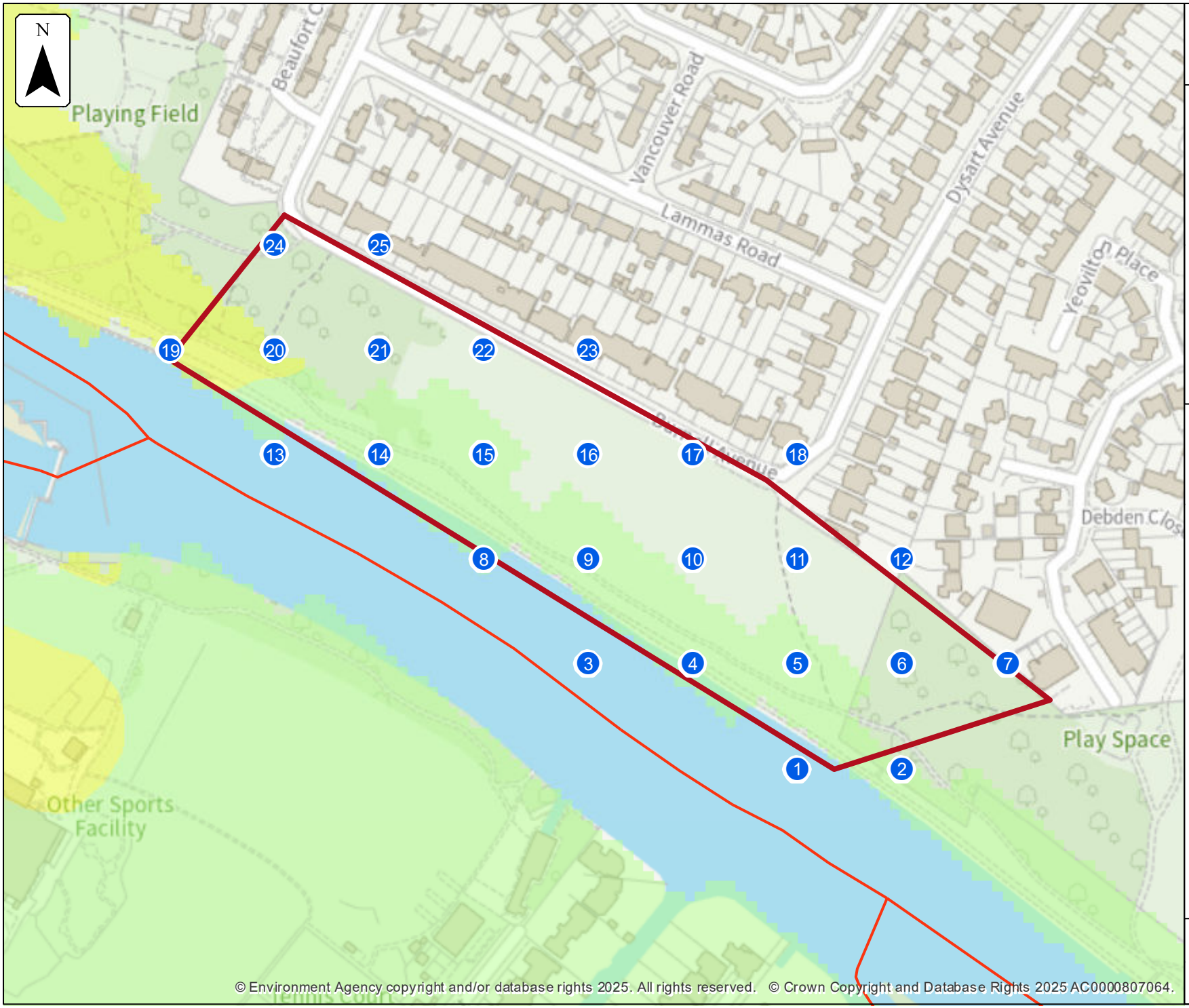
Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+81%)	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+81%)
				Level	Level	Level	Level	Level	Flow	Flow	Flow	Flow	Flow
1	1524856	516578	171571	6.46	6.67	6.77	7.20	7.83	852.32	910.98	941.33	1207.57	1455.52
2	1525203	516614	171536	6.46	6.67	6.77	7.20	7.83	827.82	880.56	907.75	1135.34	1374.33
3	1525834	516671	171576	6.98	7.29	7.46	10.11	12.48	24.50	30.45	33.67	98.11	169.69
4	1524928	516848	171507	6.86	7.13	7.26	8.09	8.87	174.09	220.19	245.49	1043.40	1826.48
5	1526060	516855	171504	6.86	7.13	7.26	8.09	8.87	215.80	222.43	225.23	367.35	867.48
6	1524830	516858	171428	6.86	7.13	7.26	7.98	8.55	592.32	590.31	589.97	700.11	797.45
7	1524977	517034	171433	6.94	7.20	7.33	7.98	8.53	215.81	222.48	225.17	504.50	1231.87
8	1526240	517056	171423	6.94	7.20	7.33	7.98	8.53	739.01	759.15	770.51	1125.19	1611.54
9	1525173	517508	171108	6.97	7.22	7.34	7.89	8.67	864.02	929.02	961.54	1325.81	1673.09
10	1525802	517744	170859	7.08	7.33	7.45	8.02	8.86	874.23	946.04	983.13	1247.75	1458.52

Data in this table comes from the Thames (Datchet to Teddington) 2023 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.
If no level or flow data is available for a scenario, no table will be shown.



Environment Agency

Defended modelled fluvial extent and height

Location (easting/northing)
517273/171368

Scale
1:2,500

Created
17 Jan 2025

Model name
Thames (Datchet to Teddington) 2023

- Selected area
- Main river

Modelled 2D grid
Water level in mAOD

- 0 - 7.0
- 7.0 - 7.25
- 7.25 - 7.5
- 7.5 - 7.75
- 7.75 - 8.0
- 8.0 - 8.25
- 8.25 - 8.5
- 8.5 - 8.75
- 8.75 - 9.0

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

Sample point data

Defended

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
1	517372	171239	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	517423	171239	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.46	0.60
3	517270	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	517321	171290	NoData	0.25	0.36	0.46	0.55	0.64	0.74	0.79	0.96	1.65
5	517372	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.32
6	517423	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	517474	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	517219	171341	0.31	0.49	0.68	0.85	1.02	1.21	1.41	1.50	1.86	2.64
9	517270	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.26	0.88
10	517321	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	517372	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	517423	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	517117	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	517168	171392	NoData	NoData	NoData	NoData	NoData	0.54	0.64	0.68	0.91	1.77
15	517219	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.15
16	517270	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
17	517321	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	517372	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	517066	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.51
20	517117	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.14
21	517168	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	517219	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	517270	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	517117	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	517168	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			0.42	0.63	0.98	1.19	1.36	1.56	1.76	2.08	2.44	3.15

Data in this table comes from the Thames (Datchet to Teddington) 2023 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defended

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
1	517372	171239	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	517423	171239	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	7.07	7.82
3	517270	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	517321	171290	NoData	5.50	5.75	5.97	6.17	6.38	6.60	6.71	7.06	7.78
5	517372	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	7.80
6	517423	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	517474	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	517219	171341	5.24	5.49	5.73	5.96	6.15	6.37	6.59	6.70	7.05	7.84
9	517270	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	7.06	7.80
10	517321	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	517372	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	517423	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	517117	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	517168	171392	NoData	NoData	NoData	NoData	NoData	6.36	6.59	6.69	7.05	7.91
15	517219	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	7.88
16	517270	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
17	517321	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	517372	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	50% AEP	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
19	517066	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.05
20	517117	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.03
21	517168	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	517219	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	517270	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	517117	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	517168	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			5.25	5.50	5.75	5.98	6.17	6.38	6.60	6.71	7.07	8.08

Data in this table comes from the Thames (Datchet to Teddington) 2023 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
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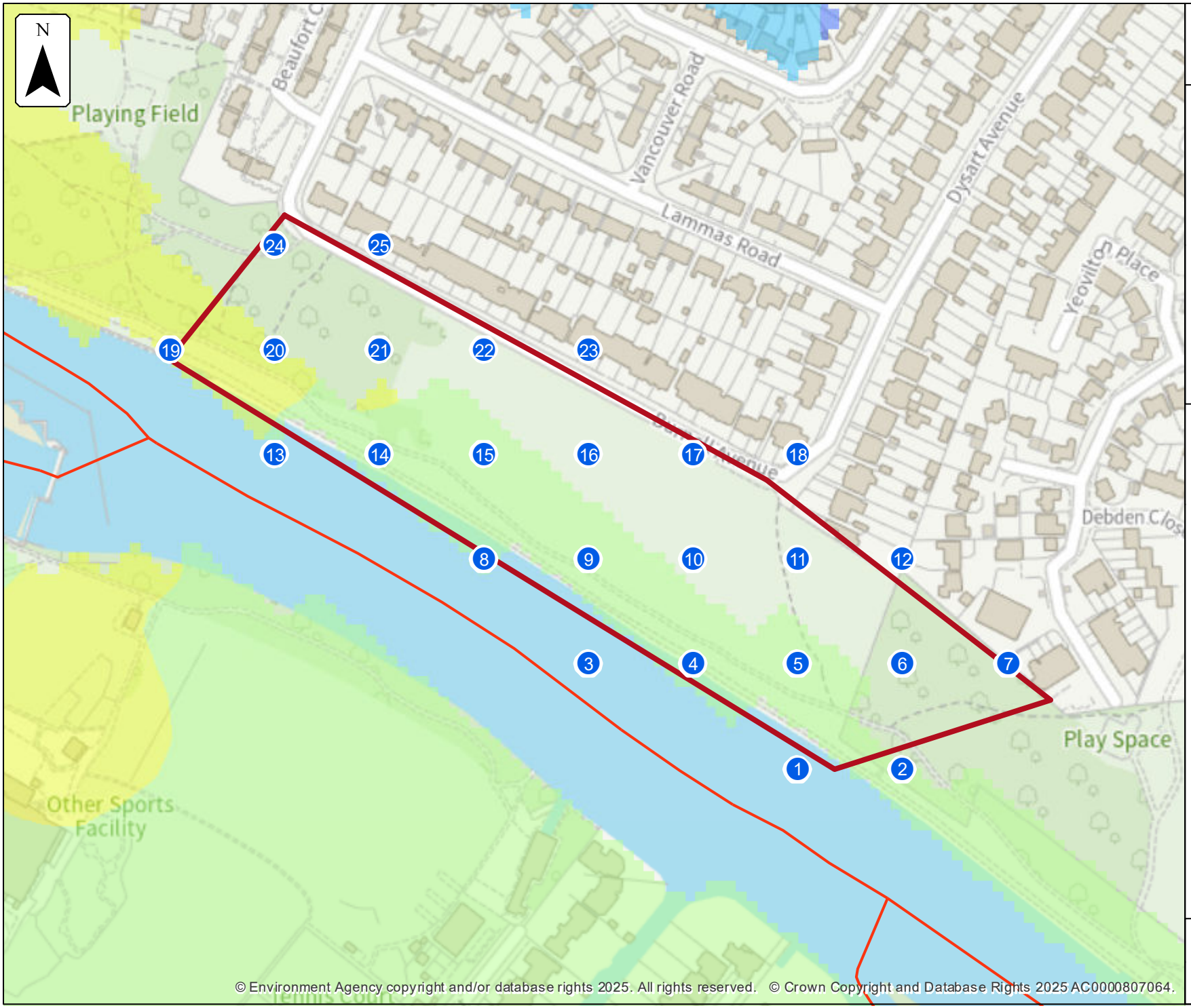


Environment Agency

Defences removed modelled fluvial extent and height

Location (easting/northing)
517273/171368

Scale
1:2,500

Created
17 Jan 2025

Model name
Thames (Datchet to Teddington) 2023

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 7.0
- 7.0 - 7.25
- 7.25 - 7.5
- 7.5 - 7.75
- 7.75 - 8.0
- 8.0 - 8.25
- 8.25 - 8.5
- 8.5 - 8.75
- 8.75 - 9.0

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

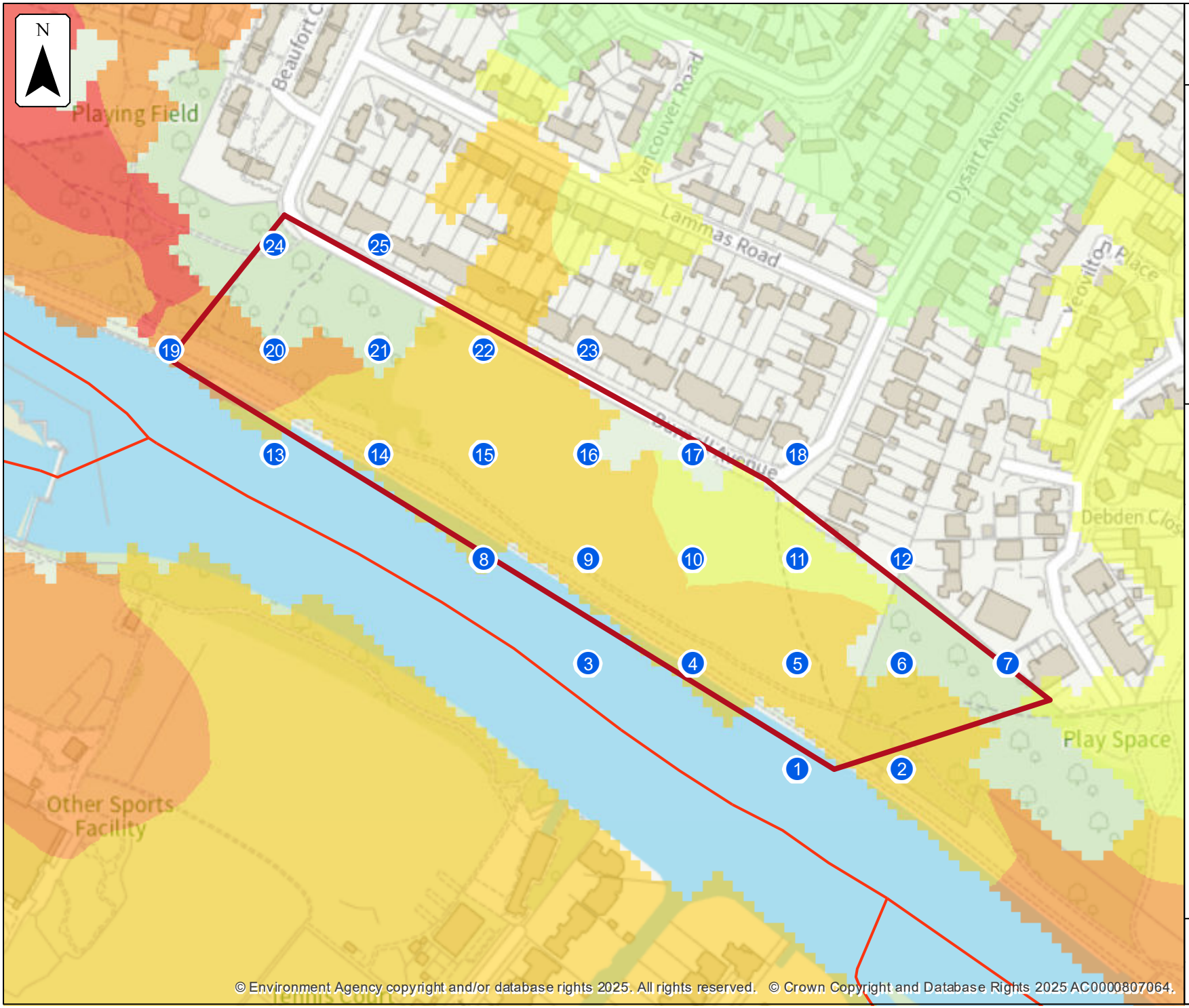
Sample point data

Defences removed

Label	Easting	Northing	1% AEP	0.1% AEP	1% AEP	0.1% AEP
			Depth	Depth	Height	Height
1	517372	171239	NoData	NoData	NoData	NoData
2	517423	171239	NoData	0.61	NoData	7.85
3	517270	171290	NoData	NoData	NoData	NoData
4	517321	171290	0.79	1.68	6.72	7.81
5	517372	171290	NoData	0.34	NoData	7.83
6	517423	171290	NoData	NoData	NoData	NoData
7	517474	171290	NoData	NoData	NoData	NoData
8	517219	171341	1.51	2.67	6.71	7.86
9	517270	171341	NoData	0.91	NoData	7.83
10	517321	171341	NoData	NoData	NoData	NoData
11	517372	171341	NoData	NoData	NoData	NoData
12	517423	171341	NoData	NoData	NoData	NoData
13	517117	171392	NoData	NoData	NoData	NoData
14	517168	171392	0.69	1.80	6.70	7.94
15	517219	171392	NoData	0.17	NoData	7.91
16	517270	171392	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP	0.1% AEP	1% AEP	0.1% AEP
			Depth	Depth	Height	Height
17	517321	171392	NoData	NoData	NoData	NoData
18	517372	171392	NoData	NoData	NoData	NoData
19	517066	171443	NoData	2.54	NoData	8.08
20	517117	171443	NoData	0.14	NoData	8.07
21	517168	171443	NoData	NoData	NoData	NoData
22	517219	171443	NoData	NoData	NoData	NoData
23	517270	171443	NoData	NoData	NoData	NoData
24	517117	171494	NoData	NoData	NoData	NoData
25	517168	171494	NoData	NoData	NoData	NoData
Max value in selected area:			2.09	3.18	6.72	8.11

Data in this table comes from the Thames (Datchet to Teddington) 2023 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Environment Agency

Defended climate change modelled fluvial extent and height

Location (easting/northing)
517273/171368

Scale
1:2,500

Created
17 Jan 2025

Model name
Thames (Datchet to Teddington) 2023

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 7.0
- 7.0 - 7.25
- 7.25 - 7.5
- 7.5 - 7.75
- 7.75 - 8.0
- 8.0 - 8.25
- 8.25 - 8.5
- 8.5 - 8.75
- 8.75 - 9.0

This map shows the 1.0% AEP +81% height data

0 25 50 75 100
metres

Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+81%)	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+81%)
			Depth	Depth	Depth	Depth	Height	Height	Height	Height	Height
1	517372	171239	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	517423	171239	0.44	0.49	0.51	1.22	6.97	7.22	7.34	7.76	8.37
3	517270	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	517321	171290	0.90	1.09	1.21	1.90	6.96	7.21	7.34	7.72	8.25
5	517372	171290	NoData	NoData	NoData	0.77	NoData	NoData	NoData	7.75	8.29
6	517423	171290	NoData	NoData	NoData	0.05	NoData	NoData	NoData	NoData	8.32
7	517474	171290	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	517219	171341	1.76	2.01	2.14	3.19	6.95	7.21	7.34	7.78	8.31
9	517270	171341	0.24	0.31	0.42	1.47	6.95	7.21	7.34	7.73	8.29
10	517321	171341	NoData	NoData	NoData	0.24	NoData	NoData	NoData	NoData	8.24
11	517372	171341	NoData	NoData	NoData	0.10	NoData	NoData	NoData	NoData	8.23
12	517423	171341	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	517117	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	517168	171392	0.82	1.06	1.19	2.34	6.95	7.21	7.33	7.84	8.41
15	517219	171392	NoData	NoData	NoData	0.65	NoData	NoData	NoData	7.81	8.41
16	517270	171392	NoData	NoData	NoData	0.17	NoData	NoData	NoData	NoData	8.33

Label	Easting	Northing	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+81%)	1% AEP (+10%)	1% AEP (+20%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+81%)
			Depth	Depth	Depth	Depth	Height	Height	Height	Height	Height
17	517321	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	517372	171392	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	517066	171443	NoData	NoData	1.80	2.99	NoData	NoData	7.33	7.98	8.63
20	517117	171443	NoData	NoData	NoData	0.55	NoData	NoData	NoData	7.94	8.66
21	517168	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	517219	171443	NoData	NoData	NoData	0.20	NoData	NoData	NoData	NoData	8.35
23	517270	171443	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	517117	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	517168	171494	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
Max value in selected area:			2.34	2.59	2.72	3.47	6.96	7.22	7.34	8.01	8.71

Data in this table comes from the Thames (Datchet to Teddington) 2023 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
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If no height or depth data is available for a scenario, no table will be shown.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

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 Richmond upon Thames London Borough.

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 National Environment Agency team at national.requests@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