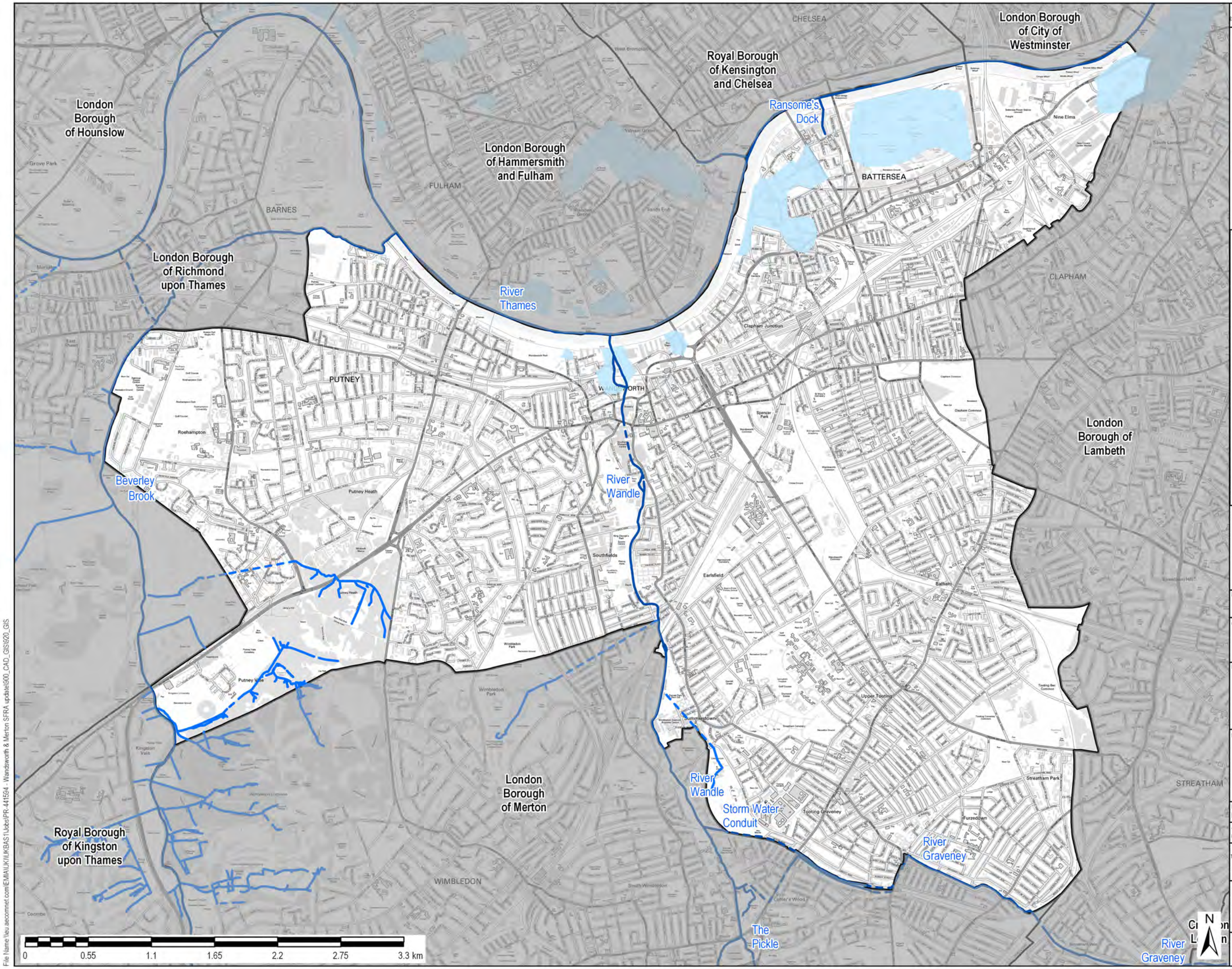

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

Legend

- Borough Boundary
- Recorded Flood Outlines from 1928
- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)

Notes

Recorded Flood Outlines is a GIS layer which shows Environment Agency records of historic flooding from rivers, the sea, groundwater and surface water. Each individual Recorded Flood Outline contains a consistent list of information about the recorded flood. Records began in 1946 when predecessor bodies to the Environment Agency started collecting detailed information about flooding incidents. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that we do not currently have records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally. A companion dataset Historic Flood Map contains a subset of these Recorded Flood Outlines which satisfy a certain criteria.

Purpose of Issue: DRAFT

Client: WANDSWORTH BOROUGH COUNCIL

Project Title: WANDSWORTH LEVEL 1 SFRA UPDATE

Drawing Title: RECORDED FLOOD OUTLINES

Drawn	Checked	Approved	Date
LL	SL	EC	May 2020

AECOM Internal Project No.: 60620167

Scale @ A3: 1:30,000

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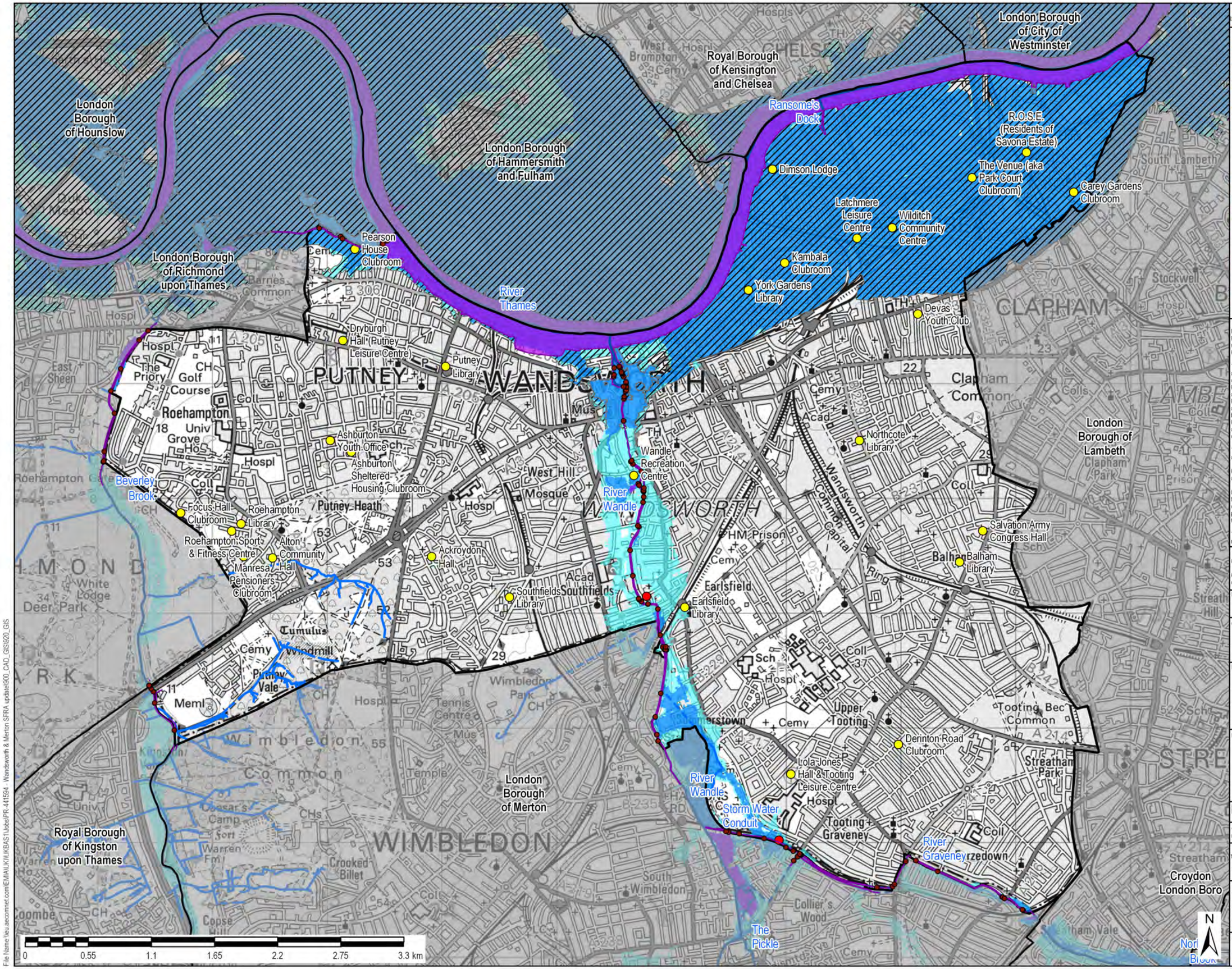
Midpoint
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number: FIGURE 0

Rev: 01

File Name:\\eu.aecomnet.com\EMIA\UK\NLKBAS1\Jobs\PR_441594 - Wandsworth & Merton SFRA update\900_CAD_GIS\920_GIS



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)

Flood Zones

- Flood Zone 1 Low Probability
- Flood Zone 2 Medium Probability
- Flood Zone 3 High Probability
- Flood Zone 3b Functional Floodplain
- Flood Defences
- Areas Benefitting from Flood Defences
- Flood Storage Areas
- Emergency Rest Centres
- Council Records of River Flooding

Notes

Main Rivers are designated by Defra on a 'Main River Map'. The Environment Agency has permissive powers to carry out flood defence works, maintenance and operational activities for Main Rivers only. However overall responsibility for maintenance lies with the riparian owner.

The Environment Agency Flood Map for Planning (Rivers and Sea) is available online (https://flood-map-for-planning.service.gov.uk/) and displays the risk of flooding based on probability:
Flood Zone 1: Land assessed, ignoring the presence of flood defences, as having a less than 0.1% annual probability of fluvial or tidal flooding.
Flood Zone 2: Land assessed, ignoring the presence of flood defences, as having between a 1% and 0.1% annual probability of fluvial flooding or between a 0.5% and 0.1% annual probability of tidal flooding in any year.
Flood Zone 3: Land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of fluvial flooding or a 0.5% or greater annual probability of tidal flooding in any year.

The Flood Map displays the location of linear raised flood defences such as embankments and walls.

Flood storage areas, land designated and operated to store flood water are displayed in a separate polygon layer.

Land that may benefit from the presence of major defences during a 1% fluvial or 0.5% tidal flood event. These are areas that would flood if the defence were not present, but may not flood because the defence is present. Areas benefiting from flood storage areas may be remote from the flood defence structure.

This map is intended to provide a strategic overview of fluvial flood risk and should not be used to assess flood risk for individual properties.

Purpose of Issue: DRAFT

Client: Wandsworth

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: FLOOD ZONES

Drawn	Checked	Approved	Date
LL	SL	EC	Oct 2020

AECOM Internal Project No.: 60620167
Scale @ A3: 1:30,000

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Midpoint
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
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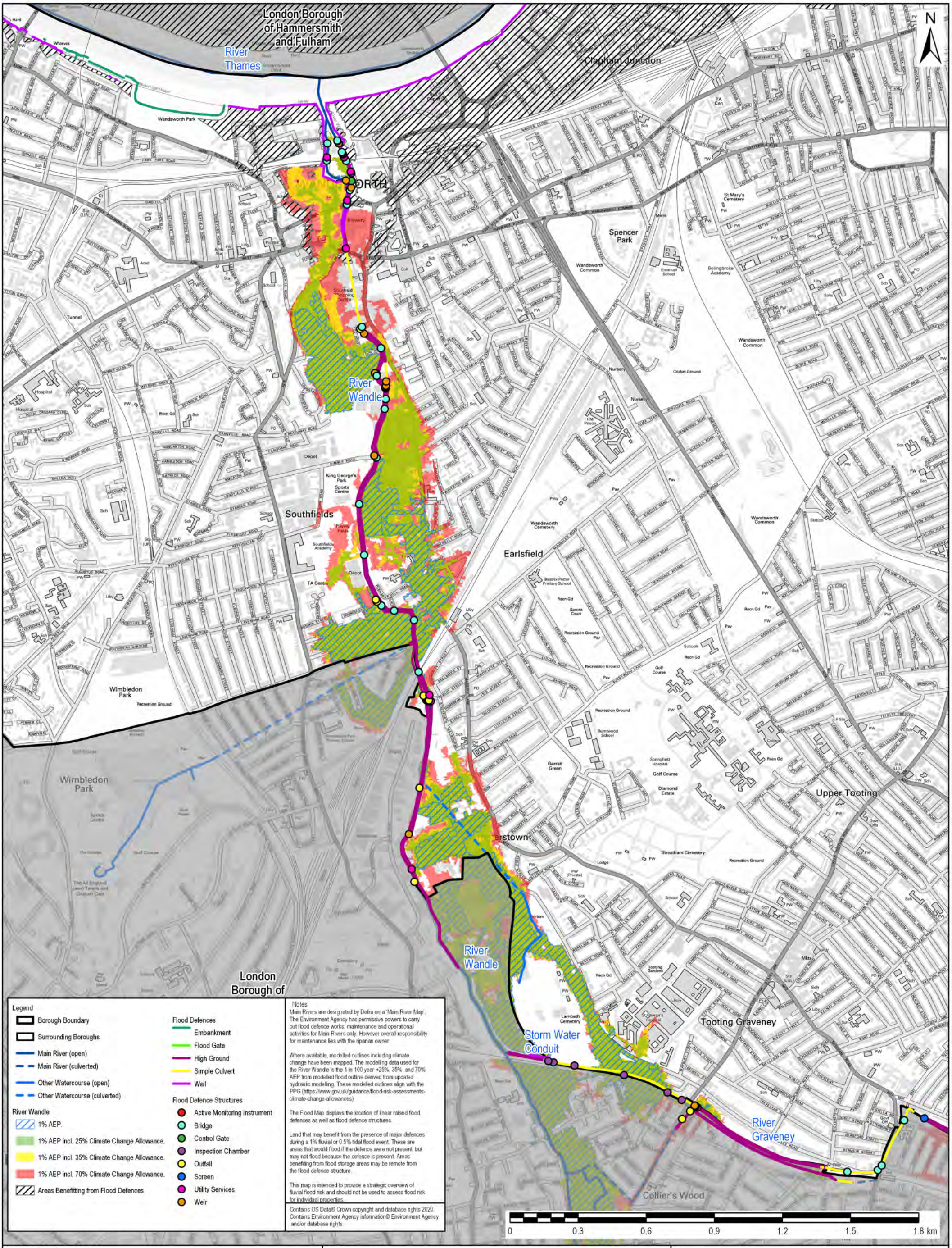
Drawing Number: FIGURE 1
Rev: 01

File Name:\\eu.aecomnet.com\EMIAU\KIN\KBAS1\Jobs\PR_441594 - Wandsworth & Merton SFRA update\900_CAD_GIS\920_GIS



Legend

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)

River Wandle

- 1% AEP.
- 1% AEP incl. 25% Climate Change Allowance.
- 1% AEP incl. 35% Climate Change Allowance.
- 1% AEP incl. 70% Climate Change Allowance.
- Areas Benefitting from Flood Defences

Flood Defences

- Embankment
- Flood Gate
- High Ground
- Simple Culvert
- Wall

Flood Defence Structures

- Active Monitoring instrument
- Bridge
- Control Gate
- Inspection Chamber
- Outfall
- Screen
- Utility Services
- Weir

Notes

Main Rivers are designated by Defra on a 'Main River Map'. The Environment Agency has permissive powers to carry out flood defence works, maintenance and operational activities for Main Rivers only. However overall responsibility for maintenance lies with the riparian owner.

Where available, modelled outlines including climate change have been mapped. The modelling data used for the River Wandle is the 1 in 100 year +25%, 35% and 70% AEP from modelled flood outline derived from updated hydraulic modelling. These modelled outlines align with the PPG (https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances)

The Flood Map displays the location of linear raised flood defences as well as flood defence structures.

Land that may benefit from the presence of major defences during a 1% fluvial or 0.5% tidal flood event. These are areas that would flood if the defence were not present, but may not flood because the defence is present. Areas benefiting from flood storage areas may be remote from the flood defence structure.

This map is intended to provide a strategic overview of fluvial flood risk and should not be used to assess flood risk for individual properties.

Project Title/Drawing Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

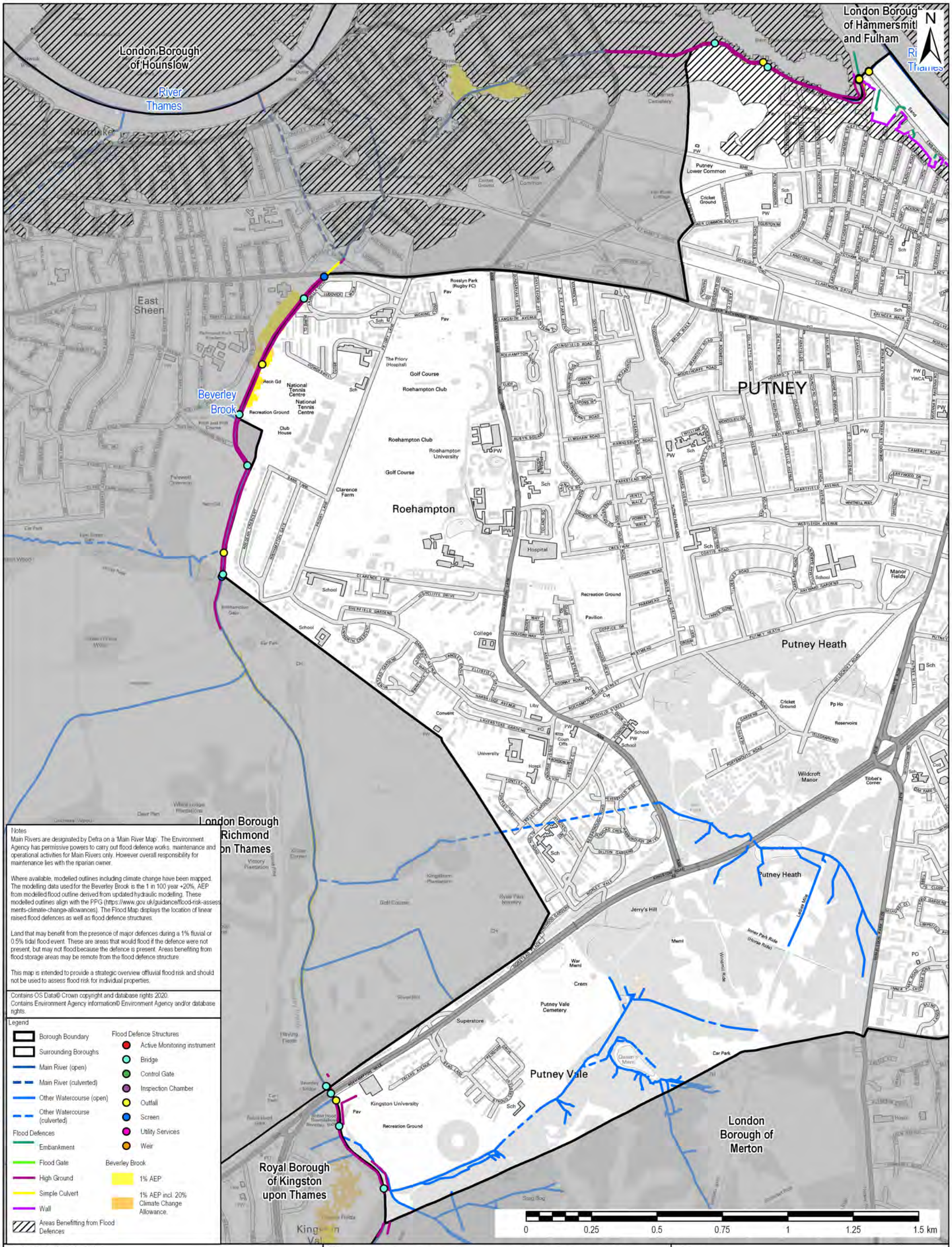
MODELLED FLOOD OUTLINES RIVER WANDLE

Client: WANDSWORTH BOROUGH COUNCIL

Drawn	Checked	Approved
HB	SL	EC
Date	Scale @ A3	Purpose of Issue
15/05/2020	1:15,000	DRAFT
Drawing Number		Rev
FIGURE 2		01

AECOM
Midpoint
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

File Name:\\eu.aecomnet.com\EMIA\UK\UKBAS1\Jobs\PR-441594 - Wandsworth & Merton SFRA update\900_CAD_GIS\920_GIS



Notes
Main Rivers are designated by Defra on a 'Main River Map'. The Environment Agency has permissive powers to carry out flood defence works, maintenance and operational activities for Main Rivers only. However overall responsibility for maintenance lies with the riparian owner.

Where available, modelled outlines including climate change have been mapped. The modelling data used for the Beverley Brook is the 1 in 100 year +20%, AEP from modelled flood outline derived from updated hydraulic modelling. These modelled outlines align with the PPG (https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances). The Flood Map displays the location of linear raised flood defences as well as flood defence structures.

Land that may benefit from the presence of major defences during a 1% fluvial or 0.5% tidal flood event. These are areas that would flood if the defence were not present, but may not flood because the defence is present. Areas benefiting from flood storage areas may be remote from the flood defence structure.

This map is intended to provide a strategic overview offluvial flood risk and should not be used to assess flood risk for individual properties.

Legend

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)

Flood Defences
- Embankment
- Flood Gate
- High Ground
- Simple Culvert
- Wall
- Areas Benefitting from Flood Defences

Flood Defence Structures
- Active Monitoring Instrument
- Bridge
- Control Gate
- Inspection Chamber
- Outfall
- Screen
- Utility Services
- Weir

Beverley Brook
- 1% AEP
- 1% AEP incl. 20% Climate Change Allowance.

Project Title/Drawing Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

MODELLED FLOOD OUTLINES BEVERLEY BROOK

Client	WANDSWORTH BOROUGH COUNCIL	
Drawn: HB	Checked: SL	Approved: EC
Date: 13/02/2020	Scale @ A3: 1:15,000	Purpose of Issue: DRAFT
Drawing Number: FIGURE 3		Rev: 01

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Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
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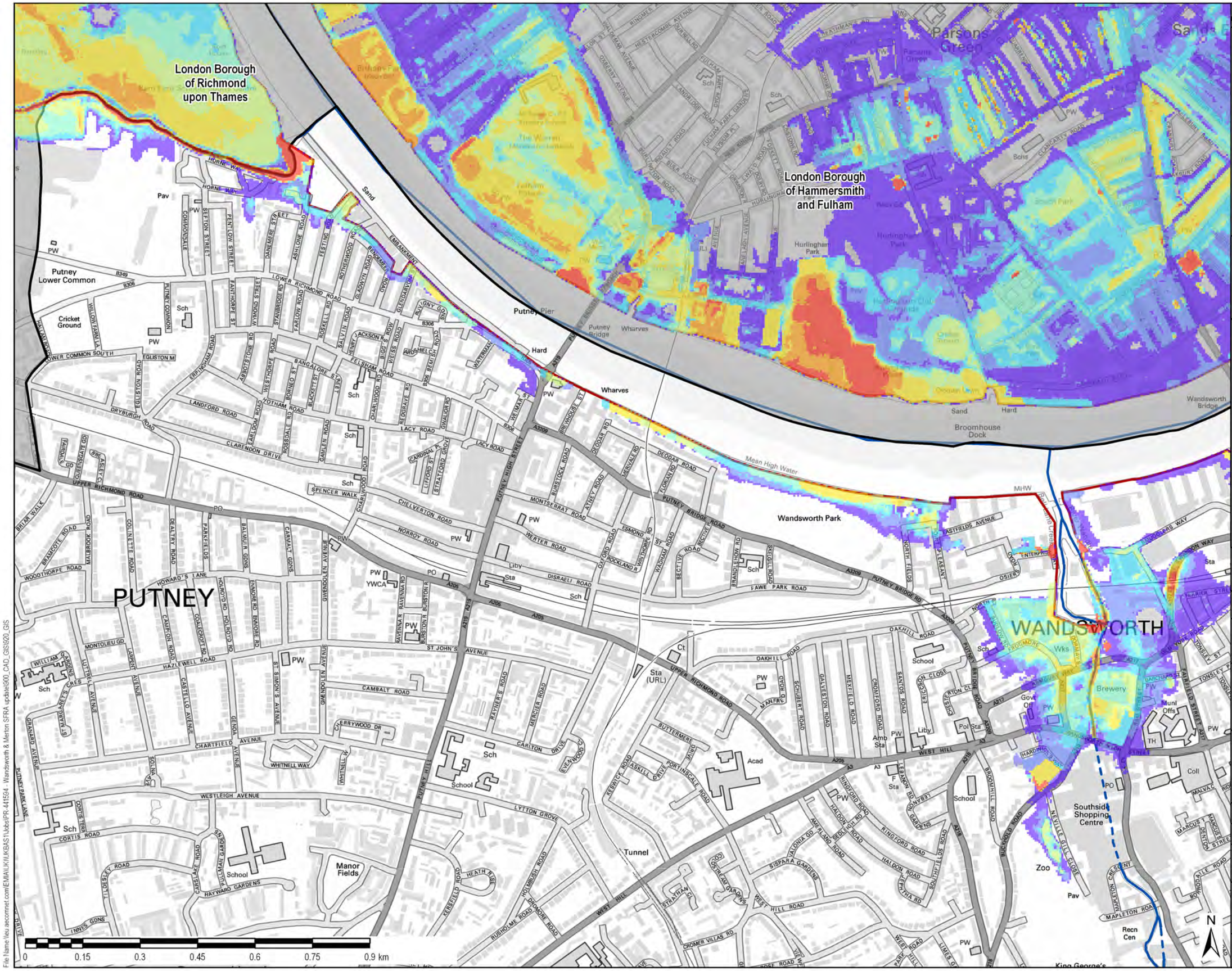
File Name:\\eu.aecomnet.com\EMIA\UK\BAS1\Jobs\PR-441594 - Wandsworth & Merton SFRA update\900_CAD_GIS\920_GIS



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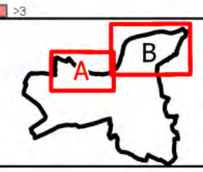
LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (Culverted)
- Other Watercourse (Surface)
- Other Watercourse (Culverted)
- Tidal Defence Line

Modelled Flood Depth (m)

- <0.5
- 0.5-0.75
- 0.75-1
- 1-1.25
- 1.25-1.5
- 1.5- 2
- 2- 2.5
- >3



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

One of the outputs of this modelling is maximum flood depth mapping. Flood depth indicates the depth of water above highest adjacent grade resulting from a flood.

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 FLOOD DEPTH

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:9,000

AECOM
Midpoint
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
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Drawing Number

FIGURE 4A

Rev

01

File Name:\\eu.aecomnet.com\EMIAUK\UKBAS1\Jobs\PR-441504 - Wandsworth & Merton SFRA update\900_CAD_GIS\920_GIS

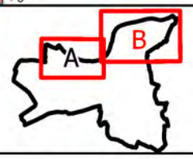
THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Other Watercourse (Surface)
- Tidal Defence Line

Modelled Flood Depth (m)

- <0.5
- 0.5-0.75
- 0.75-1
- 1-1.25
- 1.25-1.5
- 1.5- 2
- 2- 2.5
- >3



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

One of the outputs of this modelling is maximum flood depth mapping. Flood depth indicates the depth of water above highest adjacent grade resulting from a flood.

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 FLOOD DEPTH

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:30,000

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Telephone (01256) 310200
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Drawing Number

FIGURE 4B

Rev

01

0 0.2 0.4 0.6 0.8 1 1.2 km

N

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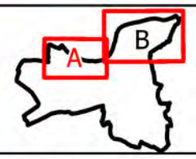
LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (Culverted)
- Other Watercourse (Surface)
- Other Watercourse (Culverted)

Flood Hazard Rating

- Low (Caution)
- Moderate (Danger for some)
- Significant (Danger for most people)
- Extreme (Danger for all)
- Tidal Defence Line



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

One of the outputs of this modelling is maximum flood hazard mapping. Flood Hazard describes the flood conditions in which people are likely to be swept over or drown in a flood, and is a combination of flood depth, velocity and the presence of debris.

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 FLOOD HAZARD

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.: 60620167

Scale @ A3: 1:9,000

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Drawing Number: FIGURE 5A

Rev: 01

0 0.15 0.3 0.45 0.6 0.75 0.9 km

N

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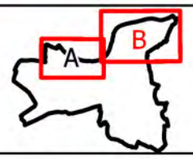
LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (Culverted)
- Other Watercourse (Surface)
- Other Watercourse (Culverted)

Flood Hazard Rating

- Low (Caution)
- Moderate (Danger for some)
- Significant (Danger for most people)
- Extreme (Danger for all)
- Tidal Defence Line



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

One of the outputs of this modelling is maximum flood hazard mapping. Flood Hazard describes the flood conditions in which people are likely to be swept over or drown in a flood, and is a combination of flood depth, velocity and the presence of debris.

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 FLOOD HAZARD

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:12,000

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Drawing Number: FIGURE 5B

Rev: 01

0 0.2 0.4 0.6 0.8 1 1.2 km

N

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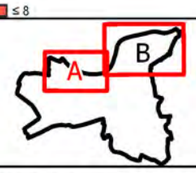
LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (Culverted)
- Other Watercourse (Surface)
- Other Watercourse (Culverted)
- Tidal Defence Line

Maximum Water Level (m)

- ≤ 3
- ≤ 3.5
- ≤ 4
- ≤ 4.5
- ≤ 5
- ≤ 5.5
- ≤ 6
- ≤ 7
- ≤ 8



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 MAXIMUM FLOOD LEVEL

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:30,000

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Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
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AECOM

Drawing Number

FIGURE 6A

Rev

01

0 0.15 0.3 0.45 0.6 0.75 0.9 km

N

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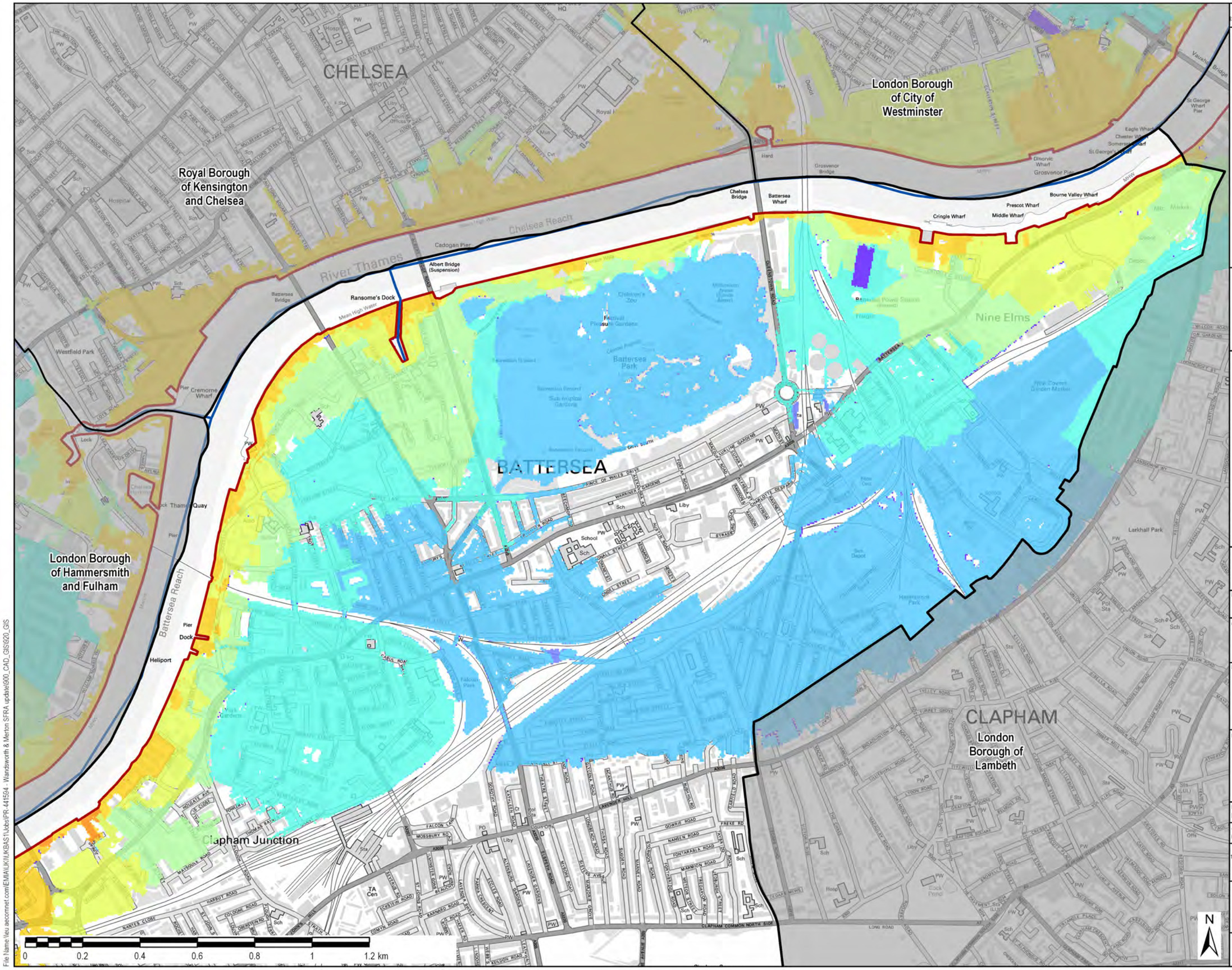

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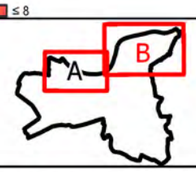
LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (Culverted)
- Other Watercourse (Surface)
- Other Watercourse (Culverted)
- Tidal Defence Line

Maximum Water Level (m)

- ≤ 3
- ≤ 3.5
- ≤ 4
- ≤ 4.5
- ≤ 5
- ≤ 5.5
- ≤ 6
- ≤ 7
- ≤ 8



Notes

Tidal breach modelling has been undertaken along the Thames tidal defence line (London Thames Breach Assessment, Atkins May 2017). The study considers the impact of a breach occurring during a tidal event, between the Thames Barrier and the upstream tidal limit at Teddington Weir. The Thames Barrier is a flood defence structure that prevents tidal surges from flowing upstream along the Thames at times of high flow / forecast flood events. Downstream of Thames Barrier there is no protection from incoming tidal surges, and so the resulting probabilities of flooding are treated differently than upstream of the Barrier.

The defence line between Teddington Weir and the Thames Barrier was divided into sections, and a breach considered at each section. Firstly the defence line was split into 'hard' and 'soft' defence types; a hard defence was considered to be a concrete wall, embankment or similar, whilst a soft defence was considered to be an earth embankment. A hard defence was defined as a 20m wide breach, with a soft defence as a 50m wide breach.

The study area for this SFRA is upstream of the Thames Barrier. Upstream of the Thames Barrier, three combinations of flow and tide are modelled to create 'maximum likely water levels' for each model node between Teddington Weir and the Thames Barrier. This approach considers the imposition of the barrier closure rule, which effectively limits the maximum water level that will be achieved upriver of the Thames Barrier. Upstream of the barrier, the following modelled scenarios were simulated:

- Maximum Likely Water Level for the year 2005
- Maximum Likely Water Level for the year 2100

Purpose of Issue

DRAFT

Client

Wandsworth

Project Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title

RIVER THAMES TIDAL BREACH MODELLING FOR THE YEAR 2100 MAXIMUM FLOOD LEVEL

Drawn	Checked	Approved	Date
HB	SL	EC	Feb 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:30,000

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Hampshire, RG21 7PP
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Fax (01256) 310201
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Drawing Number

FIGURE 6B

Rev

01

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NORTH

London Borough of City of Westminster

Royal Borough of Kensington and Chelsea

London Borough of Hammersmith and Fulham

London Borough of Richmond upon Thames

London Borough of Lambeth

Royal Borough of Kingston upon Thames

London Borough of Merton

0 2.5 KILOMETRES

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LEGEND

Borough Boundary

Flood Warning Areas

- Beverley Brook at Barnes
- Beverley Brook at Wimbledon Common and Richmond Park
- River Graveney at Tooting and Colliers Wood
- River Wandle at Wandsworth
- River Wandle at Wimbledon
- Tidal Thames from Deptford Creek to Wandsworth Bridge
- Tidal Thames from Putney Bridge to Mortlake High Street East
- Tidal Thames from Wandsworth Bridge to Putney Bridge

Notes

The Environment Agency provide a free flood warning service for many areas at risk of flooding from rivers and the sea. In some parts of England the Environment Agency may be able to provide warnings when flooding from groundwater is possible.

The Environment Agency free flood warning service can provide advance notice of flooding and can provide time to prepare.

The Environment Agency issue flood warnings to homes and businesses when flooding is expected. Upon receipt of a flood warning, occupants should take immediate action.

Revision Details	By / Check	Check Date	Suffix

Purpose of Issue: DRAFT

Client: WANDSWORTH BOROUGH COUNCIL

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: FLOOD WARNING AREAS - WANDSWORTH

Drawn	Checked	Approved	Date
HB	SL	EC	02/20

AECOM Internal Project Number: 60620167

Scale at A3: 1:30000

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T +44 (0)1256 310 200
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Drawing Number: FIGURE 7

Rev: 1

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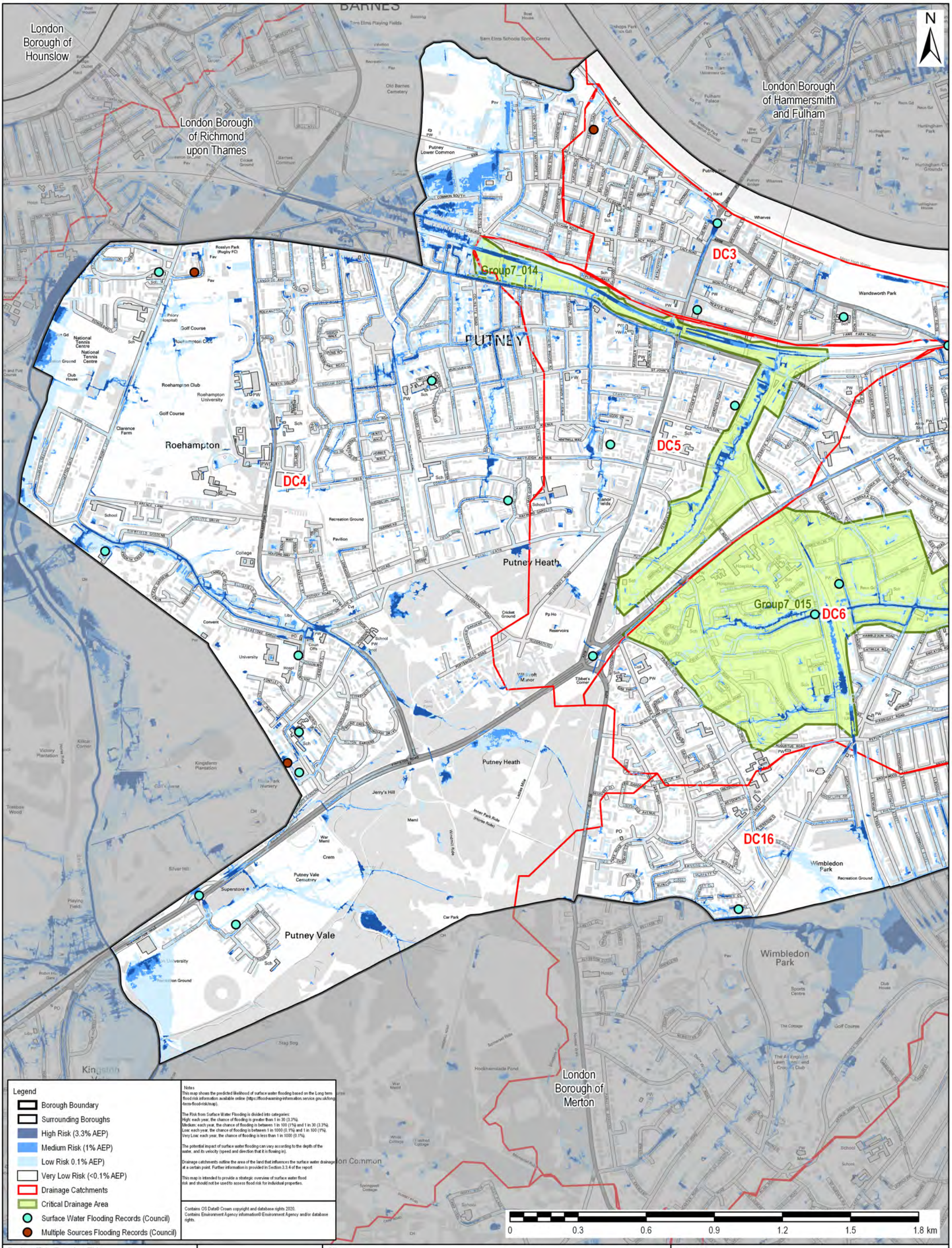
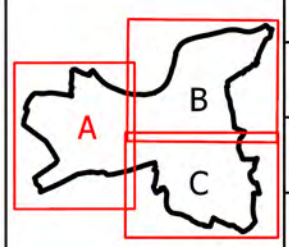


Project Title/Drawing Title

WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

RISK OF FLOODING FROM SURFACE WATER



Client	WANDSWORTH BOROUGH COUNCIL	
Drawn: LL	Checked: SL	Approved: EC
Date: 14/05/2020	Scale @ A3: 1:15,000	Purpose of Issue: DRAFT
Drawing Number: FIGURE 8A		Rev: 01

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Fax (01256) 310201
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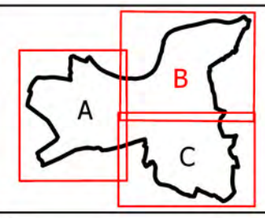
LEGEND

- Borough Boundary
- Surrounding Boroughs
- High Risk (3.3% AEP)
- Medium Risk (1% AEP)
- Low Risk 0.1% AEP)
- Very Low Risk (<0.1% AEP)
- Drainage Catchments
- Critical Drainage Area
- Surface Water Flooding Records (Council)
- Multiple Sources Flooding Records (Council)



Notes

This map shows the predicted likelihood of surface water flooding based on the Long term flood risk information available online (https://flood-warning-information.service.gov.uk/long-term-flood-risk/map).

The Risk from Surface Water Flooding is divided into categories:
High: each year, the chance of flooding is greater than 1 in 30 (3.3%).
Medium: each year, the chance of flooding is between 1 in 100 (1%) and 1 in 30 (3.3%).
Low: each year, the chance of flooding is between 1 in 1000 (0.1%) and 1 in 100 (1%).
Very Low: each year, the chance of flooding is less than 1 in 1000 (0.1%).

The potential impact of surface water flooding can vary according to the depth of the water, and its velocity (speed and direction that it is flowing in).

Drainage catchments outline the area of the land that influences the surface water drainage at a certain point. Further information is provided in Section 3.3.4 of the report.

This map is intended to provide a strategic overview of surface water flood risk and should not be used to assess flood risk for individual properties.

Purpose of Issue: DRAFT

Client: Wandsworth

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: RISK OF FLOODING FROM SURFACE WATER

Drawn	Checked	Approved	Date
LL	SL	EC	May 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:15,000

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Drawing Number: FIGURE 8B

Rev: 01

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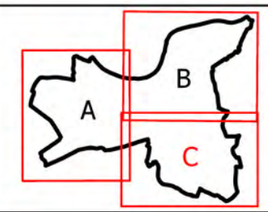
LEGEND

- Borough Boundary
- Surrounding Boroughs
- High Risk (3.3% AEP)
- Medium Risk (1% AEP)
- Low Risk 0.1% AEP)
- Very Low Risk (<0.1% AEP)
- Drainage Catchments
- Critical Drainage Area
- Surface Water Flooding Records (Council)
- Multiple Sources Flooding Records (Council)



Notes

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The Risk from Surface Water Flooding is divided into categories:
High: each year, the chance of flooding is greater than 1 in 30 (3.3%).
Medium: each year, the chance of flooding is between 1 in 100 (1%) and 1 in 30 (3.3%).
Low: each year, the chance of flooding is between 1 in 1000 (0.1%) and 1 in 100 (1%).
Very Low: each year, the chance of flooding is less than 1 in 1000 (0.1%).

The potential impact of surface water flooding can vary according to the depth of the water, and its velocity (speed and direction that it is flowing in).

Drainage catchments outline the area of the land that influences the surface water drainage at a certain point. Further information is provided in Section 3.3.4 of the report.

This map is intended to provide a strategic overview of surface water flood risk and should not be used to assess flood risk for individual properties.

Purpose of Issue: DRAFT

Client: Wandsworth

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: RISK OF FLOODING FROM SURFACE WATER

Drawn	Checked	Approved	Date
LL	SL	EC	May 2020

AECOM Internal Project No.	Scale @ A3
60620167	1:16,000

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Drawing Number: FIGURE 8C

Rev: 01

0 0.25 0.5 0.75 1 1.25 1.5 km

N

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NORTH

London Borough of Richmond upon Thames

Royal Borough of Kensington and Chelsea

London Borough of City of Westminster

London Borough of Hammersmith and Fulham

London Borough of Lambeth

Royal Borough of Kingston upon Thames

London Borough of Merton

0 2.5

KILOMETERS

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LEGEND

- Borough Boundary
- Groundwater Flooding Record (Council)

BGS Susceptibility to Groundwater Flooding

- Limited potential for groundwater flooding to occur
- Potential for groundwater flooding of property situated below ground level
- Potential for groundwater flooding to occur at surface

Notes

Groundwater flooding (defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded) is increasingly being recognised as a hazard. However, until the wet winter of 2000/2001 it had received little attention from the research community in the UK. Local knowledge of historic groundwater flooding events had generally been the only guide to an area's susceptibility to flooding. Unfortunately, local knowledge is patchy and can be unreliable and often groundwater flooding is not recognised as a distinct event, being masked by surface water floods.
In response to the need for more information on groundwater flooding, BGS has produced the first national dataset on the susceptibility of groundwater flooding, covering England, Wales and Scotland.

The susceptibility data is suitable for use for regional or national planning purposes where the groundwater flooding information will be used along with a range of other relevant information to inform land-use planning decisions. It might also be used in conjunction with a large number of other factors, e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information, to establish relative, but not absolute, risk of groundwater flooding at a resolution of greater than a few hundred metres. The confidence dataset will help in this assessment. The susceptibility data should not be used on its own to make planning decisions at any scale, and, in particular, should not be used to inform planning decisions at the site scale.
The susceptibility data cannot be used on its own to indicate risk of groundwater flooding.

This map is intended to provide a strategic overview of susceptibility to groundwater flooding and should not be used to assess flood risk for individual properties.

Revision Details	By / Check	Check Date	Suffix

Purpose of Issue: DRAFT

Client: Wandsworth

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: BGS SUSCEPTIBILITY TO GROUNDWATER FLOODING WANDSWORTH

Drawn	Checked	Approved	Date
HB	SL	EC	02/20

Internal Project No.	Scale at A3
60620167	1:30000

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Drawing Number	Rev
FIGURE 9	1

NORTH

London Borough of Hammersmith and Fulham

London Borough of Lambeth

London Borough of Richmond upon Thames

London Borough of Merton

1 Internal, 0 External

1 Internal, 0 External

3 Internal, 0 External

16 Internal, 0 External

6 Internal, 1 External

3 Internal, 0 External

2 Internal, 1 External

3 Internal, 0 External

3 Internal, 0 External

0 Internal, 2 External

0 Internal, 1 External

1 Internal, 2 External

0 Internal, 2 External

0 Internal, 2 External

1 Internal, 0 External

1 Internal, 0 External

9 Internal, 0 External

3 Internal, 0 External

0 Internal, 1 External

0 2

KILOMETRES

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LEGEND

Borough Boundary

Thames Water Sewer Flooding Records

- 1
- 2
- 3
- 7
- 9
- 16

Council Sewer Flooding Records

Notes

Thames Water Utilities Ltd has provided an extract from their DG5 Register for the study area. Due to data protection requirements the data has not been provided at individual property level; rather the register comprises the number of properties within 4 digit postcode areas that have experienced flooding either internally or externally within the last 10 - 20 years. For the purpose of this study, records for the last 10 years have been used.

It should be noted that records only appear on the DG5 Register where they have been reported to TWUL, and as such they may not include all instances of sewer flooding.

Furthermore given that TWUL target these areas for maintenance and improvements, areas that have experienced flooding in the past may no longer be at greatest risk of flooding in the future.

This map is intended to provide a strategic overview of areas at risk of sewer flooding and should not be used to assess flood risk for individual properties.

Revision Details	By / Check	Check Date	Suffix

Purpose of Issue: DRAFT

Client: WANDSWORTH BOROUGH COUNCIL

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: SEWER FLOODING RECORDS WANDSWORTH

Drawn	Checked	Approved	Date
HB	SL	EC	02/20

AECOM Internal Project Number	Scale at A3
60620167	1:27,400

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Drawing Number	Rev
FIGURE 10	01

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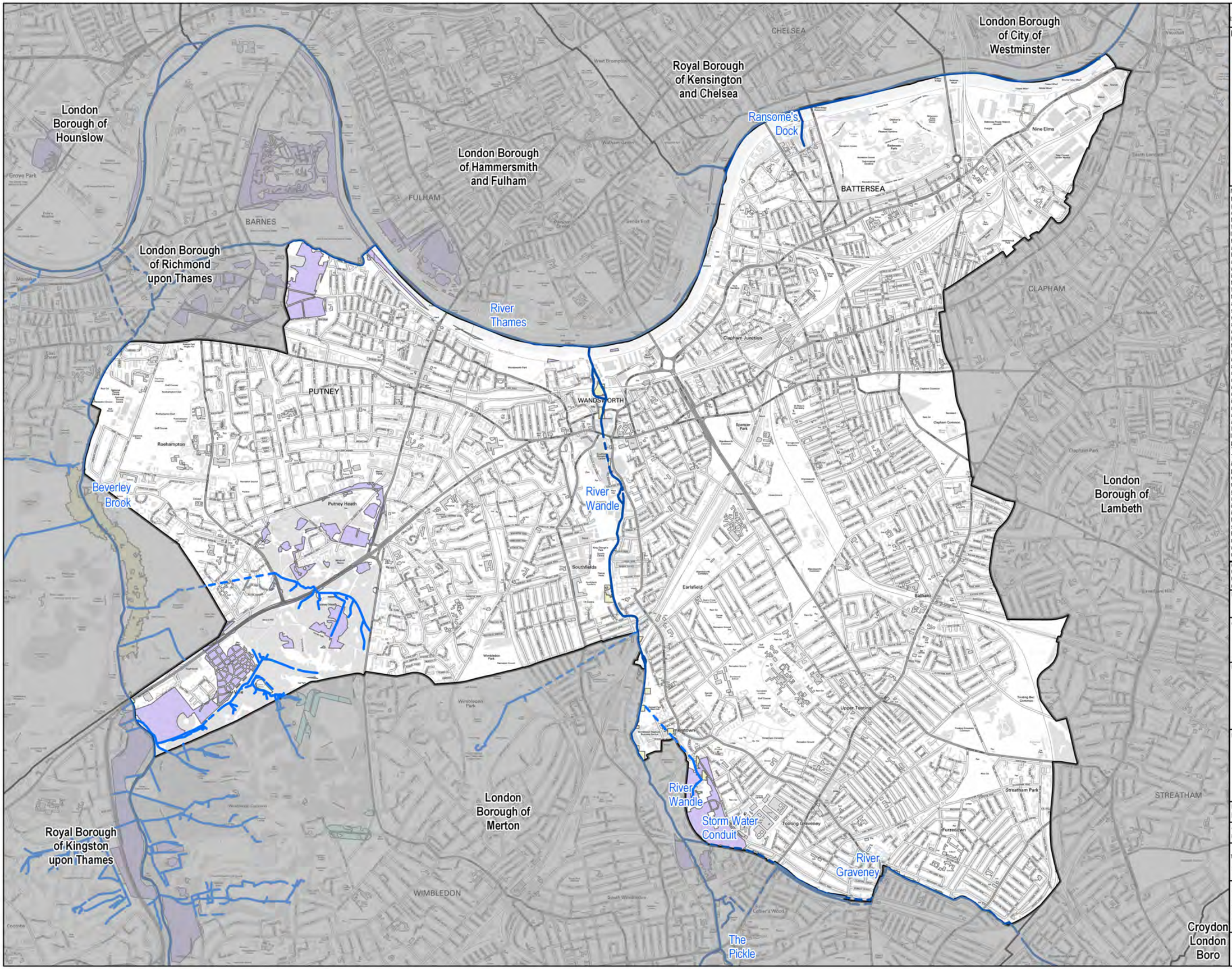

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Legend

- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)
- WWNP Floodplain Reconnection Potential
- WWNP Wider Catchment Woodland Potential
- WWNP Riparian Woodland Potential
- WWNP Floodplain Woodland Potential

Notes

Mapping Potential for Working with Natural Processes research project (SC150005) created a toolbox of mapped data and methods which enable operational staff in England to identify potential locations for Working with Natural Processes (WWNP).

WWNP Floodplain Woodland Planting Potential is our best estimate of locations where tree planting on the floodplain may be possible, and effective to attenuate flooding. The dataset is designed to support signposting of areas of floodplain not already wooded. The dataset is based upon fluvial Flood Zone 2 of the Flood Map for Planning. A set of open access constraints data was used to erase areas which contained existing woodland, watercourses, peat, roads, rail and urban locations. The information provided is largely based on modelled data and open constraints data, and is therefore indicative rather than specific.

WWNP Riparian Woodland Potential is our best estimate of locations where tree planting may be possible on smaller floodplains close to flow pathways, and effective to attenuate flooding. The dataset is designed to support signposting of riparian areas not already wooded. The dataset is based upon a 50m buffer of available OS Open Data river networks. A set of open access constraints data was used to erase areas which contained existing woodland, watercourses, peat, roads, rail and urban locations. The information provided is largely based on open data, and is indicative rather than specific.

WWNP Floodplain Reconnection Potential is our best estimate of locations where it may be possible to establish reconnection between a watercourse and its natural floodplain, especially during high flows. The dataset is designed to support signposting of areas where there is currently poor connectivity such that flood waters are constrained to the channel and flood waves may therefore propagate downstream rapidly. The dataset is based upon the Risk of Flooding from Rivers and Sea probability maps, and identifies areas of low and very low probability that are close to a water-course, but which do not contain residential property or key services. The areas may contain non-residential property so it is important to consider this and recent buildings or defences when considering floodplain reconnection.

WWNP Wider Catchment Woodland Potential is our best estimate of locations where there are slowly permeable soils, where scrub and tree planting may be most effective to increase infiltration and hydrological losses. The dataset is designed to support signposting of areas not already wooded. The dataset is based upon the 1:50k BGS geology survey, and relies upon identifying drift and bedrock geologies that are characteristic of slowly permeable soils. A set of open access constraints data was used to erase areas which contained existing woodland, watercourses, peat, roads, rail and urban locations. The information provided is largely based on a 100m gridded version of the BGS 1:50k superficial and bedrock data, along with open constraints data, and is indicative rather than specific. Locations identified may have more recent building or land use than available data indicates. It is important to note that land ownership and change to flood risk have not been considered, and it may be necessary to model the impacts of significant reconnection. Further information on the Working with Natural Processes project, including a mapping user guide, can be found in the reports published here: https://www.gov.uk/government/publications/working-with-natural-processes-to-reduce-flood-risk Attribution statement: © Environment Agency copyright and/or database right 2015. All rights reserved.

Purpose of Issue: DRAFT

Client: WANDSWORTH BOROUGH COUNCIL

Project Title: WANDSWORTH LEVEL 1 SFRA UPDATE

Drawing Title: WORKING WITH NATURAL PROCESSES

Drawn	Checked	Approved	Date
LL	SL	EC	May 2020

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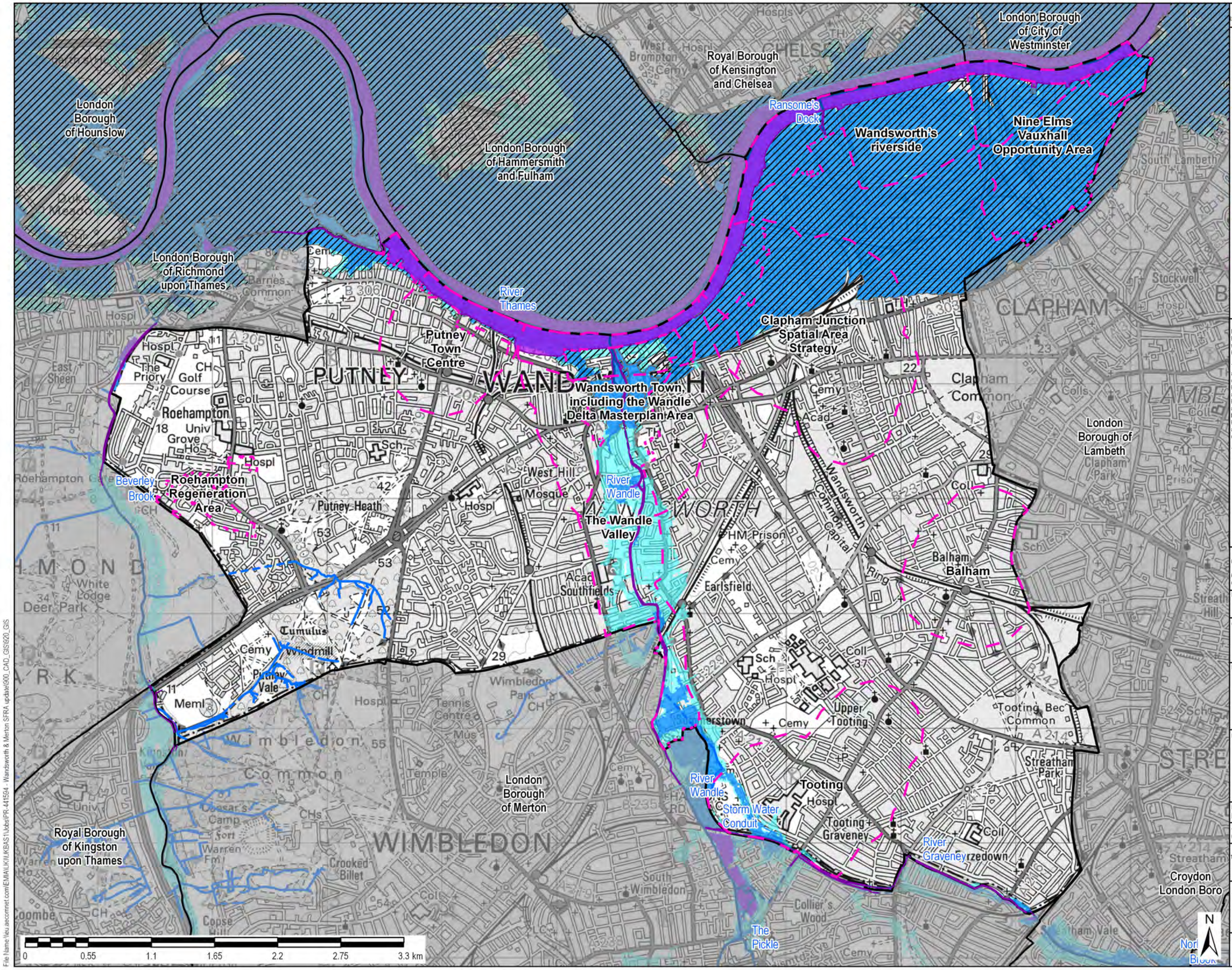
Drawing Number	Rev
FIGURE 11	01



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LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main River (open)
- Main River (culverted)
- Other Watercourse (open)
- Other Watercourse (culverted)

Flood Zones

- Flood Zone 1 Low Probability
- Flood Zone 2 Medium Probability
- Flood Zone 3 High Probability
- Flood Zone 3b Functional Floodplain
- Flood Defences
- Areas Benefitting from Flood Defences
- Sequential Test Area

Notes

Main Rivers are designated by Defra on a 'Main River Map'. The Environment Agency has permissive powers to carry out flood defence works, maintenance and operational activities for Main Rivers only. However overall responsibility for maintenance lies with the riparian owner.

The Environment Agency Flood Map for Planning (Rivers and Sea) is available online (https://flood-map-for-planning.service.gov.uk/) and displays the risk of flooding based on probability:
Flood Zone 1: Land assessed, ignoring the presence of flood defences, as having a less than 0.1% annual probability of fluvial or tidal flooding.
Flood Zone 2: Land assessed, ignoring the presence of flood defences, as having between a 1% and 0.1% annual probability of fluvial flooding or between a 0.5% and 0.1% annual probability of tidal flooding in any year.
Flood Zone 3: Land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of fluvial flooding or a 0.5% or greater annual probability of tidal flooding in any year.

This map shows the areas where the Sequential Test is satisfied.

Purpose of Issue: DRAFT

Client: Wandsworth

Project Title: WANDSWORTH LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

Drawing Title: AREAS WHERE SEQUENTIAL TEST IS SATISFIED

Drawn	Checked	Approved	Date
LL	SL	EC	Oct 2020

AECOM Internal Project No.: 60620167
Scale @ A3: 1:30,000

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Telephone (01256) 310200
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Drawing Number: FIGURE 12
Rev: 01

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