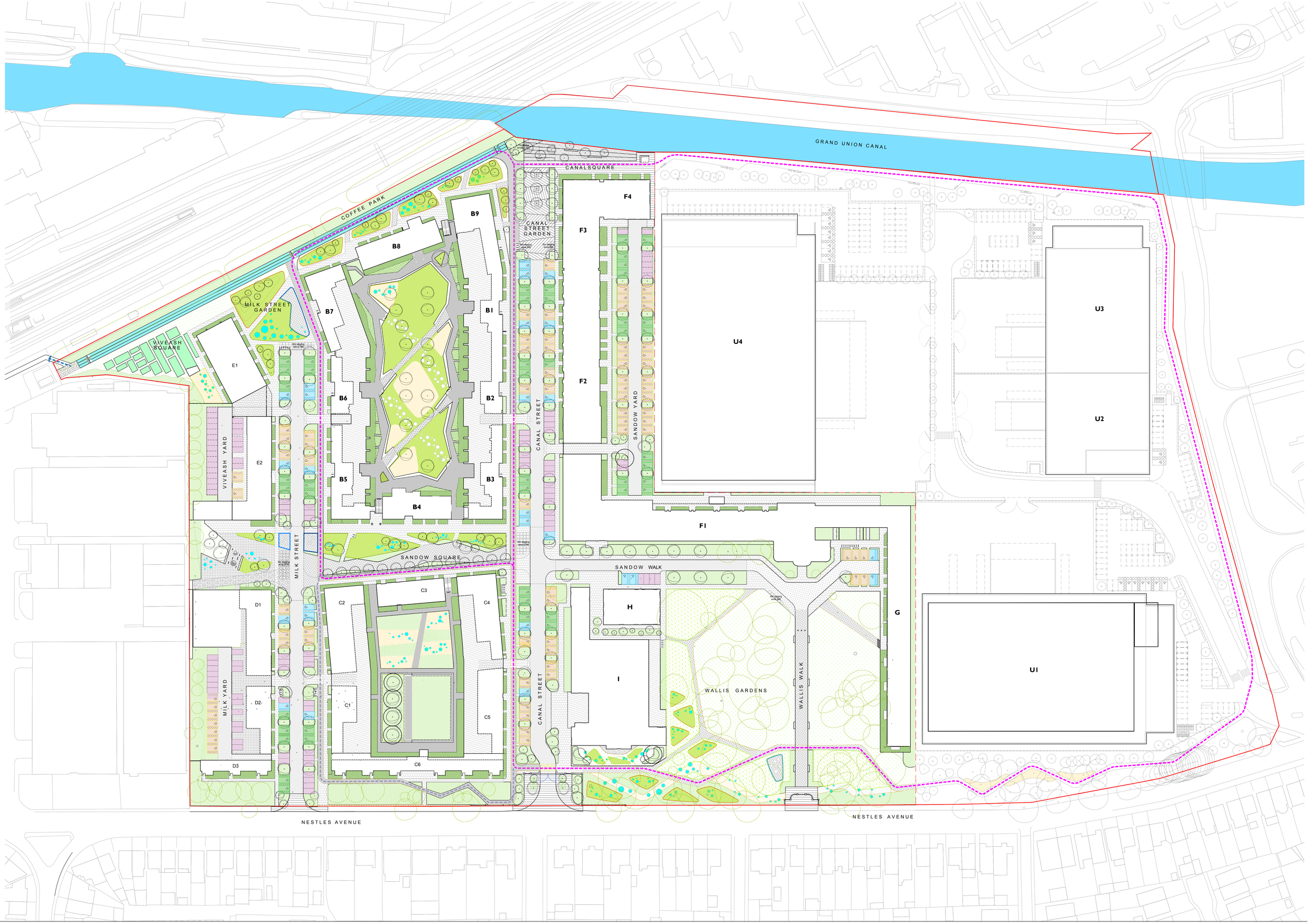


BARRATT LONDON

SEGRO

DATE	REV	DESCRIPTION	DRW	CHK
170120	01	Final site for planning	WT	AM
170324	02	Layout update	MB	WT
170403	03	Layout update	CC	WT

GILLESPIES

1 St John's Square, London, EC1M 4DH

T 0207 253 2020 F 0207 253800
E design.london@gillespies.co.uk

FORMER NESTLE FACTORY, HAYES

Landscape Overview Masterplan parking - Future Provision

SCALE 1:500 @ A0

0 5 10

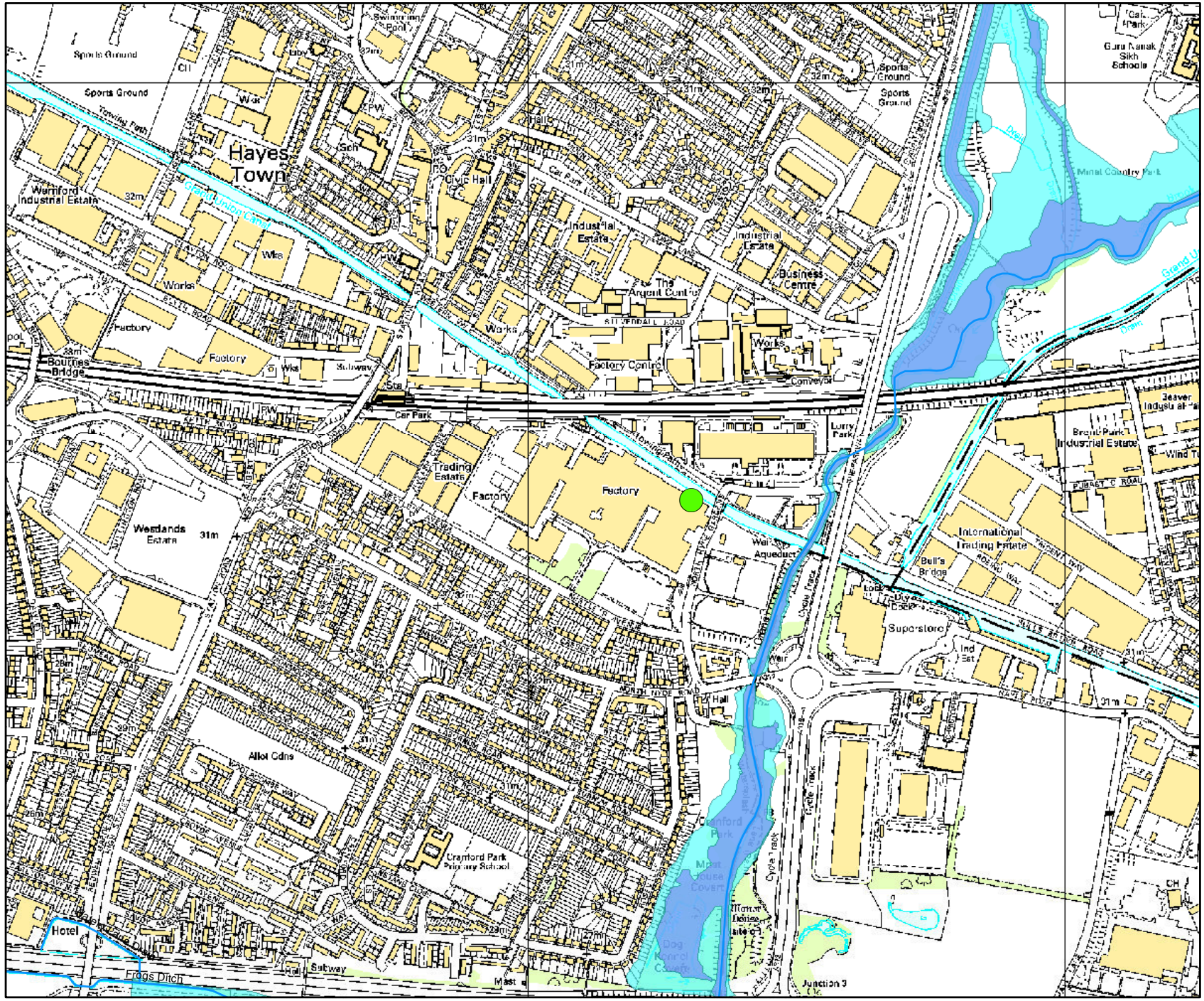
LG 102

ISSUE D7

APPENDIX B – FLOOD RISK DRAWINGS & DATA

Drawing No.	Title
HNL4611MS	Flood Map for Planning
HNL4611MS	Defended Flood Outlines [1 in 5; 1 in 10; 1 in 20; 1 in 50]
HNL4611MS	Defended Flood Outlines [1 in 100; 1 in 100+20%; 1 in 1,000]
HNL4611MS	1D Node Results
HNL4611MS	Modelled Flood Levels & Flows
Figure A-1.2	London Borough of Hillingdon Preliminary Flood Risk Assessment: Summary Map of Past Floods – Surface Water Incidents
Figure B-3.2	London Borough of Hillingdon Preliminary Flood Risk Assessment: Surface Water Depth (m) - 1 in 100 plus Climate Change chance of Rainfall Event occurring in any given year (1% AEP + CC)
Figure A-3.2	London Borough of Hillingdon Preliminary Flood Risk Assessment: Summary Map of Past Floods –Groundwater Incidents
Figure A-4.2	London Borough of Hillingdon Preliminary Flood Risk Assessment: Summary Map of Past Floods – Sewer Incidents

Flood Map for Planning centred on Nestlé Factory, Nestles Avenue, Hayes, UB3 4RF - 03/03/2016 - HNL4611MS



Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX

0 130 260 520
Metres

Legend

Main Rivers

Flood Map for Planning

Flood Storage Area

Areas Benefiting from Flood Defences

Flood Zone 3

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 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

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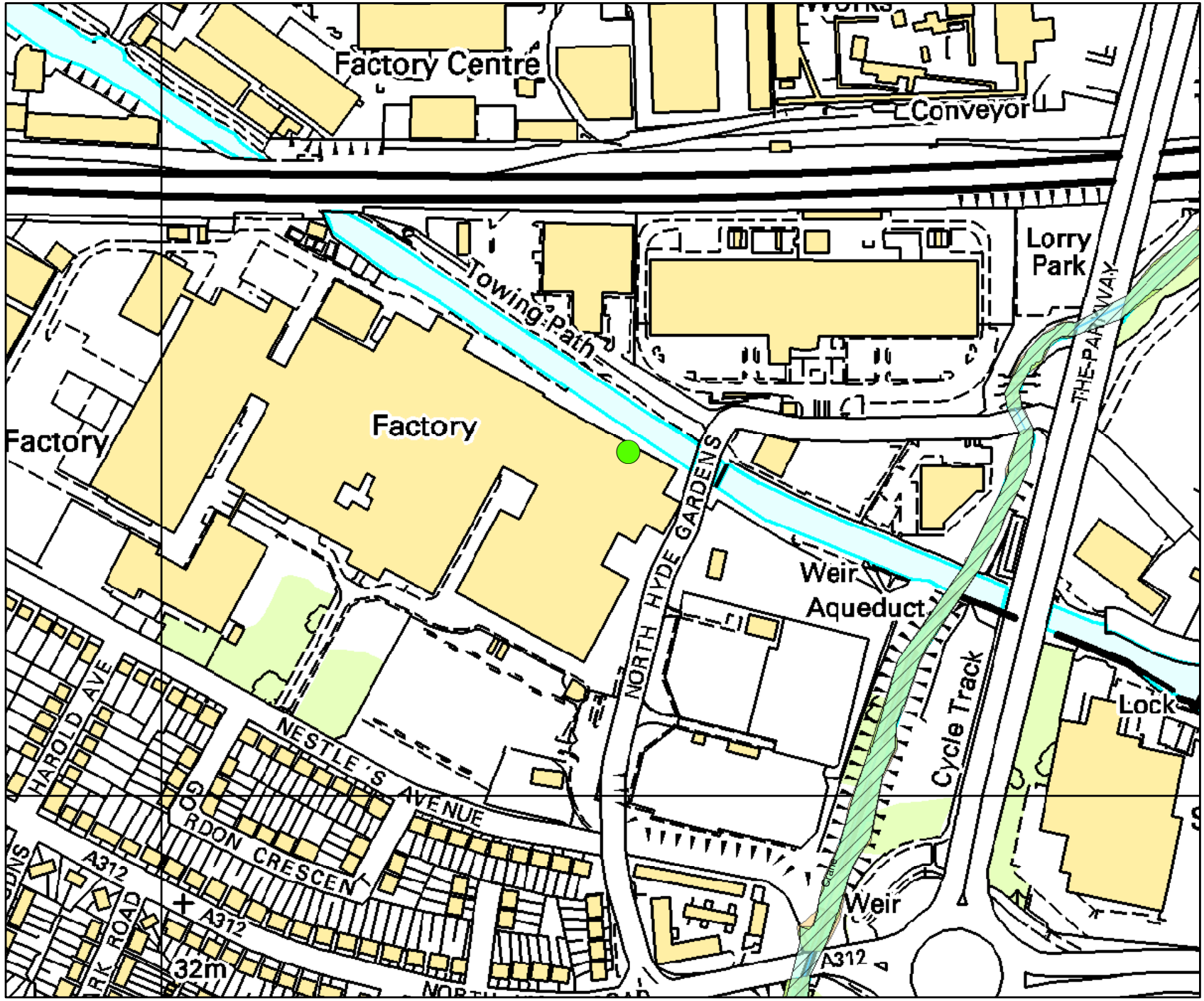
Detailed FRA centred on Nestlé Factory, Nestles Avenue, Hayes, UB3 4RF - 03/03/2016 - HNL4611MS



Environment Agency

Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX

0 45 90 180
Metres

Legend

Main Rivers

Defended Flood Outlines

- 1 in 5 (20%) Defended
- 1 in 10 (10%) Defended
- 1 in 20 (5%) Defended
- 1 in 50 (2%) Defended

The data in this map has been extracted from the River Crane Mapping Study (Halcrow 2008).
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites withinthe catchment.
Modelled outlines take into account catchment wide defences.

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.
https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

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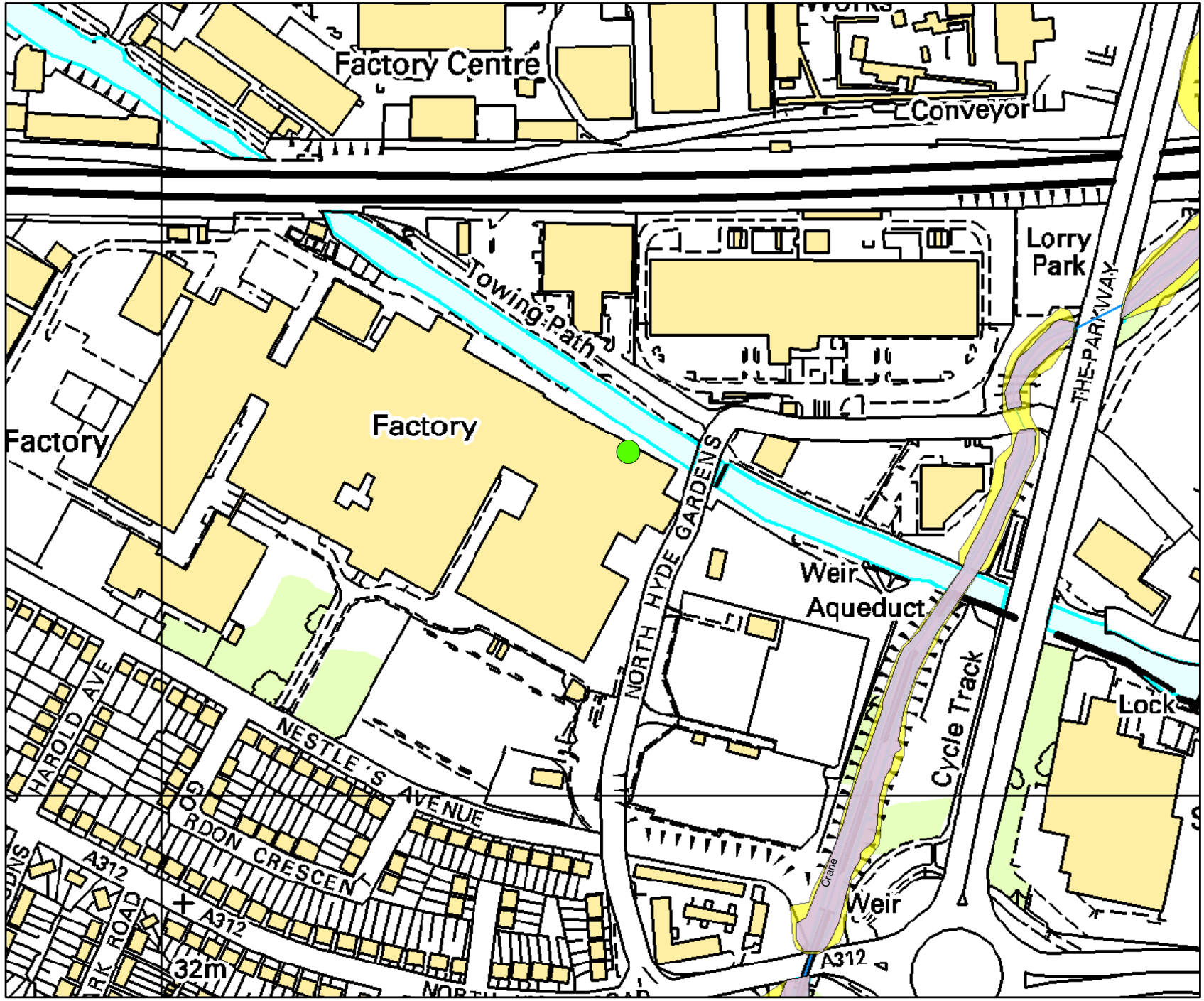
Detailed FRA centred on Nestlé Factory, Nestles Avenue, Hayes, UB3 4RF - 03/03/2016 - HNL4611MS



Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX

0 45 90 180
Metres

Legend

Main Rivers

Defended Flood Outlines

- 1 in 100 (1%) Defended
- 1 in 100+20% (*CC) Defended
- 1 in 1000 (0.1%) Defended

The data in this map has been extracted from the River Crane Mapping Study (Halcrow 2008).
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites withinthe catchment.
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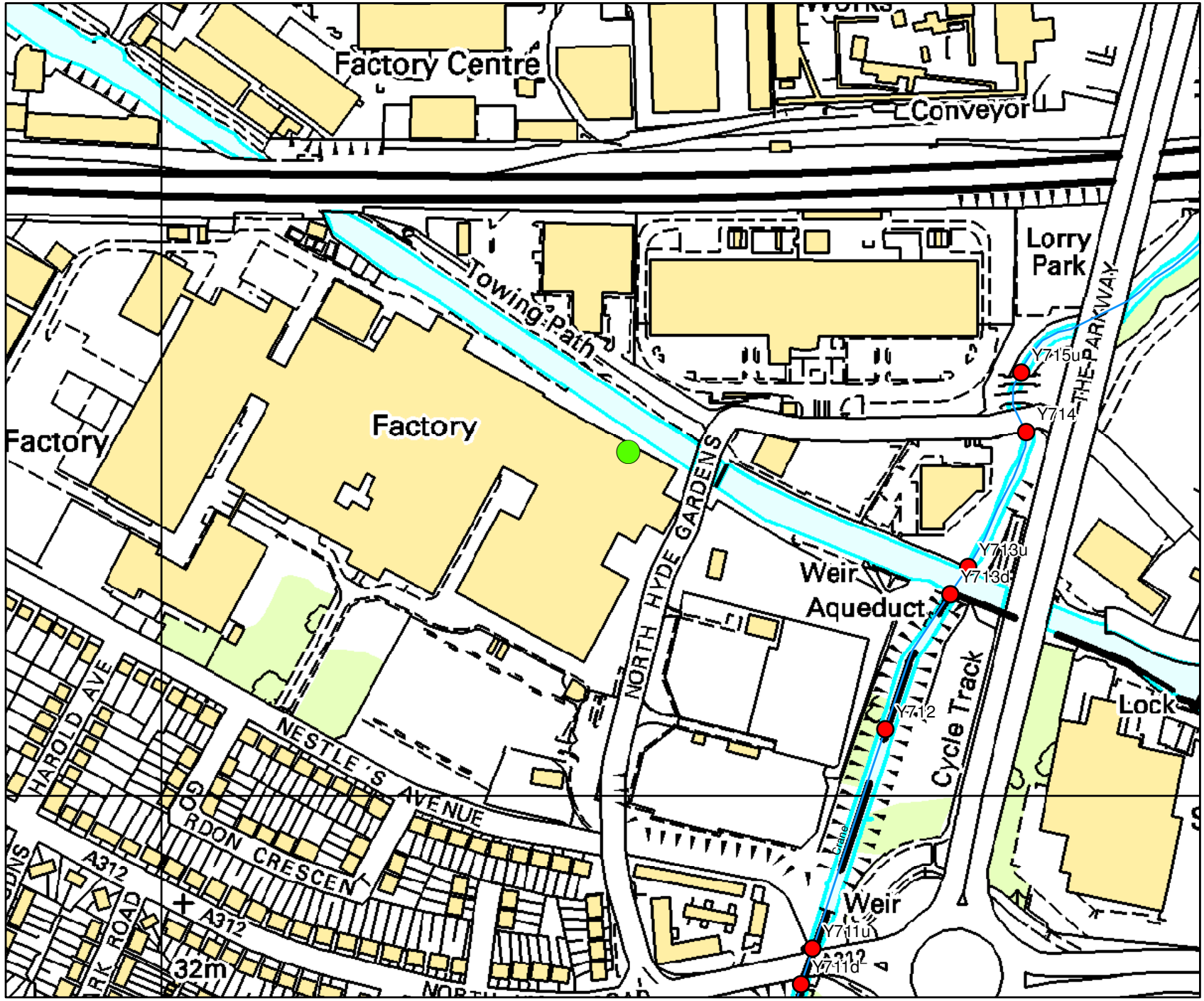
Detailed FRA centred on Nestlé Factory, Nestles Avenue, Hayes, UB3 4RF - 03/03/2016 - HNL4611MS



Environment Agency

Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX

0 45 90 180
Metres

Legend

Main Rivers

1D Node Results

Node Results

The data in this map has been extracted from the River Crane Mapping Study (Halcrow 2008).
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites withinthe catchment.
Modelled outlines take into account catchment wide defences.

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence. https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

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Environment Agency ref: HNL4611MS

The following information has been extracted from the River Crane Mapping Study (Halcrow 2008)

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.
https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Caution:
The modelled flood levels and extents are appropriate for catchment wide strategic flood risk mapping. However, for more detailed flood risk assessment it is recommended that each of the underlying flood mapping, hydraulic modelling and hydrological assumptions are re-evaluated to determine the appropriateness in a more detailed analysis.

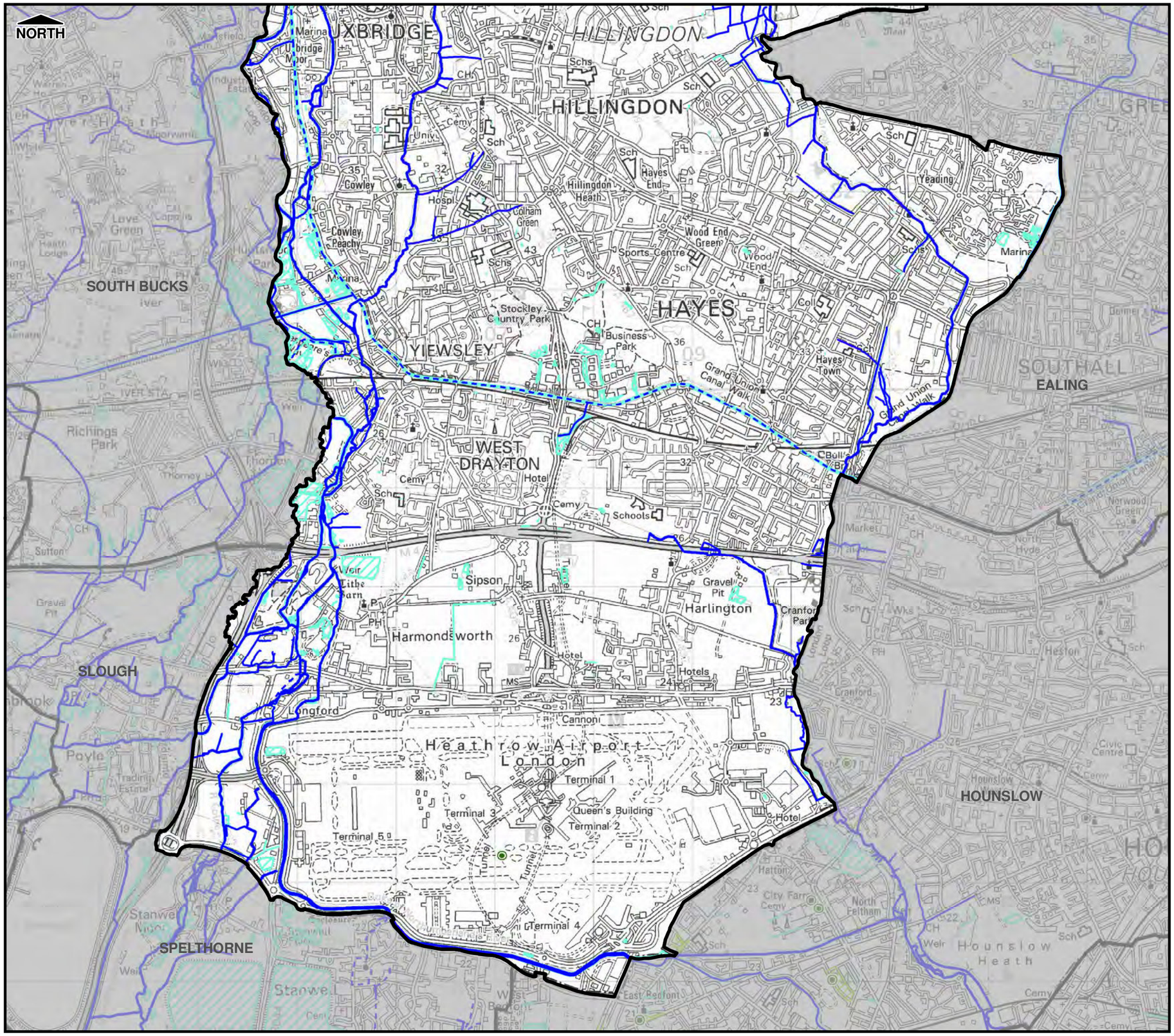
All flood levels are given in metres Above Ordnance Datum (mAOD)
All flows are given in cubic metres per second (cumecs)

MODELLED FLOOD LEVEL

			Return Period					
Node Label	**Easting**	**Northing**	**5 yr**	**20 yr**	**50 yr**	**100 yr**	**100yr + 20%**	**1000yr**
Y715u	510561.3	179274.0	26.110	26.318	26.515	26.640	26.863	28.866
Y714	510567.8	179237.0	26.058	26.261	26.453	26.574	26.789	28.624
Y713u	510524.5	179148.6	25.901	26.104	26.302	26.429	26.654	28.576
Y713d	510513.3	179130.8	25.679	25.800	25.910	25.979	26.087	26.638
Y712	510472.2	179042.2	25.602	25.736	25.860	25.938	26.064	26.698
Y711u	510427.1	178899.4	25.386	25.504	25.613	25.682	25.795	26.385
Y711d	510420.5	178875.4	25.231	25.314	25.385	25.428	25.493	25.666

MODELLED FLOWS

			Return Period					
Node Label	**Easting**	**Northing**	**5 yr**	**20 yr**	**50 yr**	**100 yr**	**100yr + 20%**	**1000yr**
Y715u	510561.3	179274.0	15.900	18.662	21.337	23.095	25.946	42.468
Y714	510567.8	179237.0	15.900	18.662	21.337	23.095	25.946	42.468
Y713u	510524.5	179148.6	15.900	18.661	21.336	23.094	25.943	42.466
Y713d	510513.3	179130.8	15.900	18.661	21.336	23.093	25.943	42.466
Y712	510472.2	179042.2	15.899	18.659	21.336	23.092	25.941	42.466
Y711u	510427.1	178899.4	15.899	18.660	21.334	23.091	25.940	42.466
Y711d	510420.5	178875.4	15.899	18.660	21.334	23.091	25.940	42.466



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies
- Surface Water Flooding Incidents
- Surface Water Flood Outline

London Borough of Hillingdon

HILLINGDON LONDON

Preliminary Flood Risk Assessment

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Scale at A3	Date	Drawn by	Approved by
1:40,000	06/04/2011	R.MOORE	P.HLINOVSKY

Summary Map of Past Floods - Surface Water Incidents

Consultants
CAPITA SYMONDS
Scott Wilson
Flood Risk Management
Capita Symonds
Level Seven,
52 Grosvenor Gardens,
Belgravia,
London
SW1W 0AU

Drain London Programme Board Members

Environment Agency
Thames Water
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GREATER LONDON AUTHORITY

FIGURE A-1.2

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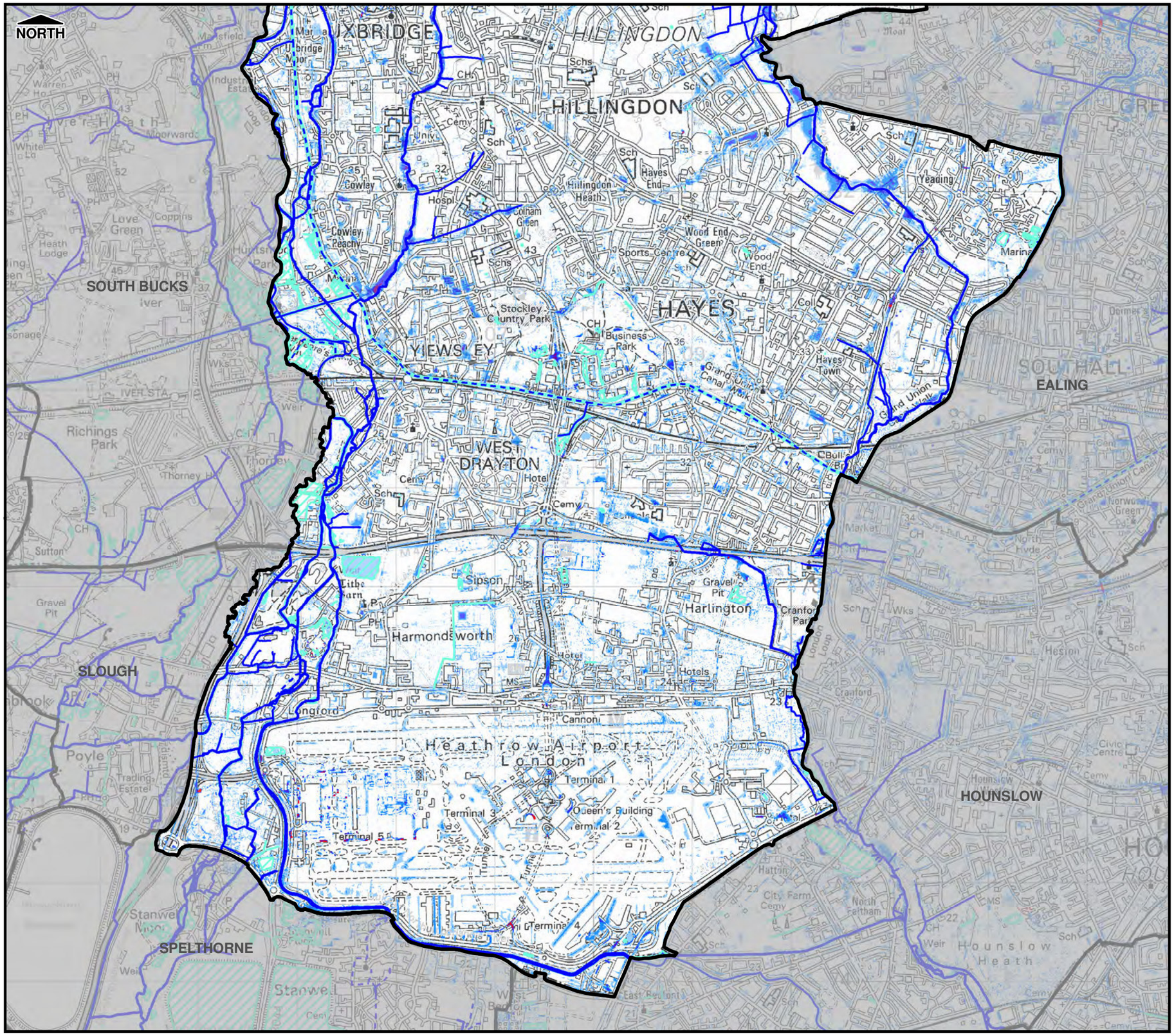

THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies

Flood Depth

- < 0.1m
- 0.1m - 0.25m
- 0.25m - 0.5m
- 0.5m - 1.0m
- 1.0m - 1.5m
- > 1.5m

Notes

1. This map only shows the predicted likelihood of surface water flooding (this includes flooding from sewers, drains, small watercourses and ditches that occurs in heavy rainfall) for defined areas, and due to the coarse nature of the source data used, are not detailed enough to account for precise addresses.
2. Users of this map should refer to section 3.2 of the Surface Water Management Plan for a complete description of limitations and accuracy of the flood/hazard extents shown.

London Borough of Hillingdon

HILLINGDON LONDON

Preliminary Flood Risk Assessment

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Scale at A3	Date	Drawn by	Approved by
1:40,000	06/04/2011	R.MOORE	P.HLINOVSKY

Surface Water Depth (m)
1 in 100 plus climate change Chance of rainfall event occurring in any given year (1% AEP + CC)

Consultants

CAPITA SYMONDS
Scott Wilson
Flood Risk Management

Capita Symonds
Level Seven,
52 Grosvenor Gardens,
Belgravia,
London
SW1W 0AU

Drain London Programme Board Members

Environment Agency
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FIGURE B-3.2

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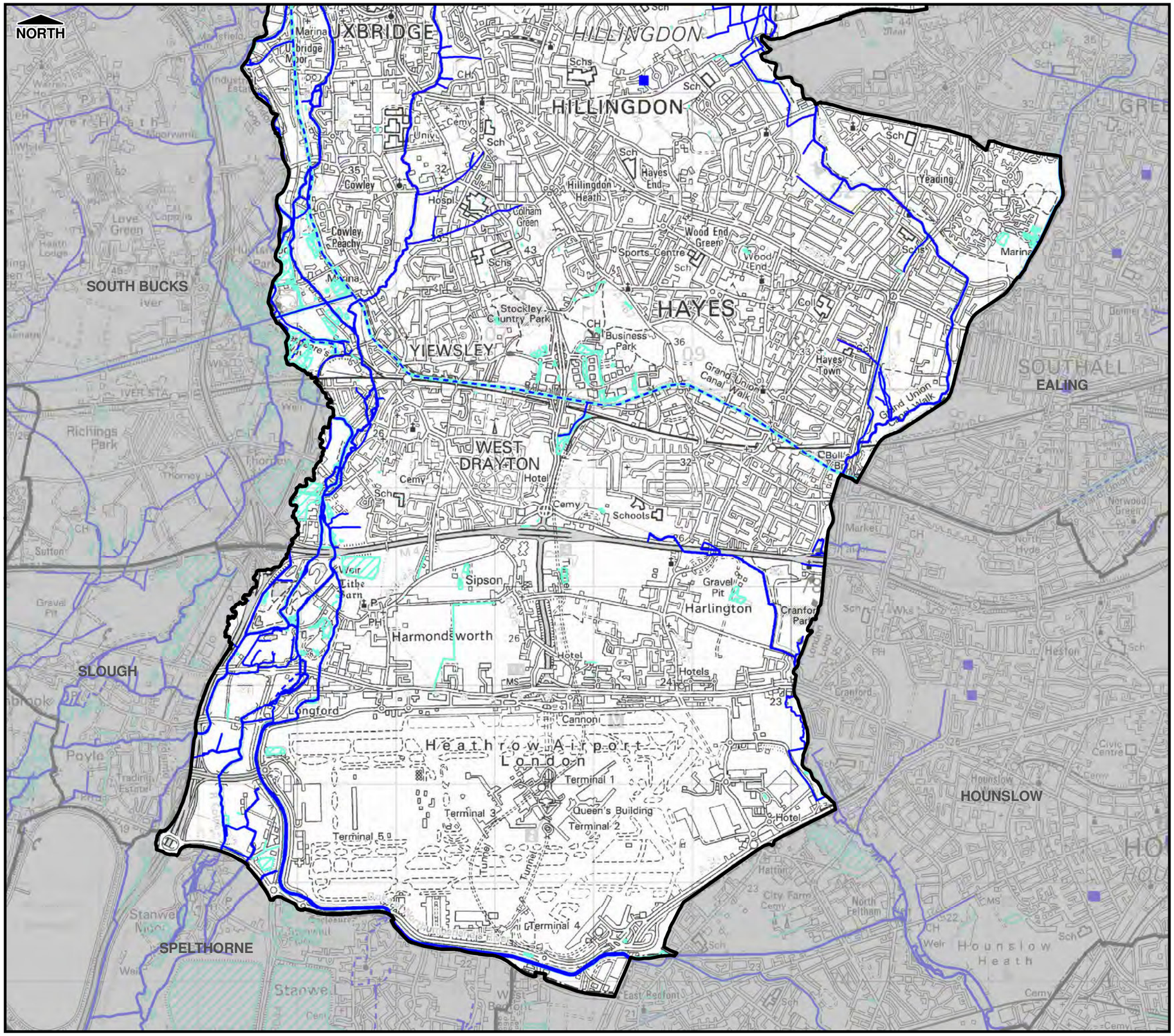

0 0.25 0.5 1 1.5 2 Kilometres

THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies
- Groundwater Flood Incident (EA Records)
- Ground Water Flood Outline

Notes

London Borough of Hillingdon

HILLINGDON LONDON

Preliminary Flood Risk Assessment

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Scale at A3	Date	Drawn by	Approved by
1:40,000	06/04/2011	R.MOORE	P.HLINOVSKY

Summary Map of Past Floods - Ground Water Incidents

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SW1W 0AU

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FIGURE A-3.2

Filepath: L:\Environment\zwet\CS046913_DrainLondon_Tier2\Group1\ARC\mxds\PFRA\GP1_Hillingdon_FigA-3.2_GWIncidents.mxd