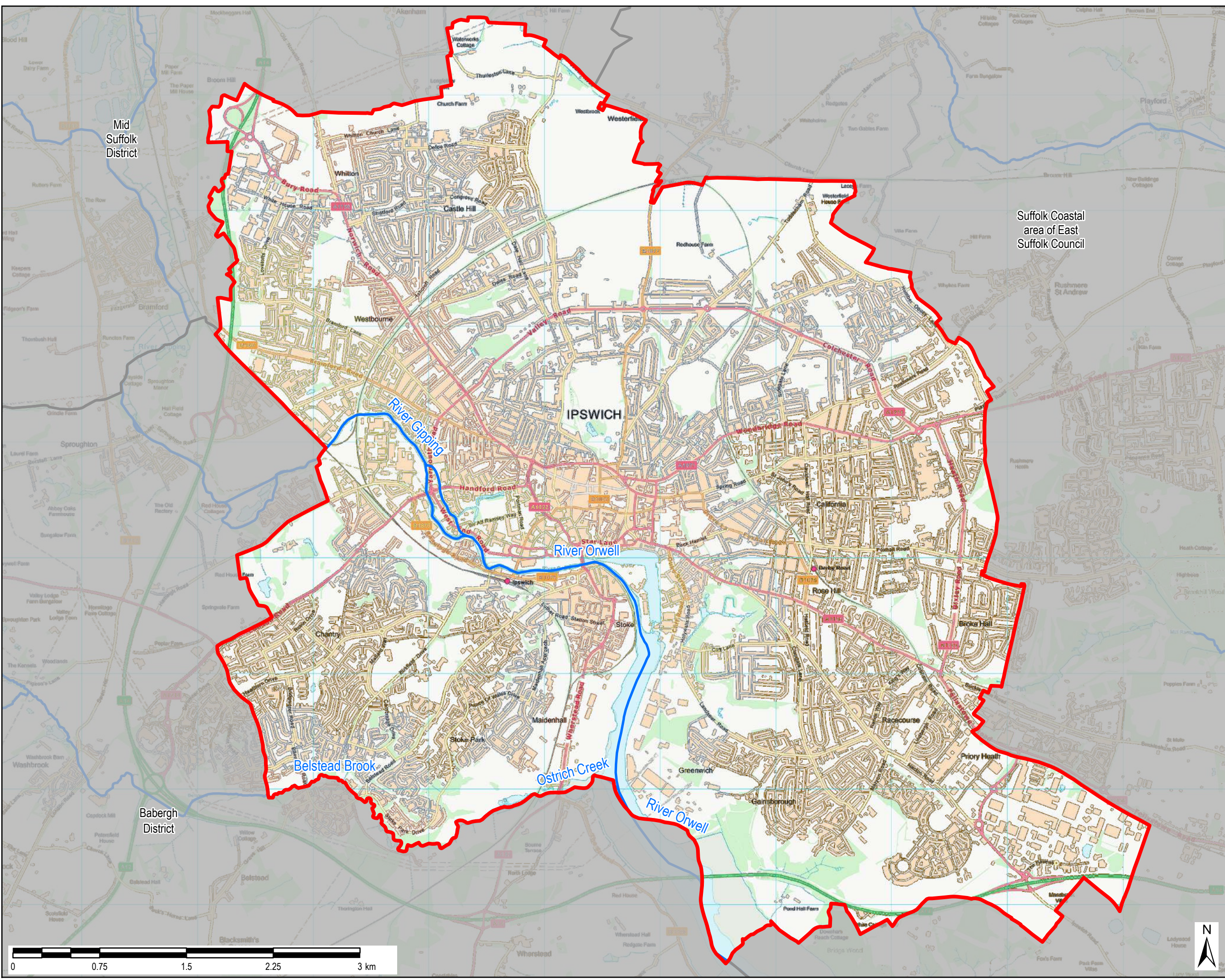


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LEGEND

- Borough Boundary
- Surrounding Boroughs
- Main Rivers

Bedrock

- Lambeth Group
- Neogene To Quaternary Rocks
- Thames Group
- White Chalk Subgroup

Notes

1. Bedrock geology (formerly known as 'solid' geology by BGS) is the term used for the main mass of rocks forming the earth and is present everywhere, where exposed at the surface, or concealed beneath superficial deposits or water.
2. The data shown is the BGS Bedrock Geology data.
3. Further information on Bedrock Geology can be found within Section 2.3 of the Level 1 SFRA report

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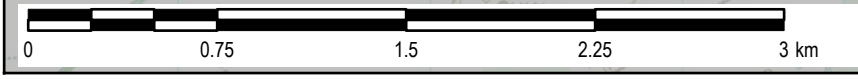
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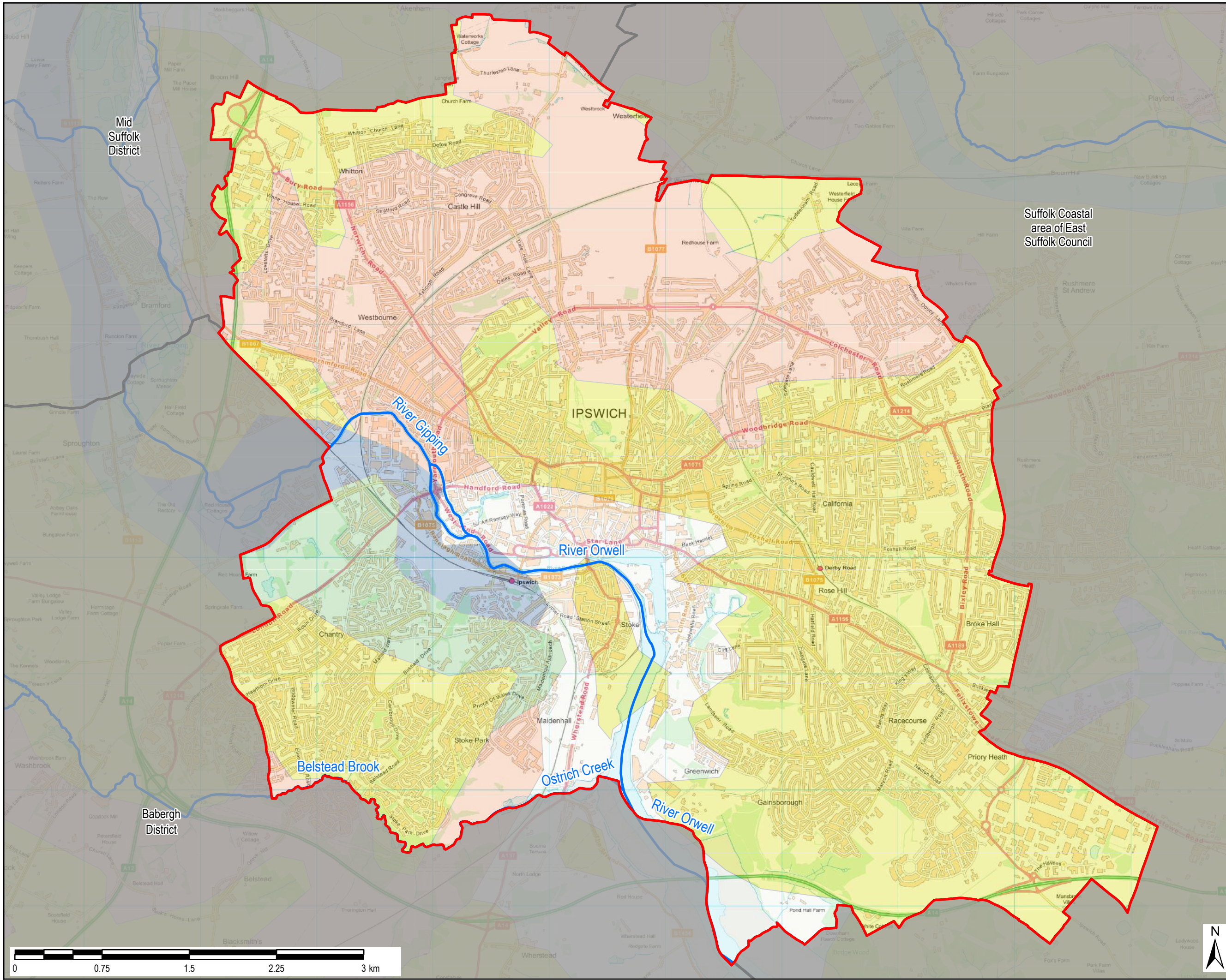
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LEGEND

- Borough Boundary
- Main Rivers
- Superficial Deposits**
- Alluvium
- Crag Group
- Glacial Sand and Gravel
- River Terrace Deposits
- Till
- Surrounding Districts

Notes

1. Superficial deposits (formerly known as 'drift' by BGS) are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 2.6 million years from the present. They rest on older deposits or rocks referred to as bedrock.
2. The data shown is the BGS Superficial Deposits Geology data.
3. Further information on Superficial Deposits Geology can be found within Section 2.3 of the Level 1 SFRA report.

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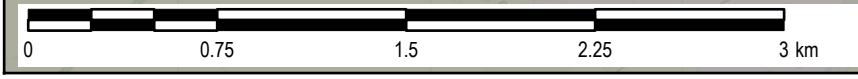
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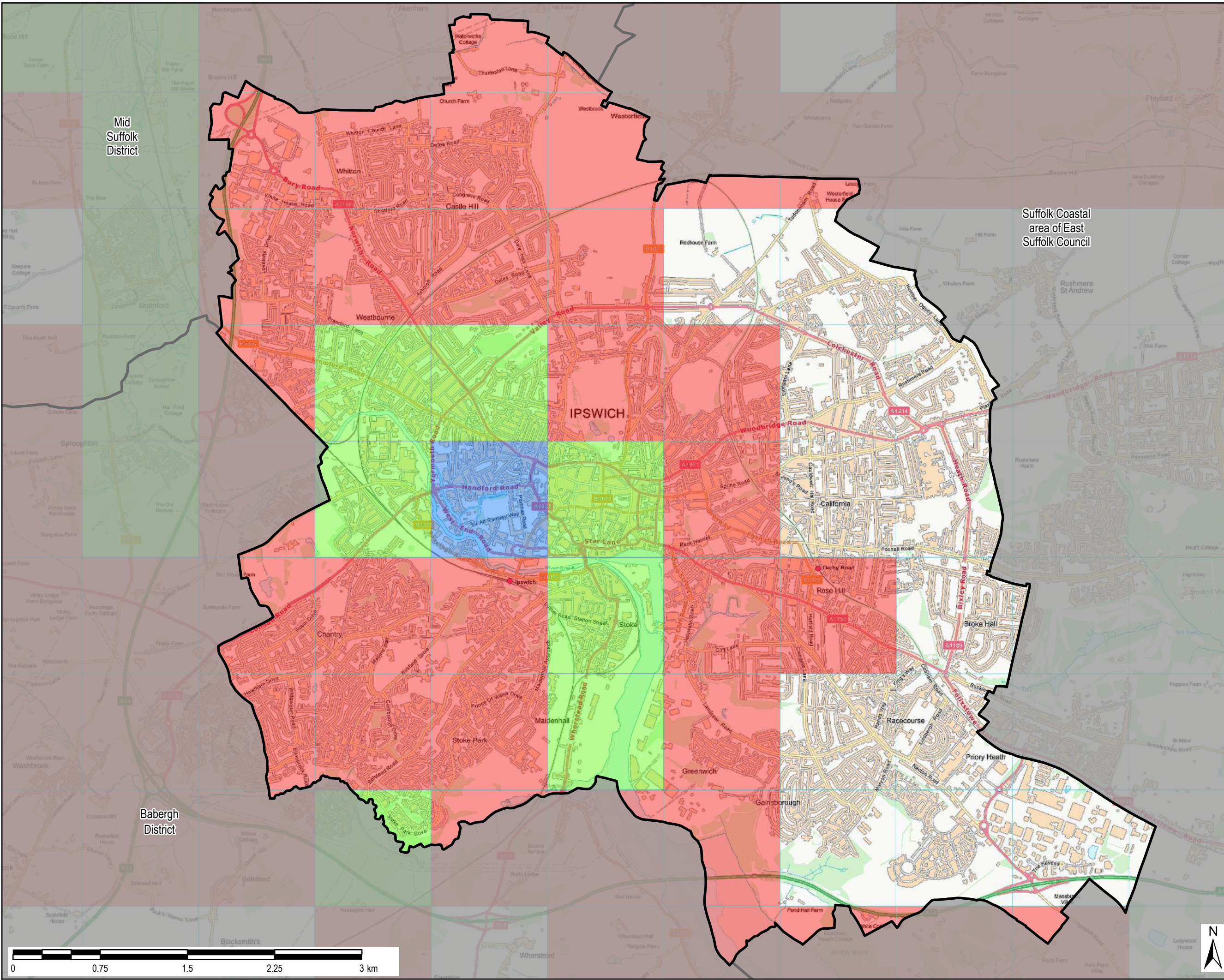
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LEGEND

- Borough Boundary
- Surrounding Districts

Proportion of each 1km grid square where geological and hydrogeological conditions show that groundwater flooding could occur

- < 25%
- >= 25% < 50%
- >= 50% < 75%

Not considered to be at risk of Groundwater flooding

- Notes
1. Areas Susceptible to Groundwater Flooding (ASiGWF) is a strategic scale map showing where groundwater flooding could occur on a 1km square grid. It shows the proportion of each 1km square where geological and hydrogeological conditions show that groundwater flooding could occur. The susceptible areas are represented by one of four categories showing the proportion of each 1km square that is susceptible to groundwater emergence. It does not show the likelihood of groundwater flooding occurring.
 2. The absence of values for any grid square means that no part of that square is identified as being susceptible to groundwater emergence.
 3. The map identifies areas where further investigation is needed to assess whether groundwater flooding may affect property or infrastructure.
 4. This data shown is the Environment Agency dataset 'Areas Susceptible to Groundwater Flooding'.

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AREAS SUSCEPTIBLE TO GROUNDWATER FLOODING

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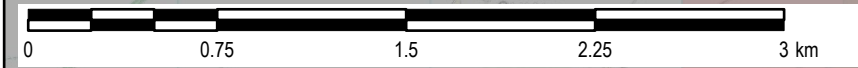
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LEGEND

-  Borough Boundary
-  Main Rivers
-  Risk of flooding from Reservoirs

Notes

- In England and Wales, the Environment Agency has a regulatory role for reservoir safety, under the Reservoirs Act 1975. It ensures that reservoirs are regularly inspected and essential safety works are carried out. The Environment Agency has the power to prosecute reservoir owners for failure to carry out essential safety works, and where emergency works are required, it has the power to carry out these works itself.
- The outline reservoir flood maps do not give any information about the likelihood of reservoir failure, the depth and speed of the flood waters, or the length of time it would take for the flood waters to reach any location.

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RISK OF FLOODING FROM RESERVOIRS

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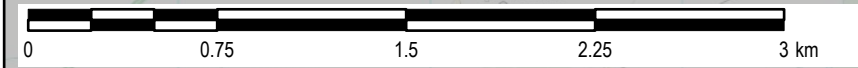
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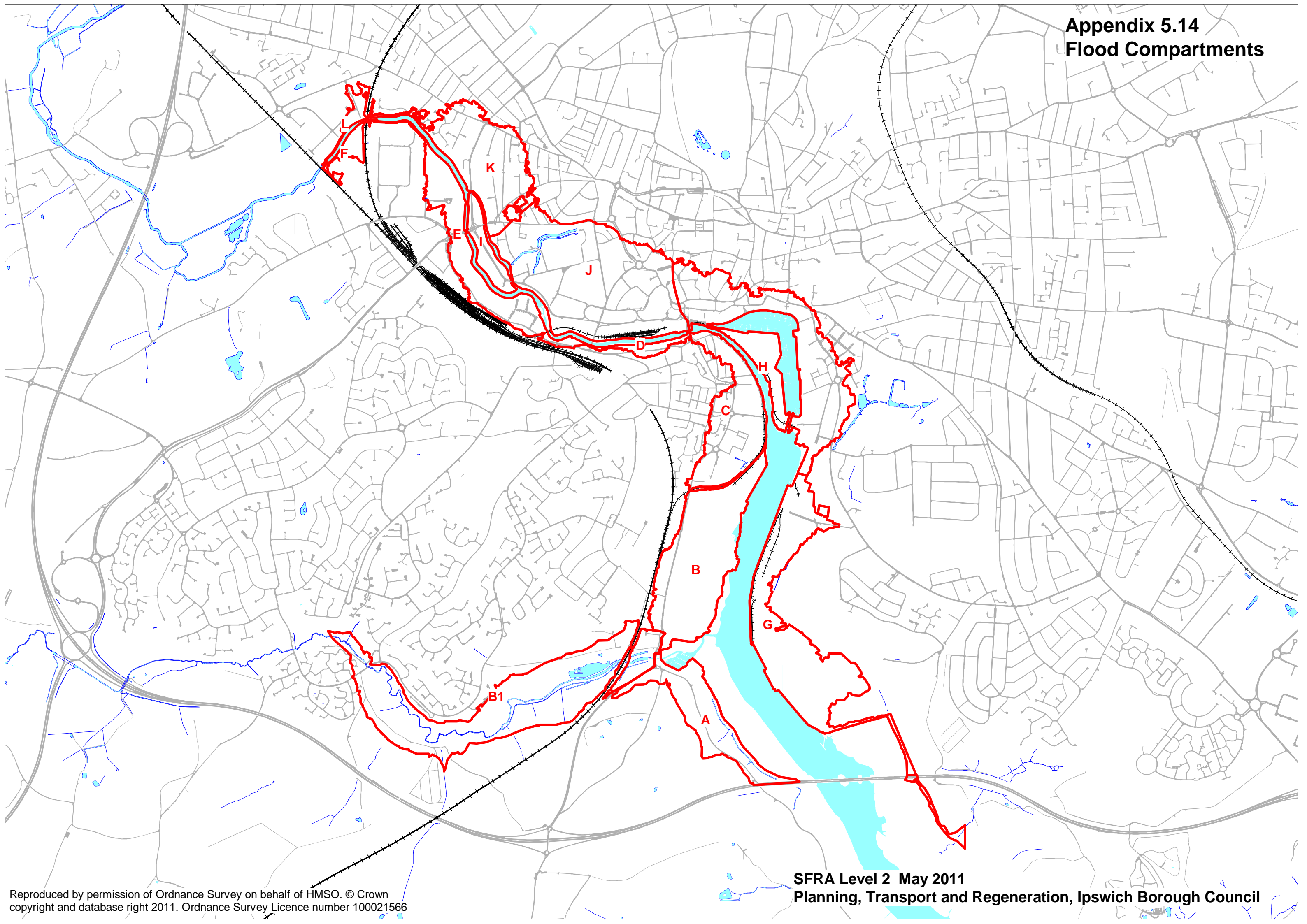
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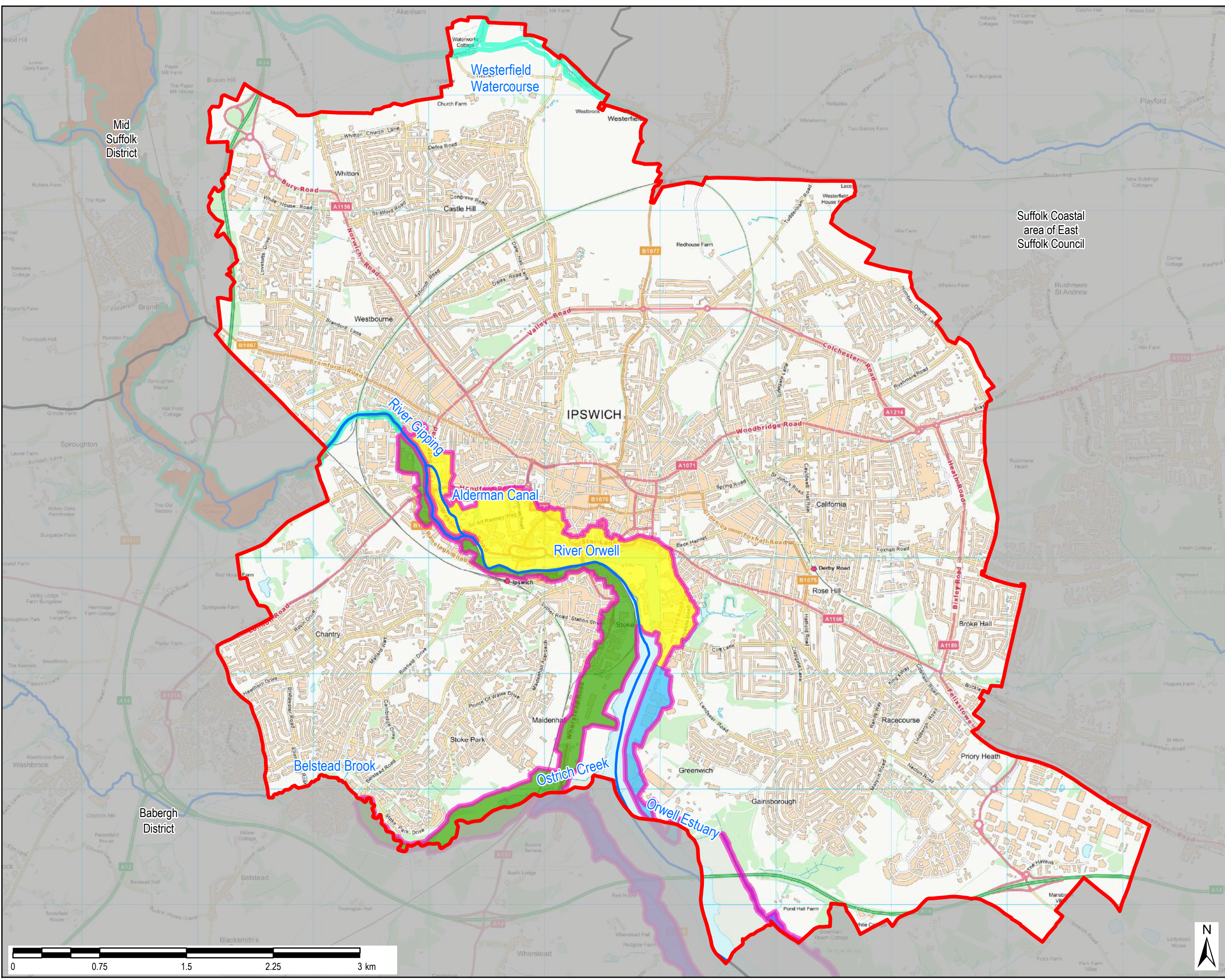
**Appendix 5.14
Flood Compartments**



SFRA Level 2 May 2011

Planning, Transport and Regeneration, Ipswich Borough Council

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LEGEND

- Borough Boundary
- Surrounding Districts
- Main Rivers

Flood Warning Area

- The River Gipping from Needham Market to London Road Bridge, Ipswich
- The tidal River Orwell at Cliff Quay industrial area in Ipswich
- The tidal River Orwell at Ipswich wet dock and waterfront, to upstream of Stoke Bridge
- The tidal River Orwell estuary from Felixstowe to Bourne Bridge in Ipswich
- The tidal River Orwell from Bourne Park to Hadleigh Road Industrial Estate

Flood Alert Areas

- The River Gipping, from downstream of Needham Market, to upstream of London Road Bridge, Ipswich
- The Suffolk and Essex coast from Felixstowe to Clacton including Orwell and Stour estuaries

Notes

1. 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.
2. 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.
3. The Environment Agency issue flood alerts when flooding is possible. Flood alerts cover larger areas than flood warnings and are issued more frequently. Upon receipt of a flood warning, occupants should be prepared for flooding and to take action.
4. If a flood alert for groundwater is available this does not mean that your property is definitely at risk. It is very difficult to predict the exact location of flooding from groundwater as it is often related to local geology. To help people, the Environment Agency provide flood alerts for large areas that could be affected if groundwater levels were high.
5. The River Gipping from Needham Market to London Road Bridge, Ipswich is predominantly upstream of the study area however a small part of the Flood Warning Area extends into the Borough

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FLOOD WARNING AREAS AND FLOOD ALERT AREAS

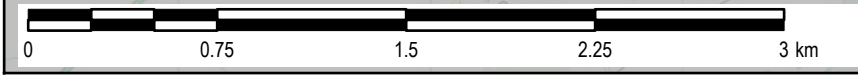
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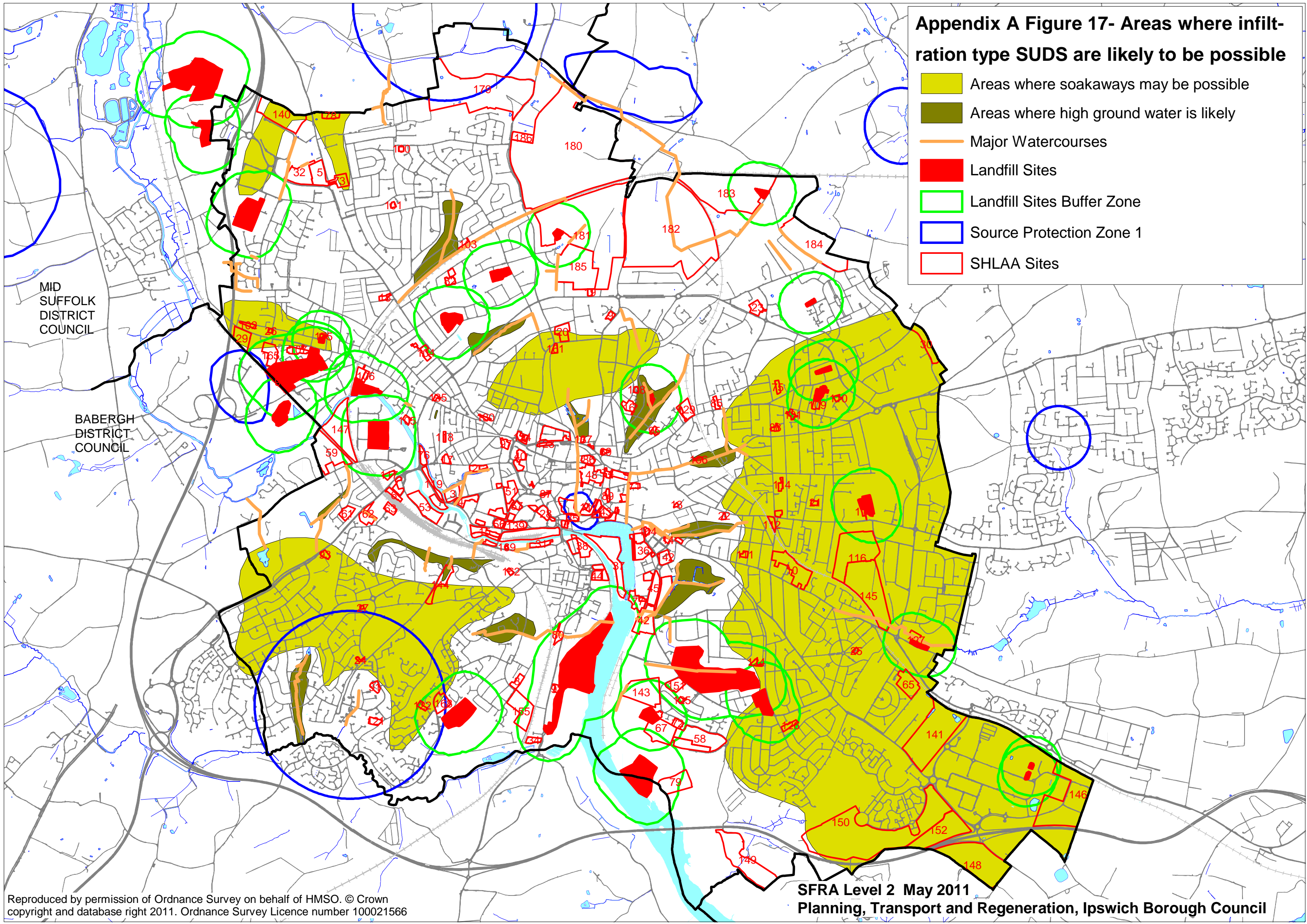
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Appendix A Figure 17- Areas where infiltration type SUDS are likely to be possible






- Areas where soakaways may be possible
- Areas where high ground water is likely
- Major Watercourses
- Landfill Sites
- Landfill Sites Buffer Zone
- Source Protection Zone 1
- SHLAA Sites

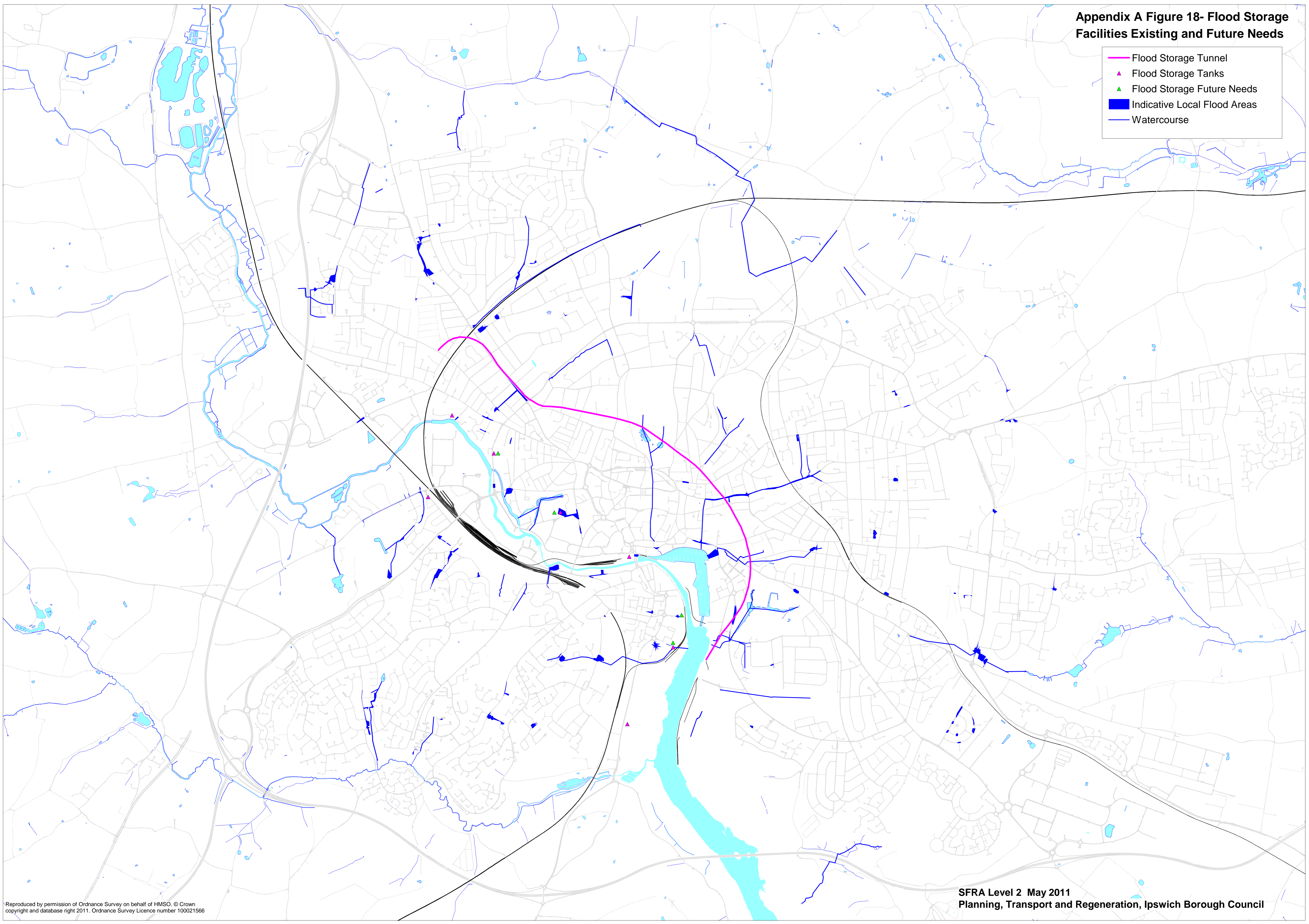


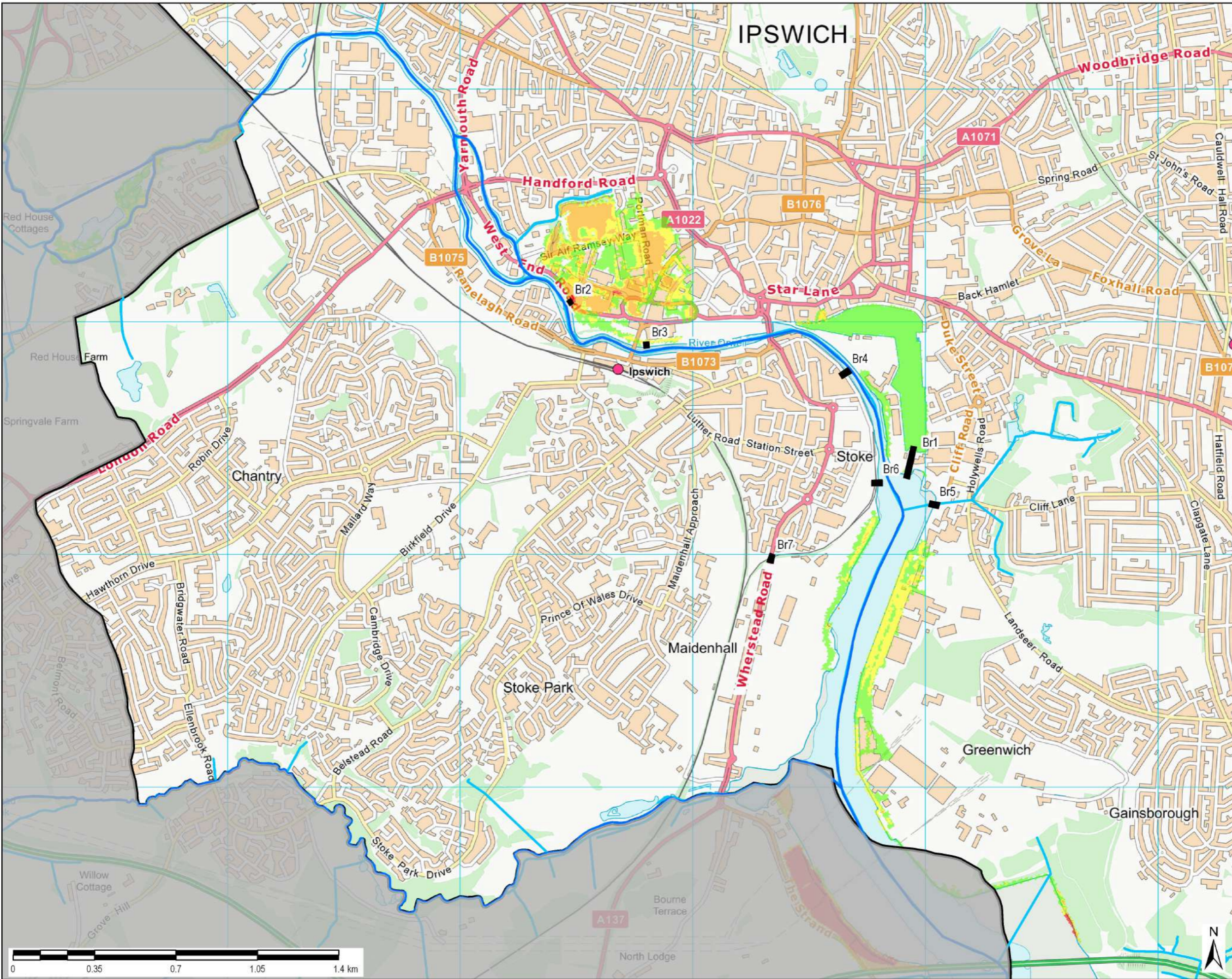
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Appendix A Figure 18- Flood Storage Facilities Existing and Future Needs

-  Flood Storage Tunnel
-  Flood Storage Tanks
-  Flood Storage Future Needs
-  Indicative Local Flood Areas
-  Watercourse





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LEGEND

- Borough Boundary
- Main Rivers
- Ordinary Watercourses
- Breach Locations

Hazard rating

- Caution
- Danger to some
- Danger to most
- Danger to all

Notes

1. This map shows the modelled flood hazard from the IPO2 Barrier Open: BR02 Breach at West End Road scenario.
2. BR02 scenario includes: Ipswich FDMS including barrier, pumping station for fluvial flow, repairs to New Cut u/s defences, Wherstead Rd floodgate and Tesco development with enhanced defences (see note 4 below). Barrier open.
3. The breach modelling was updated in 2011 as part of the original SFRA (from EA breach modelling created in 2009) and was sensitivity tested by the Environment Agency in 2019 for inclusion within this updated SFRA.
4. Modelling shown includes the raising of flood defences (relative to former SHLAA site 47) to 6m AOD. This defence raising has not been completed, therefore, the local representation of flood hazard and depth may be slightly altered. Development proposals local to this site should further develop breach modelling in consultation with the EA, IBC & LLFA to inform development layout

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 FLOOD HAZARD 0.5% FROM BREACH BR02 AT 2015 (PRESENT DAY)

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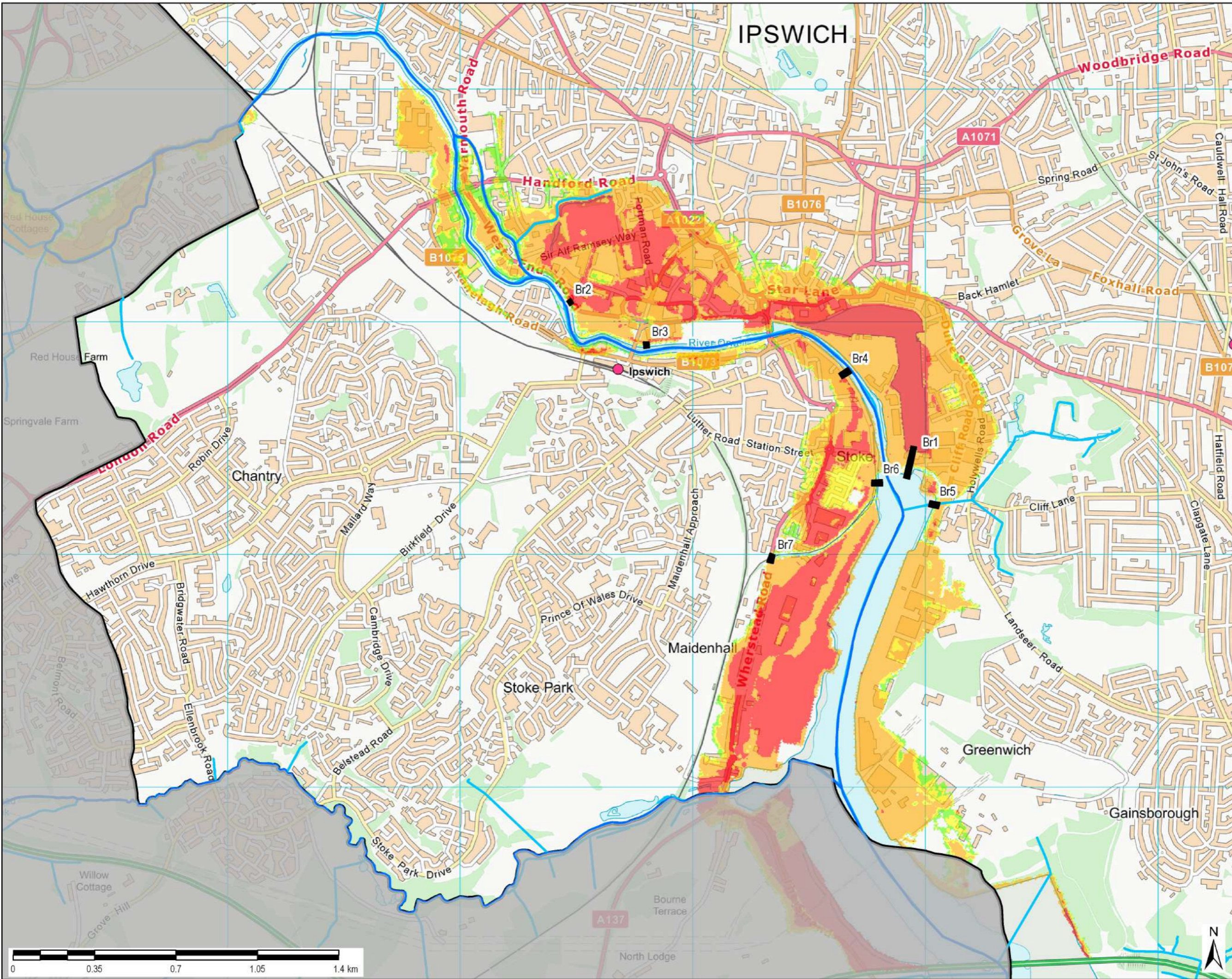
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LEGEND

- Borough Boundary
- Main Rivers
- Ordinary Watercourses
- Breach Locations

Hazard rating

- Caution
- Danger to some
- Danger to most
- Danger to all

Notes

- This map shows the modelled flood hazard from the IPO2 Barrier Open: BR02 Breach at West End Road scenario.
- BR02 scenario includes: Ipswich FDMS including barrier, pumping station for fluvial flow, repairs to New Cut u/s defences, Wherstead Rd floodgate and Tesco development with enhanced defences (see note 4 below). Barrier open.
- The breach modelling was updated in 2011 as part of the original SFRA (from EA breach modelling created in 2009) and was sensitivity tested by the Environment Agency in 2019 for inclusion within this updated SFRA.
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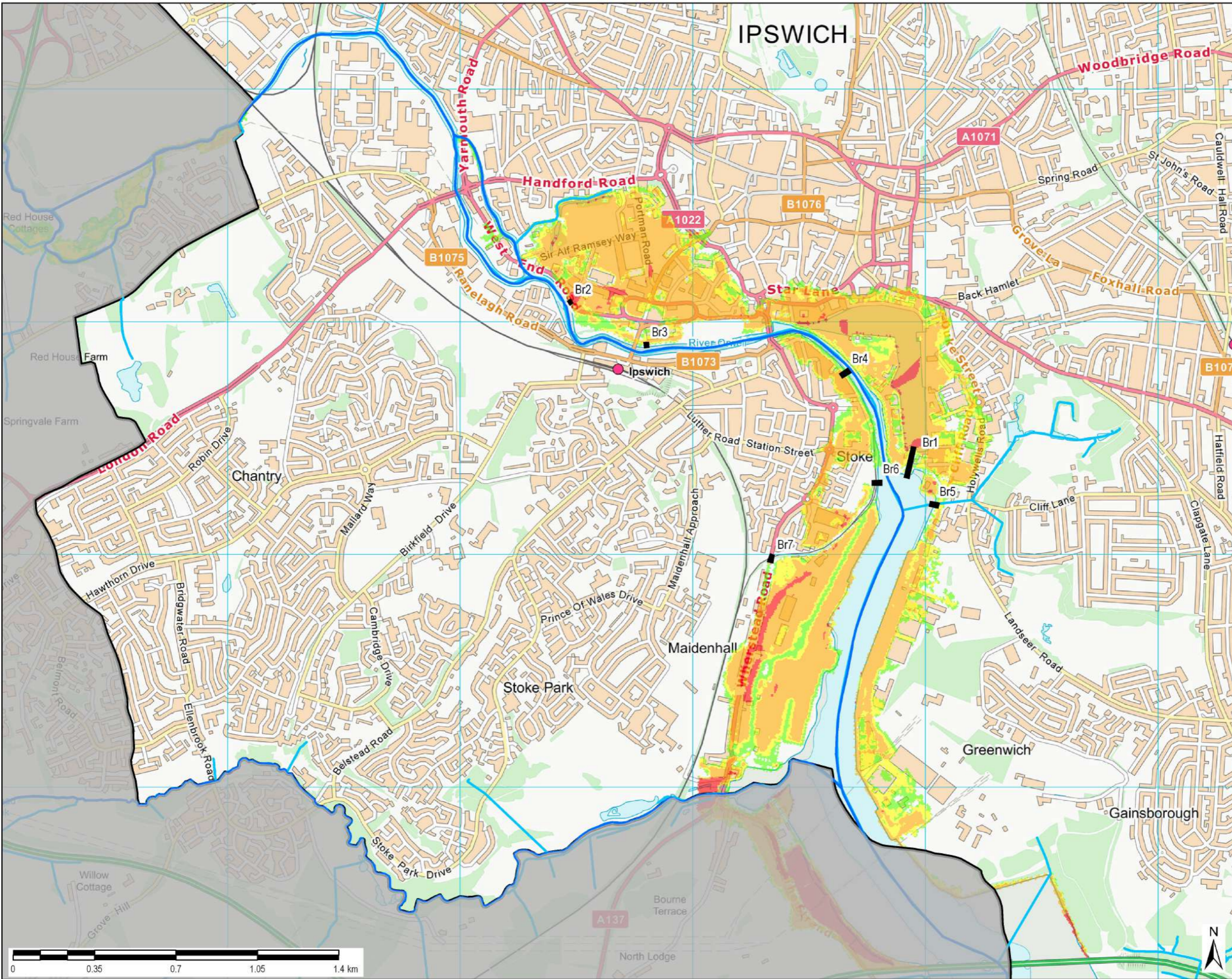
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LEGEND

- Borough Boundary
- Main Rivers
- Ordinary Watercourses
- Breach Locations

Hazard rating

- Caution
- Danger to some
- Danger to most
- Danger to all

Notes

- This map shows the modelled flood hazard from the IPO2 Barrier Open: BR02 Breach at West End Road scenario.
- BR02 scenario includes: Ipswich FDMS including barrier, pumping station for fluvial flow, repairs to New Cut u/s defences, Wherstead Rd floodgate and Tesco development with enhanced defences (see note 4 below). Barrier open.
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