

**WARDS AFFECTED:** Aspley, Bilborough and Leen Valley

**WEST AREA COMMITTEE  
14 NOVEMBER 2007**

**REPORT OF DIRECTOR OF PLANNING AND TRANSPORT STRATEGY**

**RIVER LEEN AND DAY BROOK STRATEGIC FLOOD RISK ASSESSMENT**

**1 SUMMARY**

This report is to inform West Area Committee of the findings of the River Leen and Day Brook Strategic Flood Risk Assessment (SFRA).

**2 RECOMMENDATION**

It is recommended that West Area Committee note this report and that the Environment Agency is undertaking consultation on the findings.

**3 BACKGROUND**

3.1 The River Leen enters Nottingham in Bulwell and flows due south before entering the River Trent at Queens Drive. In a 1 in 100 year flood event, the River Leen and Day Brook are expected to overtop in several places flooding many hectares of inner city Nottingham. Based upon 2005 data some 564 properties and many key transportation routes would be affected. The extent of this flooding in the West Area Committee area is shown on Plans 1 and 2.

3.2 The Environment Agency, City Council and others jointly commissioned a SFRA to re-investigate water flows along the River Leen and to more accurately predict how the river acts during flood events. The SFRA provides a map-based planning tool that can be used to identify areas at food risk and so inform:-

- Emergency planning procedures
- Flood infrastructure works
- Planning decisions
- Strategic level flood risk solutions
- Brownfield land reclamation / redevelopment proposals

3.3 The extent of anticipated River Leen flooding in the West Area Committee area using SFRA data is shown on Plans 3 and 4 – n.b. Plan 3 and 4 also shows outlines for 1 in 100 year + climate change and 1 in 1000 year events. These three return periods are chosen as they are key planning indicators.

## **4 SUMMARY OF KEY FINDINGS**

- 4.1 As a result of the more accurate ground level data and flood modeling techniques used, the flood outlines obtained from the SFRA differ significantly from those derived from 2005 data. Key findings relating to the West Area Committee area are:-
- Former PZ Cussons soap factory on Wilkinson Street is expected to flood more extensively than previously thought
  - In a 1:100 year event, floodwater crossing the Cussons site falls onto the railway line and flows south along the track bed. The railway acts as a secondary channel conveying flood water until it falls back into the river north of Derby Road
  - The extent of flooding from either the river channel or railway line in a 1 in 100 year event is much reduced compared to the 2005 outlines e.g. Wades Ave south of Cussons, Poulter Close south of Bobbers Mill and the Ainsley estate.
  - In a 1 in 100 year event, Alfreton Road is not now expected to be blocked by floodwater, although Ilkeston Road remains at threat.
  - Redevelopment of key brownfield sites would reduce the risk of flooding to exiting communities.
- 4.2 The study investigated the effects of flooding at PZ Cussons and the railway line in more depth. Whilst the findings would be subject to further detailed assessment, the SFRA concluded that redevelopment of the former soap factory would actually decrease the threat of flooding west of the railway line and elsewhere downstream. In short, the site's developer would be required to undertake certain works in order to protect new properties and a by product of these would be to protect existing communities too.
- 4.3 The City's sewer network captures much of the rainwater falling on Bilborough and Leen Valley that, under normal circumstances would drain slowly into the River Leen or go elsewhere. This water is carried directly into the River Leen. The effect is to artificially enlarge the river's catchment and to discharge water into it more quickly than would naturally be the case. Major development / redevelopment proposals in Bilborough and Leen Valley whilst not directly affected by the River Leen's floodplain will therefore have to consider flood issues so not as to heighten risk downstream.
- 4.4 The Environment Agency has begun consultation on these findings and would welcome comments, see 9.1 below.

## **5 FINANCIAL IMPLICATIONS**

None

## **6 LEGAL IMPLICATIONS**

None

**7 EQUALITY AND DIVERSITY IMPLICATIONS**

The SFRA will inform decisions about key regeneration sites in the River Leen corridor, many of which are in disadvantaged communities.

**8 RISK MANAGEMENT ISSUES**

None

**9 CONSULTATIONS**

The Environment Agency is undertaking public consultation on the River Leen SFRA. Reference copies are available for viewing at their Trentside Offices, in local libraries or Environment and Regeneration, Exchange Buildings. The Agency will in addition be holding 'flood surgeries' at locations along the River Leen in early 2008.

**10 CRIME AND DISORDER ACT IMPLICATIONS**

None

**11 VALUE FOR MONEY**

None

**12 LIST OF BACKGROUND PAPERS OTHER THAN PUBLISHED WORKS OR THOSE DISCLOSING CONFIDENTIAL OR EXEMPT INFORMATION**

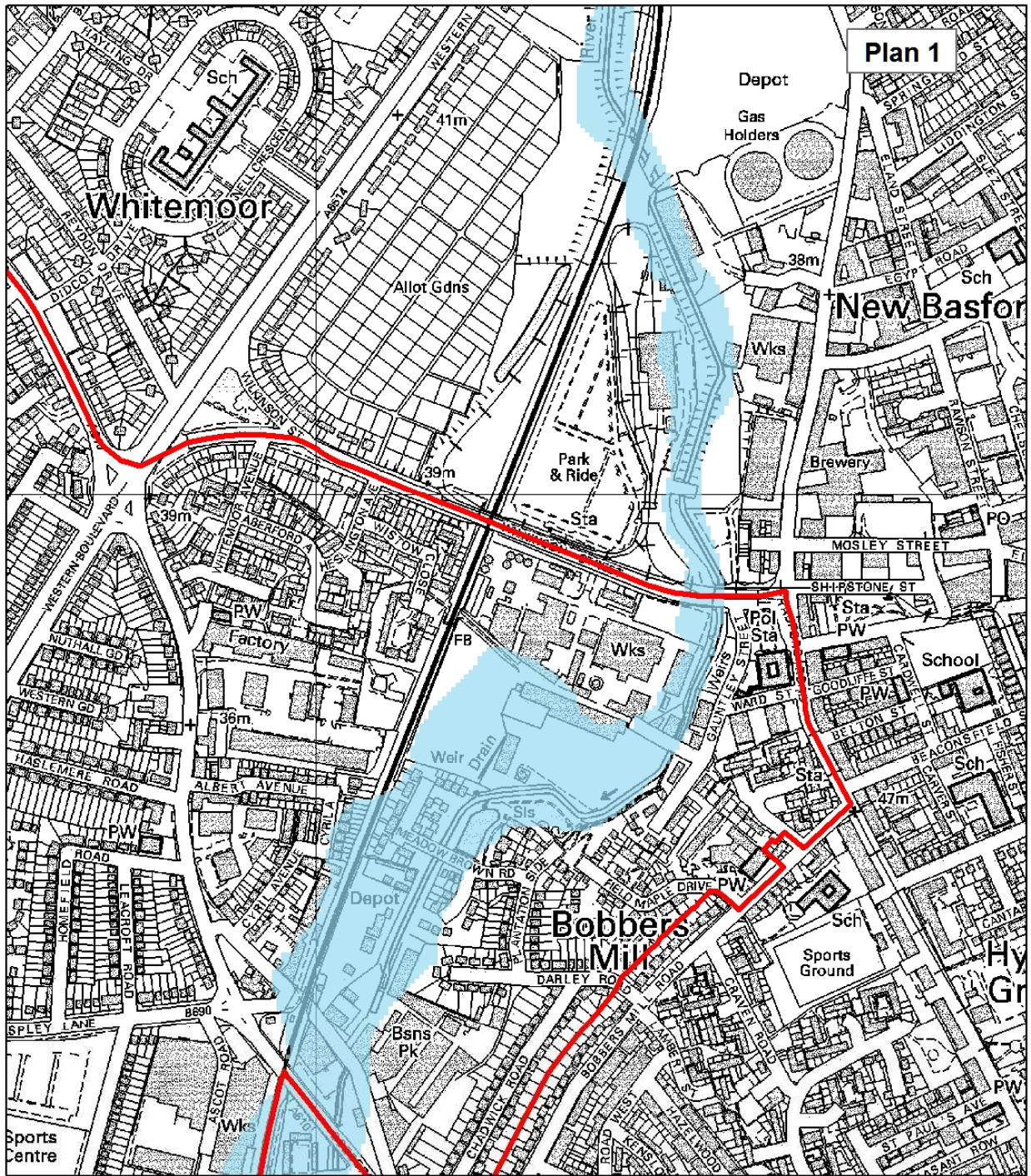
None

**13 PUBLISHED DOCUMENTS REFERRED TO IN COMPILING THIS REPORT**

River Leen and Day Brook Strategic Flood Risk Assessment July 2007

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Title: **WEST AREA COMMITTEE - FLOOD OUTLINES 2005 DATA NORTH SECTION**

Key

- West Area Committee Boundary
- Flood Map - 1 in 100 Year Flood 2005 Data

Map produced on:  
22/10/07

Map produced by:  
AB  
GIS Team



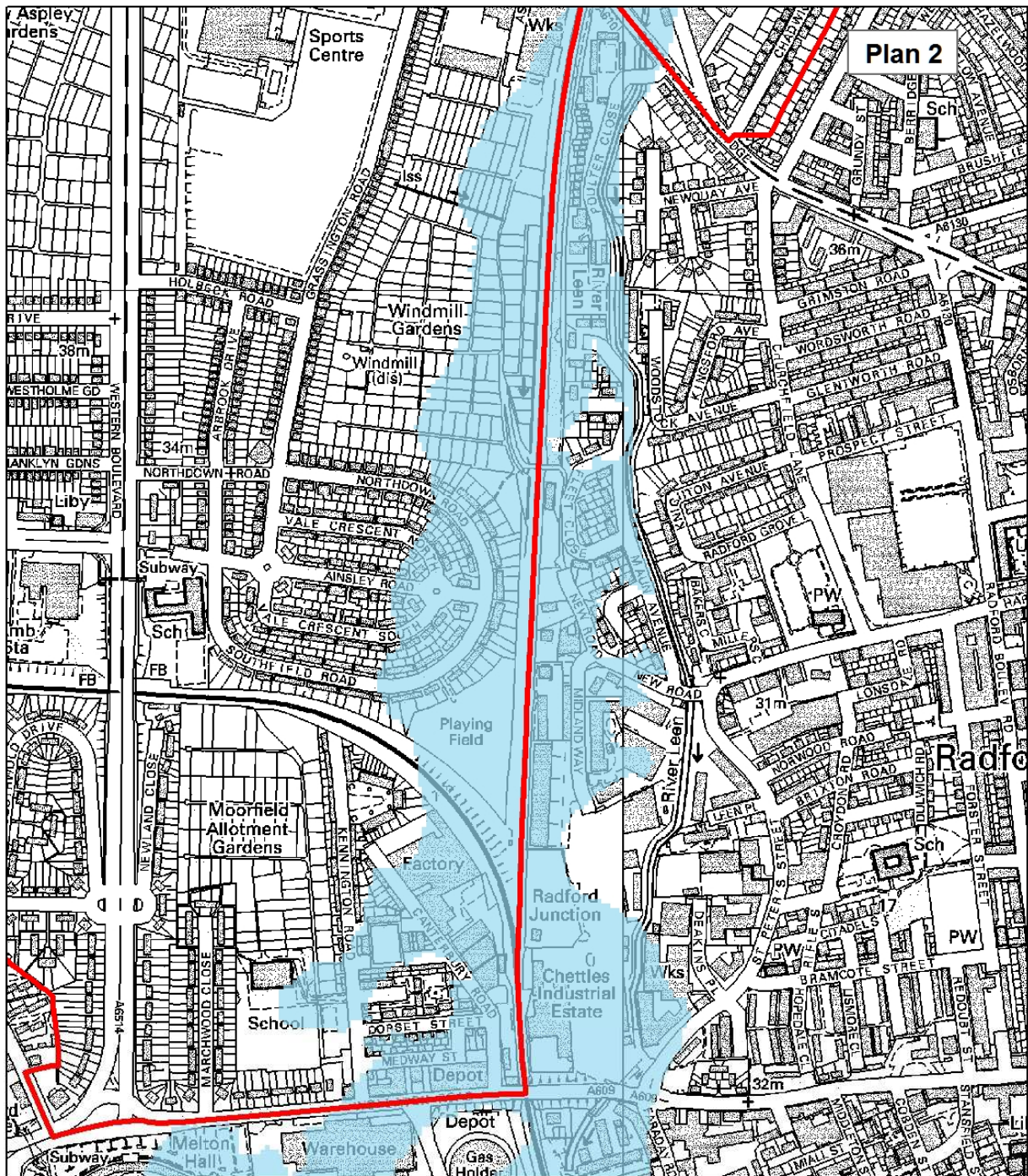
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**Title: WEST AREA COMMITTEE - FLOOD OULTINES 2005 DATA SOUTH SECTION**

**Key**

- West Area Committee Boundary
- Flood Map - 1 in 100 Year Flood 2005 Data

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22/10/07

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GIS Team

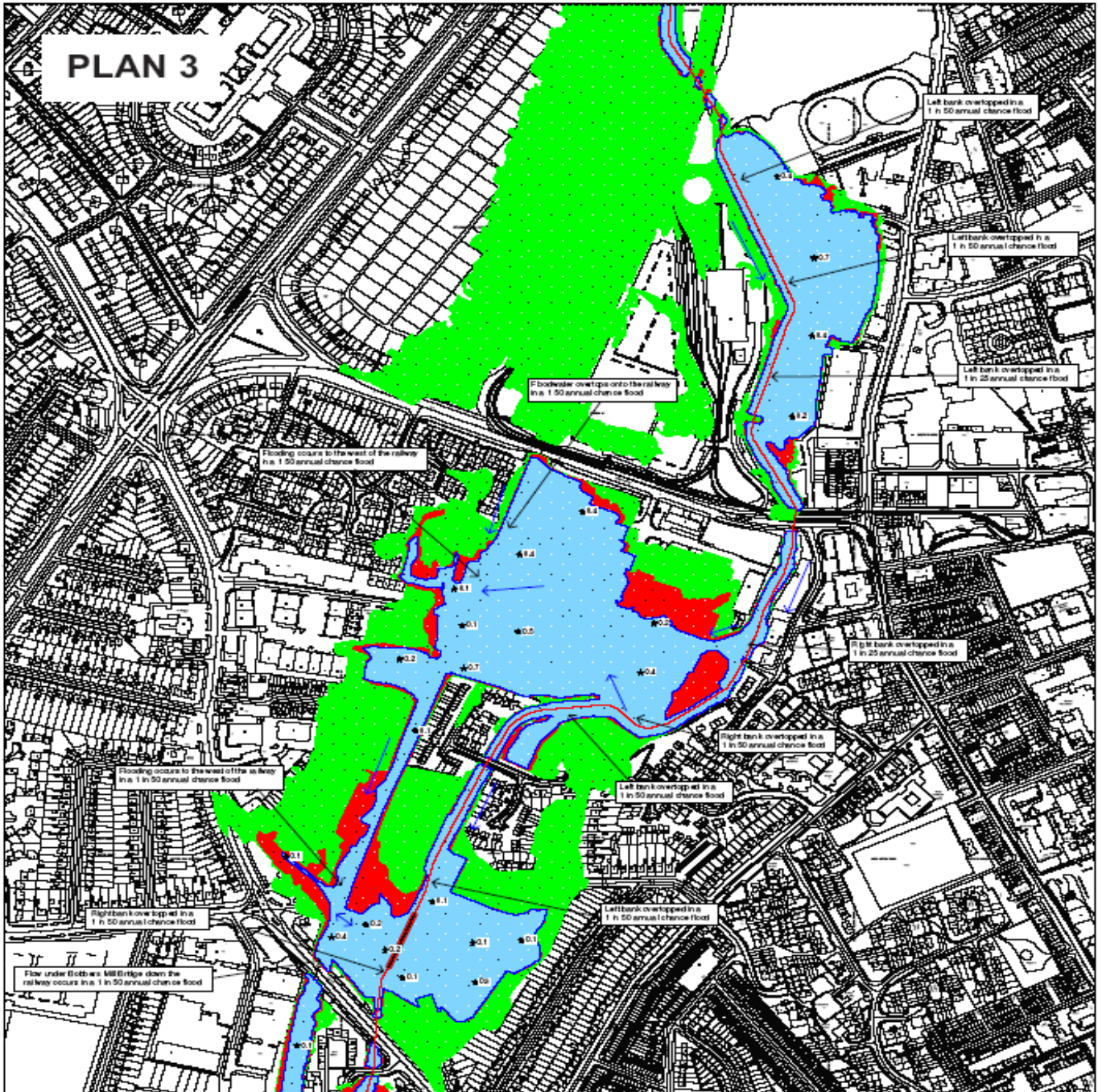


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Title: WEST AREA COMMITTEE - FLOOD OUTLINES SFRA NORTH SECTION

Key

- 1 in 100 annual chance flood outline
- 1 in 100 + 25% annual chance flood outline
- 1 in 1000 annual chance flood outline
- River Lane and Dyke
- Culverted watercourse
- Direction of flow
- A.01  
Typical depth (m) during 1 in 100 annual chance flood

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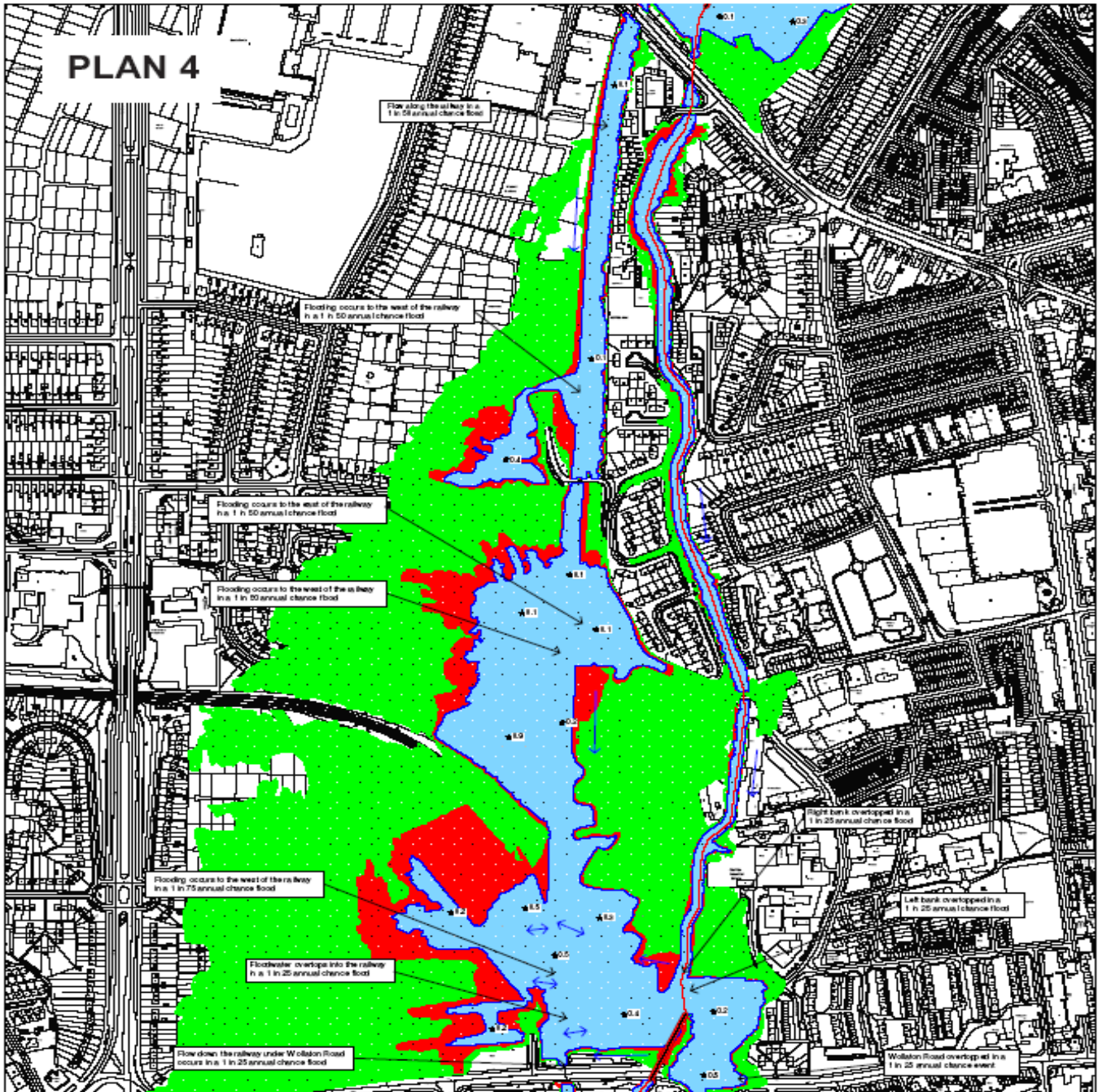
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<b>Title: WEST AREA COMMITTEE - FLOOD OUTLINES SFRA SOUTH SECTION</b>		
<p><b>Key</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> 1 in 100 annual chance flood outline</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> 1 in 100 + 20% annual chance flood outline</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> 1 in 1000 annual chance flood outline</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid black; margin-right: 5px;"></span> River bank and Day brook</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid black; margin-right: 5px;"></span> Culverted watercourses</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid black; margin-right: 5px;"></span> Direction of flow</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid black; margin-right: 5px;"></span> Typical depth (m) during 1 in 100 annual chance flood</li> </ul>	<p>Map produced on: 22/10/07</p> <p>Map produced by: AB GIS Team</p>	 <p><b>Nottingham City Council</b></p> <p>Environment and Regeneration</p> <p>N Not to Scale</p>
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