Appendix B: Depth Mapping

Residual Risk – Composite of Breach Results and Overtopping
(Composite Results for all breaches; ROC01, ROC02, ROC03, ROC04, ROC05, ROC06, ROC07)

B1 (View 1-3) Maximum Flood Depth from Breaches & Overtopping (1 in 200yr event, 2010)
B2 (View 1-3) Maximum Flood Depth from Breaches & Overtopping (1 in 1000yr event, 2010)
B3 (View 1-3) Maximum Flood Depth from Breaches & Overtopping (1 in 200yr event, 2110 incl. CC)
B4 (View 1-3) Maximum Flood Depth from Breaches & Overtopping (1 in 1000yr event, 2110 incl. CC)

Potential Impact of Overtopping of Defences

B5 (View 1-3) Maximum Flood Depth from Overtopping (1 in 200yr event, 2110 incl. CC)
B6 (View 1-3) Maximum Flood Depth from Overtopping (1 in 1000yr event, 2110 incl. CC)
FLOODING RESULTING FROM OVERTOPPING OF EXISTING DEFENCES

KEY

<table>
<thead>
<tr>
<th>Flood Cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Flood Depth [m]</td>
</tr>
<tr>
<td>0.5m to 1.0m</td>
</tr>
<tr>
<td>1.0m to 2.0m</td>
</tr>
<tr>
<td>2.0m to 3.0m</td>
</tr>
<tr>
<td>3.0m to 5.0m and greater</td>
</tr>
</tbody>
</table>

TECHNICAL NOTE

Hydraulic modelling has been undertaken using DHI-HEC-RAS software (WINHEC-RAS win. 3.2.1) to assess the effect of overtopping of defences.

The model considers 24 tides cycles with the peak level occurring on the second peak and two slightly smaller peaks either side.

The model considers the effect of overtopping from a fluvial event resulting from severe rainfall in the catchment.

The maximum flood depth is calculated by subtracting the LiDAR topographic data from the peak water level achieved at each location in the model.

A non-technical description of methodology and assumptions is included in the White Paper Report.

LEADER NOTE

This plan has been produced in accordance with Planning Policy Statement 26: Development and Flood Risk. Because the information is indicative rather than specific, local planning authorities will consider needs specific to the Environment Agency’s Local Flood Risk Management Plan.

FLOODABLE AREAS NOT SHOWN

Land adjacent to watercourses not included within this study, areas classified as flood risk areas in this report are based on assumptions. Land is assumed to flood if water overtops defences or causes overtopping of defences. Areas flooded times that are in flood depths.

PROJECT NOTE

This document has been prepared in accordance with the terms of the Malling Heritage Agreement with the aims and objectives outlined in the heritage agreement. It is intended to address and the Needs of local communities. This Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. This Brussels backers have produced this document for use in the greater area of flood risk. This Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk. The Brussels backers have produced this document for use in the greater area of flood risk.

T.M. - 25/05/2013

THAMES GATEWAY SOUTH ESSEX STRATEGIC FLOOD RISK ASSESSMENT

COMPOSITE MAXIMUM FLOOD DEPTH

FIGURE B-5 (View 2)
COMPOSITE MAXIMUM FLOOD DEPTH
1000YR (2110)

FLOODED BY:

- 100yr flood
- 1000yr flood
- Overtopping

KEY:
- Flood Cells
- Maximum Flood Depth [m]
  - < 0.5 m: Light Green
  - 0.5 m to 1.0 m: Green
  - 1.0 m to 2.0 m: Grey
  - 2.0 m to 3.0 m: Red
  - 3.0 m to 5.0 m and greater: Dark Red

TECHNICAL NOTE:
- The study was undertaken using the DHI software and the Environment Agency's flood risk software.
- The model assumes a 2nd cycle of flooding.
- The maximum flood depth is calculated using the UGB flood hazard model.

A full description of methodology and assumptions is included in the Environment Agency report.

This plan has been produced in accordance with Planning Policy Statement 20: Development and Flood Risk. Because the information is indicative rather than specific, local planning authorities will consider need to conduct the Environment Agency's Flood Risk Assessment (FRA) as part of the planning process.

FLOODABLE AREAS NOT SHOWN:
- Areas adjacent to watercourses not included within this study.
- Areas considered to be affected by floodwaters at the time of flooding are excluded.
- Fixtures, fittings, and structures.
- Areas flooded by breaches in flood defences.

This document has been prepared in accordance with the requirements of the Environment Agency's responsibilities with regard to the Flood and Water Management Act 2010.

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FIGURE B-6 (View 2)