

- Key**
- Borough Boundary
  - Main Rivers
  - Flood Storage Areas
  - Thames Tidal Defences

- Structures**
- Monitoring instrument
  - Bridge
  - Control Gate
  - Inspection Chamber
  - Outfall
  - Pump
  - Ramp
  - Screen
  - Utility Services
  - Weir

- Defences**
- Flood Gate
  - Wall
  - Embankment
  - High Ground
  - Areas Benefitting from Defences

**Cross Road FSA**  
(Not currently in operation and maintained as a FSA)

**Washlands FSA**

**Notes:**  
1) Areas Benefitting from Defences (ABDs) are based on the area that would be flooded from a 0.5% (1 in 200) annual chance tidal event or a 1% (1 in 100) fluvial event.

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**Havering SFRA**  
**Figure 106 -**  
**Existing Defences**  
**and Areas Benefitting**

DRG No: **B08600D2-L-106**

Not to Scale      21/11/2016

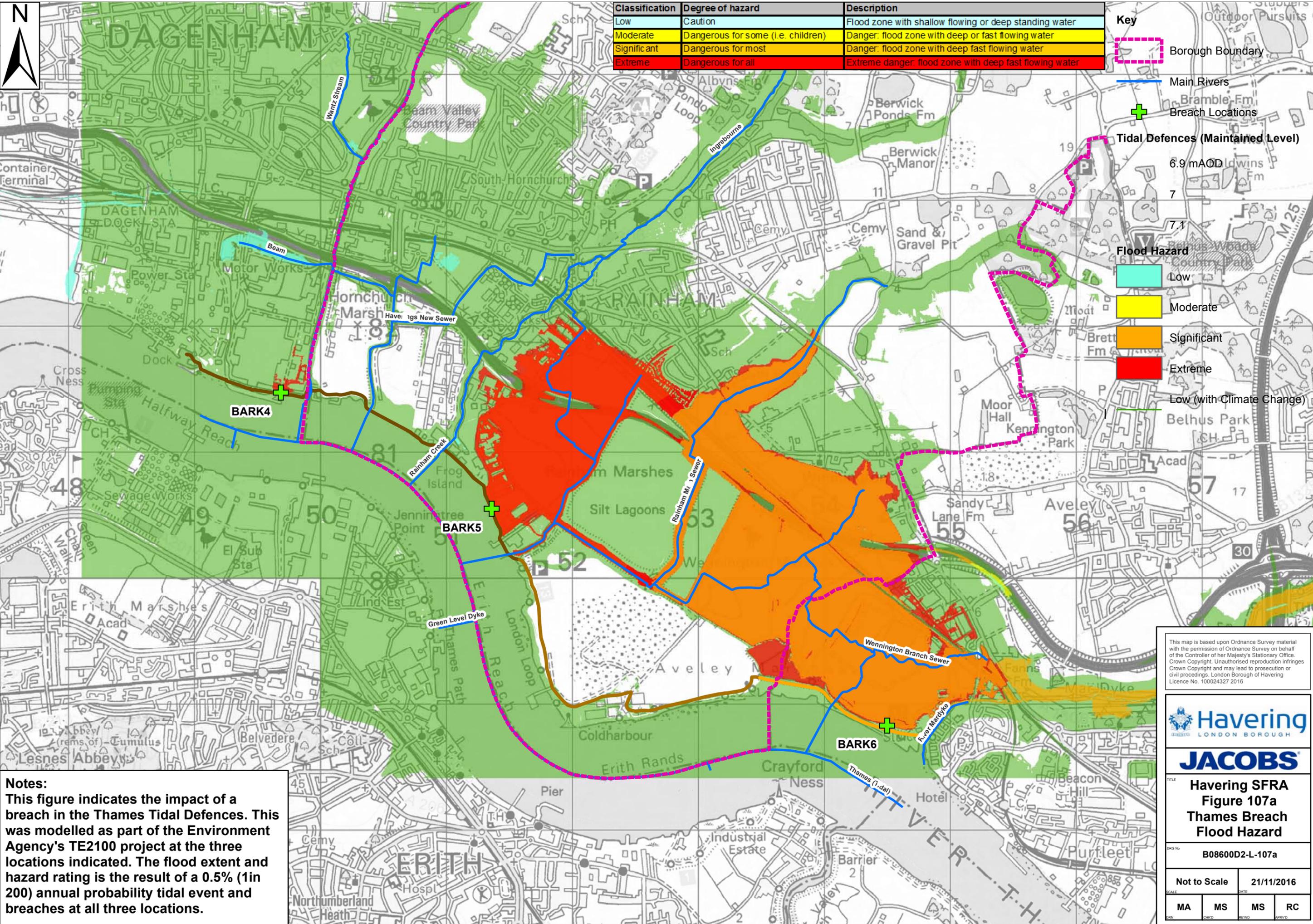
MA	MS	MS	RC
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Classification	Degree of hazard	Description
Low	Caution	Flood zone with shallow flowing or deep standing water
Moderate	Dangerous for some (i.e. children)	Danger. flood zone with deep or fast flowing water
Significant	Dangerous for most	Danger. flood zone with deep fast flowing water
Extreme	Dangerous for all	Extreme danger. flood zone with deep fast flowing water

**Key**

- Borough Boundary
- Main Rivers
- Breach Locations
- Tidal Defences (Maintained Level)**
- 6.9 mAOD
- 7
- 7.1
- Flood Hazard**
- Low
- Moderate
- Significant
- Extreme
- Low (with Climate Change)



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The flood extent and hazard rating is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at all three locations.

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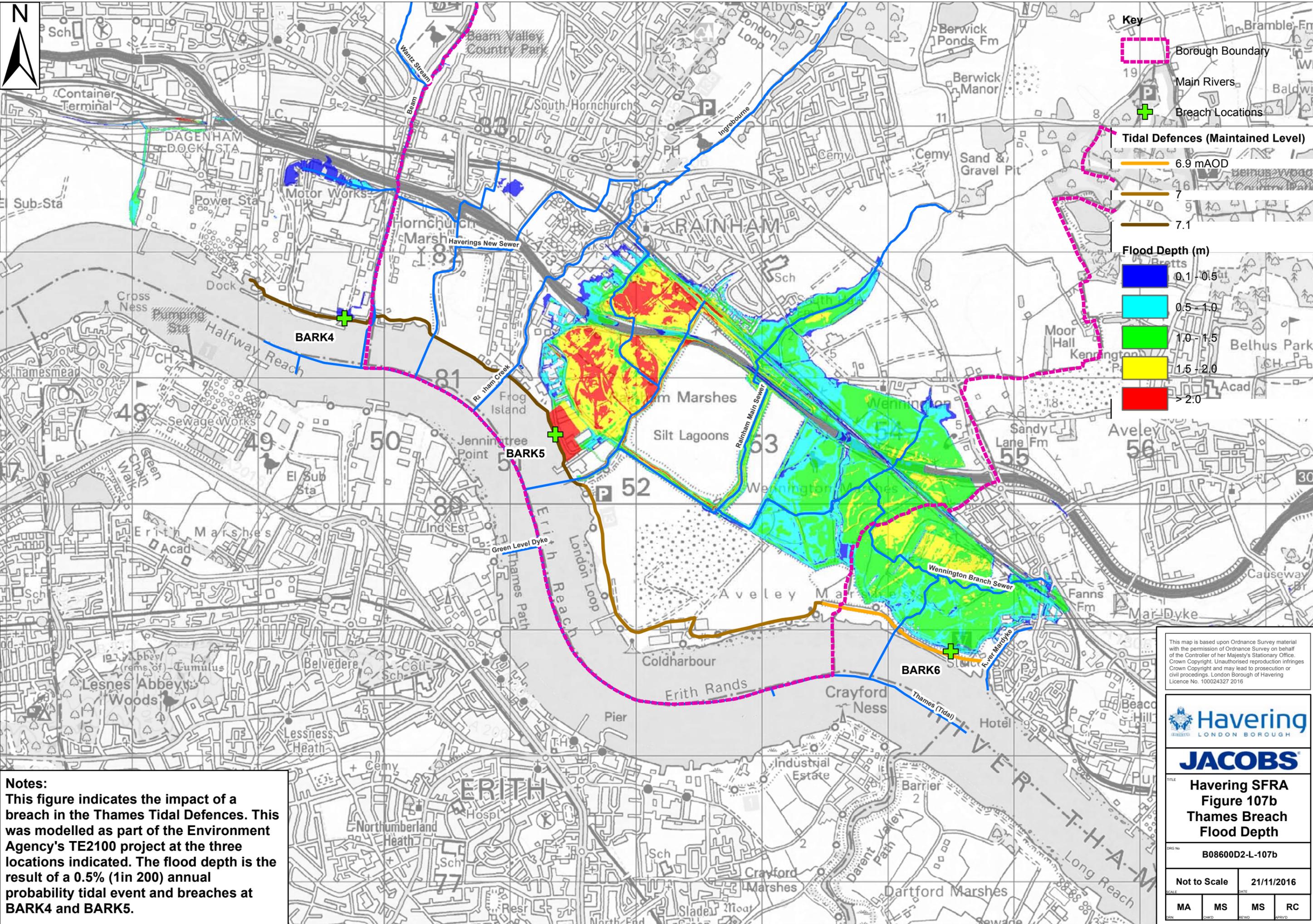
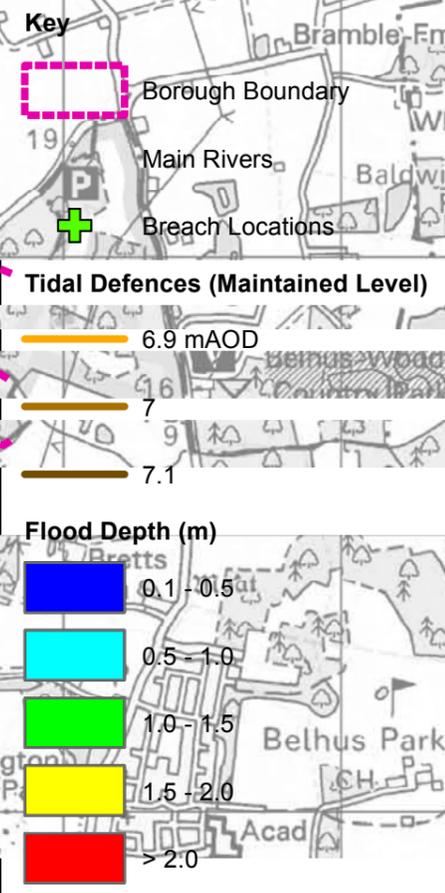


**TITLE**  
 Havering SFRA  
 Figure 107a  
 Thames Breach  
 Flood Hazard

**DRG No**  
 B08600D2-L-107a

**Not to Scale**      **21/11/2016**

<b>MA</b>	<b>MS</b>	<b>MS</b>	<b>RC</b>
<small>DRN</small>	<small>CHKD</small>	<small>REWD</small>	<small>APPRD</small>



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The flood depth is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK5.

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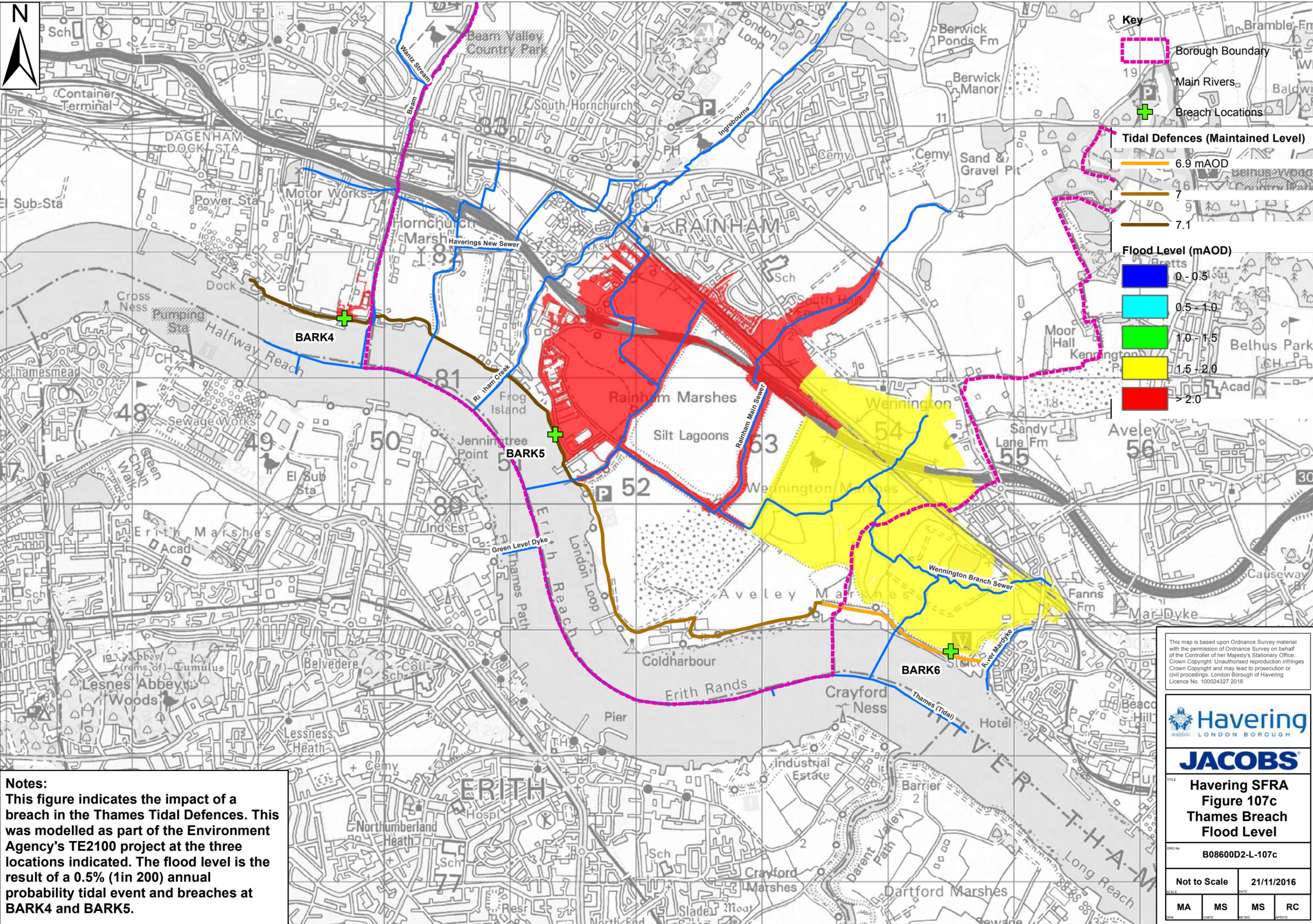
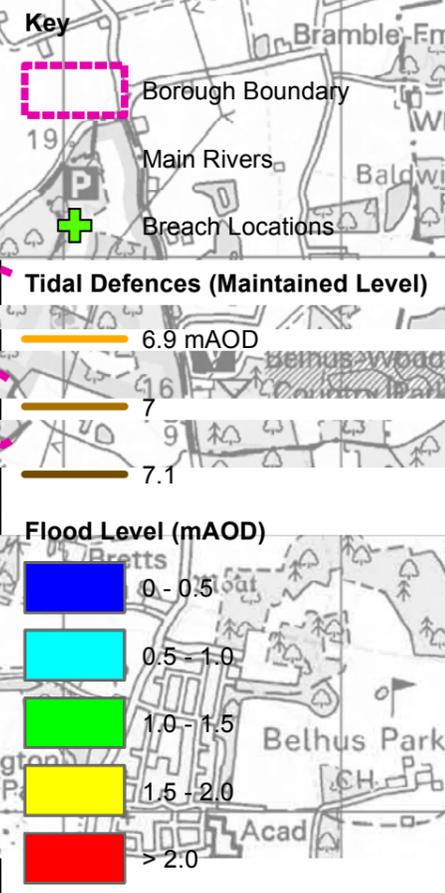


**Havering SFRA**  
**Figure 107b**  
**Thames Breach**  
**Flood Depth**

DRG No: B08600D2-L-107b

Not to Scale      21/11/2016

MA	MS	MS	RC
DRN	CHKD	REWD	APPRD



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The flood level is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK5.

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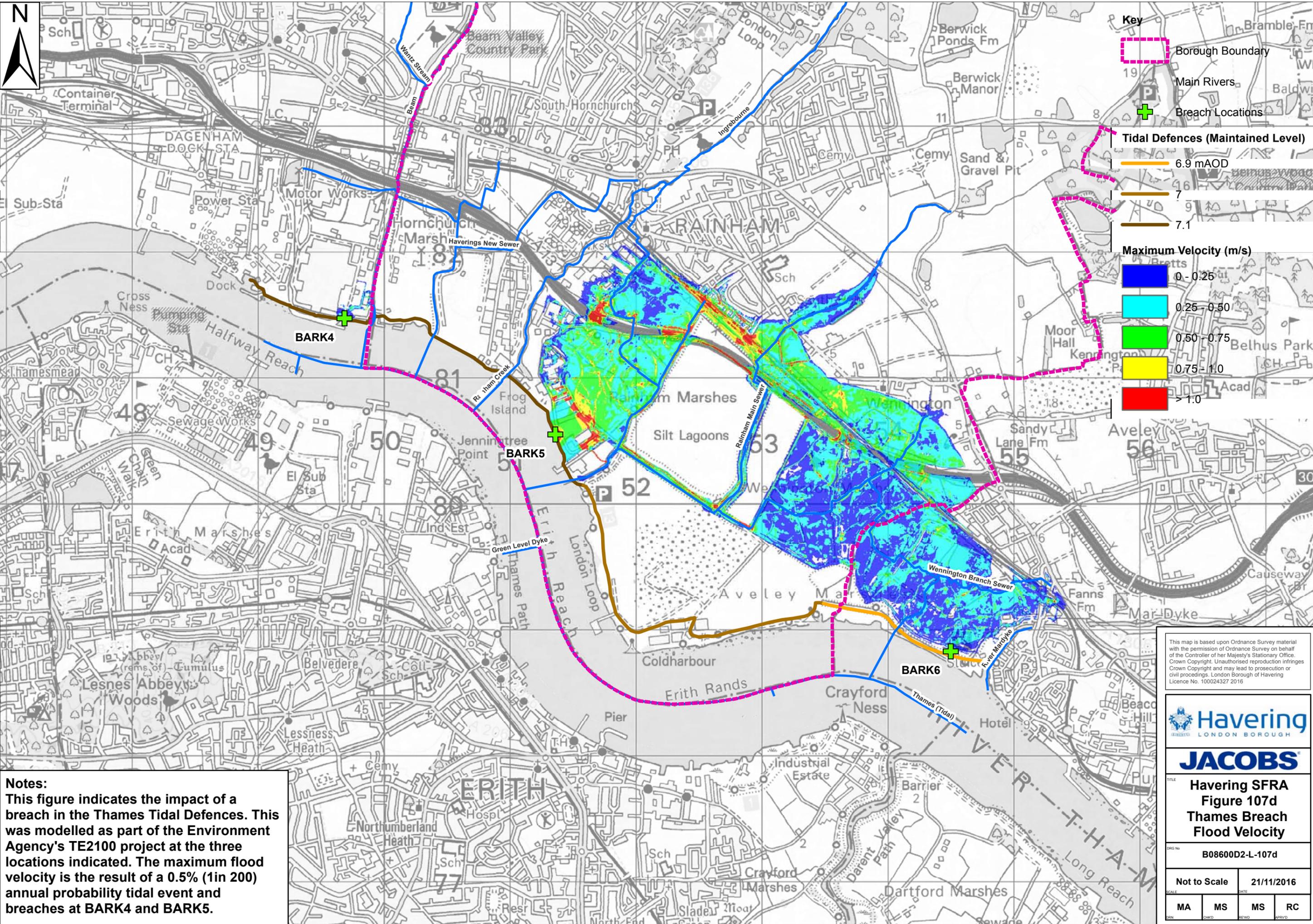
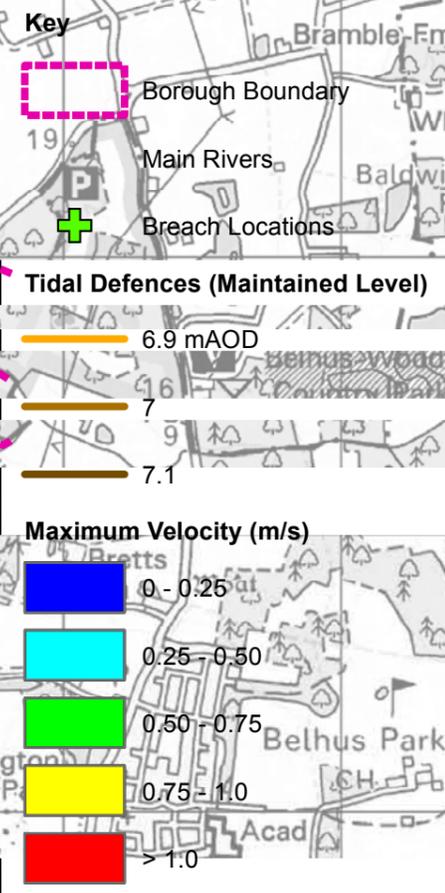


**TITLE**  
 Havering SFRA  
 Figure 107c  
 Thames Breach  
 Flood Level

**DRG No**  
 B08600D2-L-107c

**Not to Scale**      **21/11/2016**

MA	MS	MS	RC
DRN	CHKD	REWD	APPRD



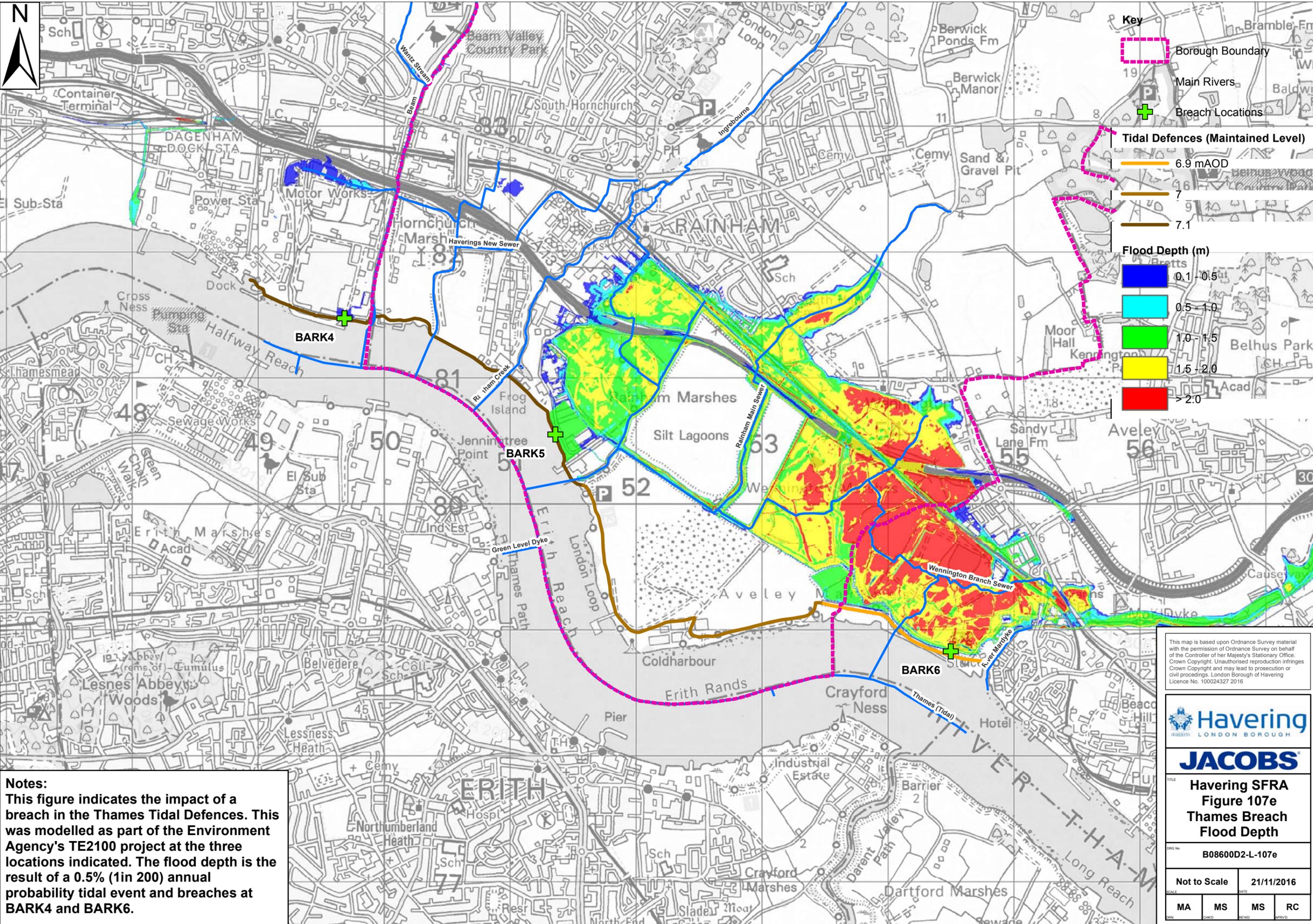
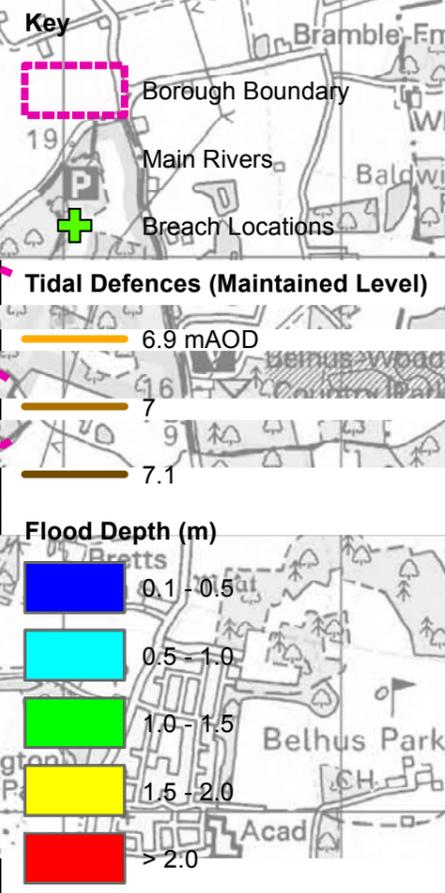
**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The maximum flood velocity is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK5.

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**Havering SFRA  
 Figure 107d  
 Thames Breach  
 Flood Velocity**

DRG No B08600D2-L-107d	
Not to Scale	21/11/2016
MA	MS MS RC
DRN	CHCD REWD APPVD



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The flood depth is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK6.

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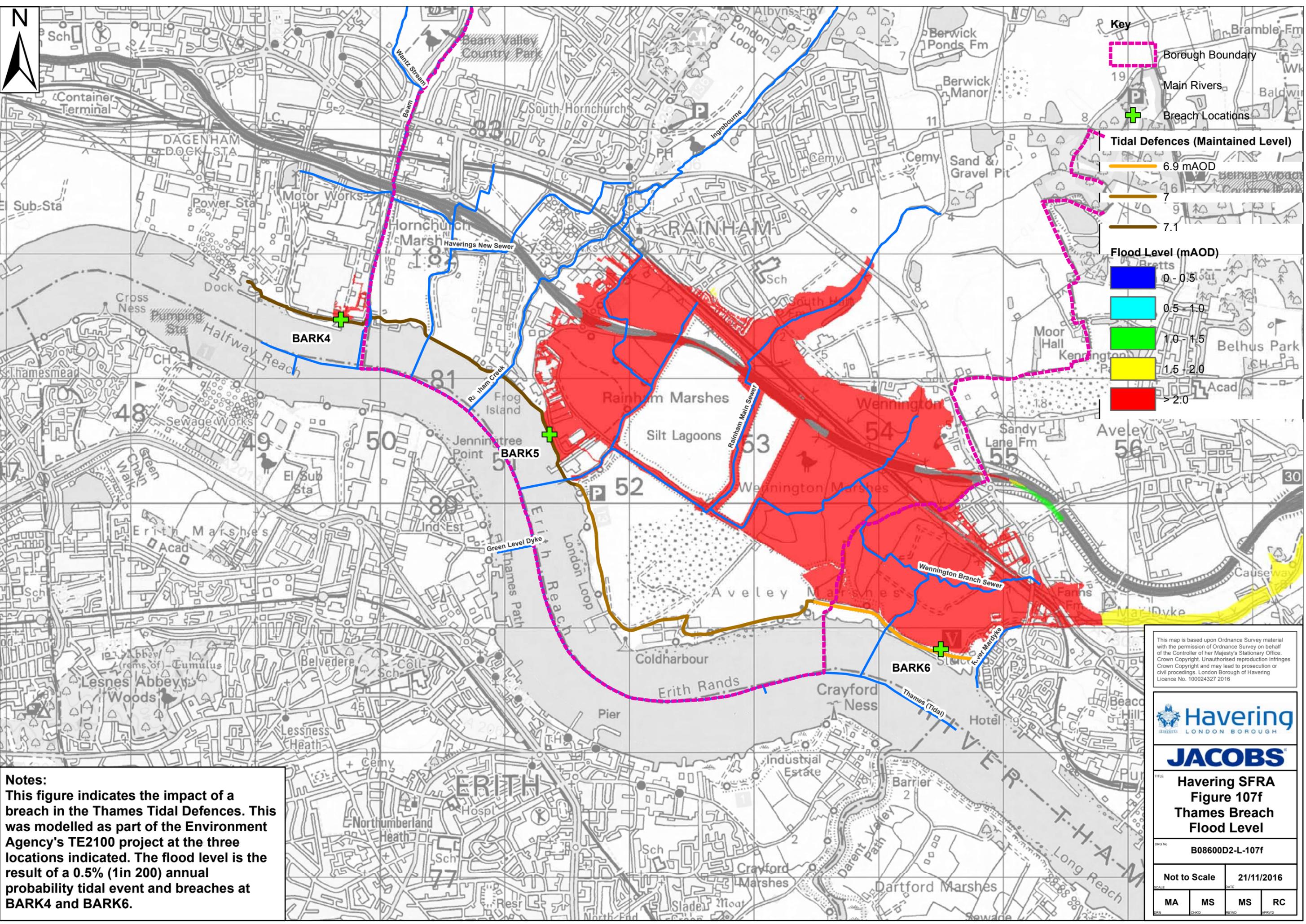


**TITLE**  
 Havering SFRA  
 Figure 107e  
 Thames Breach  
 Flood Depth

**DRG No**  
 B08600D2-L-107e

**Not to Scale**      **21/11/2016**

MA	MS	MS	RC
DRN	CHKD	REWD	APPRD



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The flood level is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK6.

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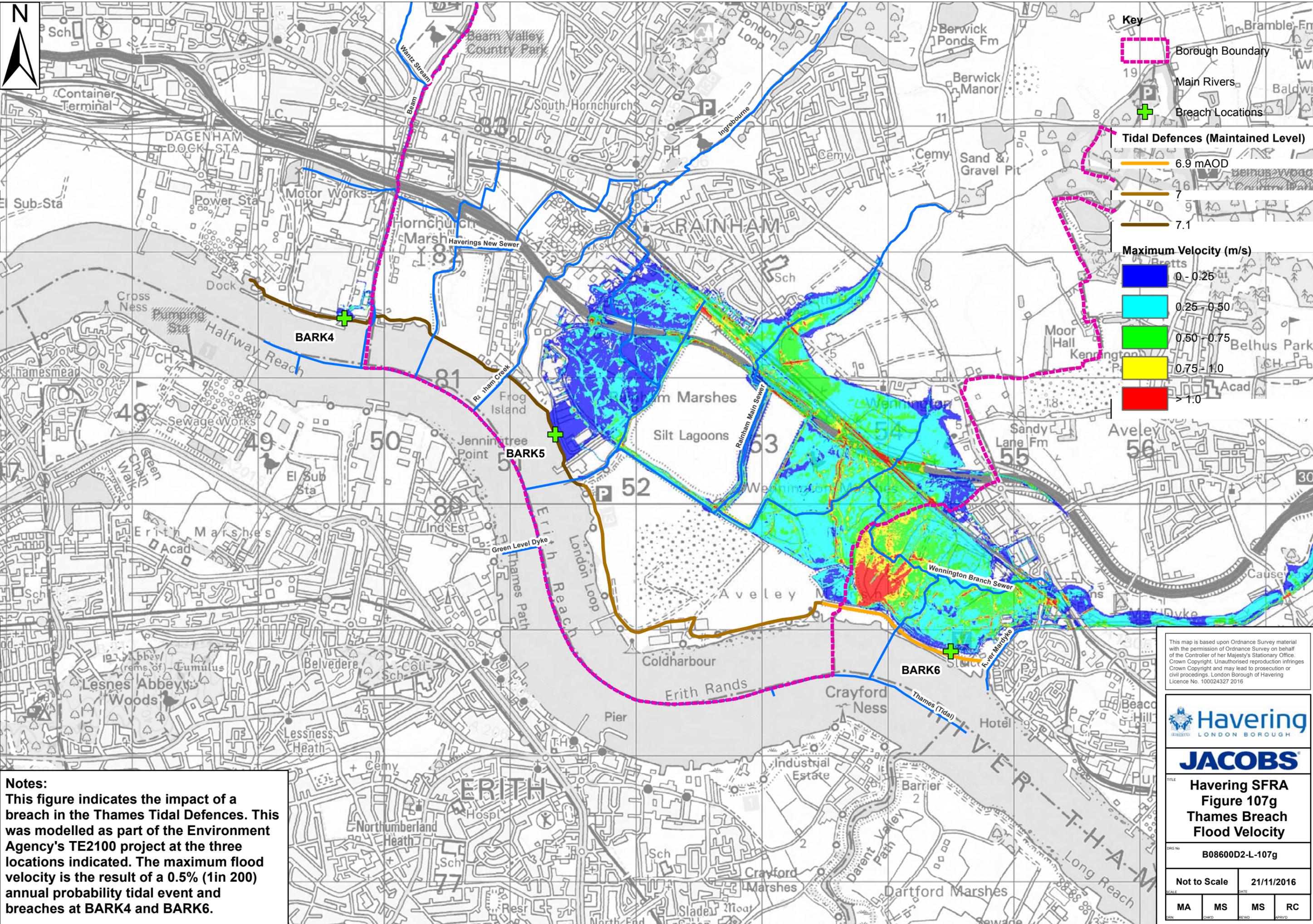
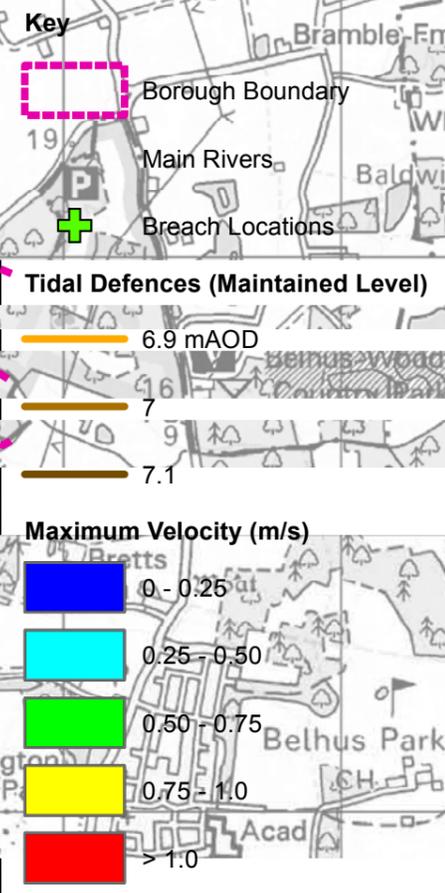


**Havering SFRA**  
**Figure 107f**  
**Thames Breach**  
**Flood Level**

DRG No: B08600D2-L-107f

Not to Scale      21/11/2016

MA	MS	MS	RC
DRN	CHKD	REWD	APPRD



**Notes:**  
 This figure indicates the impact of a breach in the Thames Tidal Defences. This was modelled as part of the Environment Agency's TE2100 project at the three locations indicated. The maximum flood velocity is the result of a 0.5% (1 in 200) annual probability tidal event and breaches at BARK4 and BARK6.

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**TITLE**  
 Havering SFRA  
 Figure 107g  
 Thames Breach  
 Flood Velocity

**DRG No**  
 B08600D2-L-107g

**Not to Scale**      **21/11/2016**

<b>MA</b>	<b>MS</b>	<b>MS</b>	<b>RC</b>
<small>DRN</small>	<small>CHKD</small>	<small>REWD</small>	<small>APPRD</small>