

**The Great Grid Upgrade**

# Weston Marsh Substation A

Hydraulic Modelling Report - Part 3 of 3

Jun 2026

**nationalgrid**

# Weston Marsh Substation A

## Document control

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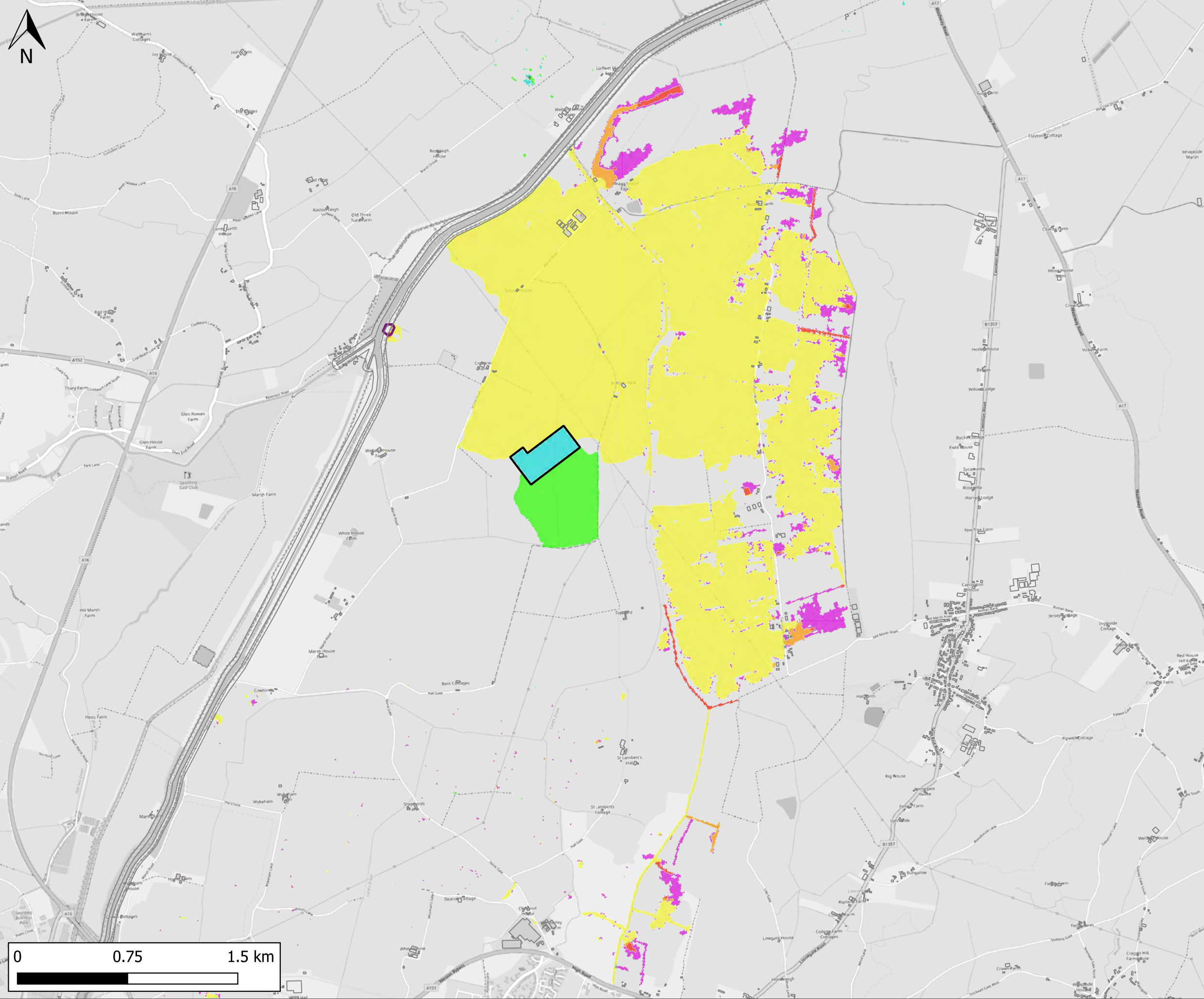
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## **Figure 9 Breach Assessment Flood Impact 0.1% AEP+CC (Upper End) in 2105 Event**



**KEY:**

- Substation Footprint Area
- Modelled Breach
- Major (<-0.10) (Decrease)
- Moderate (-0.10 - -0.05)
- Minor (-0.05 - -0.01)
- Negligible (-0.01 - 0.01)
- Minor (0.01 - 0.05)
- Moderate (0.05 - 0.1)
- Major (> 0.10) (Increase)
- Was Wet Now Dry
- Was Dry Now Wet

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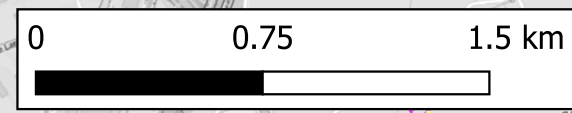
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TITLE: BREACH ASSESSMENT FLOOD IMPACT 0.1% AEP+CC (UPPER END) IN 2105 EVENT

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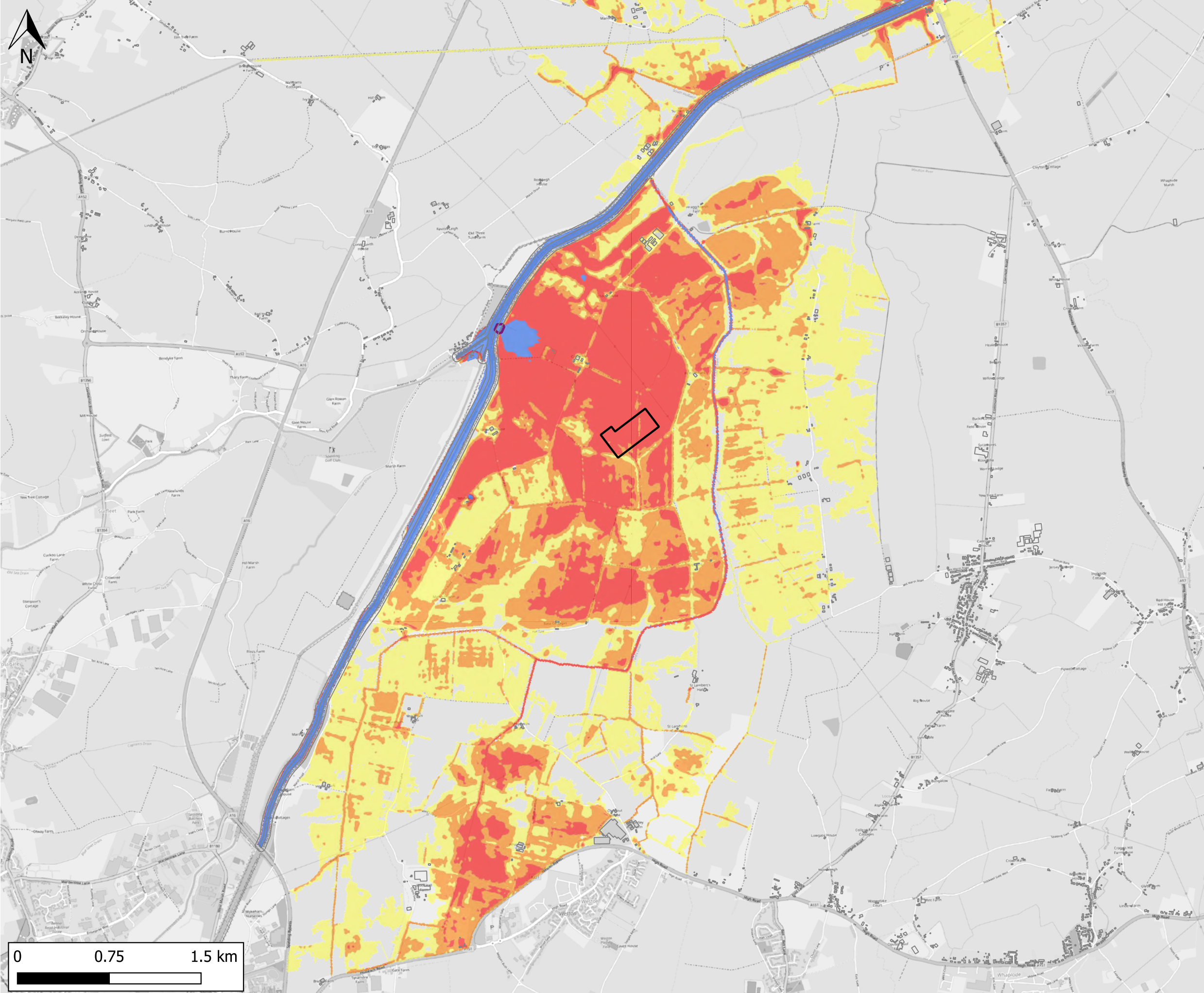
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# **Figure 10 Baseline Breach Assessment Flood Hazard 0.1% AEP+CC (Upper End) in 2105 Event**

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**KEY:**

- Substation Footprint Area
- Modelled Breach

**Flood Hazard Rating**

- 0.00 - 0.75 Low (Caution)
- 0.75 - 1.25 Moderate (Dangerous for some)
- 1.2 - 2.00 Significant (Dangerous for most)
- > 2.00 Extreme (Dangerous for all)

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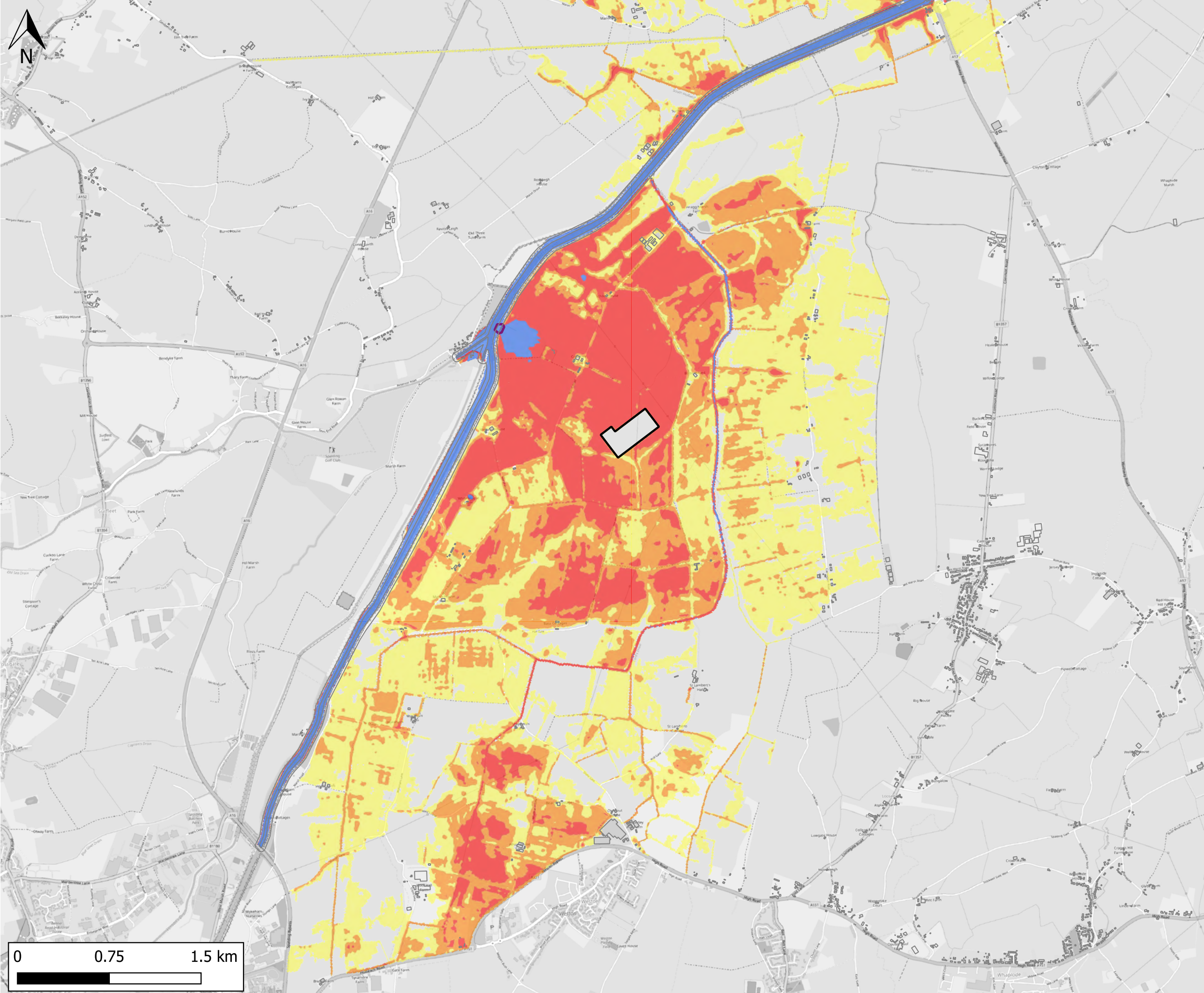
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**Figure 11 Post-Development Breach  
Assessment Flood Hazard 0.1%  
AEP+CC (Upper End) in 2105  
Event**

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**KEY:**

- Substation Footprint Area
- Modelled Breach

**Flood Hazard Rating**

- 0.00 - 0.75 Low (Caution)
- 0.75 - 1.25 Moderate (Dangerous for some)
- 1.2 - 2.00 Significant (Dangerous for most)
- > 2.00 Extreme (Dangerous for all)

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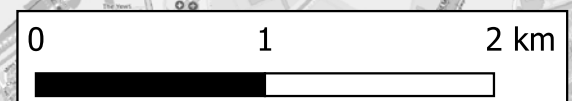
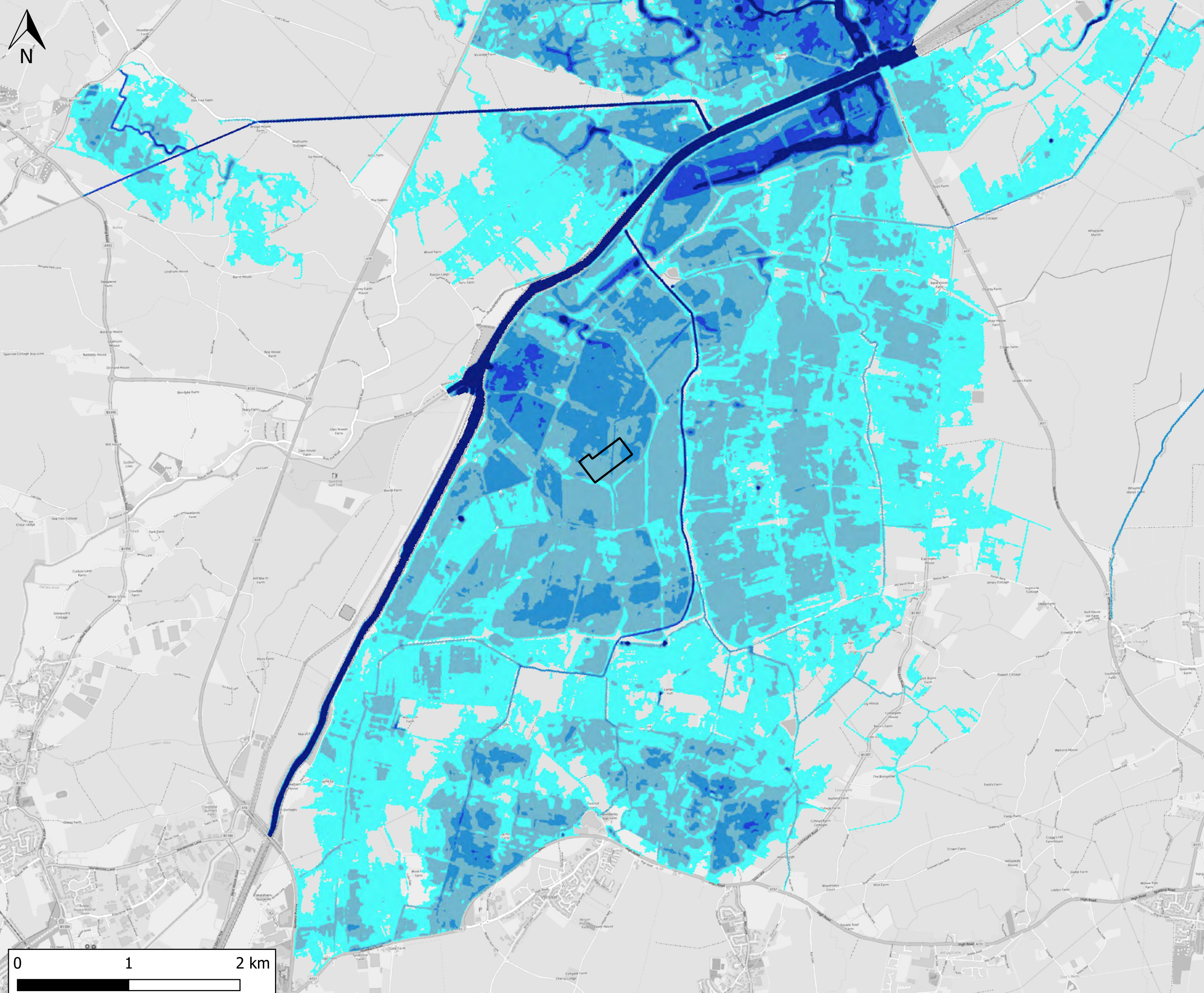
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# **Figure 12 Baseline Breach Assessment Flood Extents Progression 0.1% AEP+CC (Upper End) in 2105 Event**



# **Figure 13 Baseline Breach Assessment Sensitivity Test on H++ 0.5% AEP+CC (H++ to 2100)**

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**KEY:**

Substation Footprint Area

Flood Depth (m)

- <0.3
- 0.3 - 0.6
- 0.6 - 0.9
- 0.9 - 1.2
- >1.2

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TITLE: BASELINE BREACH ASSESSMENT SENSITIVITY TEST ON H++ 0.5% AEP+CC (H++ TO 2100)

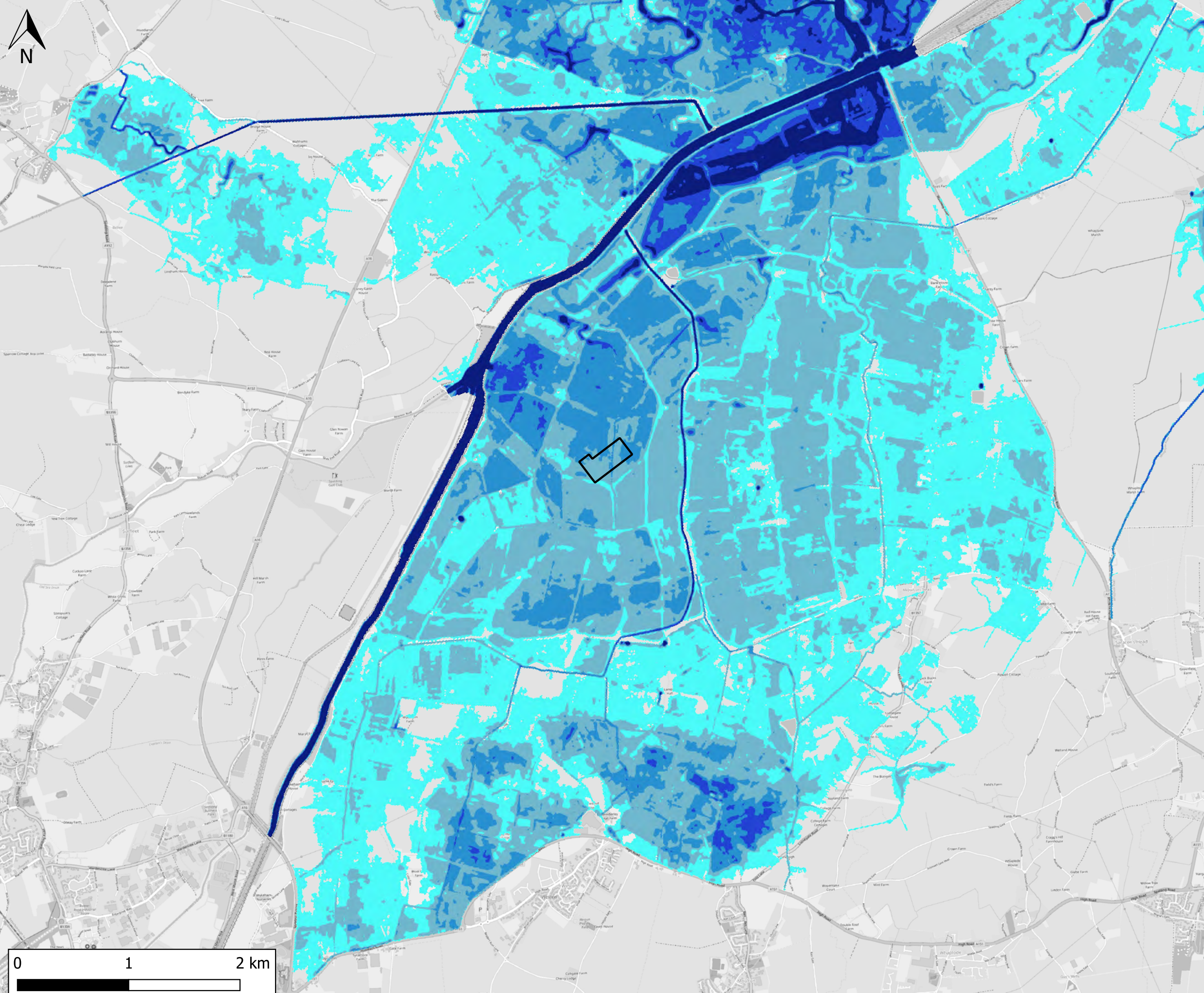
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# **Figure 14 Baseline Breach Assessment Sensitivity Test on H++ 0.1% AEP+CC (H++ to 2100)**

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**KEY:**

Substation Footprint Area

Flood Depth (m)

- <0.3
- 0.3 - 0.6
- 0.6 - 0.9
- 0.9 - 1.2
- >1.2

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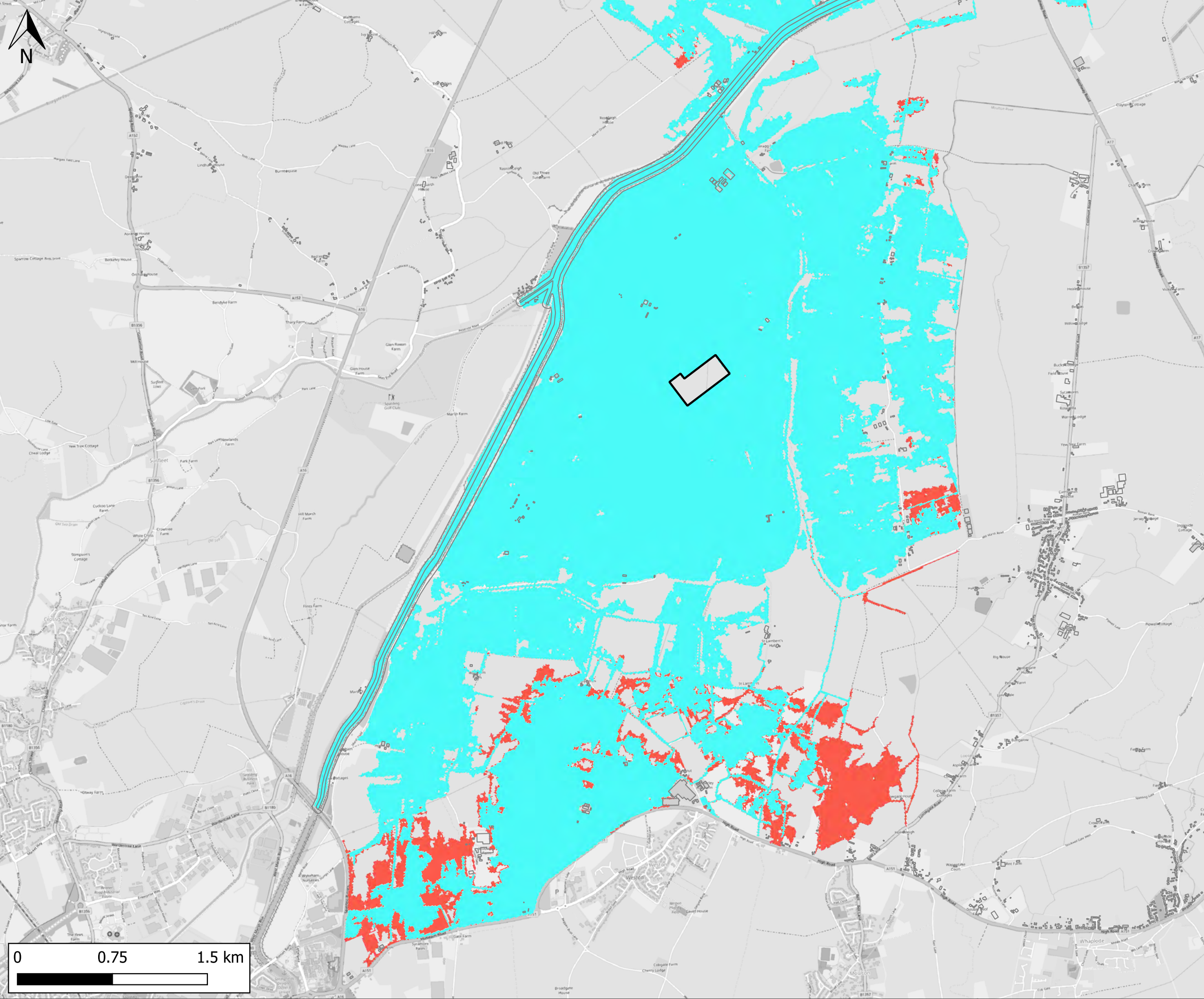
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# **Figure 15 Post-Development Breach Assessment Sensitivity on Long Breach Duration 0.1% AEP+CC (Upper End) in 2105 Event**

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**KEY:**

- Substation Footprint Area

Modelled Flood Extents:

- Design Run (35 hour breach opening)
- Sensitivity Test Run (70 hour breach opening)

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