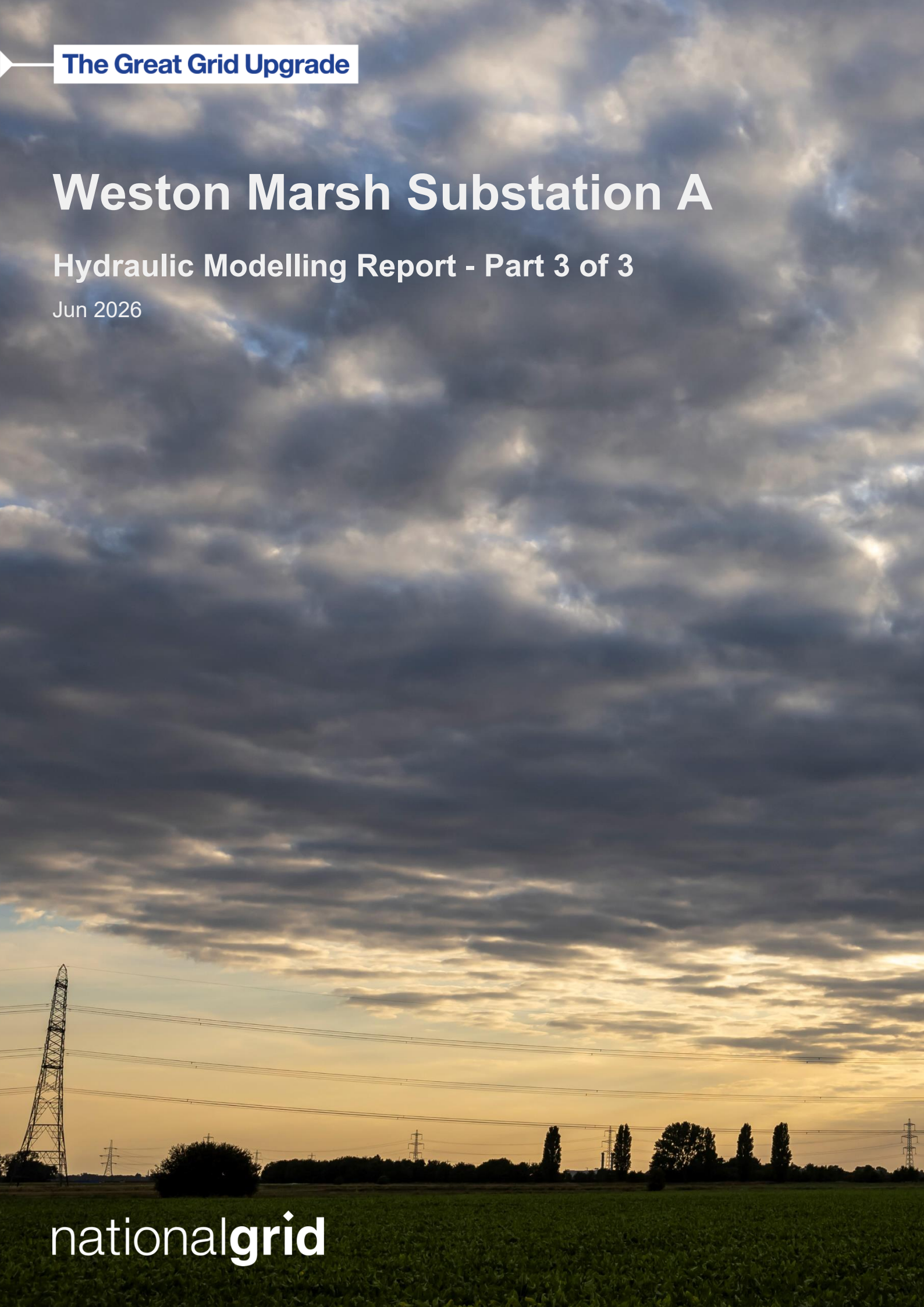
The Great Grid Upgrade

Weston Marsh Substation A

Hydraulic Modelling Report - Part 3 of 3

Jun 2026



nationalgrid

Weston Marsh Substation A
Document control

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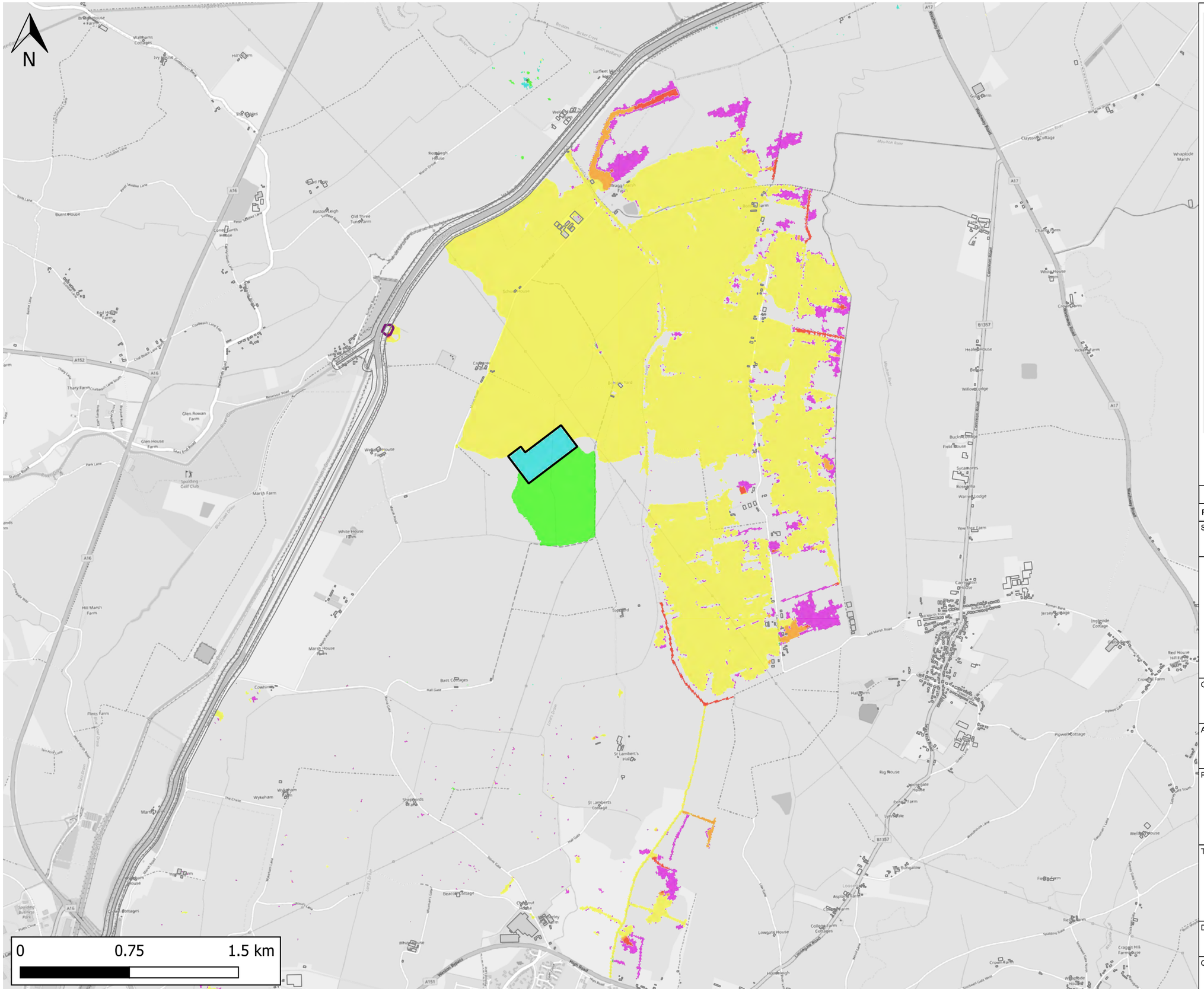
May 2026	1.0	Final	First Issue
June 2026	2.0	Final	Second Issue - correction

Contents

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

REV	DATE	DRW	DESCRIPTION	CHK	APP
01	01/05/26	LF	FIRST ISSUE	GF	JC

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CLIENT: NATIONAL GRID

ARCHITECT:

PROJECT: PROPOSED ELECTRICITY SUBSTATION WORKS AT WESTON MARSH

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

DRAWN:	CHECKED:	APPROVED:
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QGIS FILE:	SCALE @A3:	DATE:
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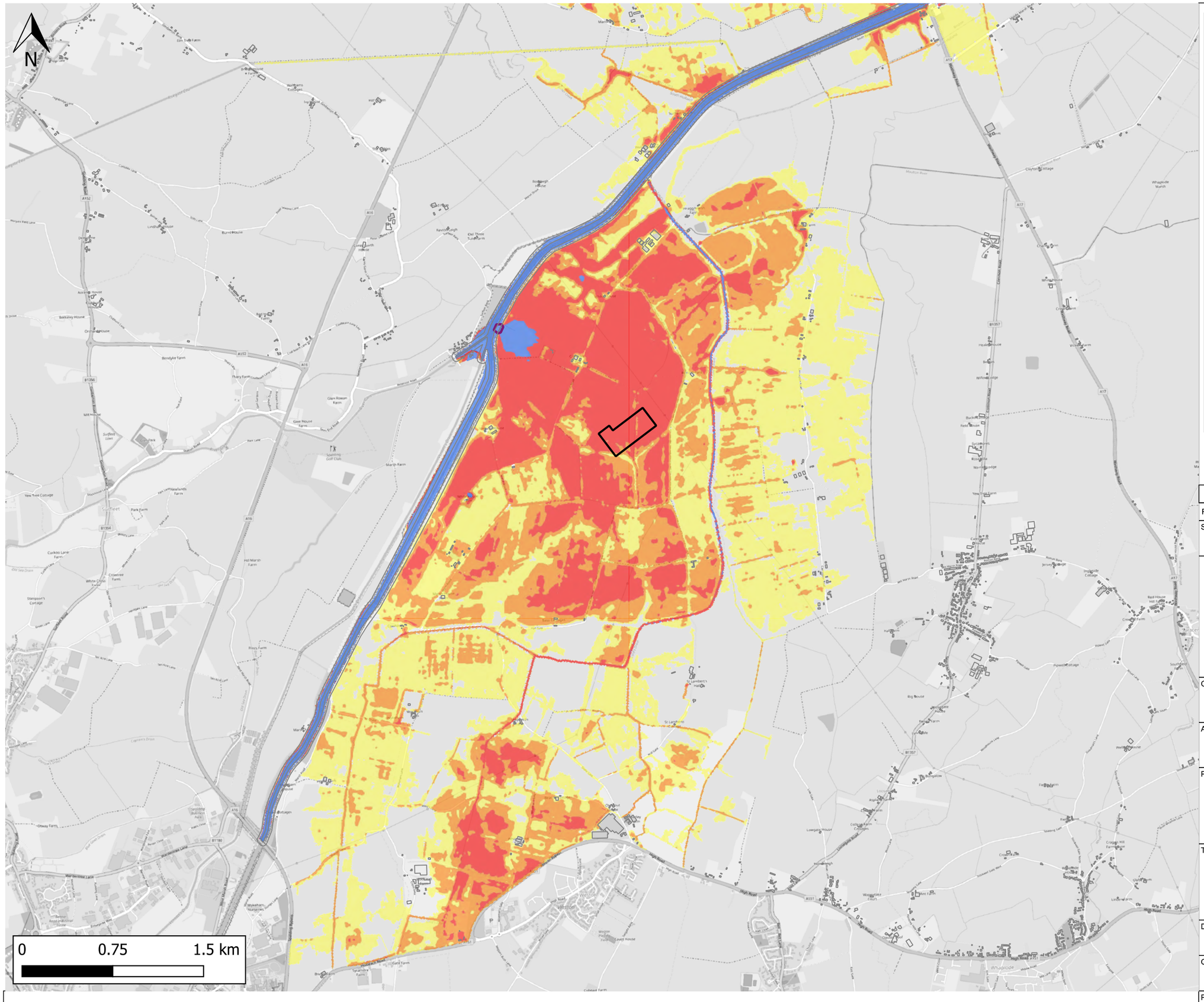
70110430	WMA-TCPA-FLMOD-009	01

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



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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ARCHITECT:

PROJECT: PROPOSED ELECTRICITY SUBSTATION WORKS AT WESTON MARSH

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

DRAWN:	CHECKED:	APPROVED:
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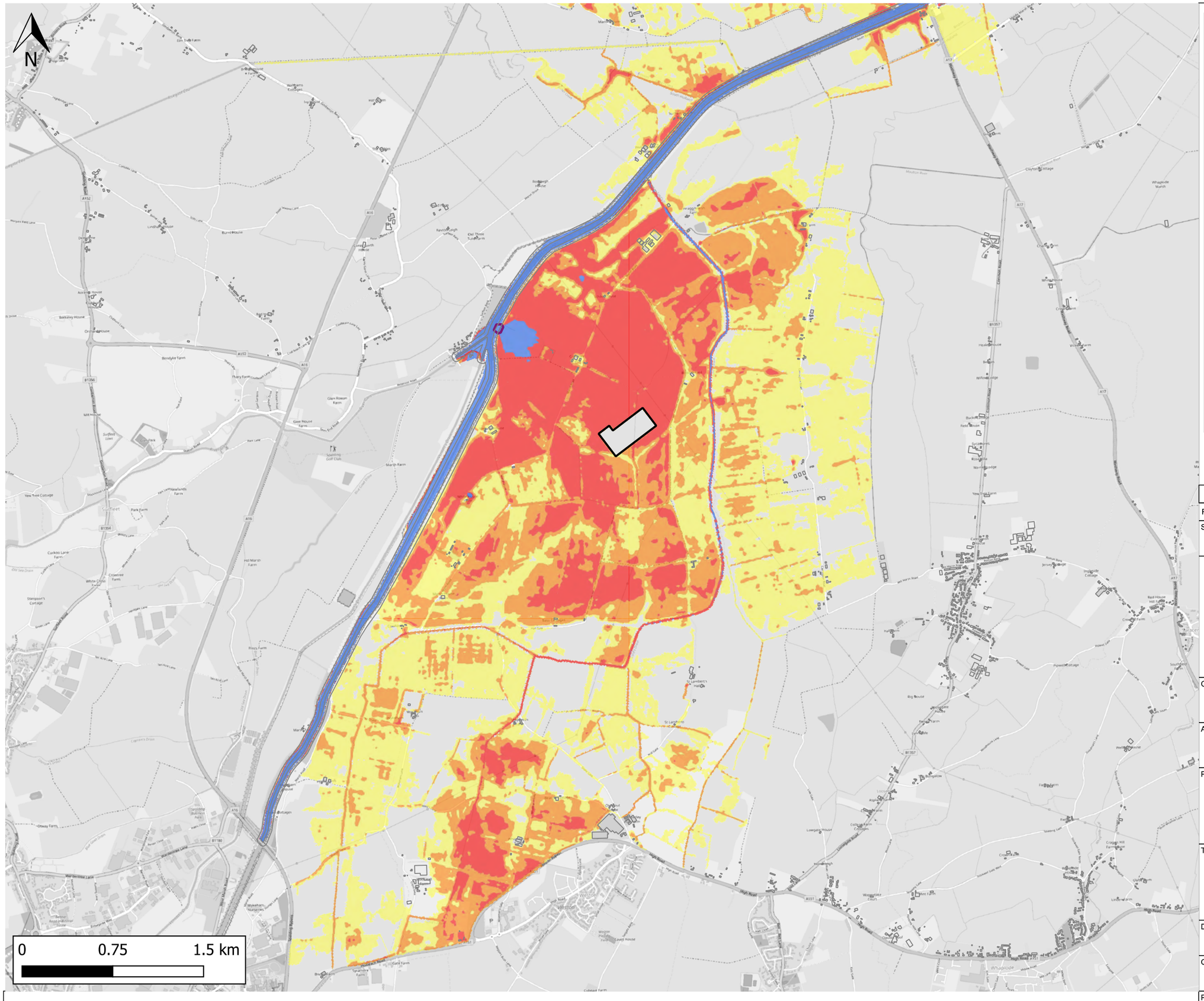
QGIS FILE:	SCALE @A3:	DATE:
-	NTS	01/05/26
PROJECT No:	DRAWING No:	REV:
70110430	WMA-TCPA-FLMOD-010	01

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



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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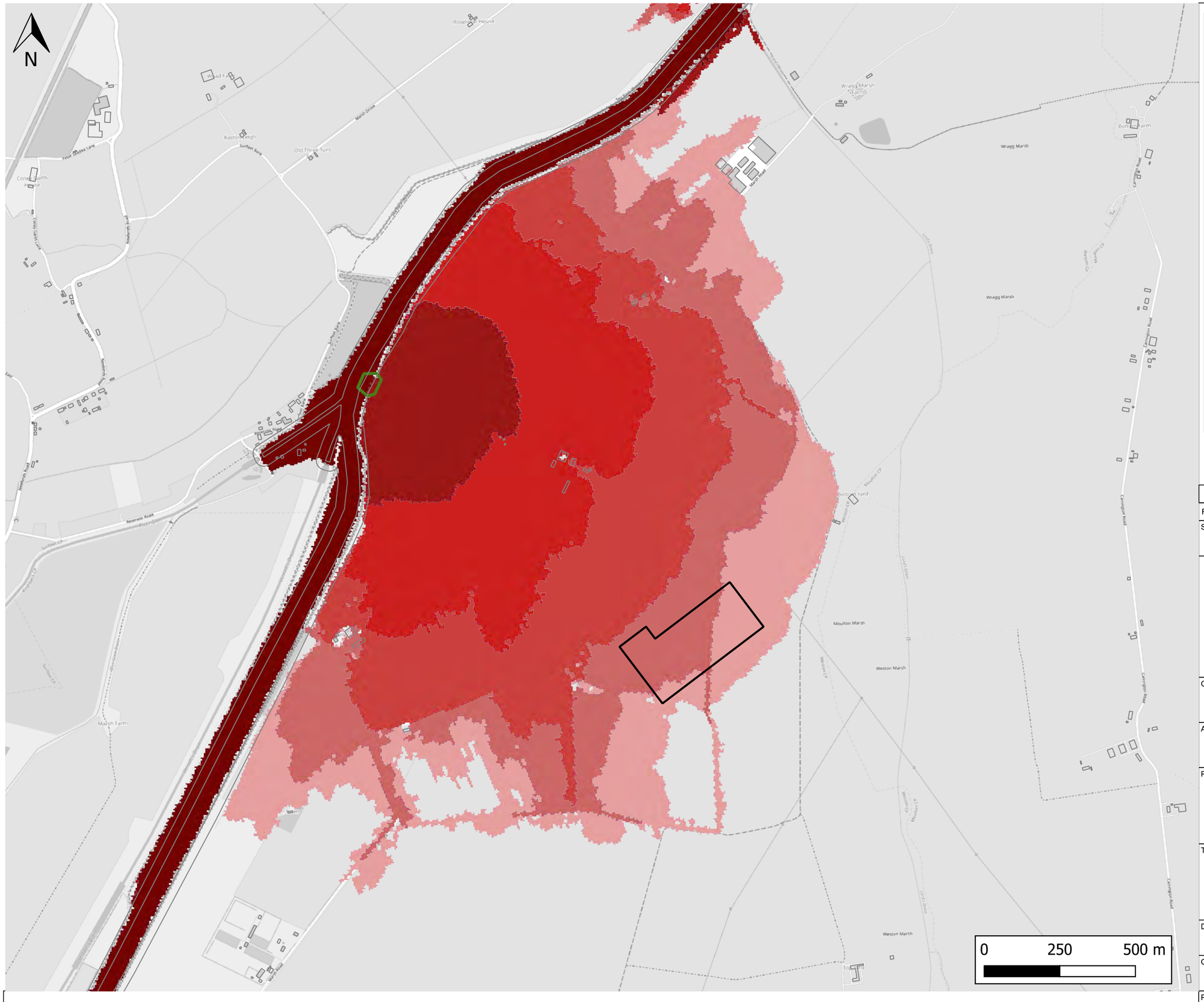
ARCHITECT:

PROJECT: PROPOSED ELECTRICITY SUBSTATION WORKS AT WESTON MARSH

TITLE: POST-DEVELOPMENT BREACH ASSESSMENT FLOOD HAZARD 0.1% AEP+CC (UPPER END) IN 2105 EVENT

DRAWN:	CHECKED:	APPROVED:
LF	GF	JC
QGIS FILE: -	SCALE @A3: NTS	DATE: 01/05/26
PROJECT No: 70110430	DRAWING No: WMA-TCPA-FLMOD-011	REV: 01

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



KEY:

- Substation Footprint Area
- Modelled Breach

Modelled Flood Extents:

- At the onset of the breach
- After 15 minutes
- After 30 minutes
- After 45 minutes
- After 1 hour
- After 1 hour and 15 minutes

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PROJECT: PROPOSED ELECTRICITY SUBSTATION WORKS AT WESTON MARSH

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

DRAWN:	CHECKED:	APPROVED:
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QGIS FILE:	SCALE @A3:	DATE:
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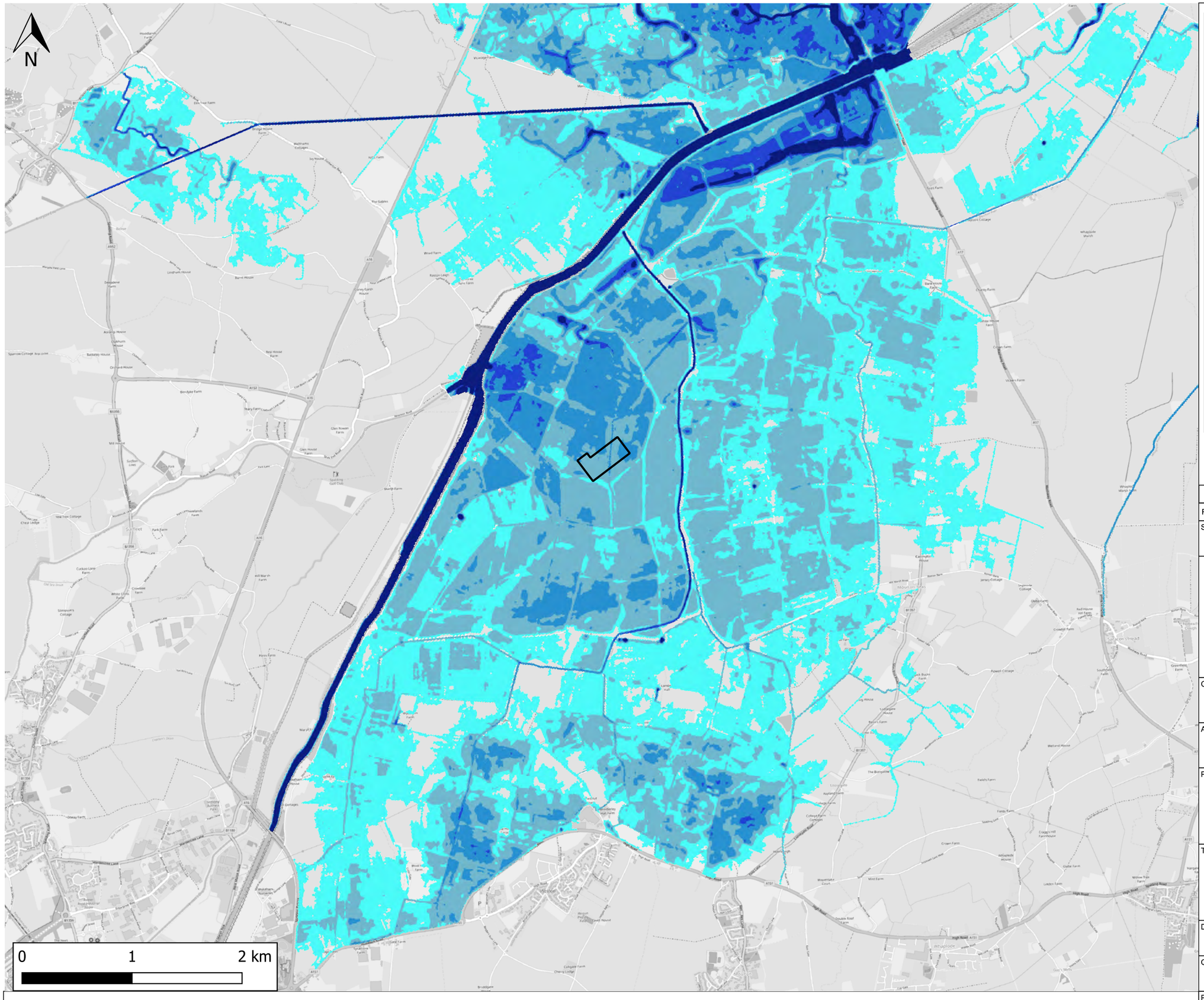
70110430	WMA-TCPA-FLMOD-012	01

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



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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ARCHITECT:

PROJECT: PROPOSED ELECTRICITY SUBSTATION WORKS AT WESTON MARSH

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

DRAWN:	CHECKED:	APPROVED:
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-	NTS	01/05/26

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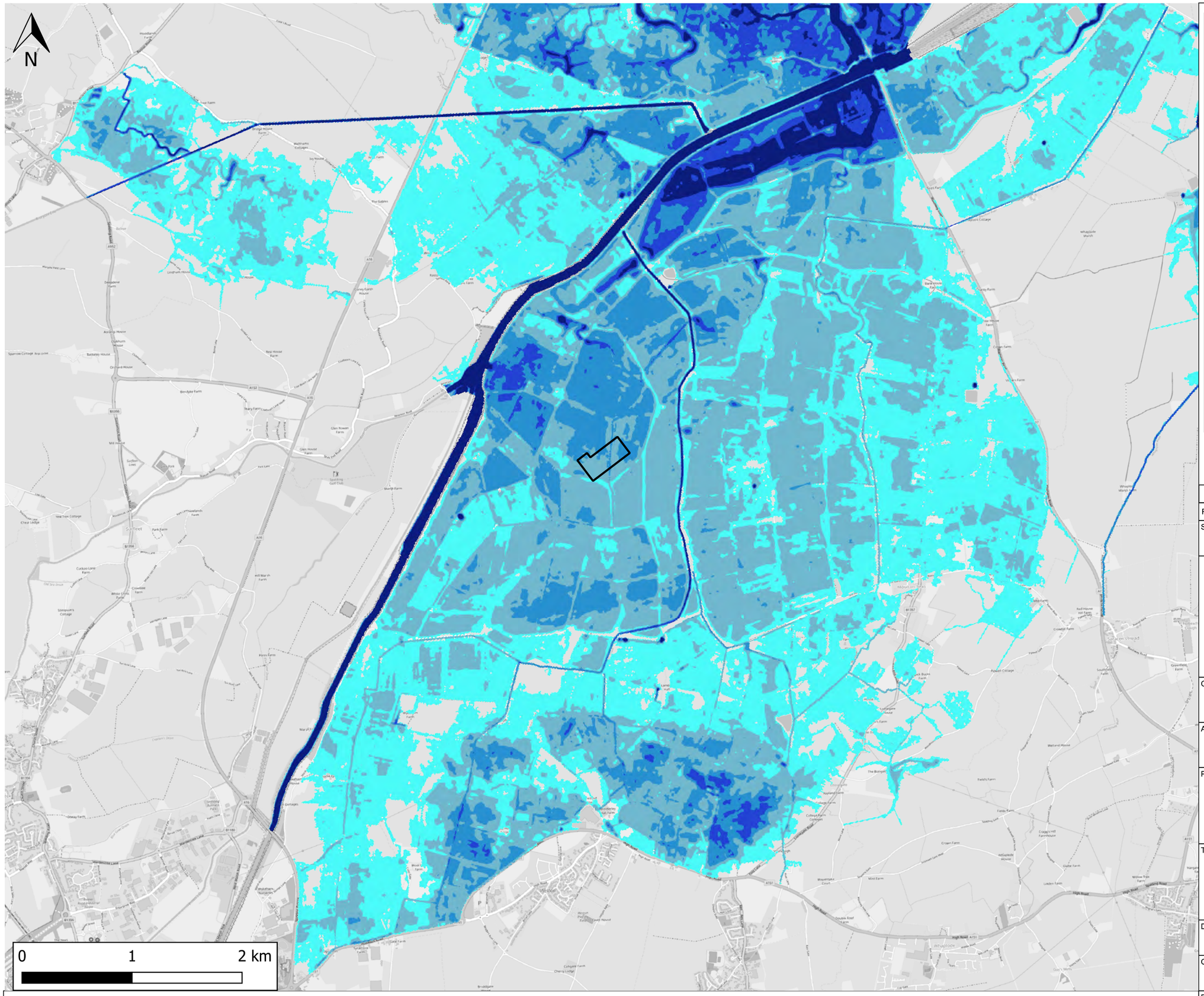
70110430	WMA-TCPA-FLMOD-013	01

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



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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ARCHITECT:

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TITLE: BASELINE BREACH ASSESSMENT SENSITIVITY ON H++ 0.1% AEP+CC (H++ TO 2100)

DRAWN:	CHECKED:	APPROVED:
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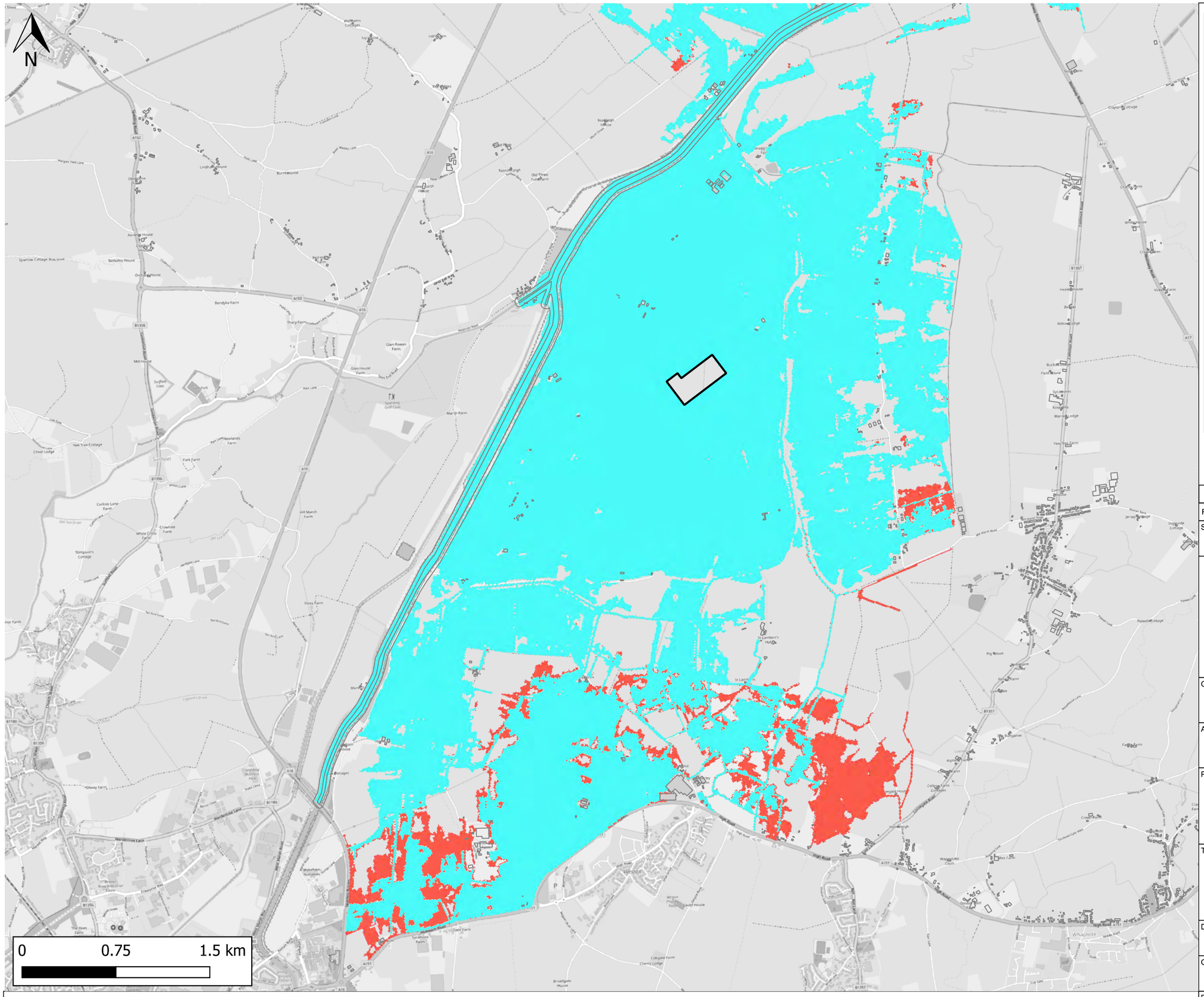
QGIS FILE:	SCALE @A3:	DATE:
-	NTS	01/05/26

PROJECT No:	DRAWING No:	REV:
70110430	WMA-TCPA-FLMOD-014	01

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



KEY:

Substation Footprint Area

Modelled Flood Extents:

Design Run (35 hour breach opening)

Sensitivity Test Run (70 hour breach opening)

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TITLE: POST-DEVELOPMENT BREACH ASSESSMENT SENSITIVITY ON LONG BREACH DURATION 0.1% AEP+CC (UPPER END) IN 2105 EVENT

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