

90% Preburst Depths

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	46.3 (1.799)	57.2 (1.610)	64.4 (1.520)	71.3 (1.448)	76.3 (1.299)	80.0 (1.208)
90 (1.5)	58.2 (2.007)	80.0 (2.017)	94.5 (2.001)	108.3 (1.976)	88.9 (1.360)	74.4 (1.008)
120 (2.0)	38.8 (1.227)	70.0 (1.628)	90.7 (1.776)	110.6 (1.864)	104.4 (1.475)	99.8 (1.247)
180 (3.0)	59.4 (1.658)	68.6 (1.411)	74.7 (1.292)	80.5 (1.198)	104.1 (1.296)	121.8 (1.339)
360 (6.0)	53.6 (1.171)	67.3 (1.077)	76.3 (1.022)	85.0 (0.973)	107.1 (1.021)	123.7 (1.037)
720 (12.0)	55.2 (0.904)	74.3 (0.875)	86.9 (0.848)	99.0 (0.819)	108.8 (0.745)	116.1 (0.698)
1080 (18.0)	37.7 (0.515)	53.0 (0.513)	63.1 (0.502)	72.8 (0.489)	91.4 (0.508)	105.3 (0.514)
1440 (24.0)	30.9 (0.371)	54.2 (0.456)	69.6 (0.479)	84.4 (0.489)	96.3 (0.462)	105.2 (0.444)
2160 (36.0)	32.2 (0.322)	40.4 (0.280)	45.8 (0.259)	51.0 (0.242)	68.3 (0.269)	81.3 (0.283)
2880 (48.0)	9.9 (0.089)	13.5 (0.083)	15.8 (0.079)	18.0 (0.076)	48.8 (0.170)	71.8 (0.222)
4320 (72.0)	15.0 (0.116)	19.5 (0.103)	22.5 (0.097)	25.4 (0.092)	32.8 (0.100)	38.4 (0.104)

Layer Info

Time Accessed 17 October 2023 01:16PM

Version 2018_v1

Note Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

Interim Climate Change Factors

	RCP 4.5	RCP6	RCP 8.5
2030	0.869 (4.3%)	0.783 (3.9%)	0.983 (4.9%)
2040	1.057 (5.3%)	1.014 (5.1%)	1.349 (6.8%)
2050	1.272 (6.4%)	1.236 (6.2%)	1.773 (9.0%)
2060	1.488 (7.5%)	1.458 (7.4%)	2.237 (11.5%)

2070	1.676 (8.5%)	1.691 (8.6%)	2.722 (14.2%)
2080	1.810 (9.2%)	1.944 (9.9%)	3.209 (16.9%)
2090	1.862 (9.5%)	2.227 (11.5%)	3.679 (19.7%)

Layer Info

Time Accessed	17 October 2023 01:16PM
Version	2019_v1
Note	ARR recommends the use of RCP4.5 and RCP 8.5 values. These have been updated to the values that can be found on the climate change in Australia website.

Probability Neutral Burst Initial Loss

min (h)\AEP(%)	50.0	20.0	10.0	5.0	2.0	1.0
60 (1.0)	25.6	19.3	16.2	15.6	14.4	11.6
90 (1.5)	28.9	16.4	14.6	15.5	15.1	13.5
120 (2.0)	31.4	21.1	16.8	15.6	13.4	12.3
180 (3.0)	35.5	18.2	15.9	15.2	14.3	11.4
360 (6.0)	35.2	20.7	17.5	16.7	15.2	10.0
720 (12.0)	34.8	22.7	20.9	20.5	18.2	12.2
1080 (18.0)	38.2	28.0	26.6	26.1	23.0	11.4
1440 (24.0)	41.9	32.0	29.7	28.4	26.0	17.4
2160 (36.0)	43.0	35.4	35.1	36.7	31.8	16.8
2880 (48.0)	48.9	43.4	44.6	48.2	37.6	22.0
4320 (72.0)	49.5	43.7	43.4	50.2	42.7	31.2

Layer Info

Time Accessed	17 October 2023 01:16PM
Version	2018_v1
Note	As this point is in NSW the advice provided on losses and pre-burst on the NSW Specific Tab of the ARR Data Hub (.nsw_specific) is to be considered. In NSW losses are derived considering a hierarchy of approaches depending on the available loss information. Probability neutral burst initial loss values for NSW are to be used in place of the standard initial loss and pre-burst as per the losses hierarchy.

Baseflow Factors

Downstream	10098
Area (km2)	12001.1858227
Catchment Number	10137
Volume Factor	0.166834
Peak Factor	0.040854

Layer Info

Time Accessed	17 October 2023 01:16PM
Version	2016_v1

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[Download JSON \(downloads/ac9a997b-e904-4d1f-9230-1253f8cd94eb.json\)](#)

[Generating PDF... \(downloads/36e855c3-3522-420b-9b3d-e449a1bbff79.pdf\)](#)



Figure D.1
Model sensitivity
Tailwater
1% AEP event

- Legend**
- Study area
- Tailwater scenario flood extent**
- 50% AEP = 6.7 m AHD
 - 20% AEP = 12.3 m AHD
 - 10% AEP = 14.5 m AHD
 - 5% AEP = 15.6 m AHD

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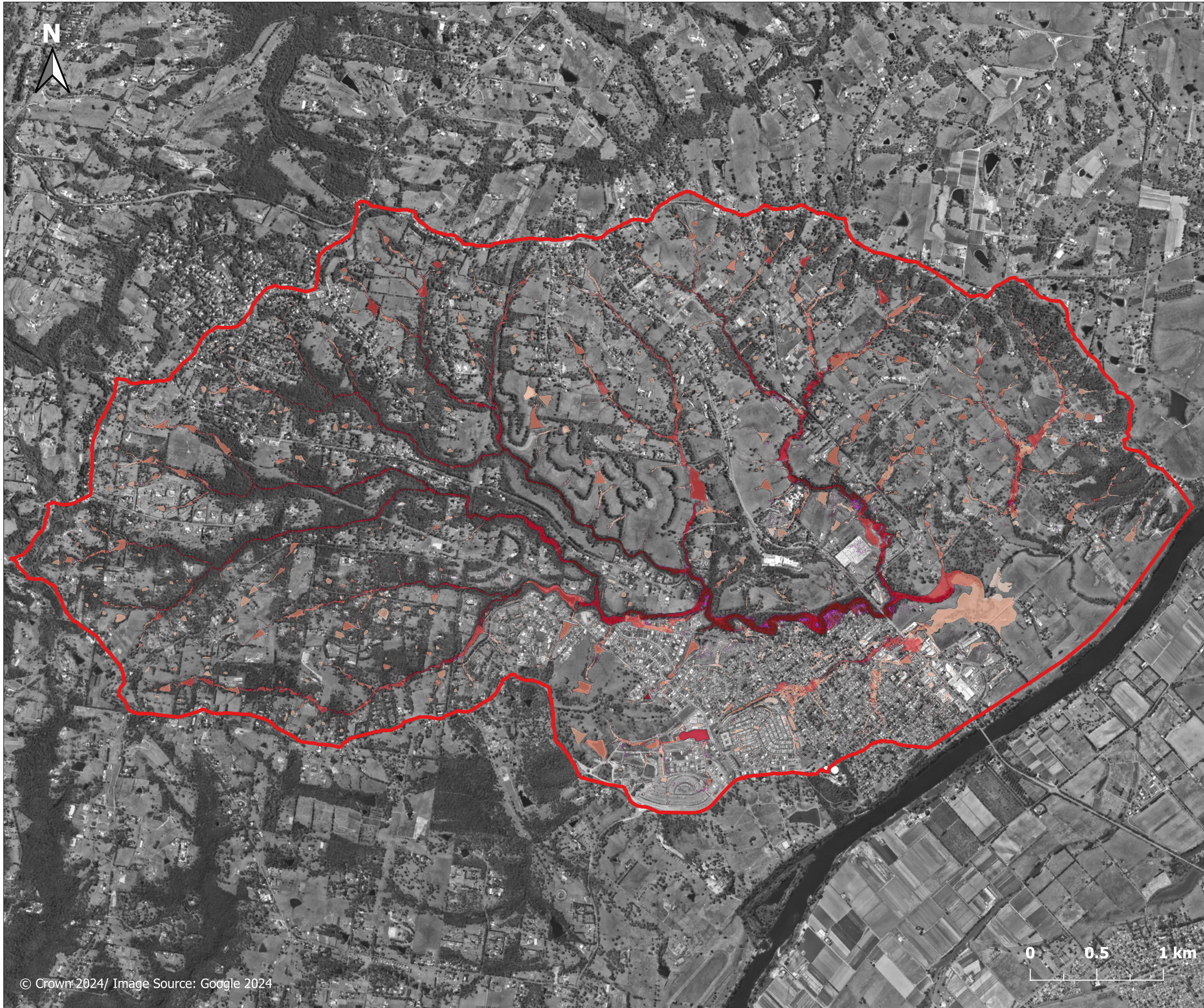


Figure D.2.1

Model sensitivity
No loss
North Richmond
Overview

- Legend**
- Study area
 - Afflux (m)**
 - < -0.50
 - 0.50 to -0.20
 - 0.20 to -0.10
 - 0.10 to -0.05
 - 0.05 to -0.02
 - 0.02 to -0.01
 - 0.01 to 0.01
 - 0.01 to 0.02
 - 0.02 to 0.05
 - 0.05 to 0.10
 - 0.10 to 0.20
 - 0.20 to 0.50
 - > 0.50
 - Was wet now dry
 - Was dry now wet

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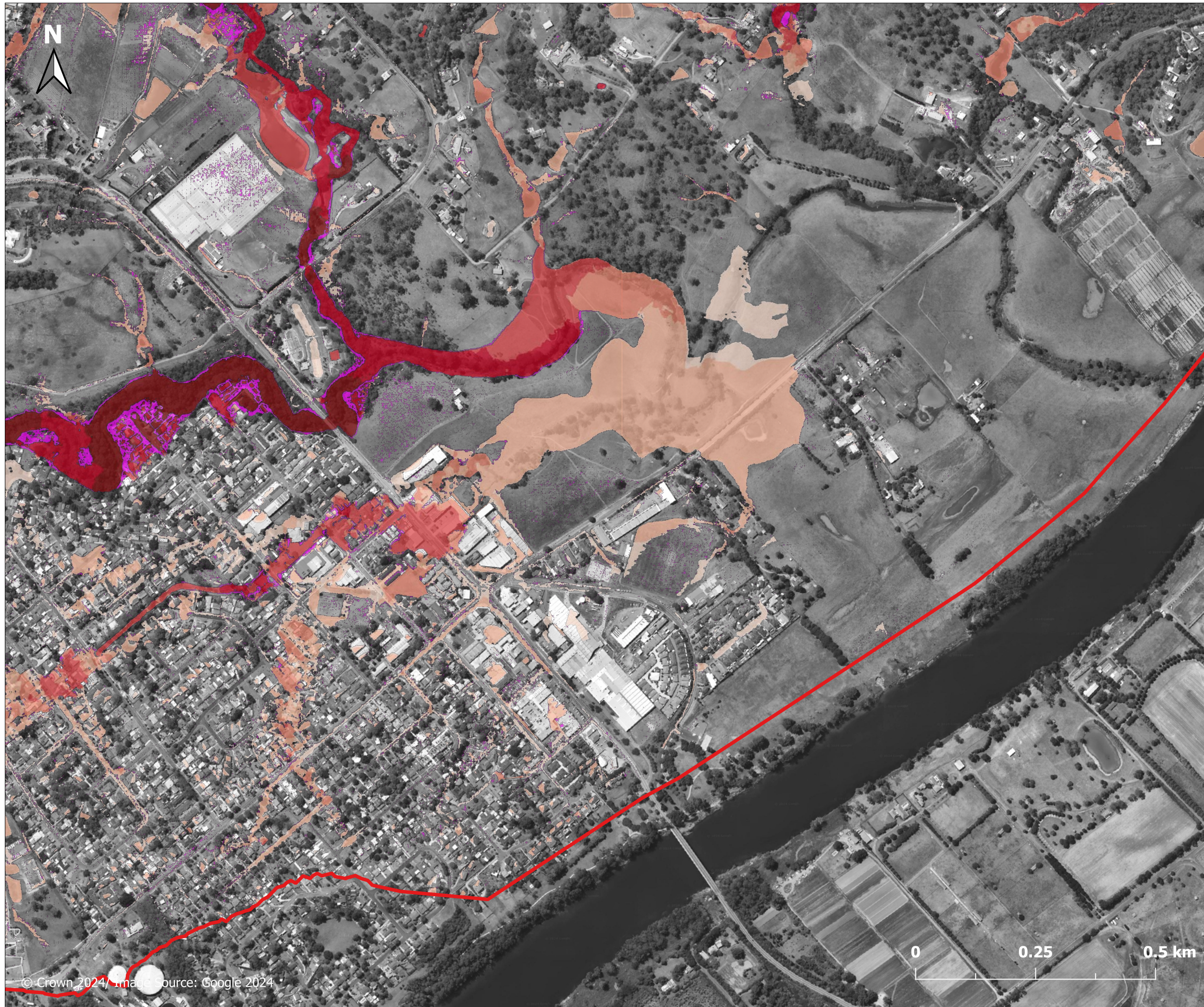
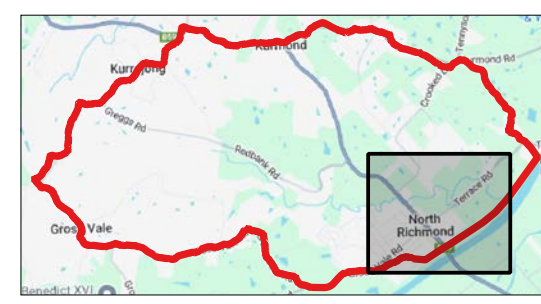


Figure D.2.2
Model sensitivity
No loss
East of North Richmond

- Legend**
- Study area
 - Afflux (m)**
 - < -0.50
 - 0.50 to -0.20
 - 0.20 to -0.10
 - 0.10 to -0.05
 - 0.05 to -0.02
 - 0.02 to -0.01
 - 0.01 to 0.01
 - 0.01 to 0.02
 - 0.02 to 0.05
 - 0.05 to 0.10
 - 0.10 to 0.20
 - 0.20 to 0.50
 - > 0.50
 - Was wet now dry
 - Was dry now wet



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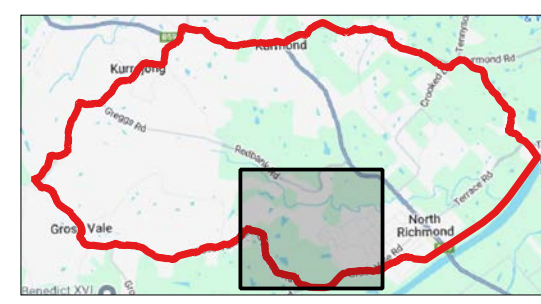


Figure D.2.3

**Model sensitivity
No loss
West of North Richmond**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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Figure D.3.1

**Model sensitivity
ARR2019 losses
North Richmond
Overview**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet

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Figure D.3.2

**Model sensitivity
ARR2019 losses
East of North Richmond**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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Figure D.3.3

**Model sensitivity
ARR2019 losses
West of North Richmond**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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Figure D.4.1

Model sensitivity
Roughness increased by
20%
North Richmond
Overview

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet

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Figure D.4.2

Model sensitivity
Roughness increased by 20%
East of North Richmond

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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Figure D.4.3
Model sensitivity
Roughness increased by
20%
West of North Richmond

Legend

Study area

Afflux (m)

- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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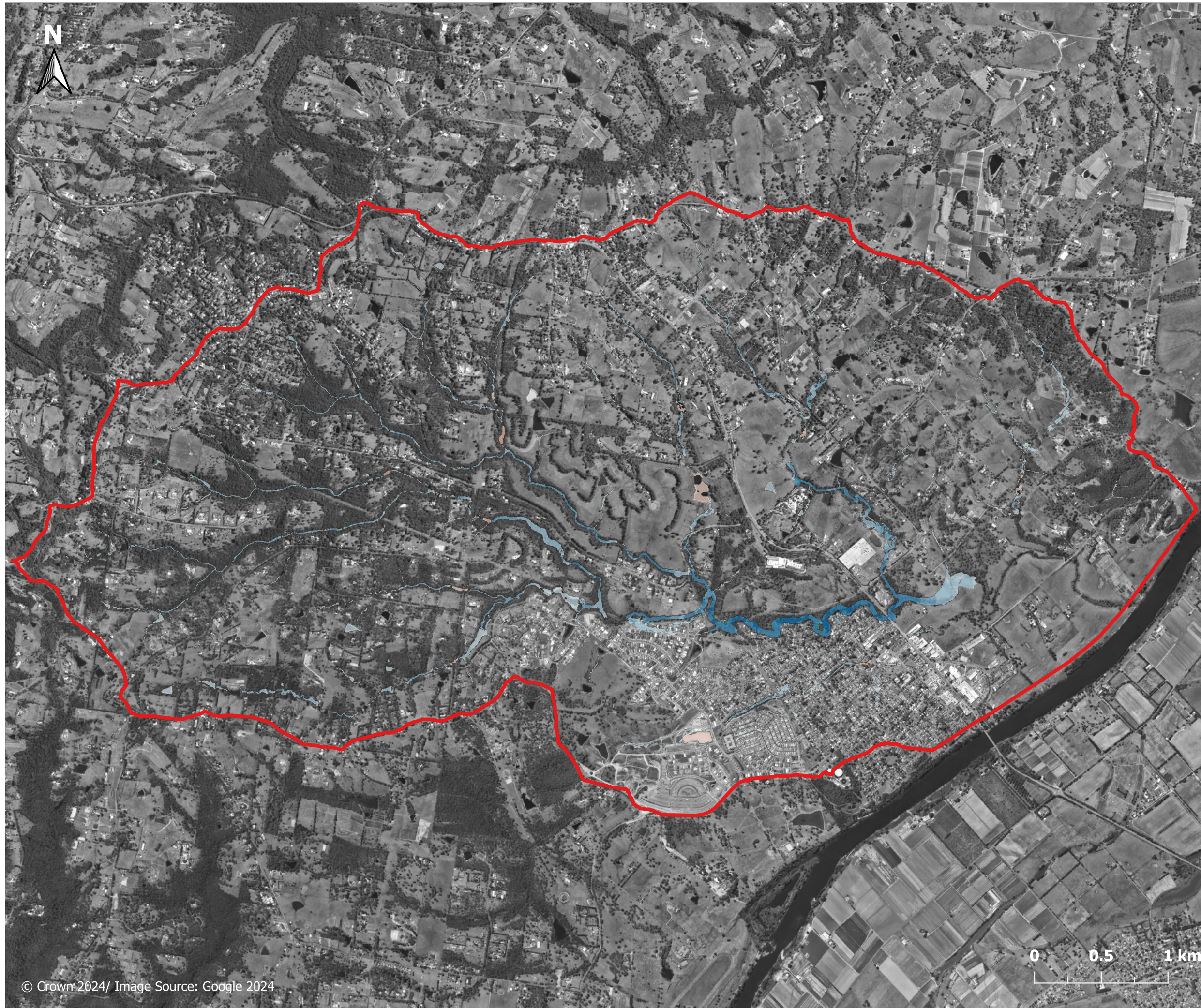


Figure D.5.1

Model sensitivity
Roughness decreased by
20%
North Richmond
Overview

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet

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Figure D.5.2

Model sensitivity
Roughness decreased by 20%
East of North Richmond

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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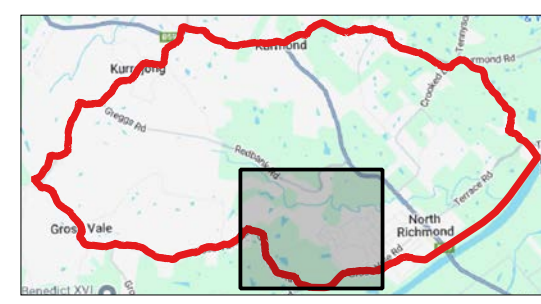


Figure D.5.3

Model sensitivity
Roughness decreased by 20%
West of North Richmond

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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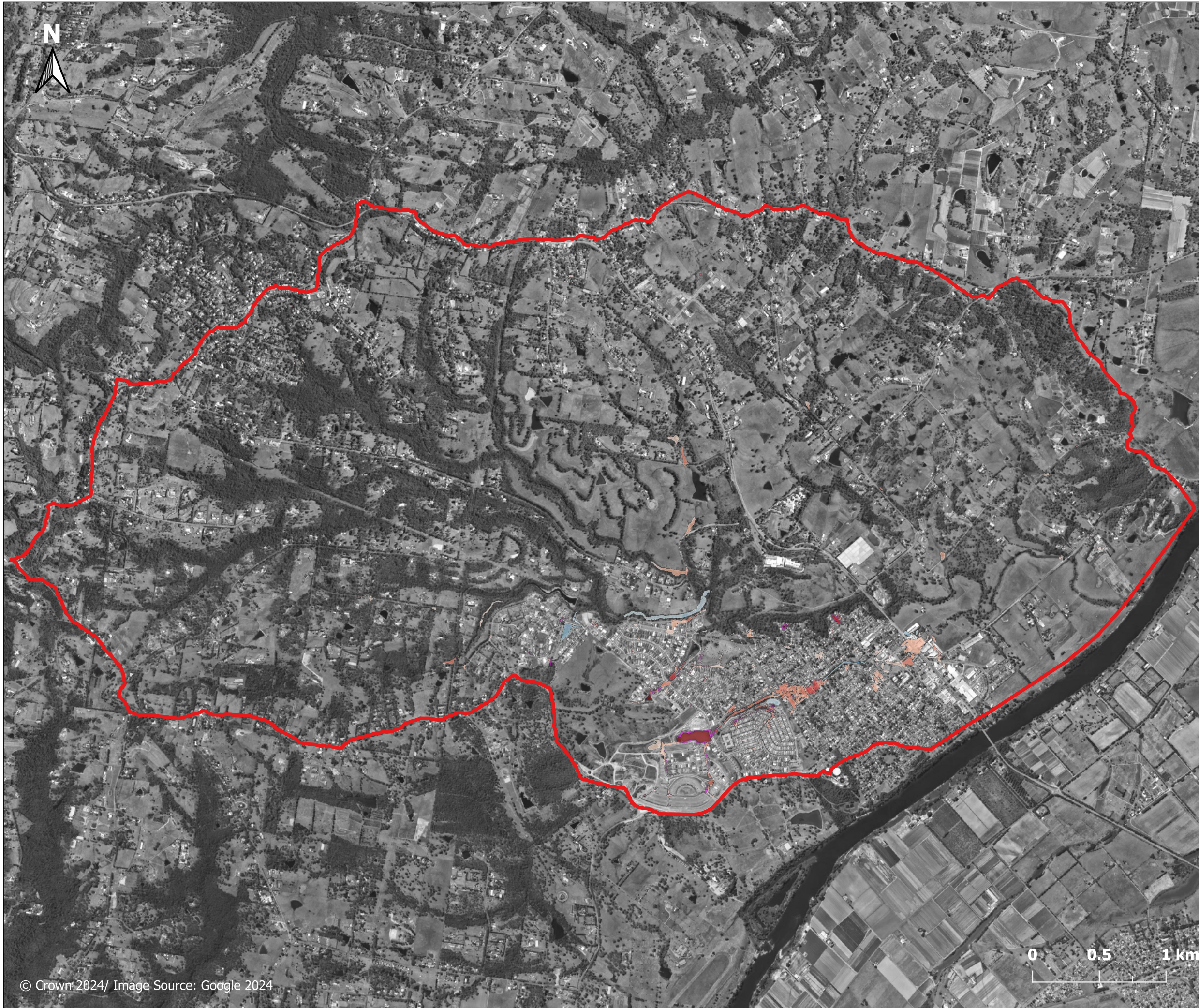


Figure D.6.1

**Model sensitivity
Double Design Blockage
North Richmond
Overview**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet

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Figure D.6.2

**Model sensitivity
Double Design Blockage
East of North Richmond**

Legend

- Study area
- Afflux (m)**
- < -0.50
- 0.50 to -0.20
- 0.20 to -0.10
- 0.10 to -0.05
- 0.05 to -0.02
- 0.02 to -0.01
- 0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.50
- > 0.50
- Was wet now dry
- Was dry now wet



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