



Figure D.6.3

**Model sensitivity
Double Design Blockage
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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**Redbank Creek Flood
Study**



**Manly
Hydraulics
Laboratory**



Figure D.7.1

**Model sensitivity
No 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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**Redbank Creek Flood
Study**





Figure D.7.2

**Model sensitivity
No 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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Redbank Creek Flood Study



© Crown 2024. Image source: Google 2024



Figure D.7.3
Model sensitivity
No Blockage
West of North Richmond

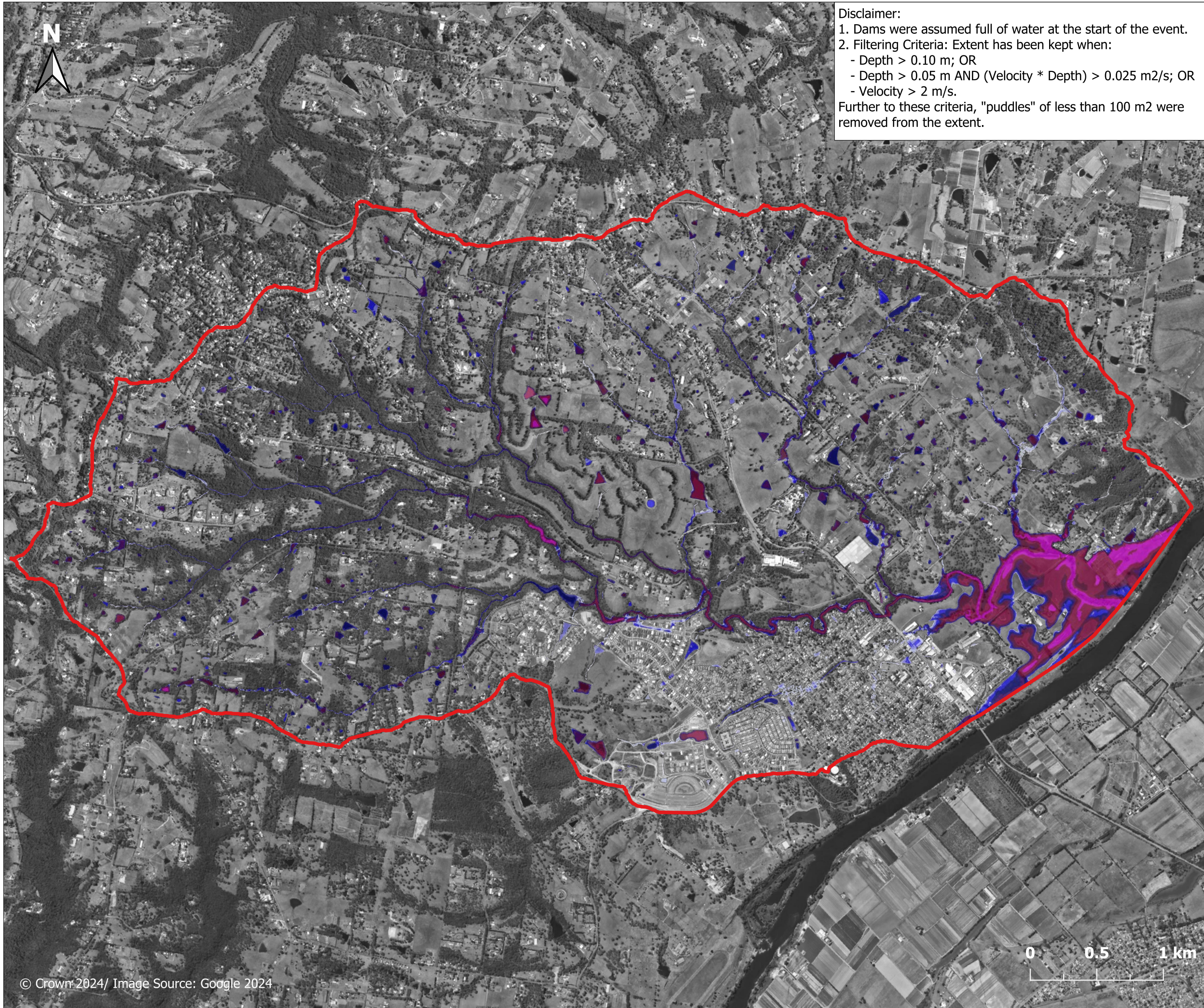
Legend

- 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



Report MHL3008
Redbank Creek Flood Study





Disclaimer:

1. Dams were assumed full of water at the start of the event.
2. Filtering Criteria: Extent has been kept when:
 - Depth > 0.10 m; OR
 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure D.8.1

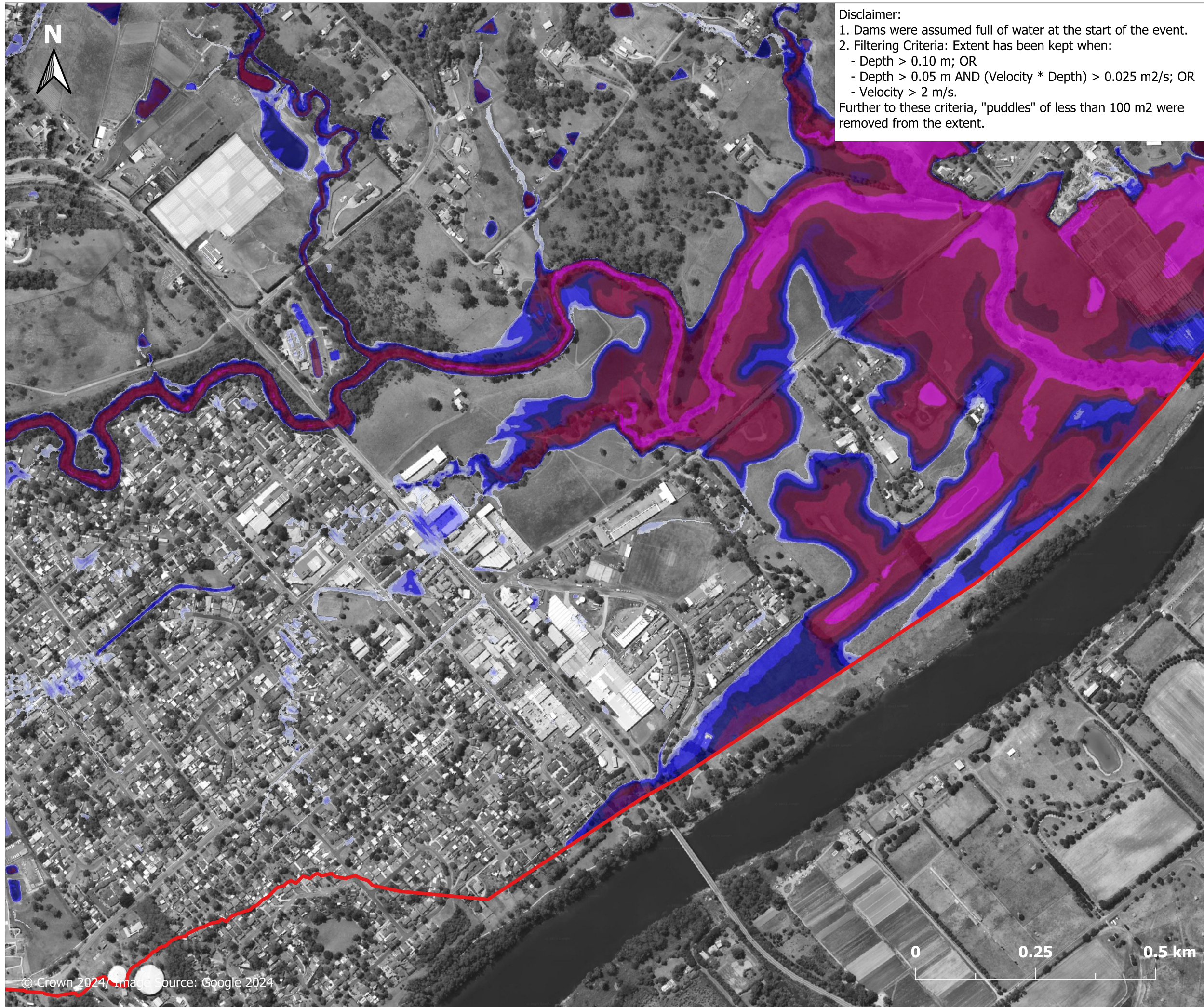
Model validation March 2022 Event No Blockage North Richmond Overview

Legend

- Study area
- Depth (m)**
- <= 0.05
- 0.05-0.15
- 0.15-0.30
- 0.30-0.50
- 0.50-1.00
- 1.00-1.50
- 1.50-2.00
- 2.00-3.00
- 3.00-5.00
- >5.00

Report MHL3008
Redbank Creek Flood Study





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 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure D.8.2
Model validation
March 2022 Event
No Blockage
East of North Richmond

Legend

Study area

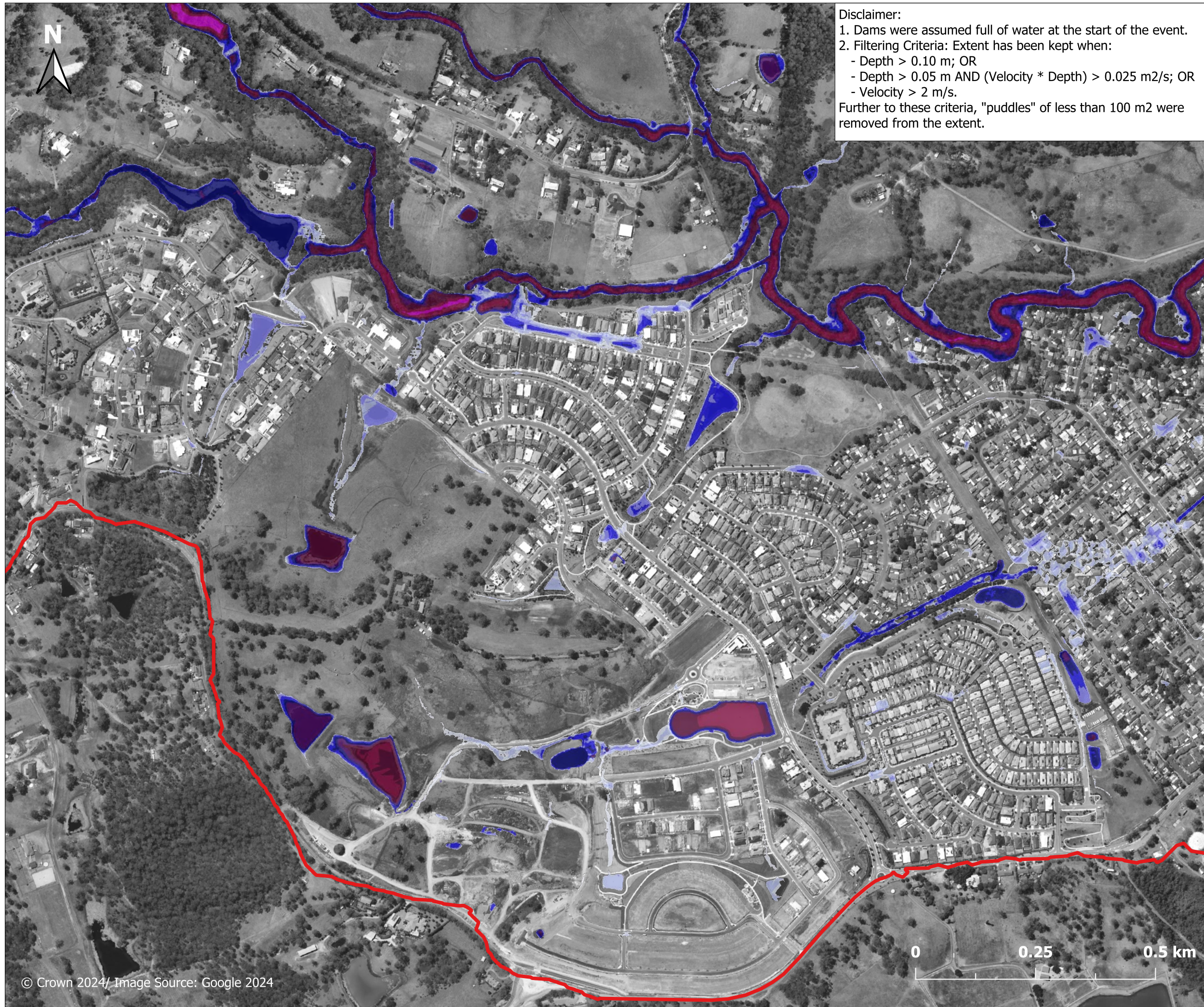
Depth (m)

- <= 0.05
- 0.05-0.15
- 0.15-0.30
- 0.30-0.50
- 0.50-1.00
- 1.00-1.50
- 1.50-2.00
- 2.00-3.00
- 3.00-5.00
- >5.00



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Redbank Creek Flood
Study





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 - Velocity > 2 m/s.
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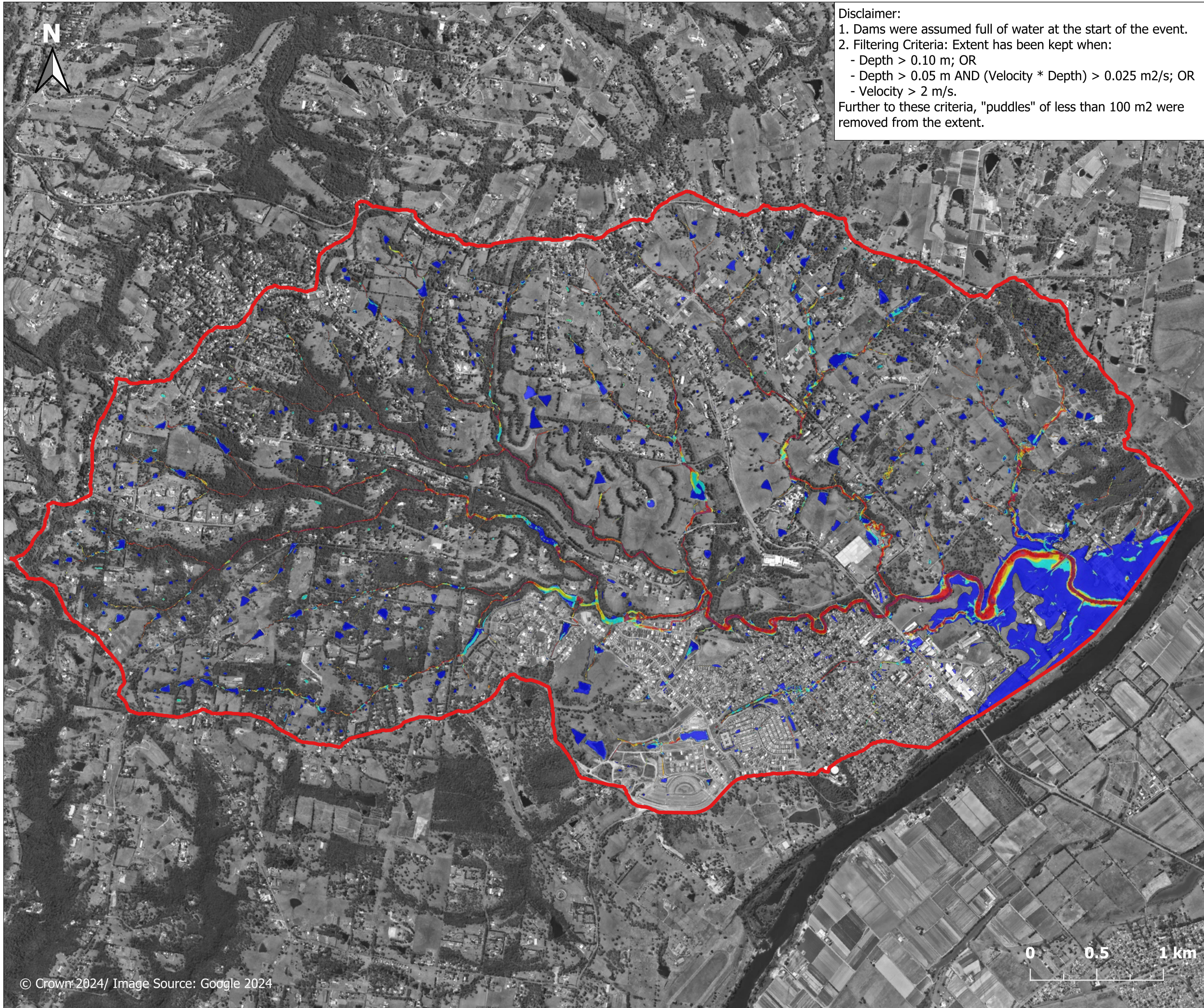
Figure D.8.3
Model validation
March 2022 Event
No Blockage
West of North Richmond

- Legend**
- Study area
 - Depth (m)**
 - <= 0.05
 - 0.05-0.15
 - 0.15-0.30
 - 0.30-0.50
 - 0.50-1.00
 - 1.00-1.50
 - 1.50-2.00
 - 2.00-3.00
 - 3.00-5.00
 - >5.00



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Redbank Creek Flood Study





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 - Depth > 0.10 m; OR
 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

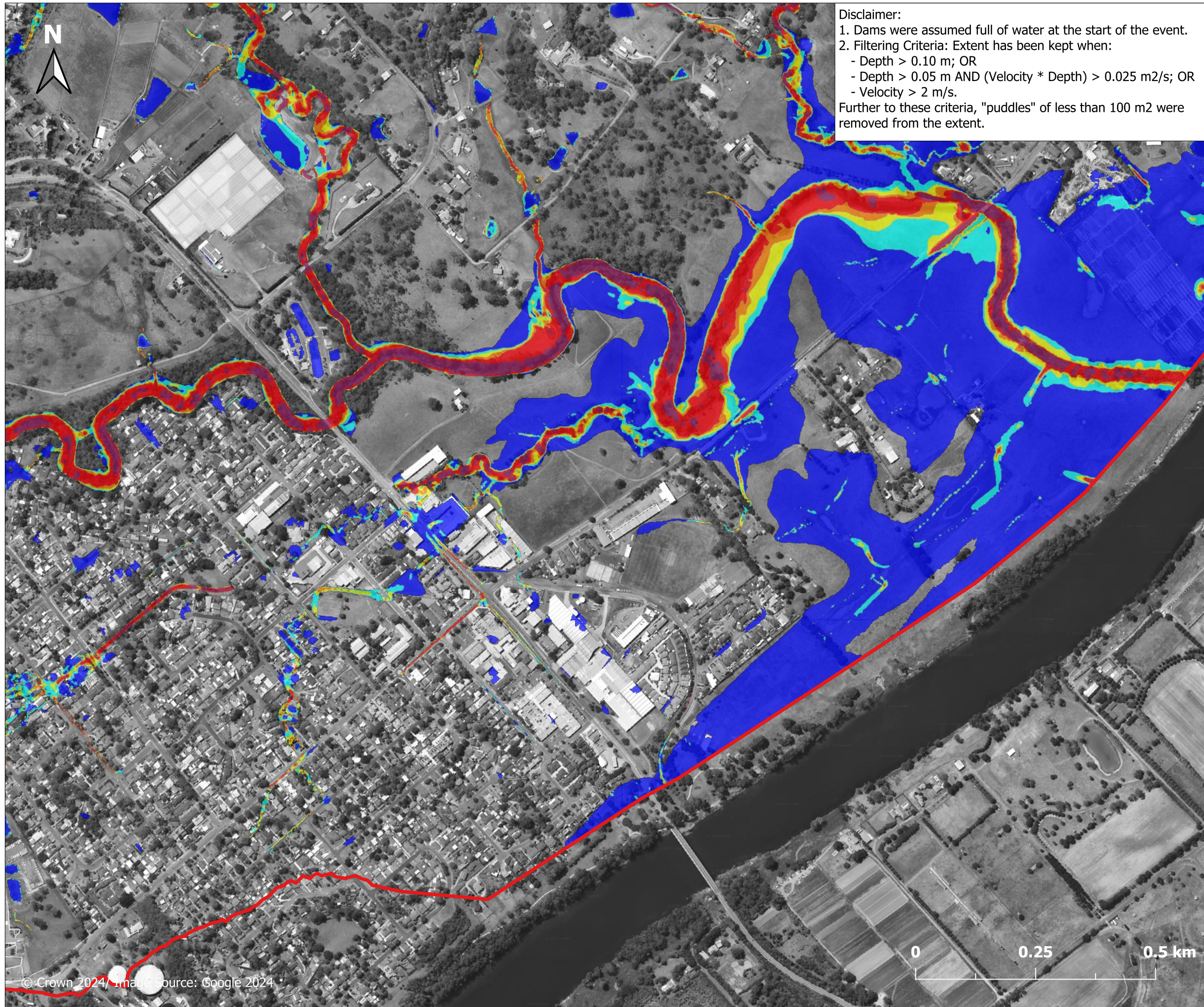
Figure D.9.1

Model validation March 2022 Event No Blockage North Richmond Overview

- Legend**
- Study area
 - Flow velocity (m/s)**
 - 0.00-0.25
 - 0.25-0.50
 - 0.50-0.75
 - 0.75-1.00
 - 1.00-1.50
 - >1.50

Report MHL3008
Redbank Creek Flood Study





Disclaimer:
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 2. Filtering Criteria: Extent has been kept when:
 - Depth > 0.10 m; OR
 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure D.9.2
Model validation
March 2022 Event
No Blockage
East of North Richmond

Legend

Study area

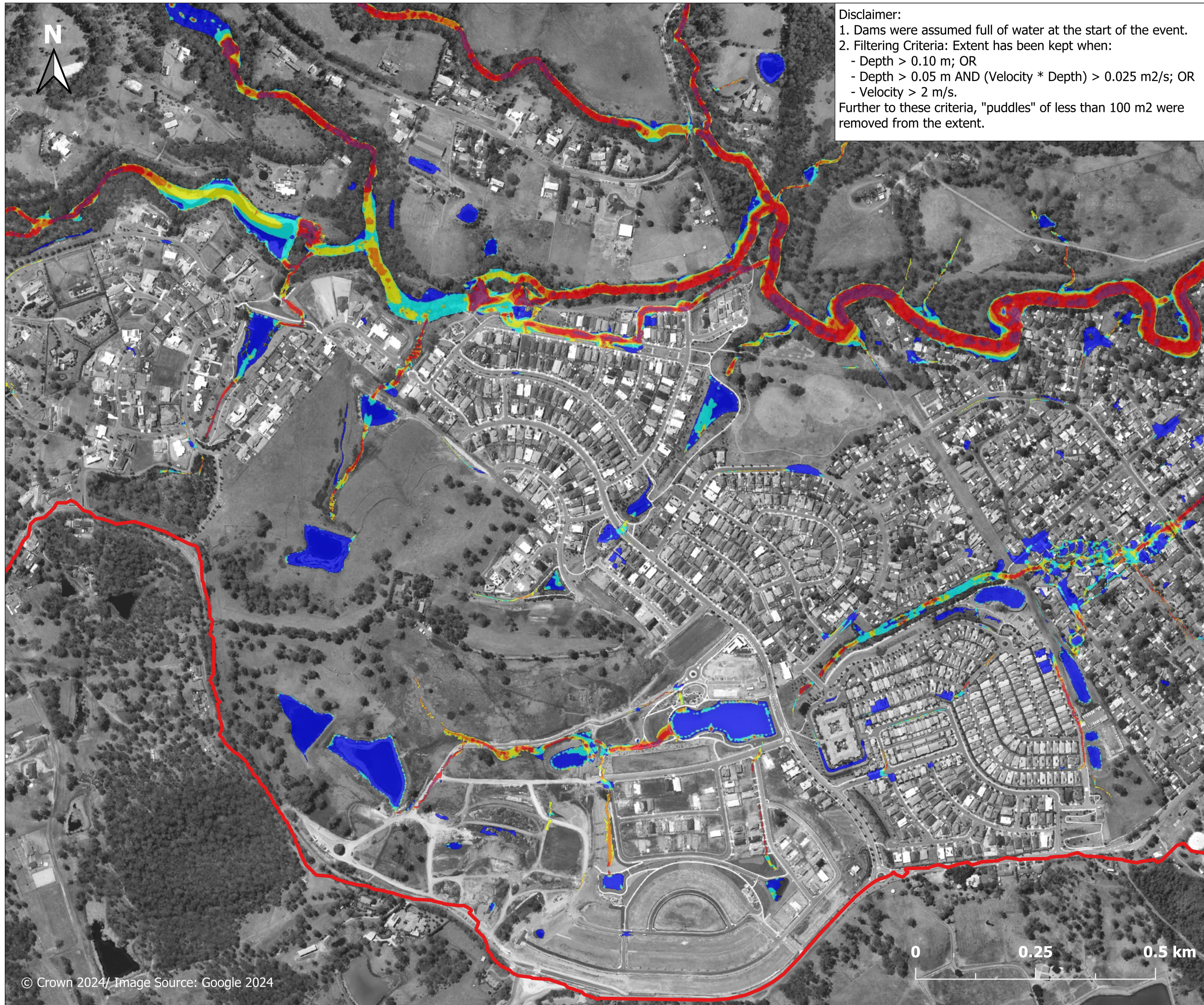
Flow velocity (m/s)

- 0.00-0.25
- 0.25-0.50
- 0.50-0.75
- 0.75-1.00
- 1.00-1.50
- >1.50



Report MHL3008
Redbank Creek Flood
Study





Disclaimer:
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 2. Filtering Criteria: Extent has been kept when:
 - Depth > 0.10 m; OR
 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure D.9.3
Model validation
March 2022 Event
No Blockage
West of North Richmond

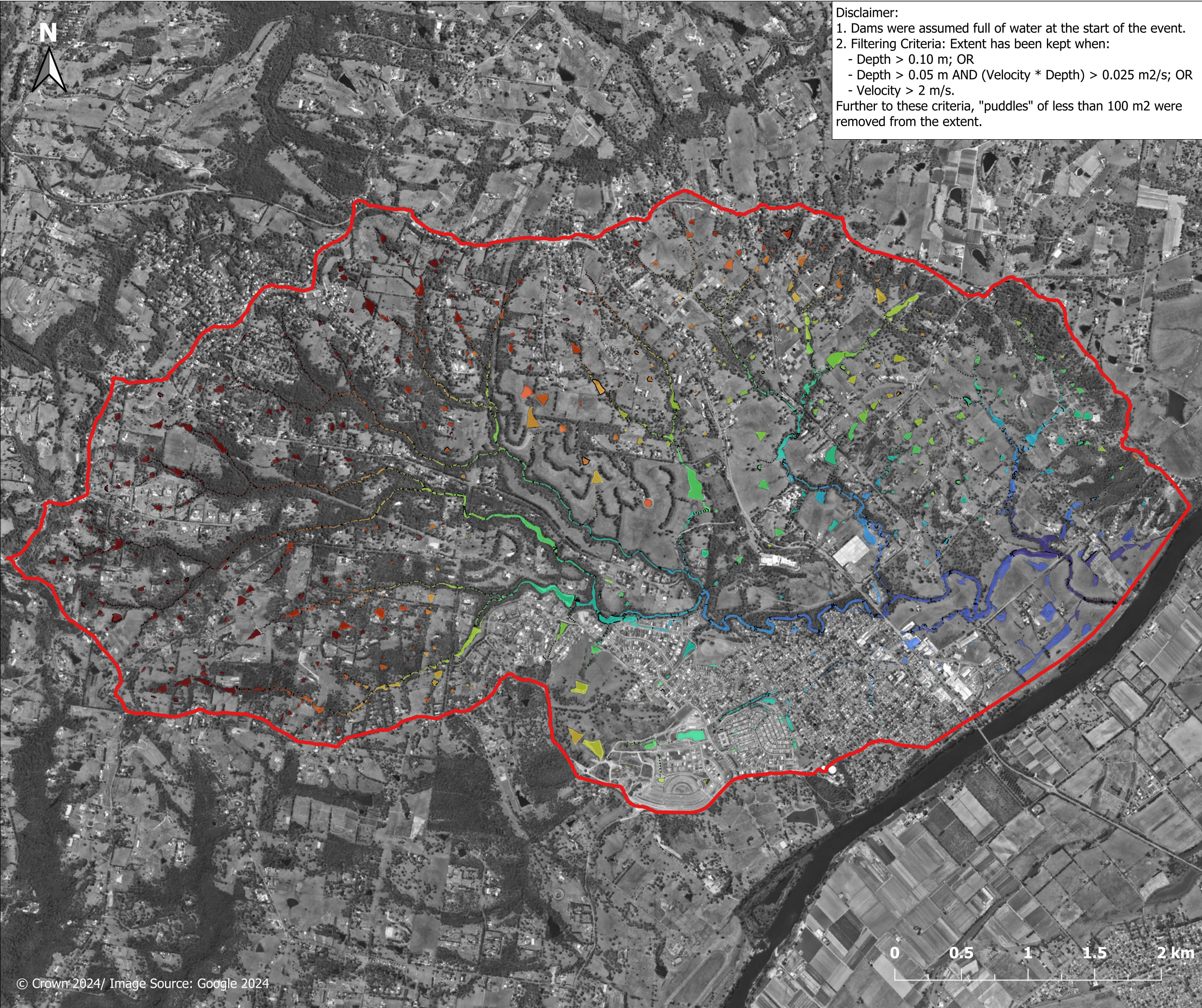
- Legend**
- Study area
 - Flow velocity (m/s)**
 - 0.00-0.25
 - 0.25-0.50
 - 0.50-0.75
 - 0.75-1.00
 - 1.00-1.50
 - >1.50



Report MHL3008
Redbank Creek Flood
Study



Appendix E Flood maps



Disclaimer:
 1. Dams were assumed full of water at the start of the event.
 2. Filtering Criteria: Extent has been kept when:
 - Depth > 0.10 m; OR
 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure E.1.1.1
Peak flood level
20% AEP event
North Richmond
Overview

Legend

- Study area
- 1 m contour

Peak water level (m AHD)

 <= 5	 50 - 55
 5 - 10	 55 - 60
 10 - 15	 60 - 65
 15 - 20	 65 - 70
 20 - 25	 70 - 75
 25 - 30	 75 - 80
 30 - 35	 80 - 85
 35 - 40	 85 - 90
 40 - 45	 90 - 95
 45 - 50	 > 95



Report MHL3008
Redbank Creek Flood
Study



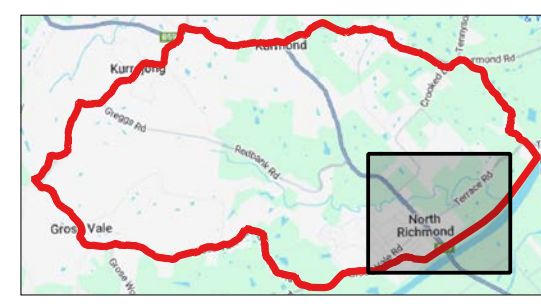


Figure E.1.1.2

**Peak flood level
 20% AEP event
 East of North
 Richmond**

Legend

- Study area
 - 1 m contour
- Peak water level (m AHD)**
- | | |
|--|--|
| <= 5 | 50 - 55 |
| 5 - 10 | 55 - 60 |
| 10 - 15 | 60 - 65 |
| 15 - 20 | 65 - 70 |
| 20 - 25 | 70 - 75 |
| 25 - 30 | 75 - 80 |
| 30 - 35 | 80 - 85 |
| 35 - 40 | 85 - 90 |
| 40 - 45 | 90 - 95 |
| 45 - 50 | > 95 |



Report MHL3008

**Redbank Creek Flood
 Study**



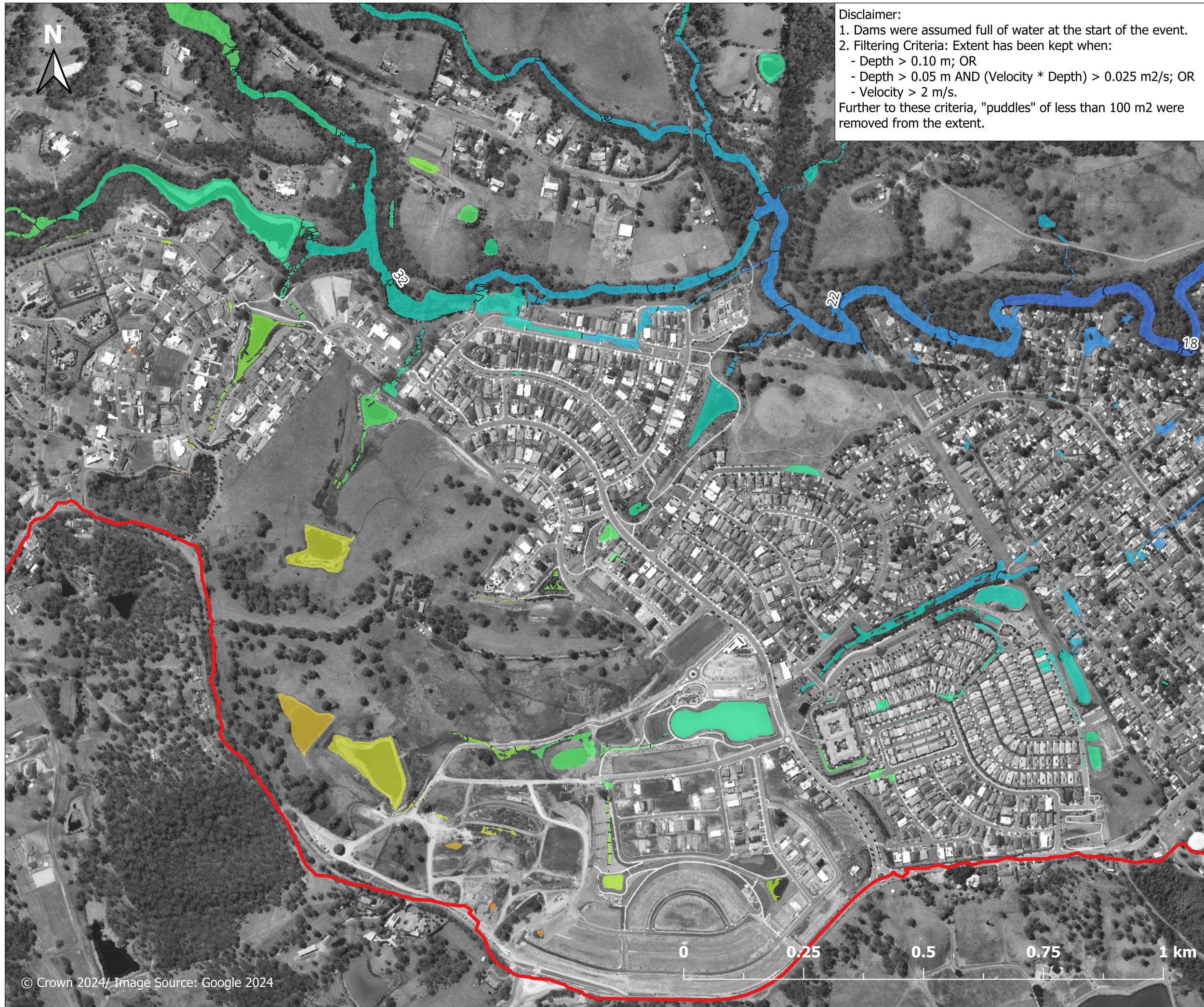
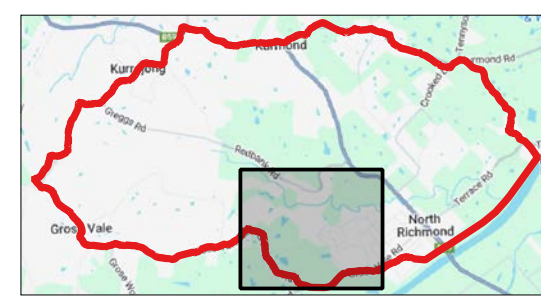


Figure E.1.1.3

**Peak flood level
 20% AEP event
 West of North
 Richmond**

Legend

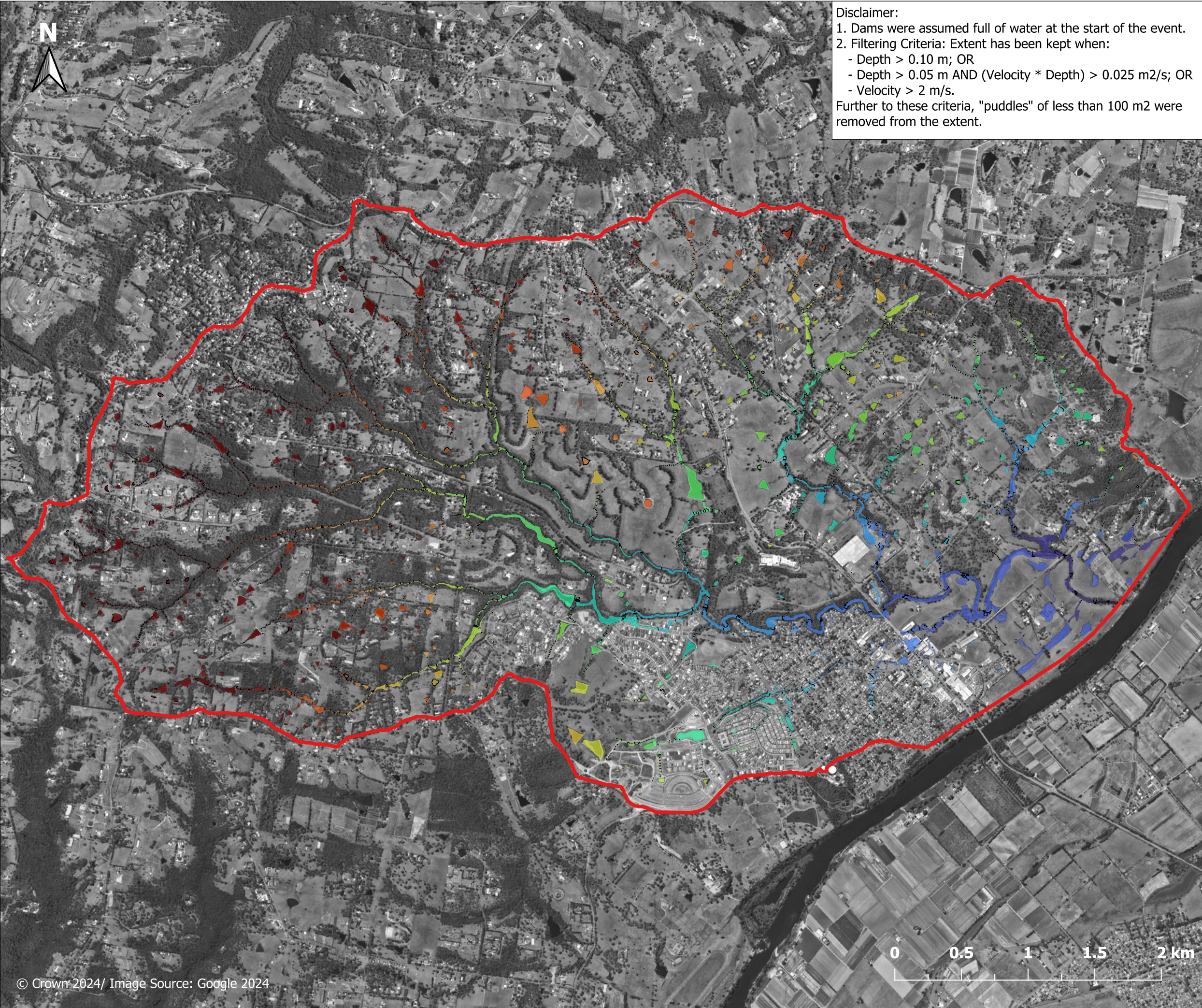
- Study area
 - 1 m contour
- Peak water level (m AHD)**
- | | |
|---|---|
| <= 5 | 50 - 55 |
| 5 - 10 | 55 - 60 |
| 10 - 15 | 60 - 65 |
| 15 - 20 | 65 - 70 |
| 20 - 25 | 70 - 75 |
| 25 - 30 | 75 - 80 |
| 30 - 35 | 80 - 85 |
| 35 - 40 | 85 - 90 |
| 40 - 45 | 90 - 95 |
| 45 - 50 | > 95 |



Report MHL3008

**Redbank Creek Flood
 Study**





Disclaimer:
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 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure E.1.2.1
Peak flood level
10% AEP event
North Richmond
Overview

Legend

- Study area
- 1 m contour

Peak water level (m AHD)

 <= 5	 50 - 55
 5 - 10	 55 - 60
 10 - 15	 60 - 65
 15 - 20	 65 - 70
 20 - 25	 70 - 75
 25 - 30	 75 - 80
 30 - 35	 80 - 85
 35 - 40	 85 - 90
 40 - 45	 90 - 95
 45 - 50	 > 95

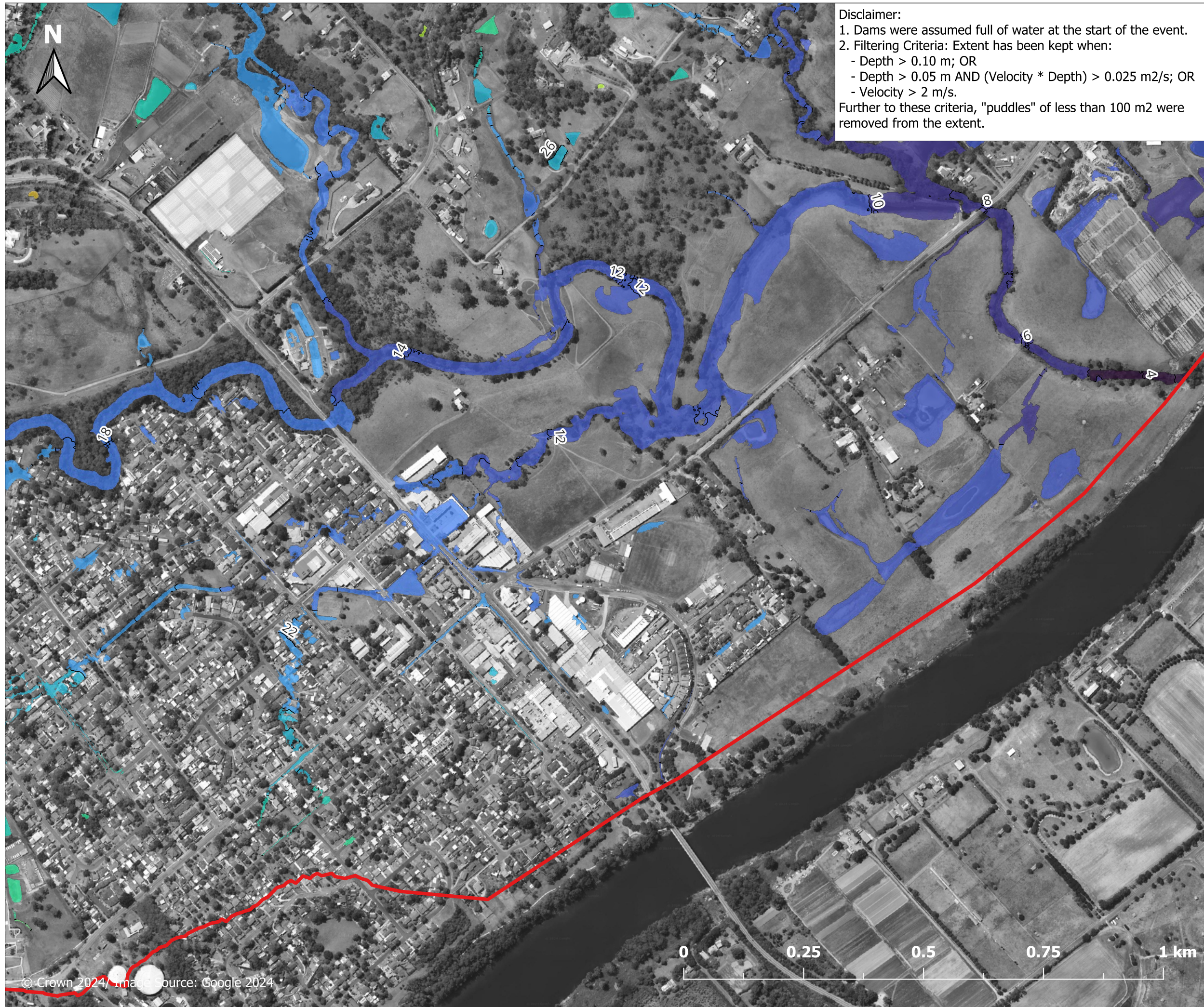
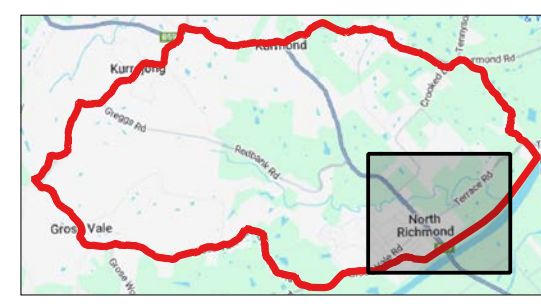


Figure E.1.2.2

**Peak flood level
 10% AEP event
 East of North
 Richmond**

Legend

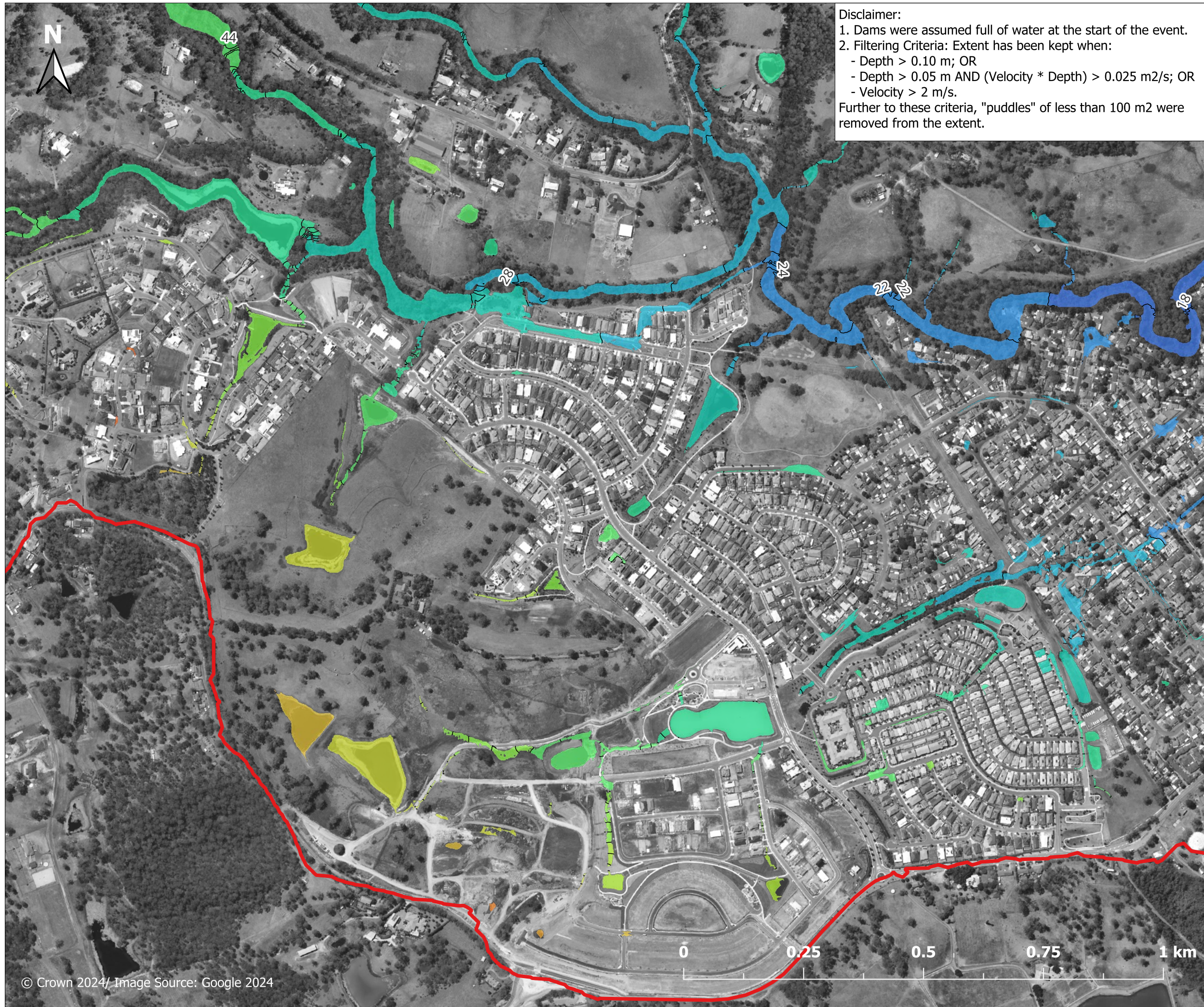
- Study area
 - 1 m contour
- Peak water level (m AHD)**
- | | |
|---|---|
| <= 5 | 50 - 55 |
| 5 - 10 | 55 - 60 |
| 10 - 15 | 60 - 65 |
| 15 - 20 | 65 - 70 |
| 20 - 25 | 70 - 75 |
| 25 - 30 | 75 - 80 |
| 30 - 35 | 80 - 85 |
| 35 - 40 | 85 - 90 |
| 40 - 45 | 90 - 95 |
| 45 - 50 | > 95 |



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**Redbank Creek Flood
 Study**





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 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure E.1.2.3
Peak flood level
10% AEP event
West of North
Richmond

Legend

- Study area
- 1 m contour

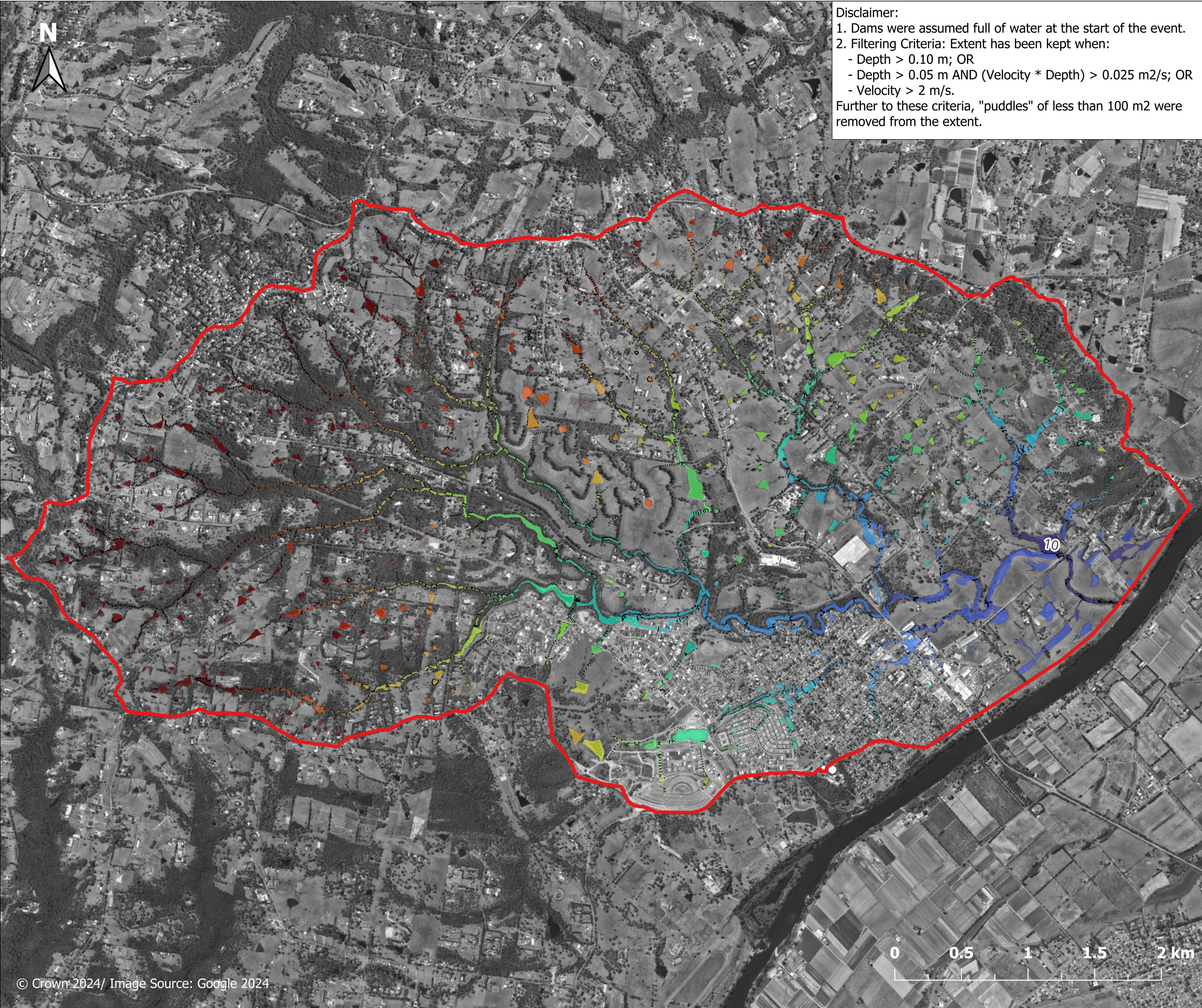
Peak water level (m AHD)

 <= 5	 50 - 55
 5 - 10	 55 - 60
 10 - 15	 60 - 65
 15 - 20	 65 - 70
 20 - 25	 70 - 75
 25 - 30	 75 - 80
 30 - 35	 80 - 85
 35 - 40	 85 - 90
 40 - 45	 90 - 95
 45 - 50	 > 95



Report MHL3008
Redbank Creek Flood
Study





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 - Depth > 0.05 m AND (Velocity * Depth) > 0.025 m²/s; OR
 - Velocity > 2 m/s.
 Further to these criteria, "puddles" of less than 100 m² were removed from the extent.

Figure E.1.3.1
Peak flood level
5% AEP event
North Richmond
Overview

Legend

- Study area
- 1 m contour

Peak water level (m AHD)

 <= 5	 50 - 55
 5 - 10	 55 - 60
 10 - 15	 60 - 65
 15 - 20	 65 - 70
 20 - 25	 70 - 75
 25 - 30	 75 - 80
 30 - 35	 80 - 85
 35 - 40	 85 - 90
 40 - 45	 90 - 95
 45 - 50	 > 95

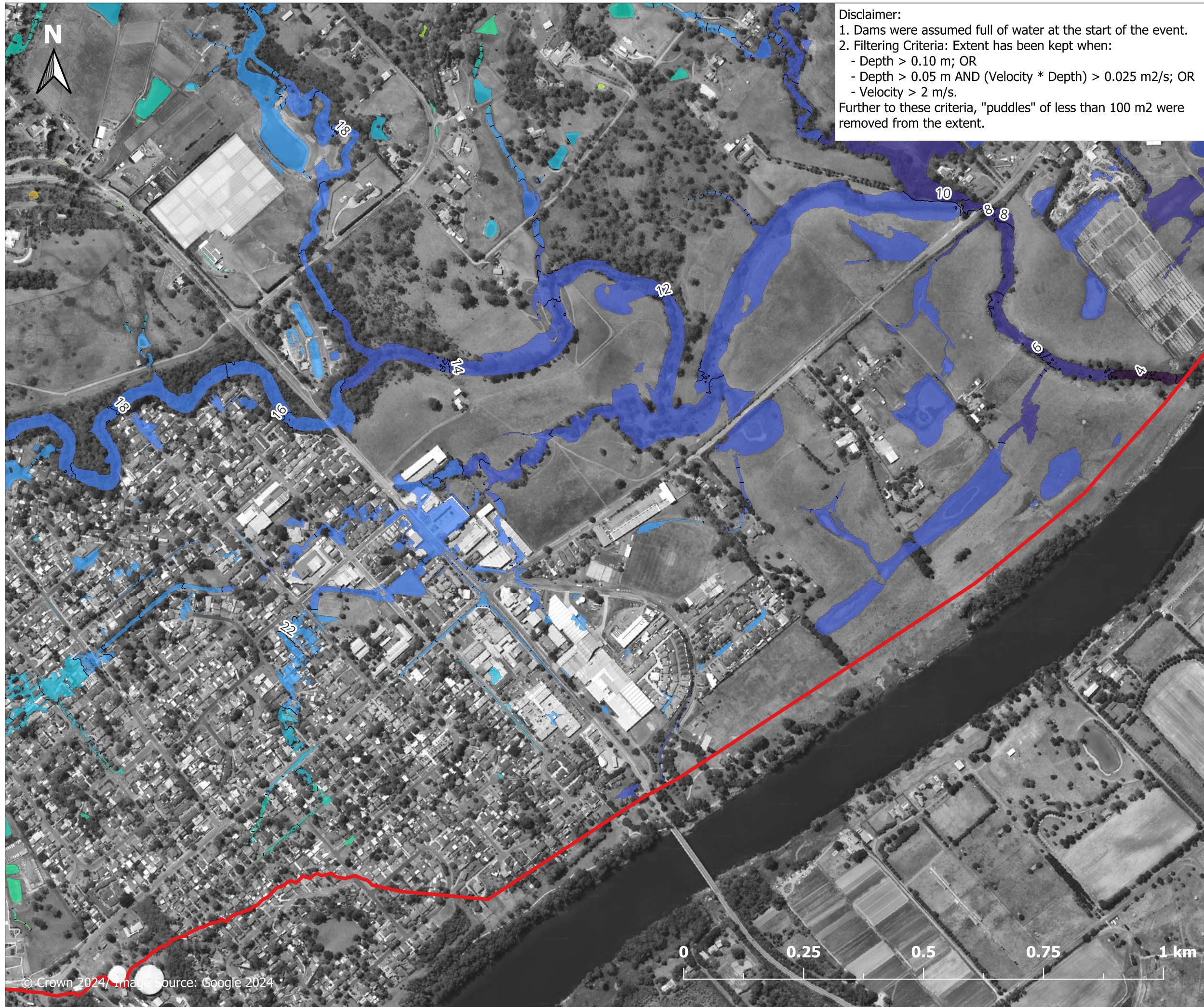
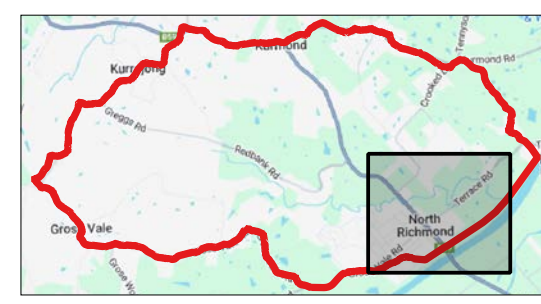


Figure E.1.3.2

**Peak flood level
 5% AEP event
 East of North
 Richmond**

Legend

- Study area
 - 1 m contour
- Peak water level (m AHD)**
- | | |
|--|--|
| <= 5 | 50 - 55 |
| 5 - 10 | 55 - 60 |
| 10 - 15 | 60 - 65 |
| 15 - 20 | 65 - 70 |
| 20 - 25 | 70 - 75 |
| 25 - 30 | 75 - 80 |
| 30 - 35 | 80 - 85 |
| 35 - 40 | 85 - 90 |
| 40 - 45 | 90 - 95 |
| 45 - 50 | > 95 |



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**Redbank Creek Flood
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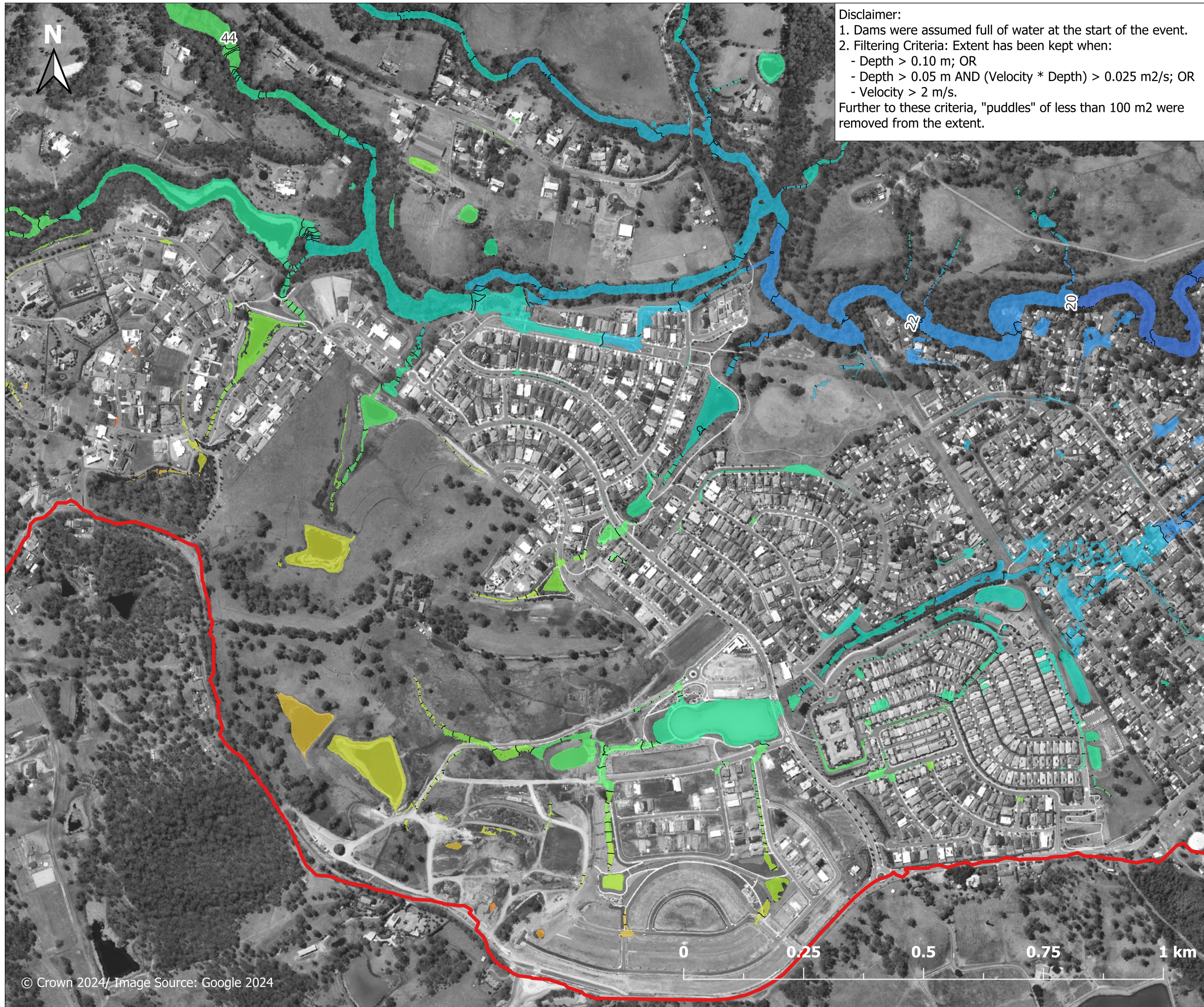
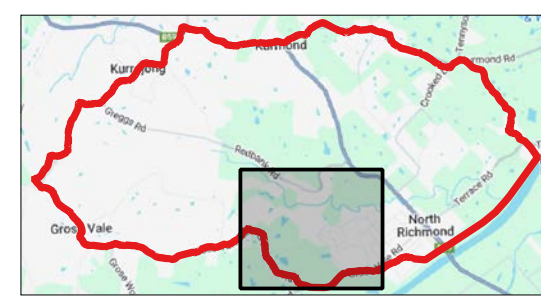


Figure E.1.3.3

**Peak flood level
 5% AEP event
 West of North
 Richmond**

Legend

- Study area
 - 1 m contour
- Peak water level (m AHD)**
- | | |
|--|--|
| <= 5 | 50 - 55 |
| 5 - 10 | 55 - 60 |
| 10 - 15 | 60 - 65 |
| 15 - 20 | 65 - 70 |
| 20 - 25 | 70 - 75 |
| 25 - 30 | 75 - 80 |
| 30 - 35 | 80 - 85 |
| 35 - 40 | 85 - 90 |
| 40 - 45 | 90 - 95 |
| 45 - 50 | > 95 |



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