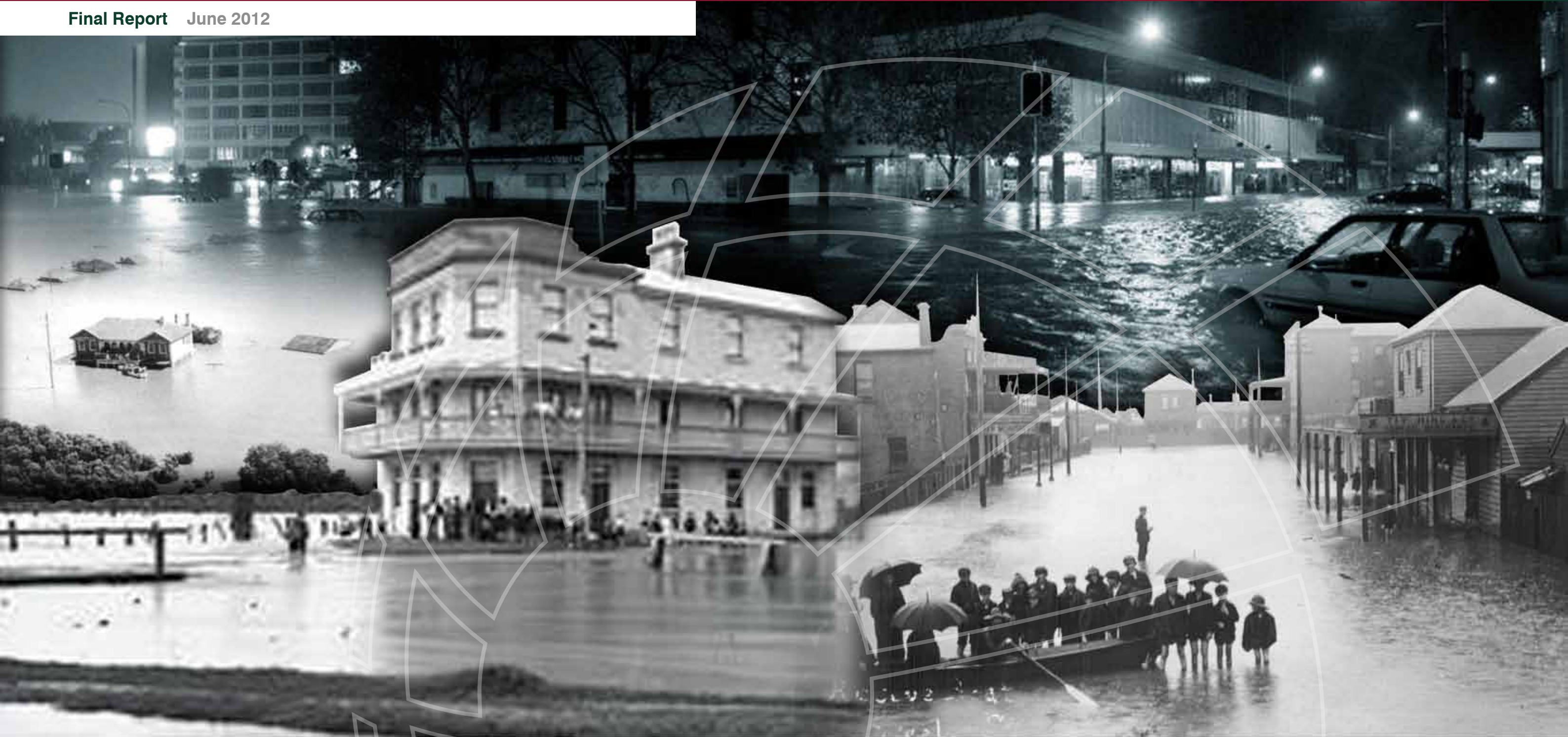


Newcastle City-wide Floodplain Risk Management Study and Plan Compendium of Maps

Final Report June 2012



Newcastle City-wide Floodplain Risk Management Study and Plan

Prepared For: City of Newcastle

Prepared By: BMT WBM Pty Ltd (Member of the BMT group of companies)

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DOCUMENT CONTROL SHEET

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	Project Manager :	Dr Philip Haines
	Client :	City of Newcastle
	Client Contact:	David Gibbins / Alastair Peddie
Client Reference		

Title :	The Newcastle City-wide Floodplain Risk Management Study and Plan Compendium of Maps
Author :	Dr Philip Haines
Synopsis :	<p>This document is the complete Floodplain Risk Management Study and Plan for the Newcastle City-wide area. It is the culmination of many years of research and studies, including various Flood Studies for specific catchments, Floodplain Management Studies, and the previous Stage 1 Concept City-wide Flood Plan. The document provides a suite of actions, works and initiatives that when implemented will result in reductions to Risks to Life and Risks to Property across the City.</p> <p>This City-wide Floodplain Management Plan excludes the Wallsend Commercial Centre, as this area already has an adopted Flood Plan (2009). Apart from updating the mapping of floodplain categories, this document does not supersede or negate the Wallsend Plan in any way. Implementation of both the City-wide Flood Plan and the Wallsend Flood Plan should occur concurrently.</p>

Disclaimers

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The Newcastle City-wide Floodplain Risk Management Working Party has prepared this document with financial assistance from the NSW Government through the Office of Environment and Heritage. This document does not necessarily represent the opinions of the NSW Government or the Office of Environment and Heritage.



REVISION/CHECKING HISTORY

REVISION NUMBER	DATE OF ISSUE	CHECKED BY		ISSUED BY	
0	23 December 2011	PEH		PEH	
1	18 June 2012	PEH		PEH	

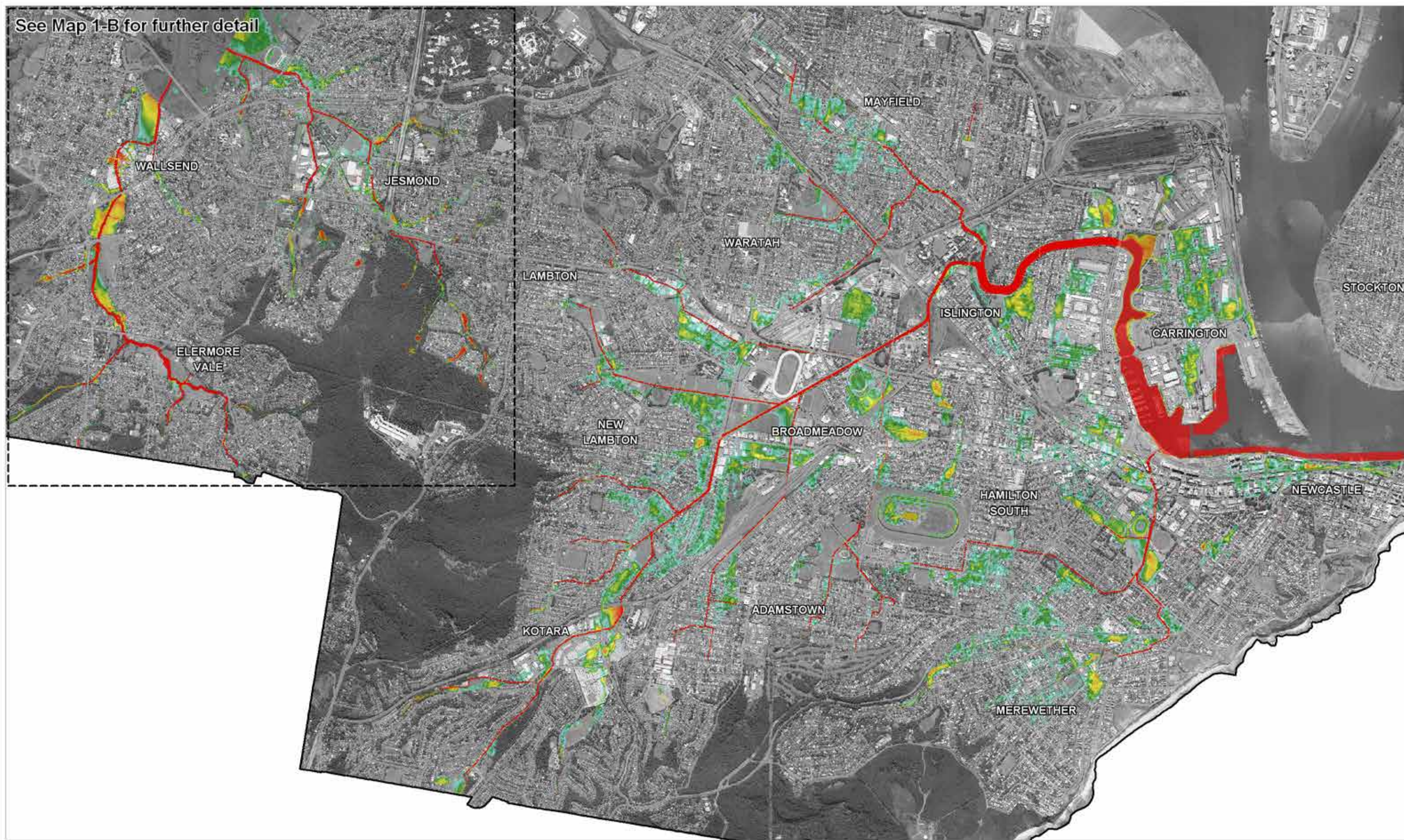
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DESTINATION	REVISION			
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City of Newcastle BMT WBM File BMT WBM Library	electronic	electronic		

LIST OF MAP SERIES INCLUDED IN THIS COMPENDIUM

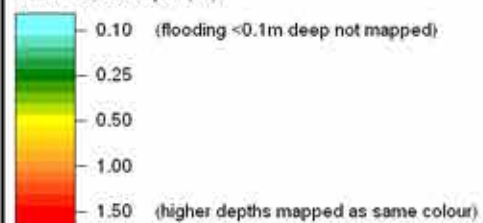
- Map Series 1 10% AEP Flood Depths
- Map Series 2 1% AEP Flood Depths
- Map Series 3 PMF Flood Depths
- Map Series 4 1% AEP Flood Impact Categories
- Map Series 5 PMF Flood Impact Categories
- Map Series 6 Risk to Life Hazards (L1-L5)
- Map Series 7 Risks to Life on Roads
- Map Series 8 Risks to Life in Buildings
- Map Series 9 Risk to Property Hazards (P1-P5)
- Map Series 10 Potential for Property Damage
- Map Series 11 Potential Locations for Elevated Refuge

See Map 1-B for further detail



LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 1 - 10% AEP Flash Flood Depths

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 0.75 1.5km
Approx. Scale

Figure:

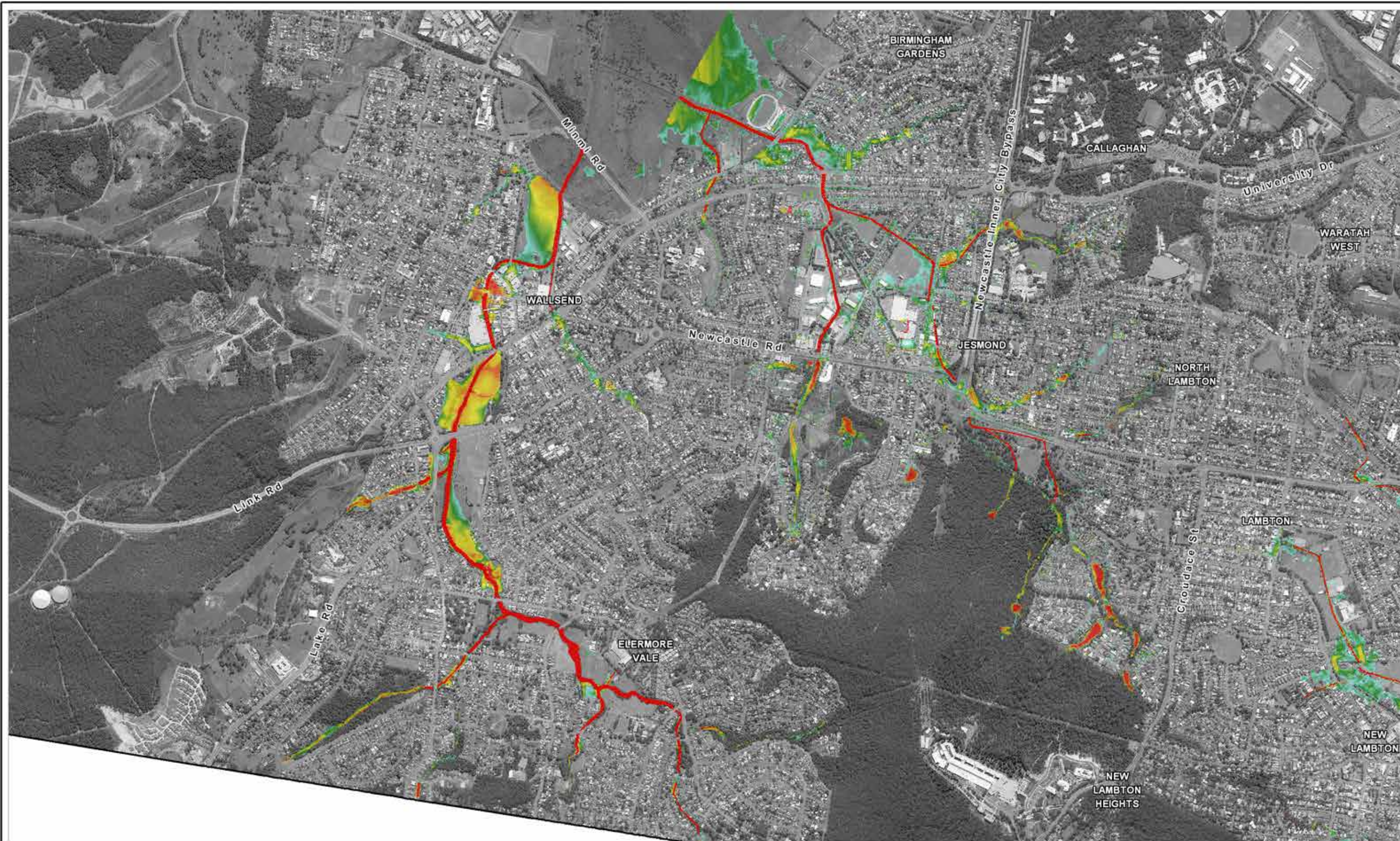
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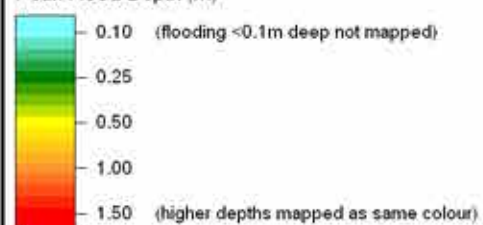


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LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 1 - 10% AEP Flash Flood Depths

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0 375 750m
Approx. Scale

Figure:

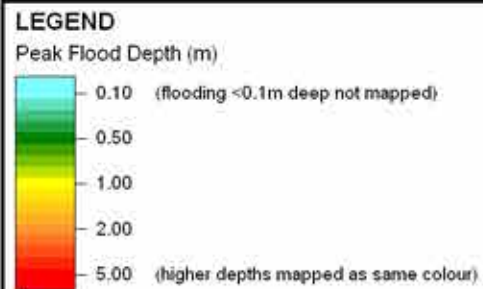
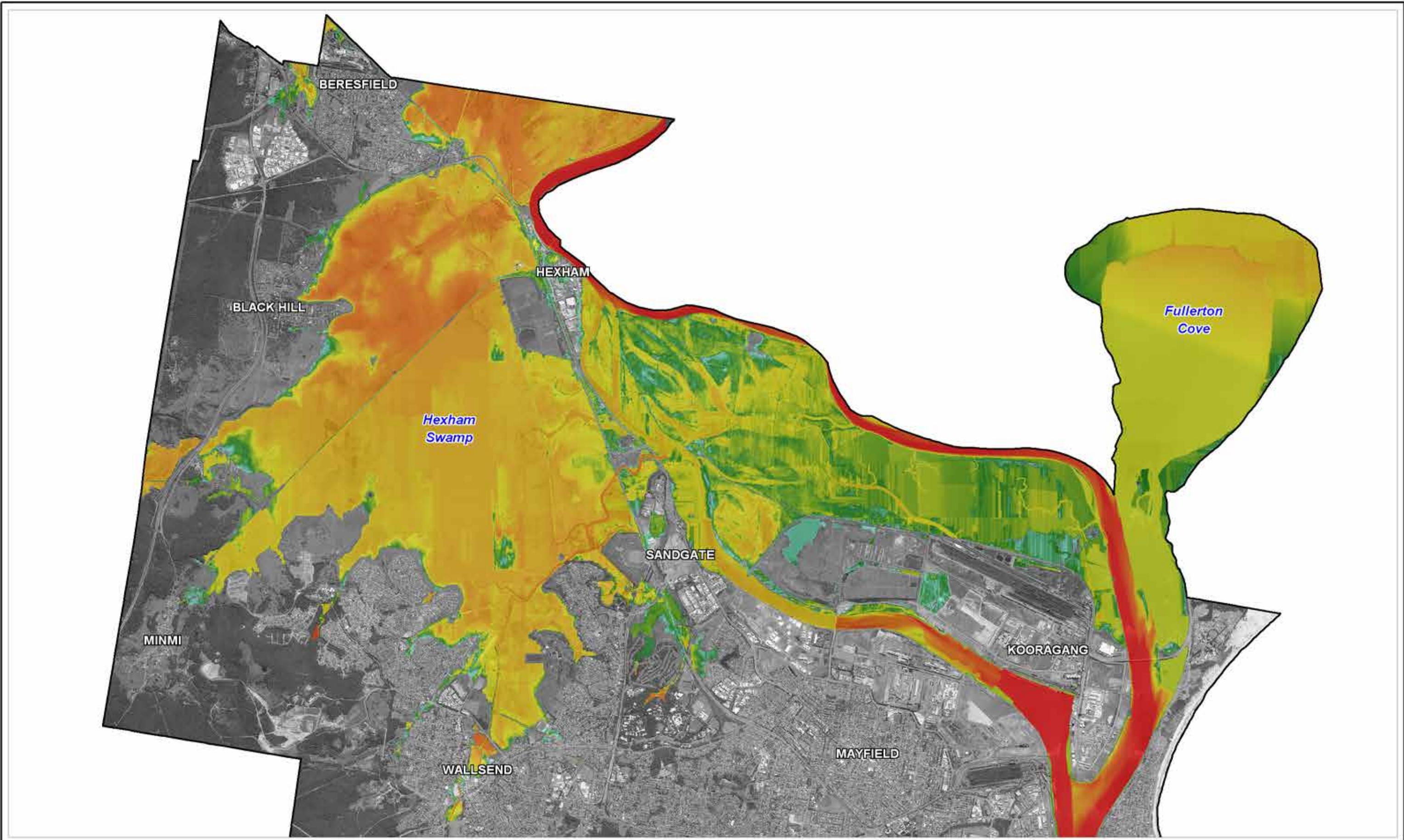
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Rev:

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Title:
**Newcastle Floodplain Risk Management Study
Map Series 1 - 10% AEP Hunter River Flood Depths**

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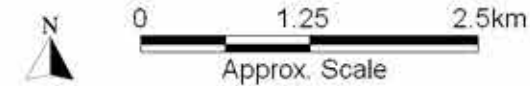
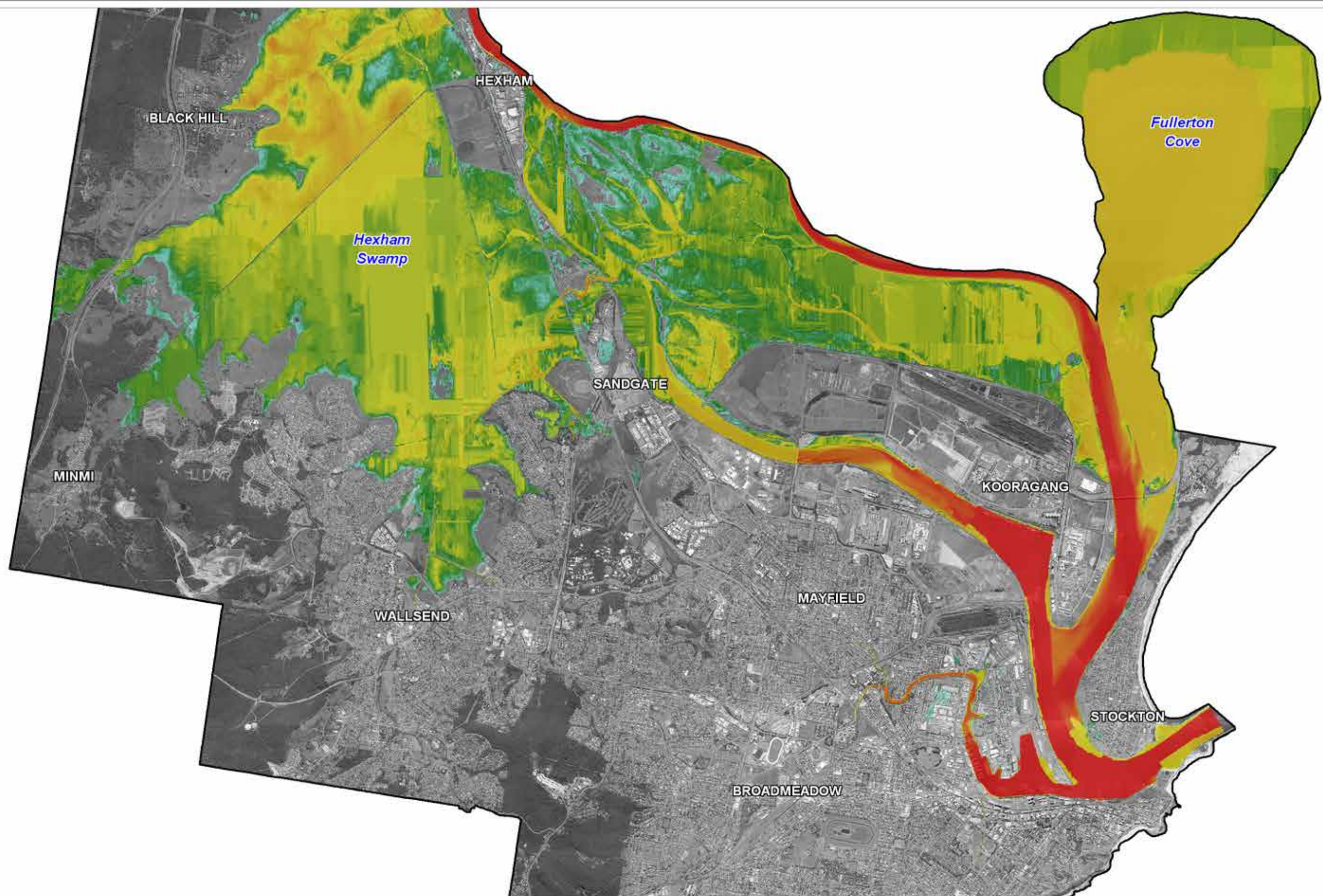


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Rev:
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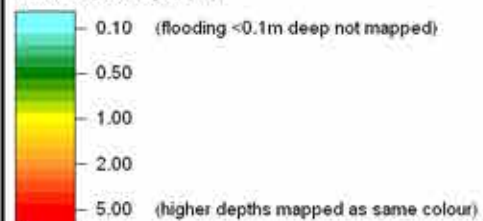


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LEGEND

Peak Flood Depth (m)



Note: Adopted ocean level = 1.35m AHD
(10% AEP with no sea level rise included)

Title:

Newcastle Floodplain Risk Management Study Map Series 1 - 10% AEP Ocean Flood Depths

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0 1.25 2.5km
Approx. Scale

Figure:

1-D

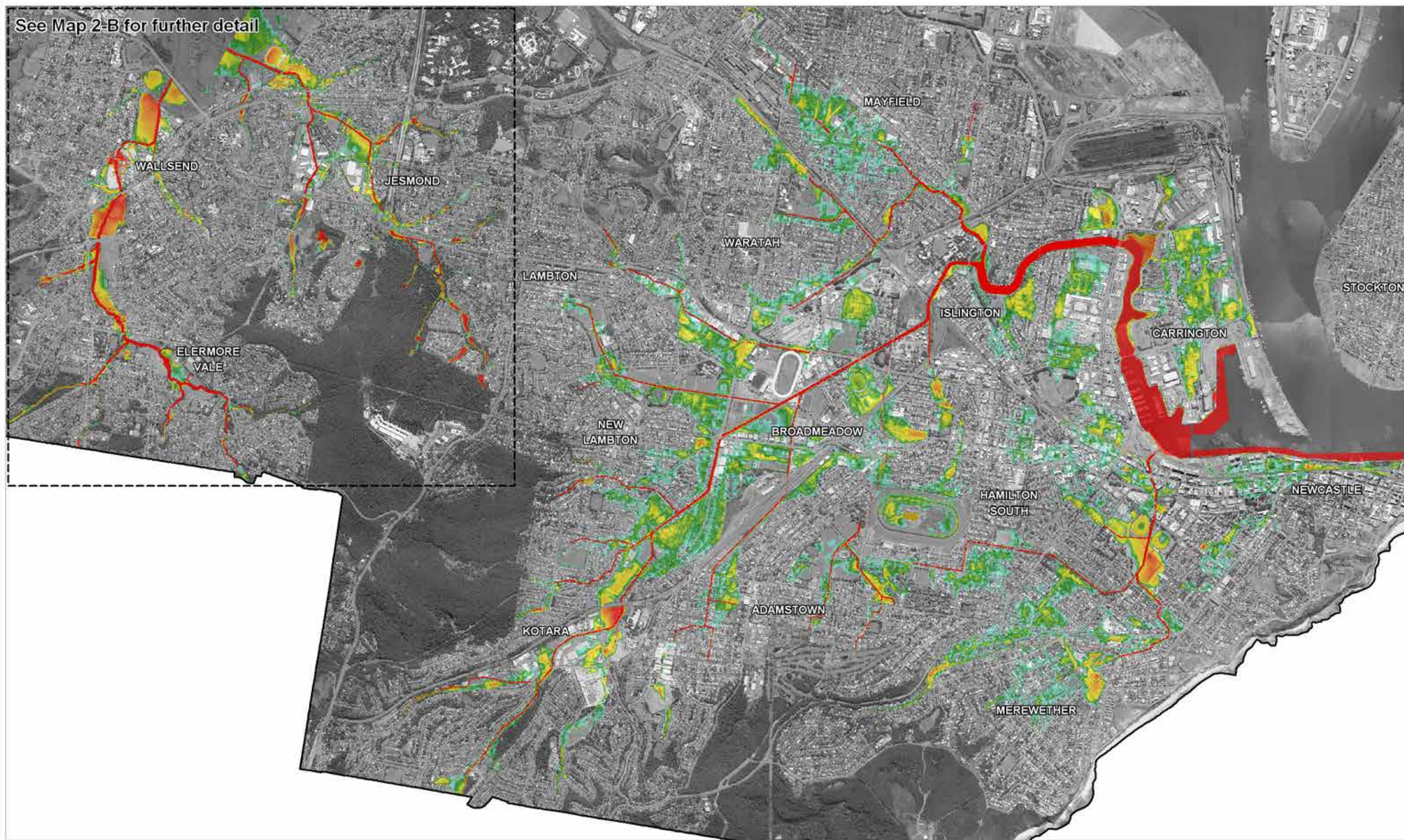
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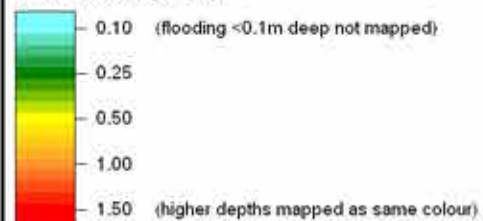
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See Map 2-B for further detail



LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 2 - 1% AEP Flash Flood Depths

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0 0.75 1.5km
Approx. Scale

Figure:

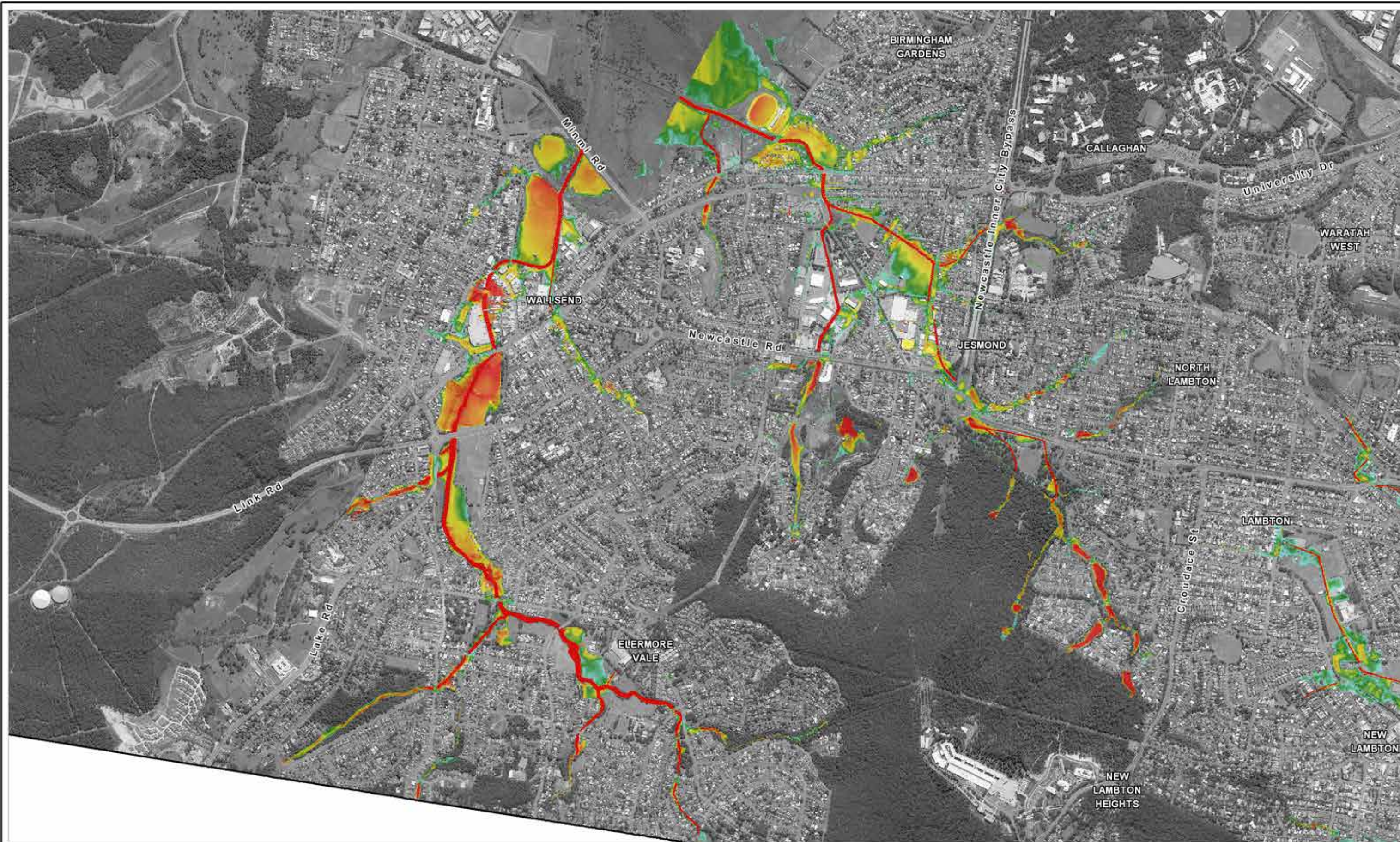
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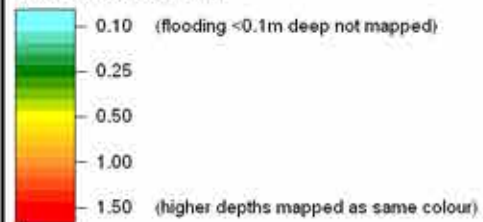


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LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 2 - 1% AEP Flash Flood Depths

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0 375 750m
Approx. Scale

Figure:

2-B

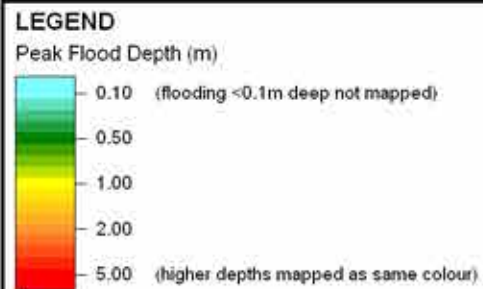
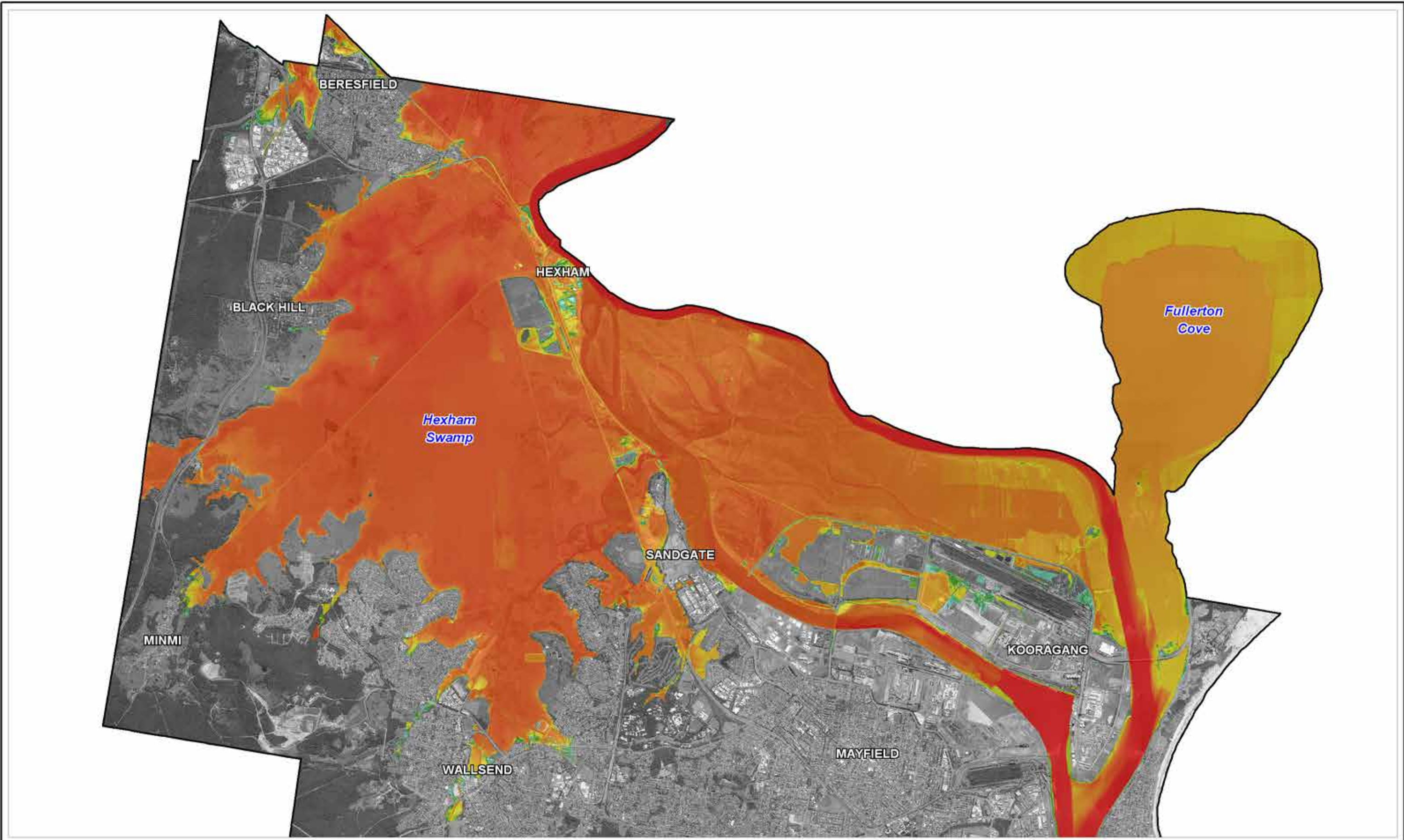
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Title:
**Newcastle Floodplain Risk Management Study
Map Series 2 - 1% AEP Hunter River Flood Depths**

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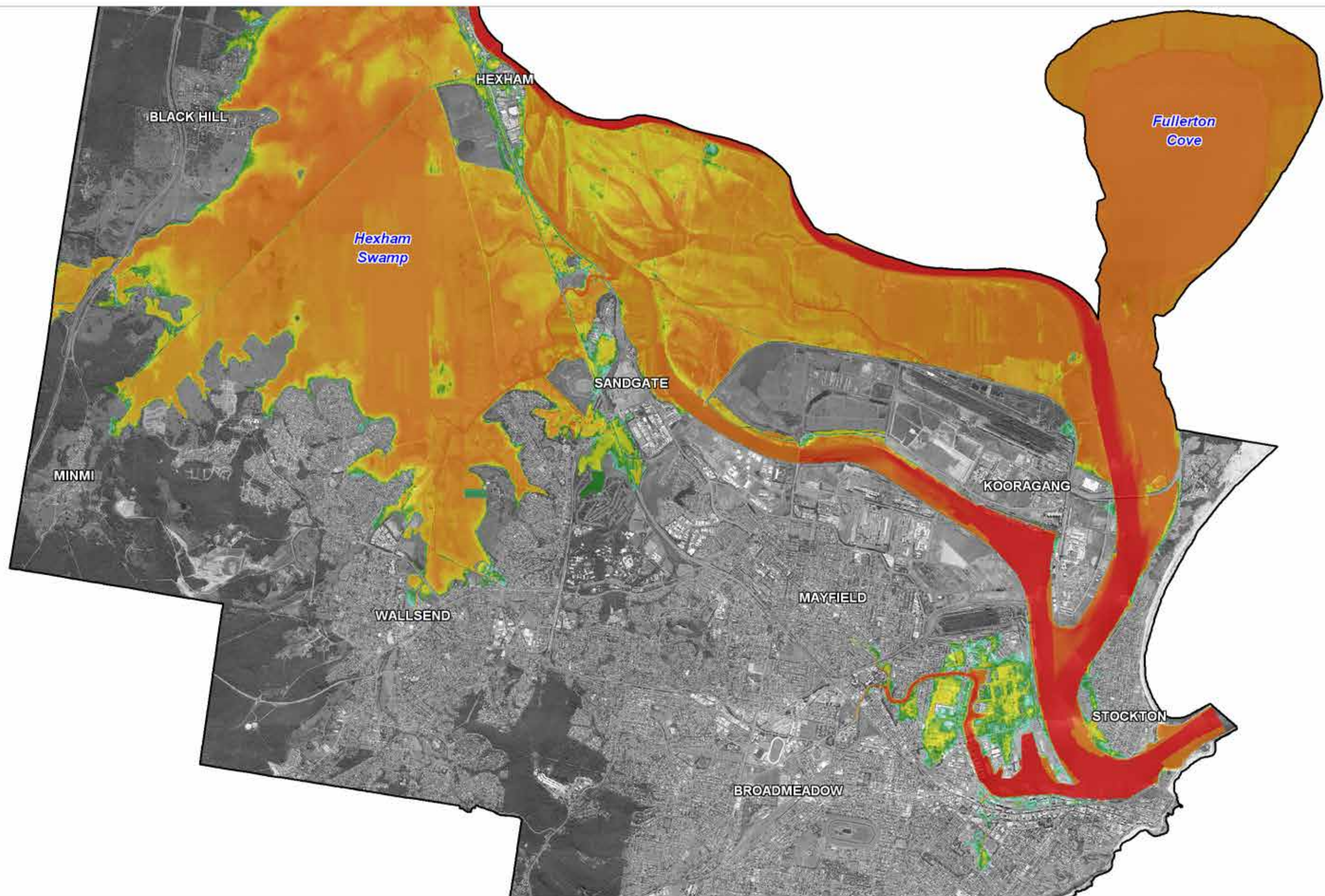
0 1.25 2.5km
Approx. Scale

Figure:
2-C

Rev:
A

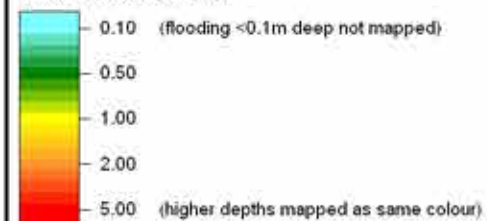


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LEGEND

Peak Flood Depth (m)



Note: Adopted ocean level = 2.3m AHD
(1% AEP with 0.9m sea level rise included)

Title:

Newcastle Floodplain Risk Management Study Map Series 2 - 1% AEP Ocean Flood Depths

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0 1.25 2.5km
Approx. Scale

Figure:

2-D

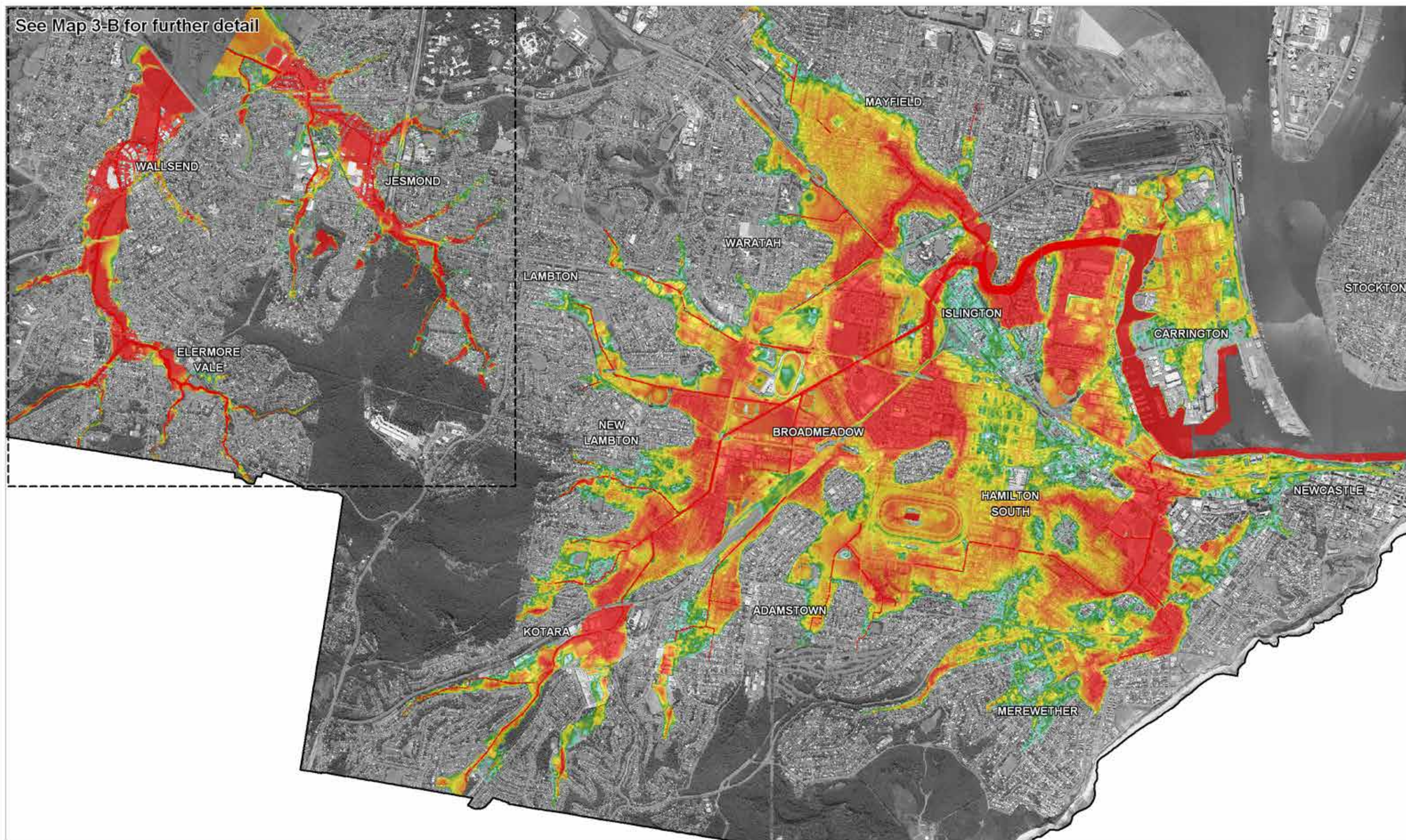
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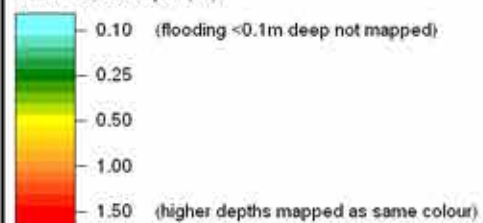
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See Map 3-B for further detail



LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 3 - PMF Flash Flood Depths

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Approx. Scale

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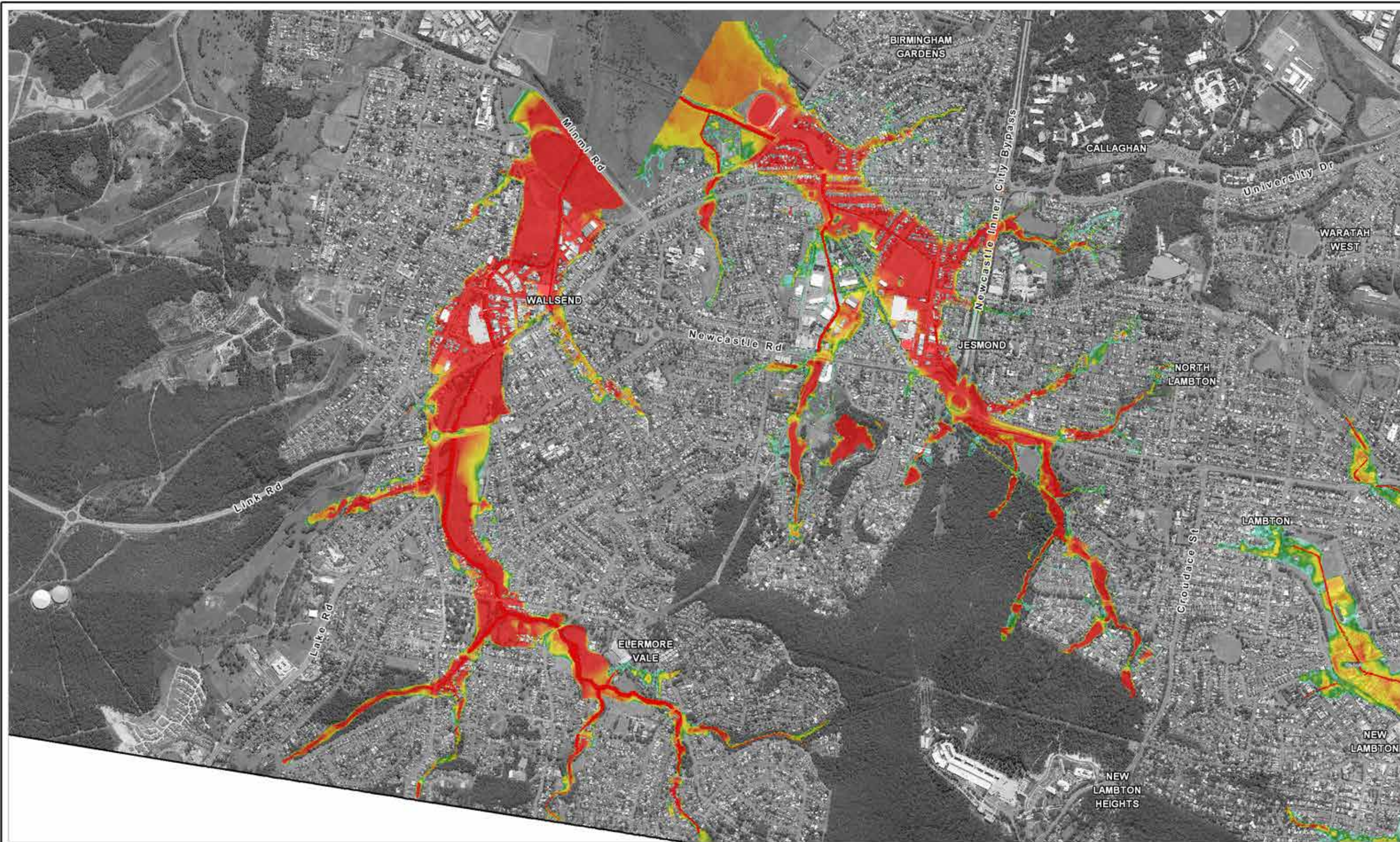
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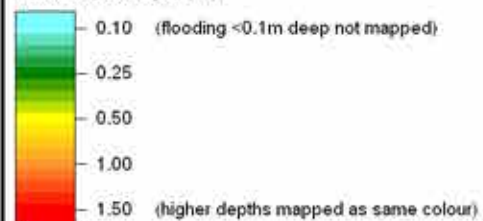


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LEGEND

Peak Flood Depth (m)



Title:

Newcastle Floodplain Risk Management Study Map Series 3 - PMF Flash Flood Depths

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0 375 750m
Approx. Scale

Figure:

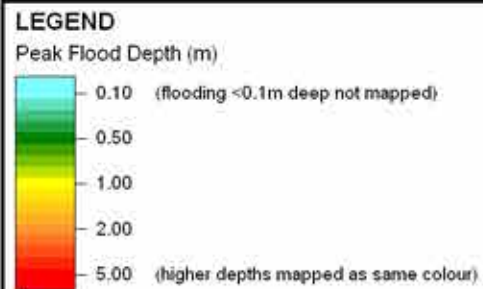
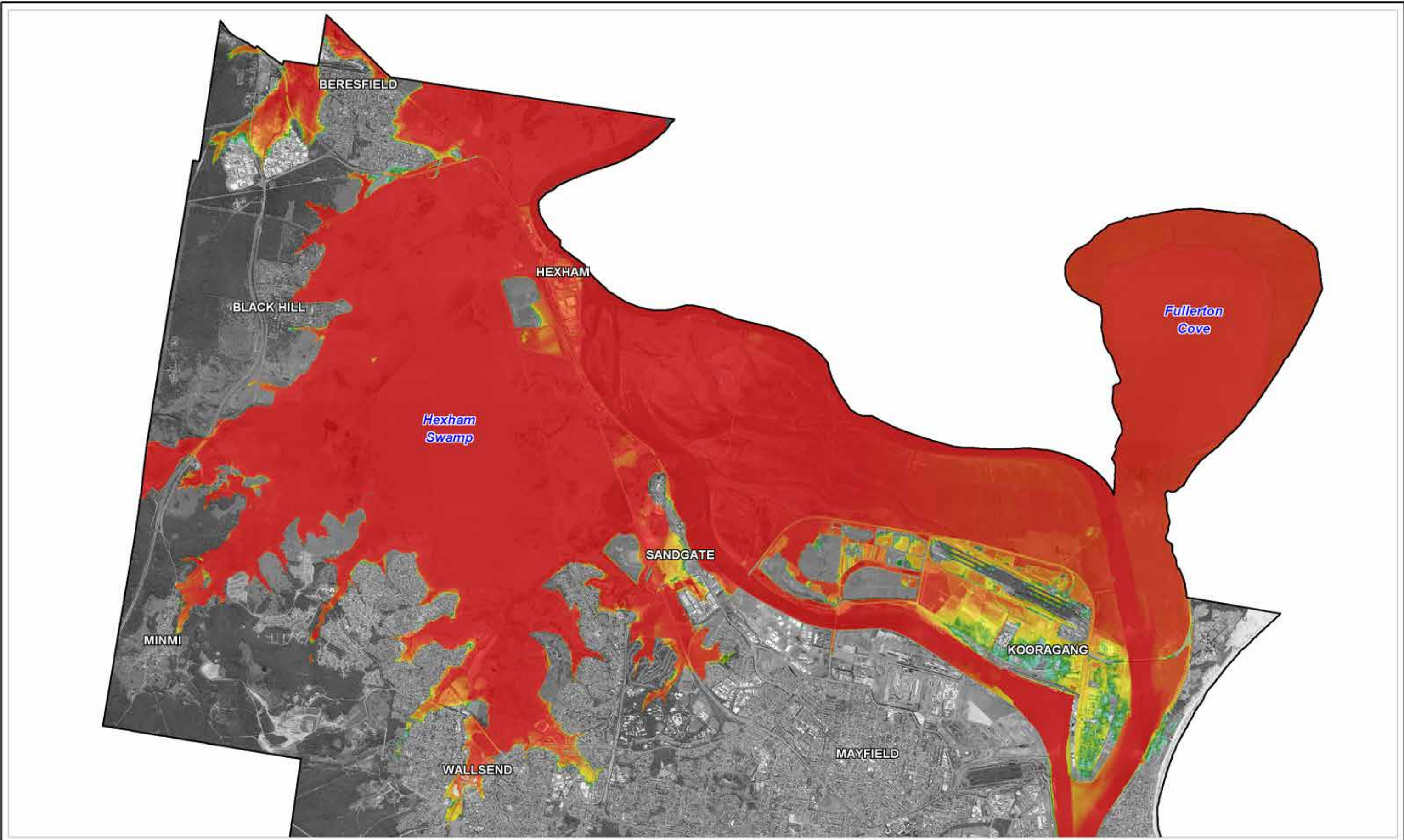
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Title:
**Newcastle Floodplain Risk Management Study
Map Series 3 - PMF Hunter River Flood Depths**

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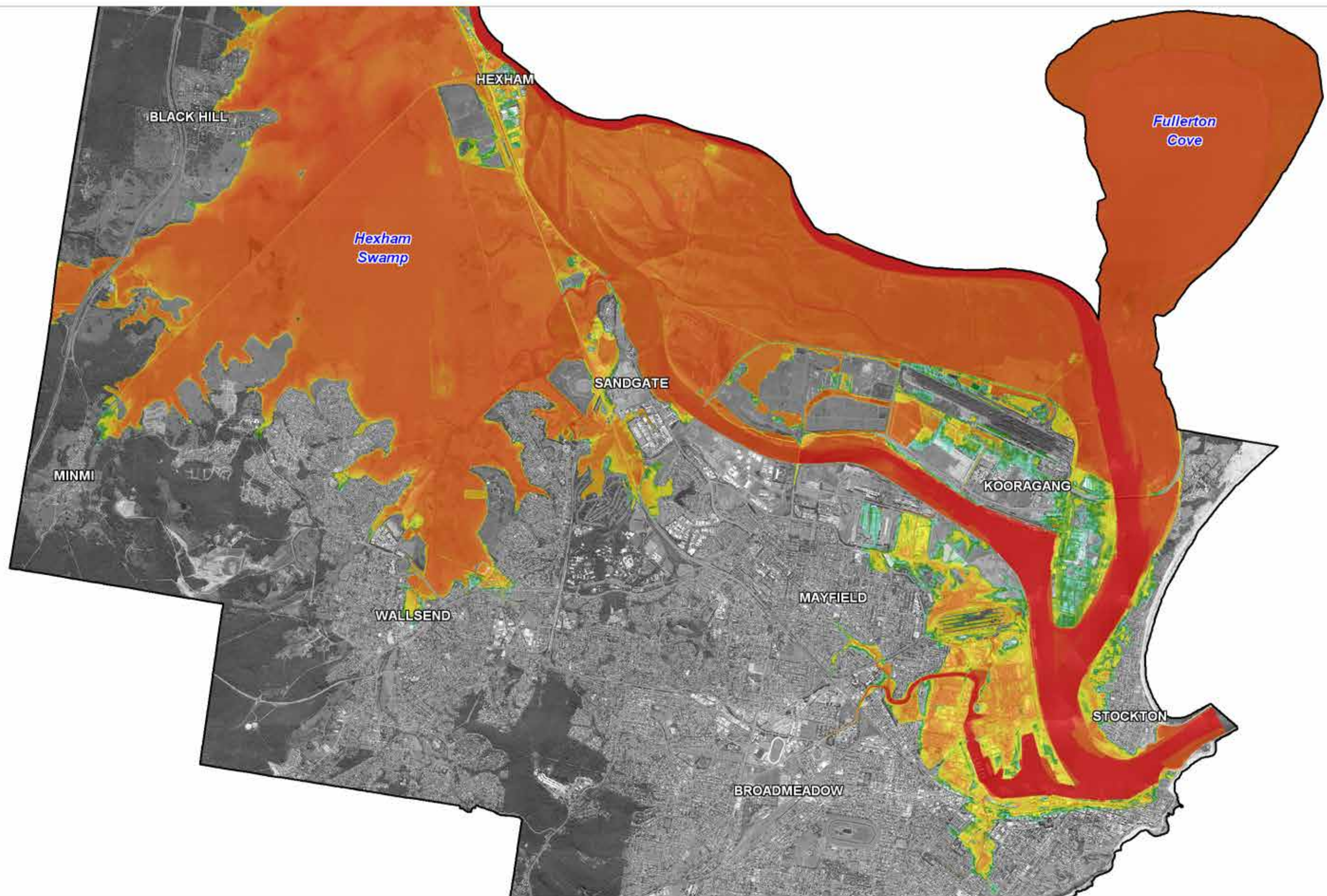
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Approx. Scale

Figure:
3-C

Rev:
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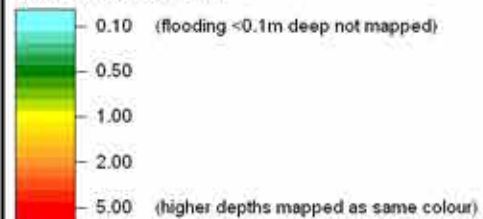


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LEGEND

Peak Flood Depth (m)



Note: Adopted ocean level = 3.4m AHD
(PMF with 0.9m sea level rise included)

Title:

Newcastle Floodplain Risk Management Study Map Series 3 - PMF Ocean Flood Depths

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0 1.25 2.5km
Approx. Scale

Figure:

3-D

Rev:

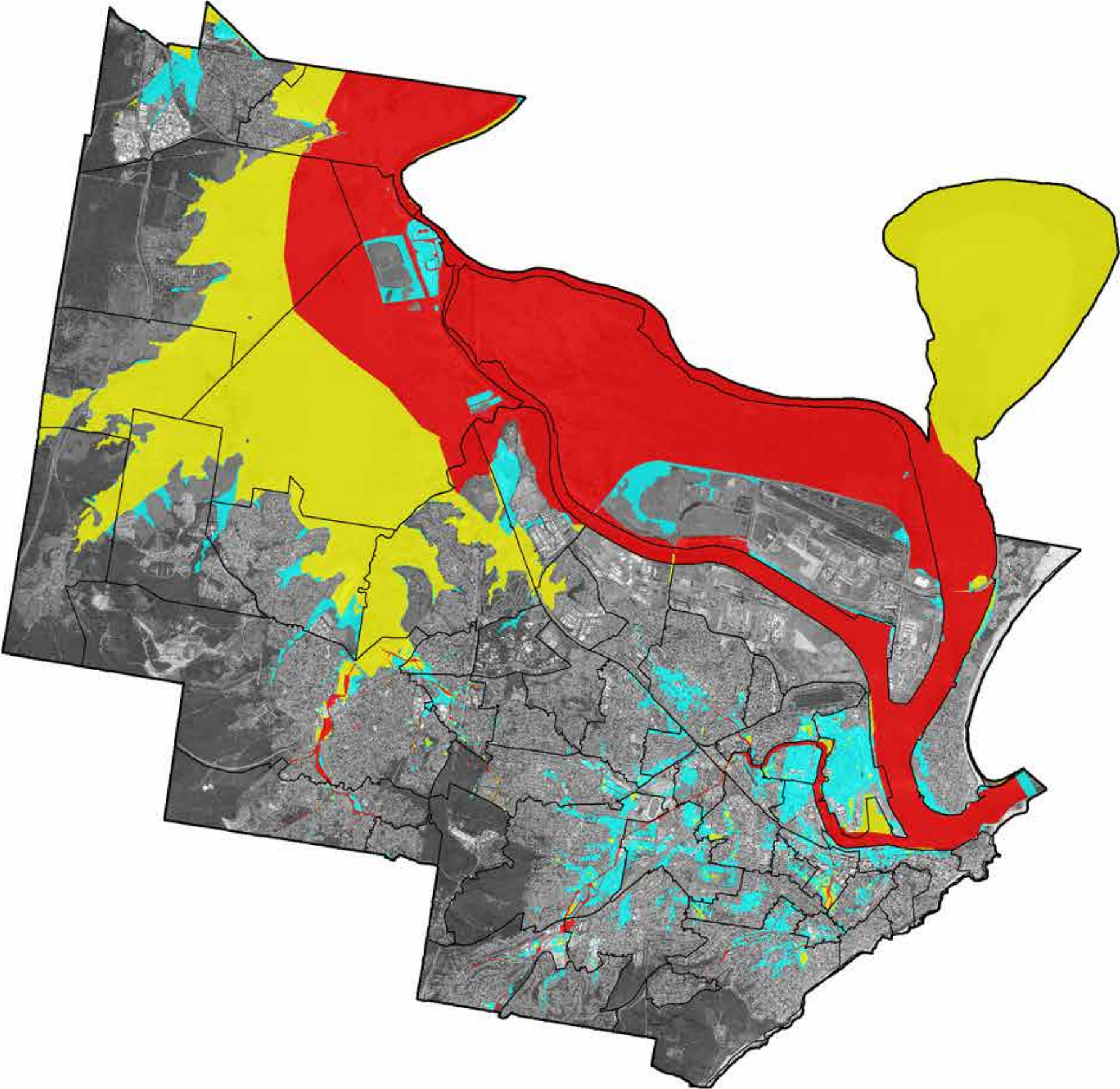
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WARATAH	See Map 4-G
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LEGEND

	Floodway
	Flood Storage
	Flood Fringe

Title:
Newcastle Floodplain Risk Management Study
Map Series 4 - 1% AEP Flood Impact Categories

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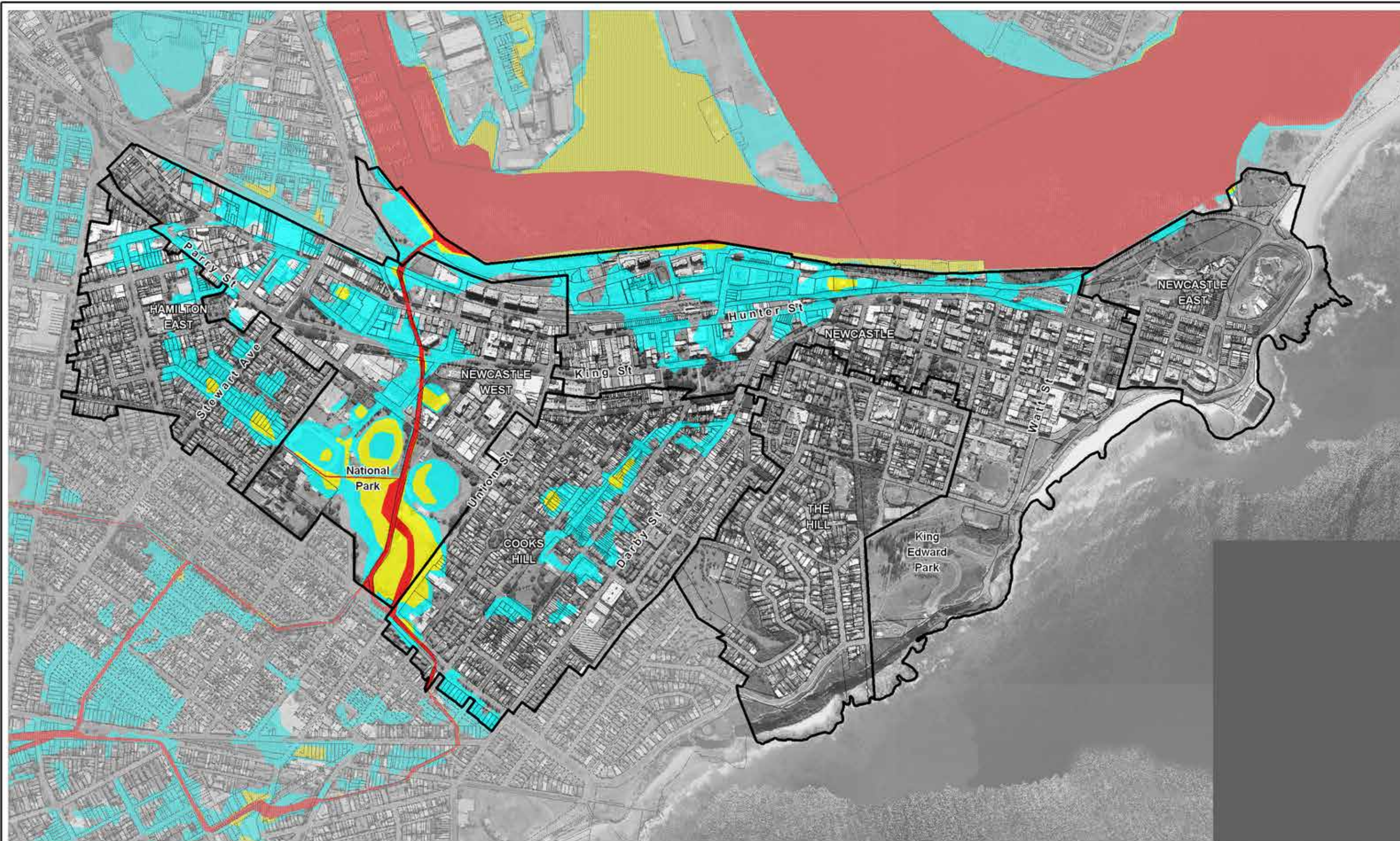
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Approx. Scale

Map:
4-INDEX

Rev:
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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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0 250 500m
Approx. Scale

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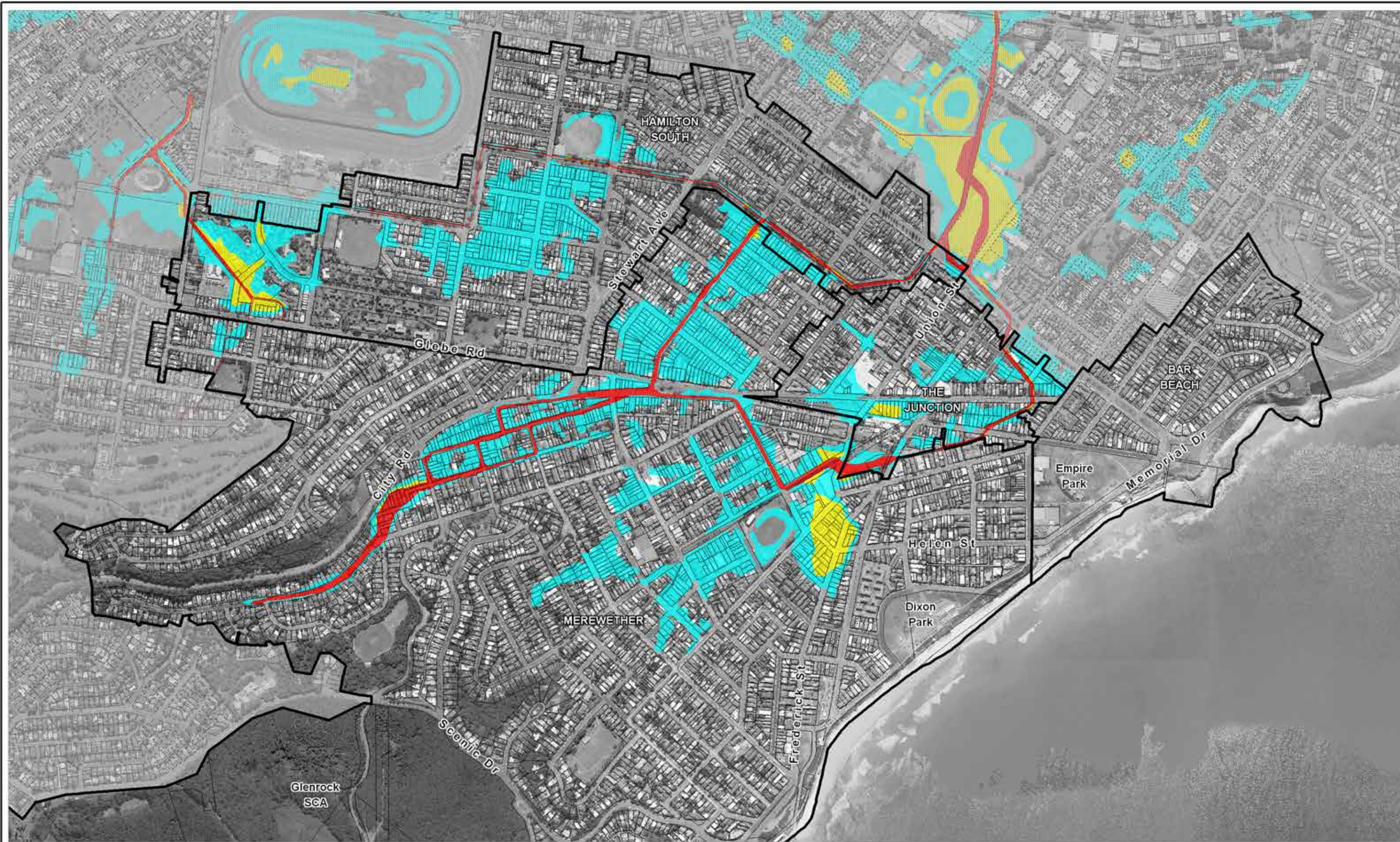
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Rev:

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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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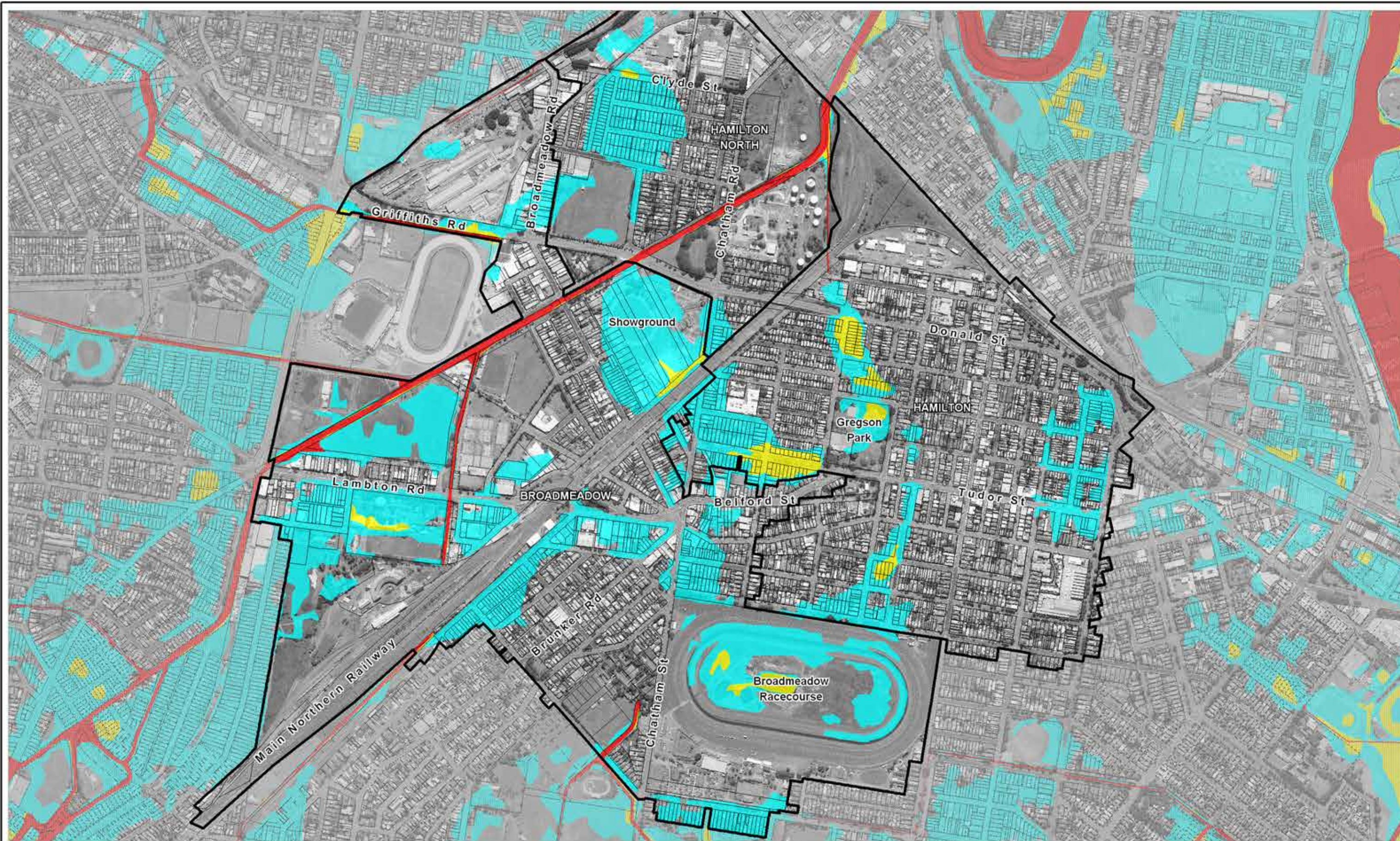
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Rev:

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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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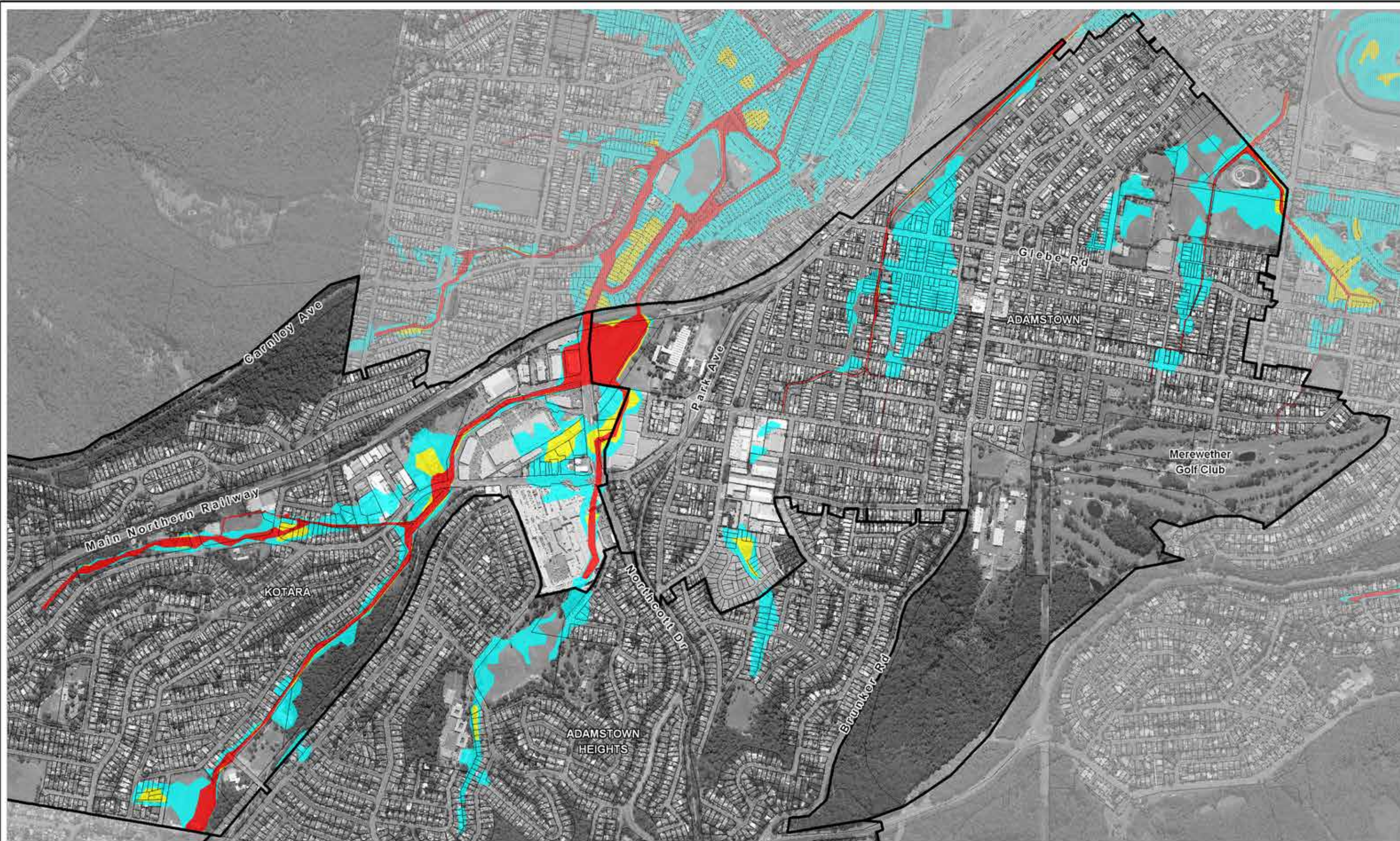
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Rev:

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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

4-D

Rev:

A



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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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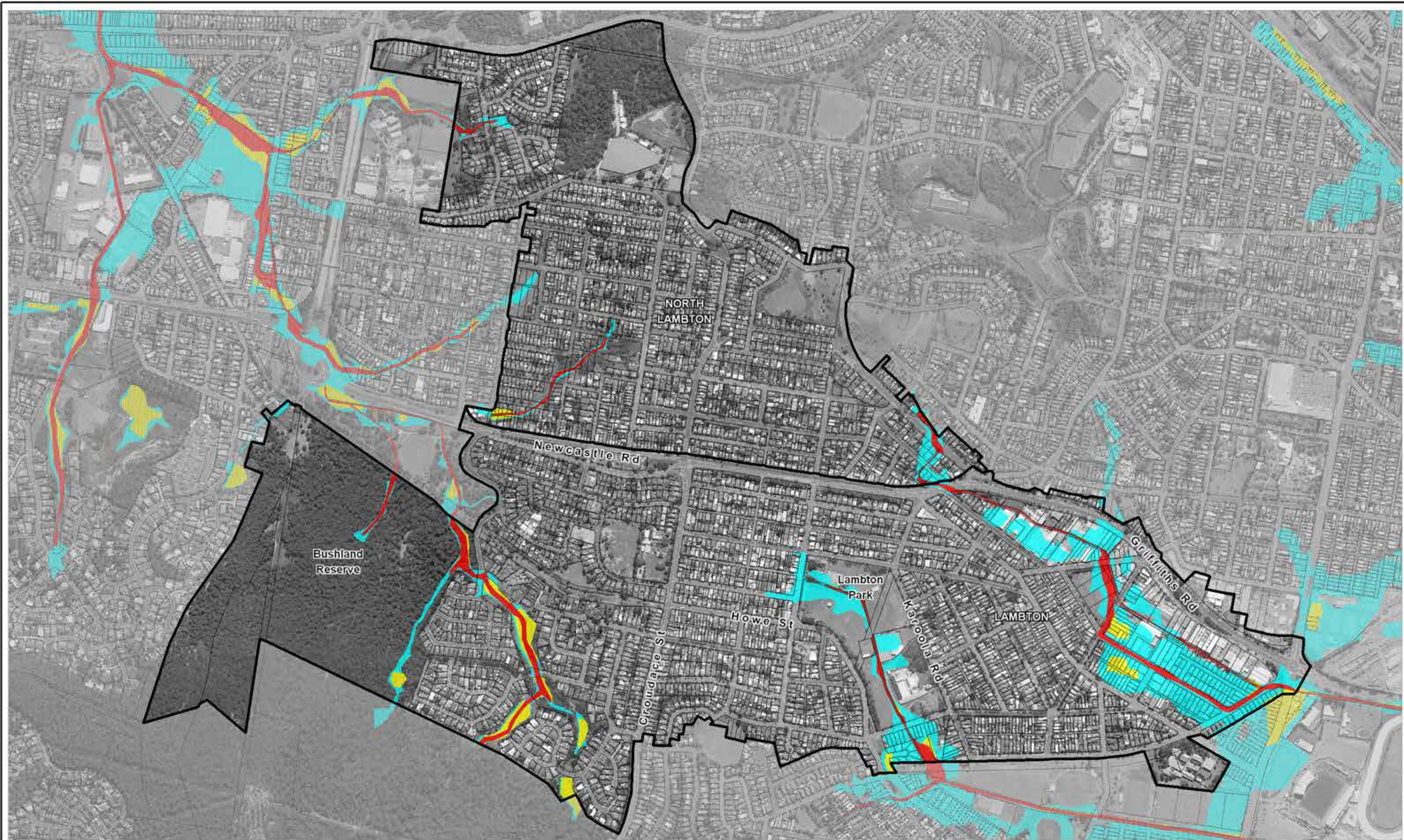
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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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Approx. Scale

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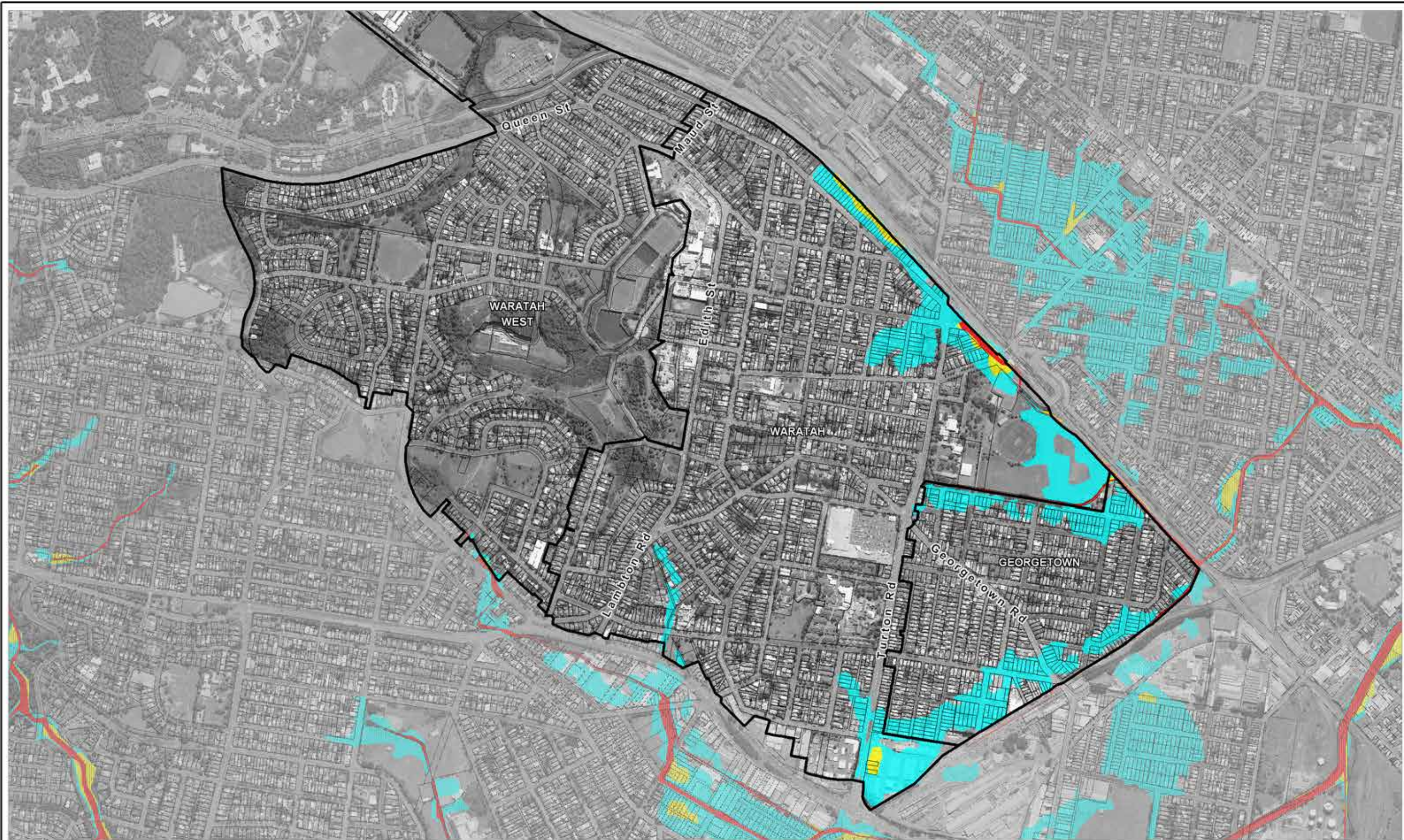
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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

4-G

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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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Approx. Scale

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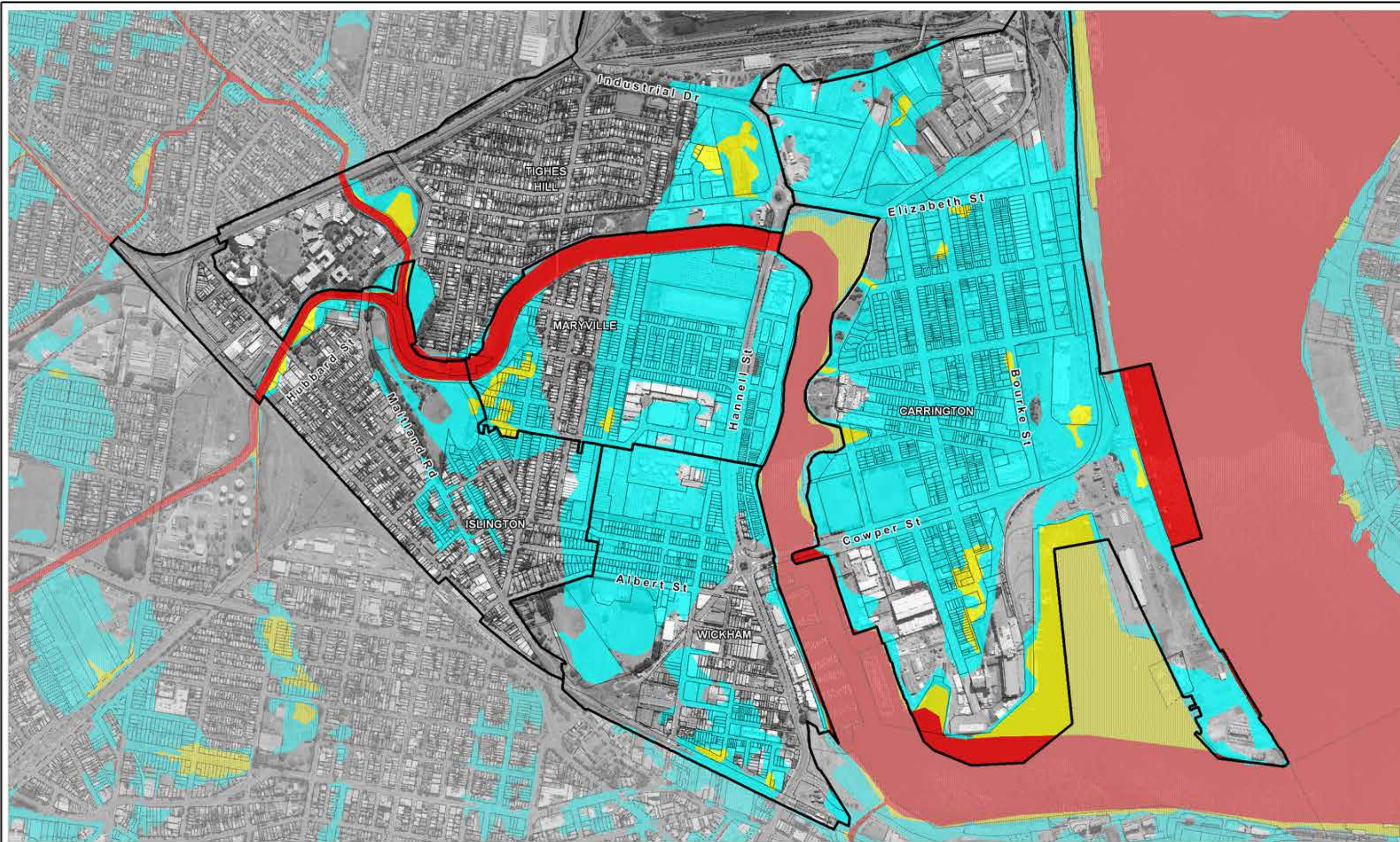
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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

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A



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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

4-J

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_410_111219_Map4-J.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

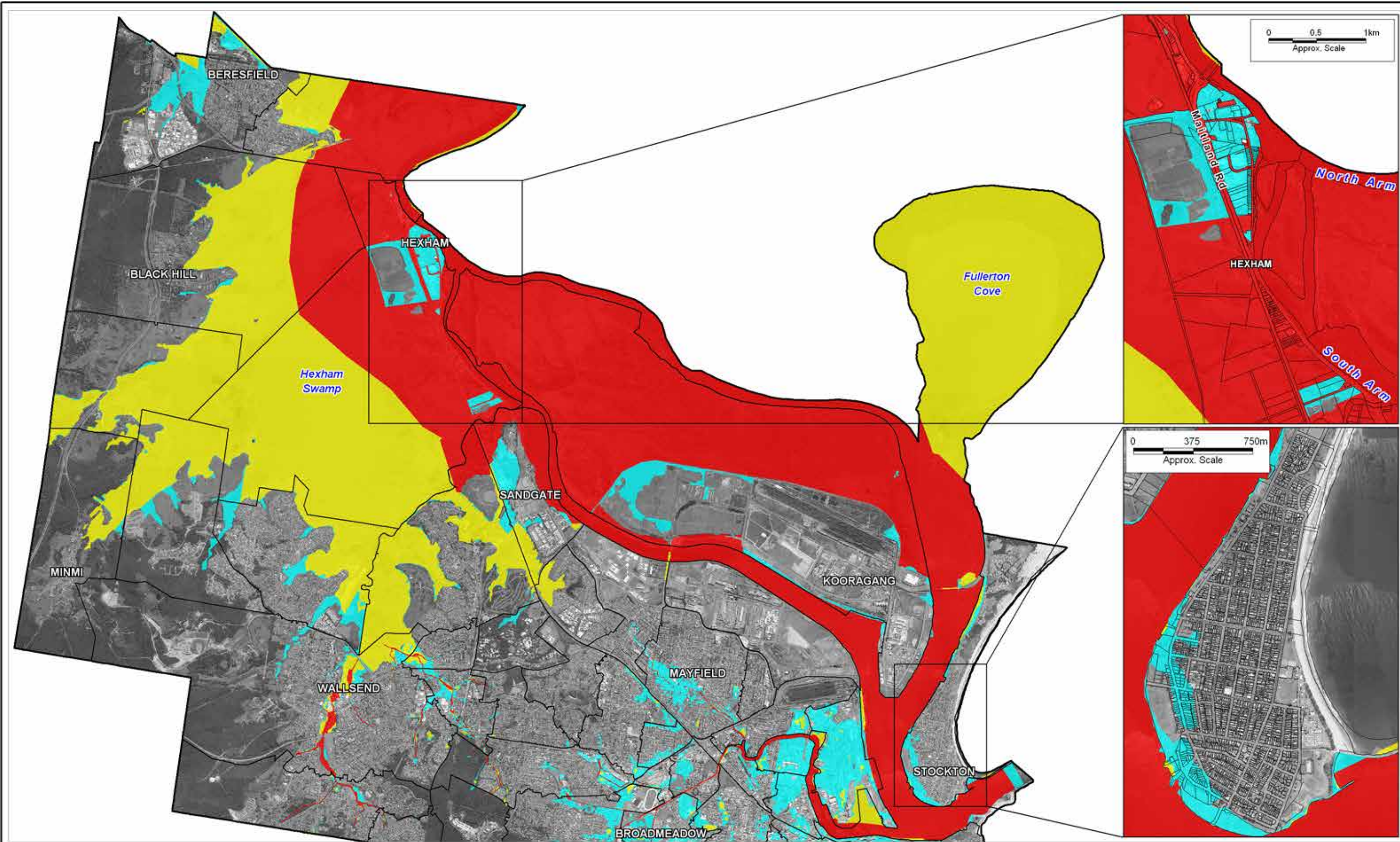
4-K

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_411_111219_Map4-K.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 4 - 1% AEP Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 1.25 2.5km
Approx. Scale

Map:

4-L

Rev:

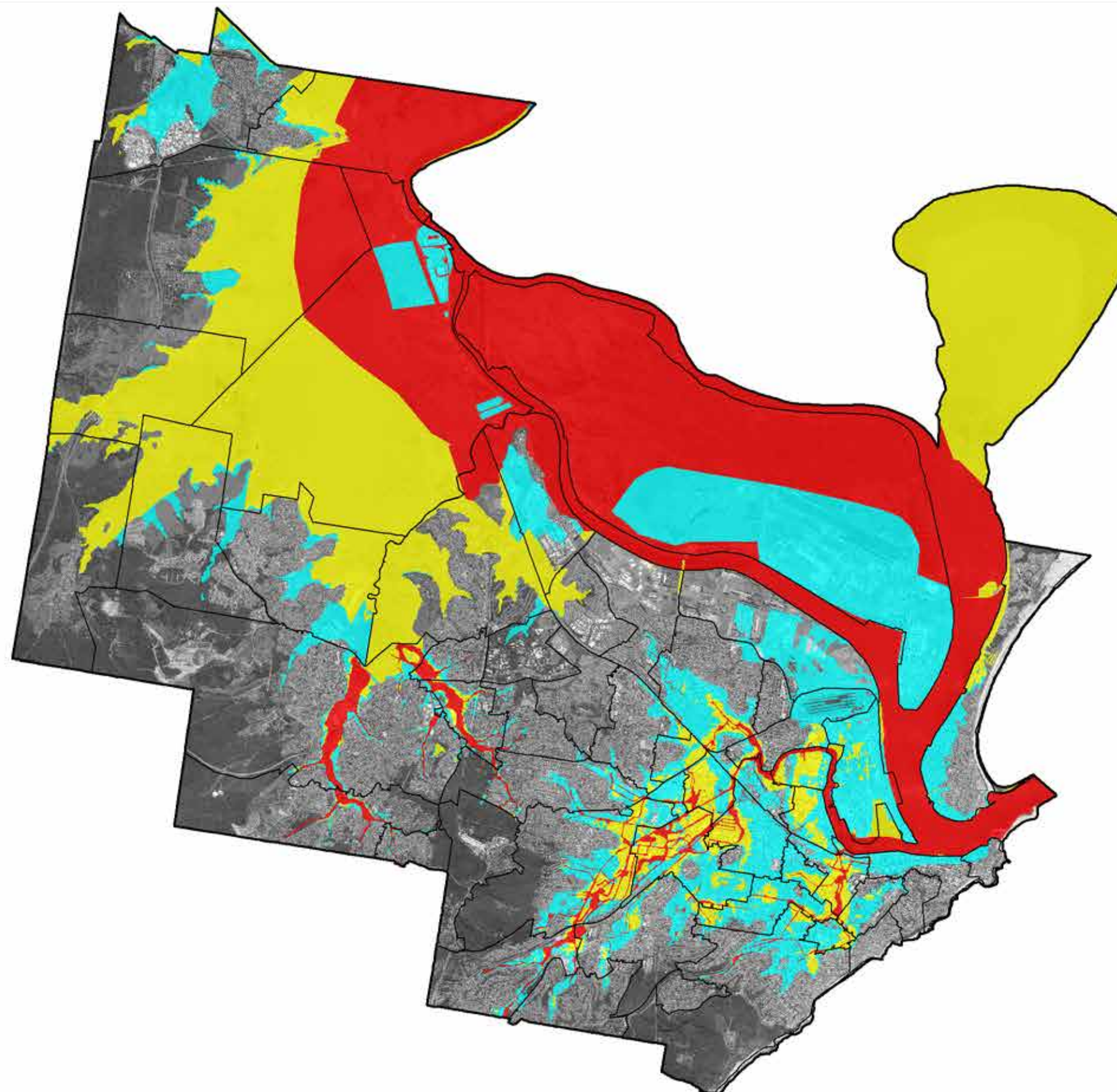
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WARATAH.....	See Map 5-G
WARATAH WEST.....	See Map 5-G
WICKHAM.....	See Map 5-I



LEGEND

	Floodway
	Flood Storage
	Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 1.25 2.5km
Approx. Scale

Map:

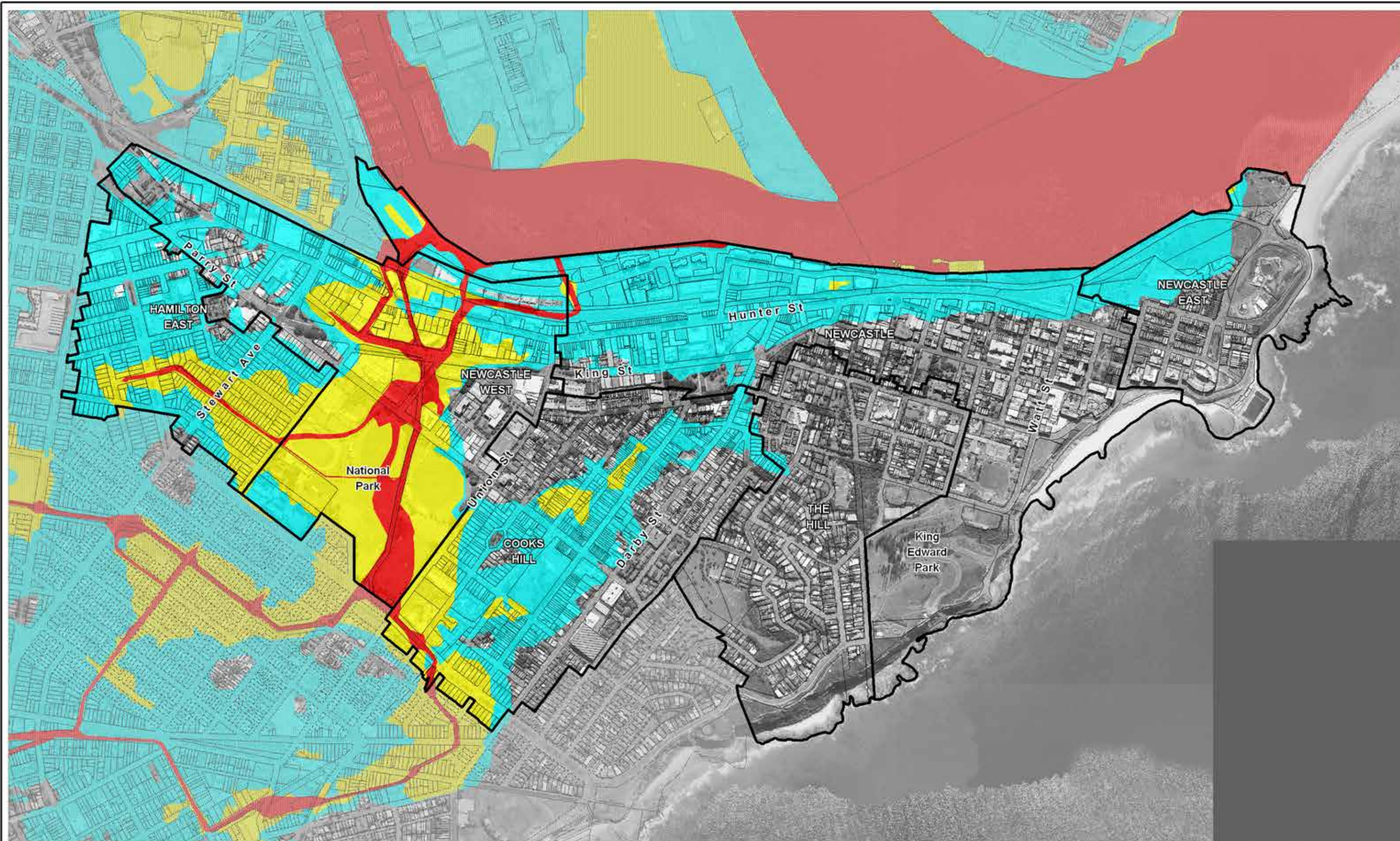
5-INDEX

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_500_111220_Map5-INDEX.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

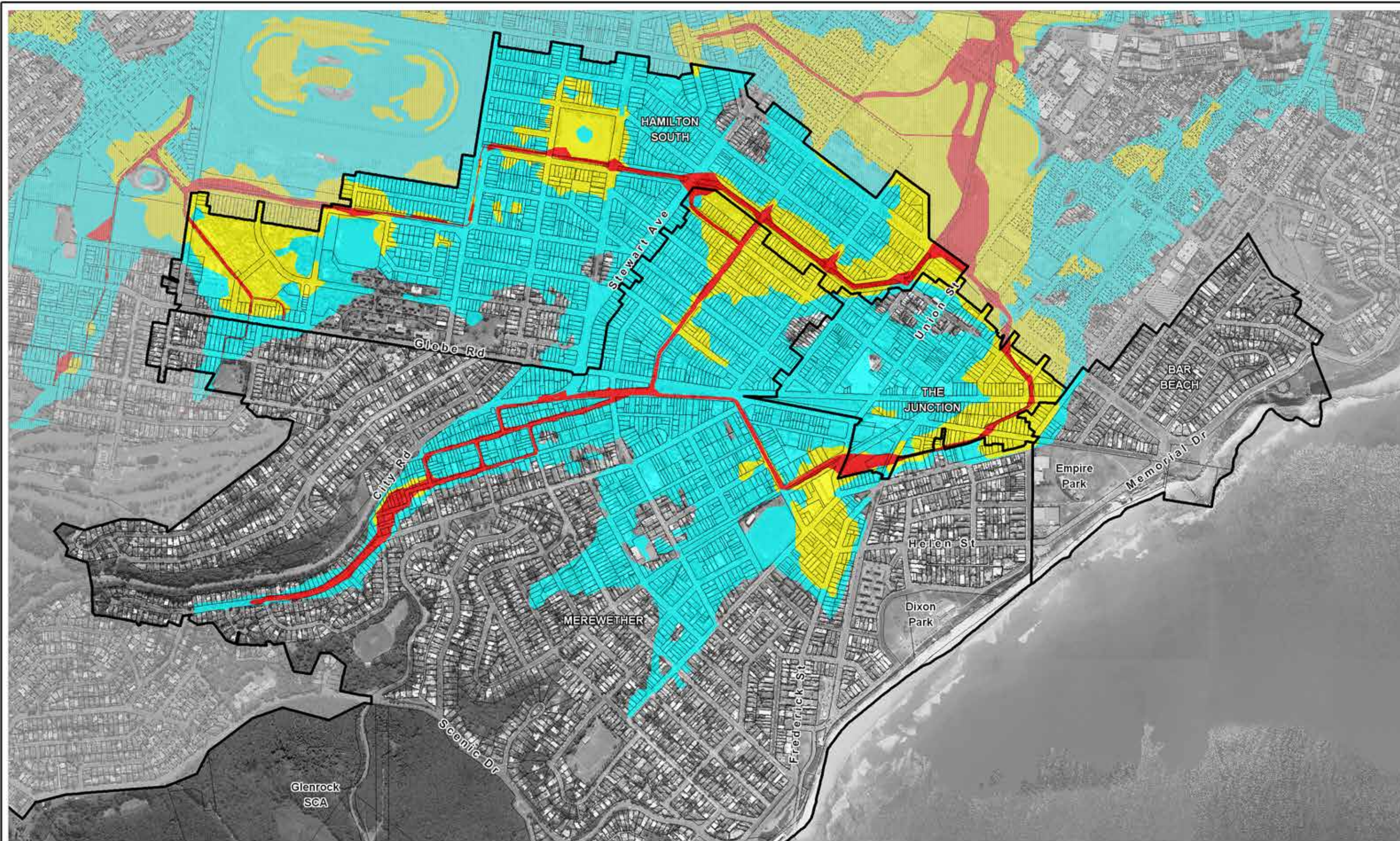
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Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_501_111219_Map5-A.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

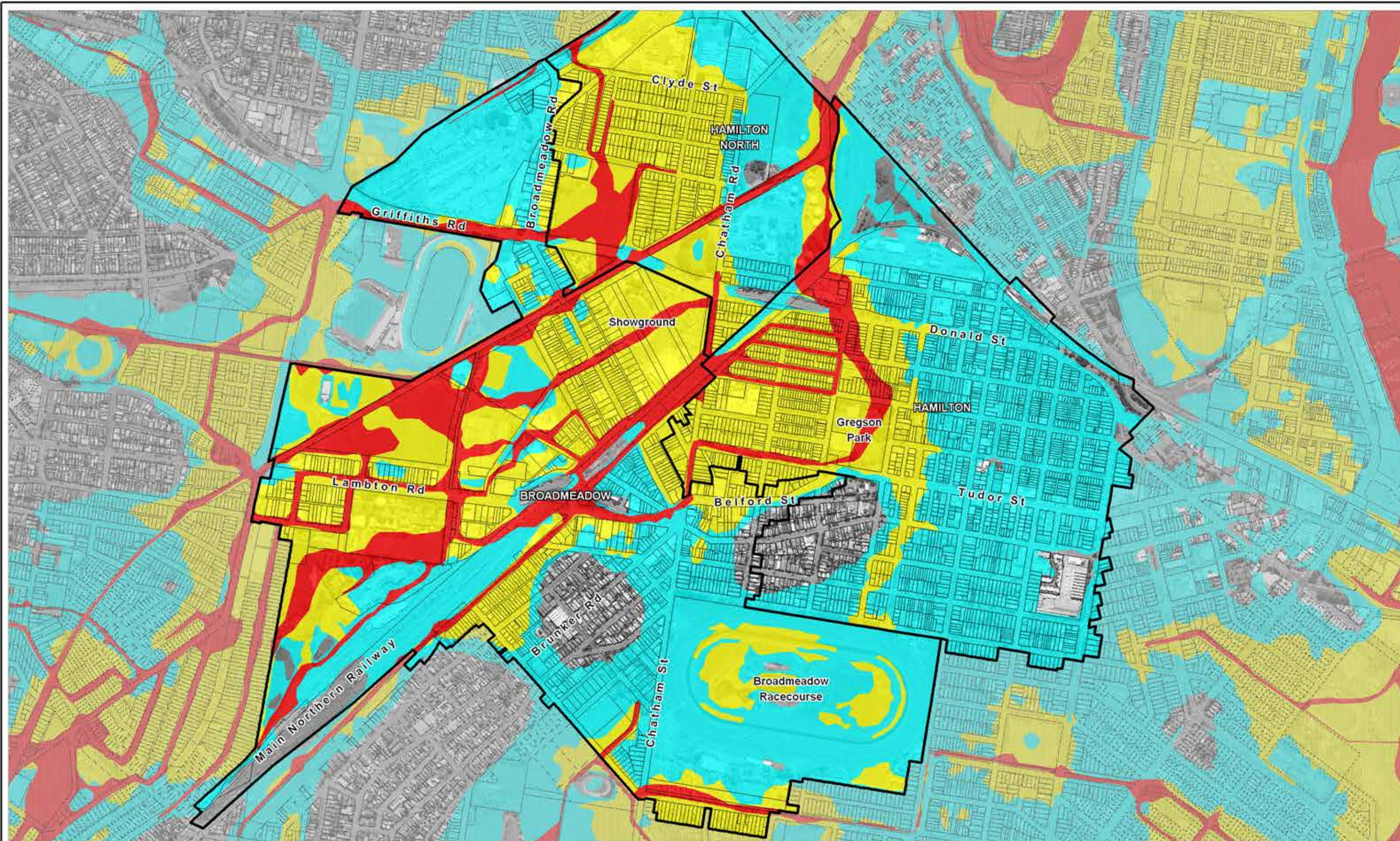
5-B

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_502_111219_Map5-B.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

5-C

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_503_111219_Map5-C.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

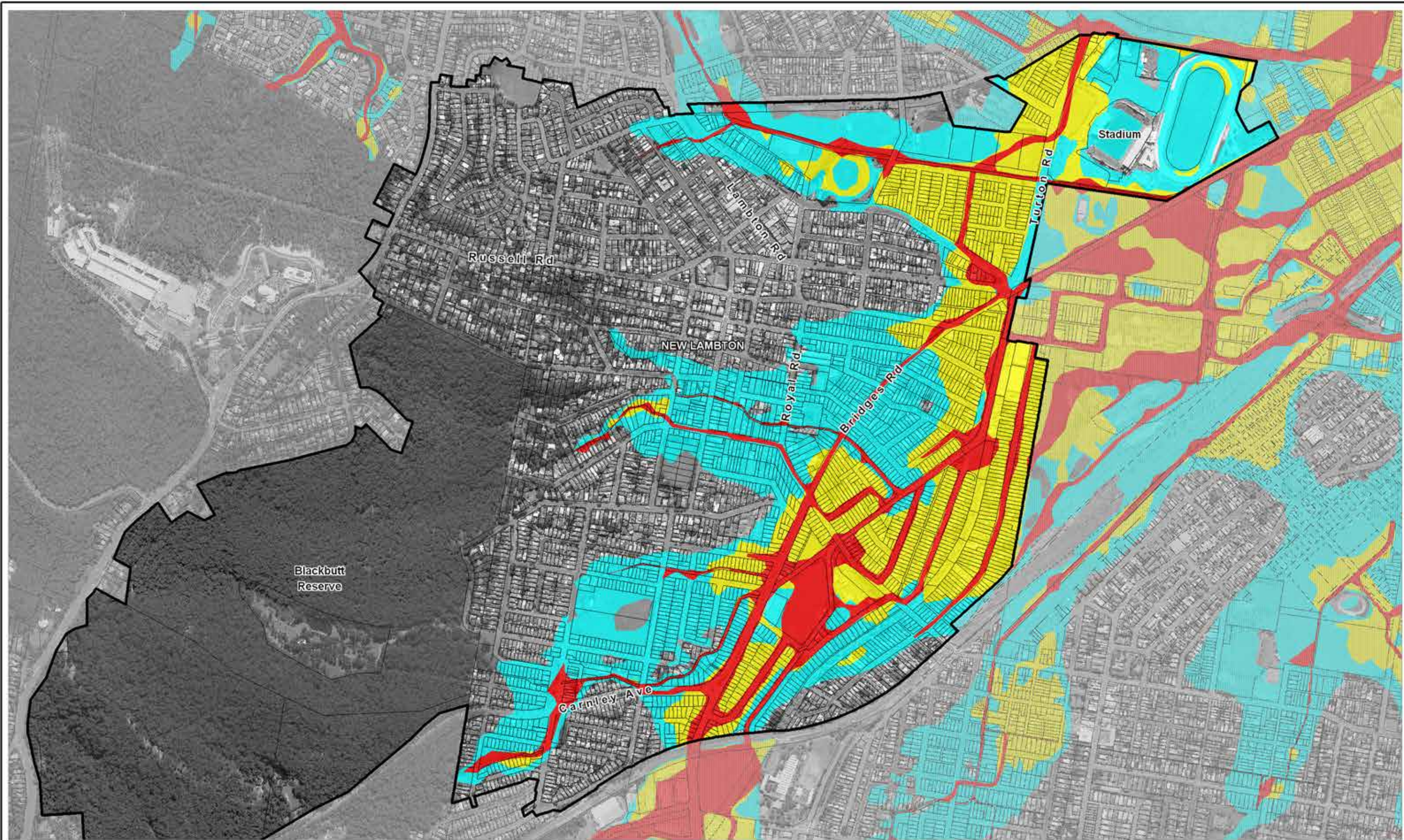
5-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_504_111219_Map5-D.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

5-E

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_505_111219_Map5-E.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

**Newcastle Floodplain Risk Management Study
Map Series 5 - PMF Flood Impact Categories**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

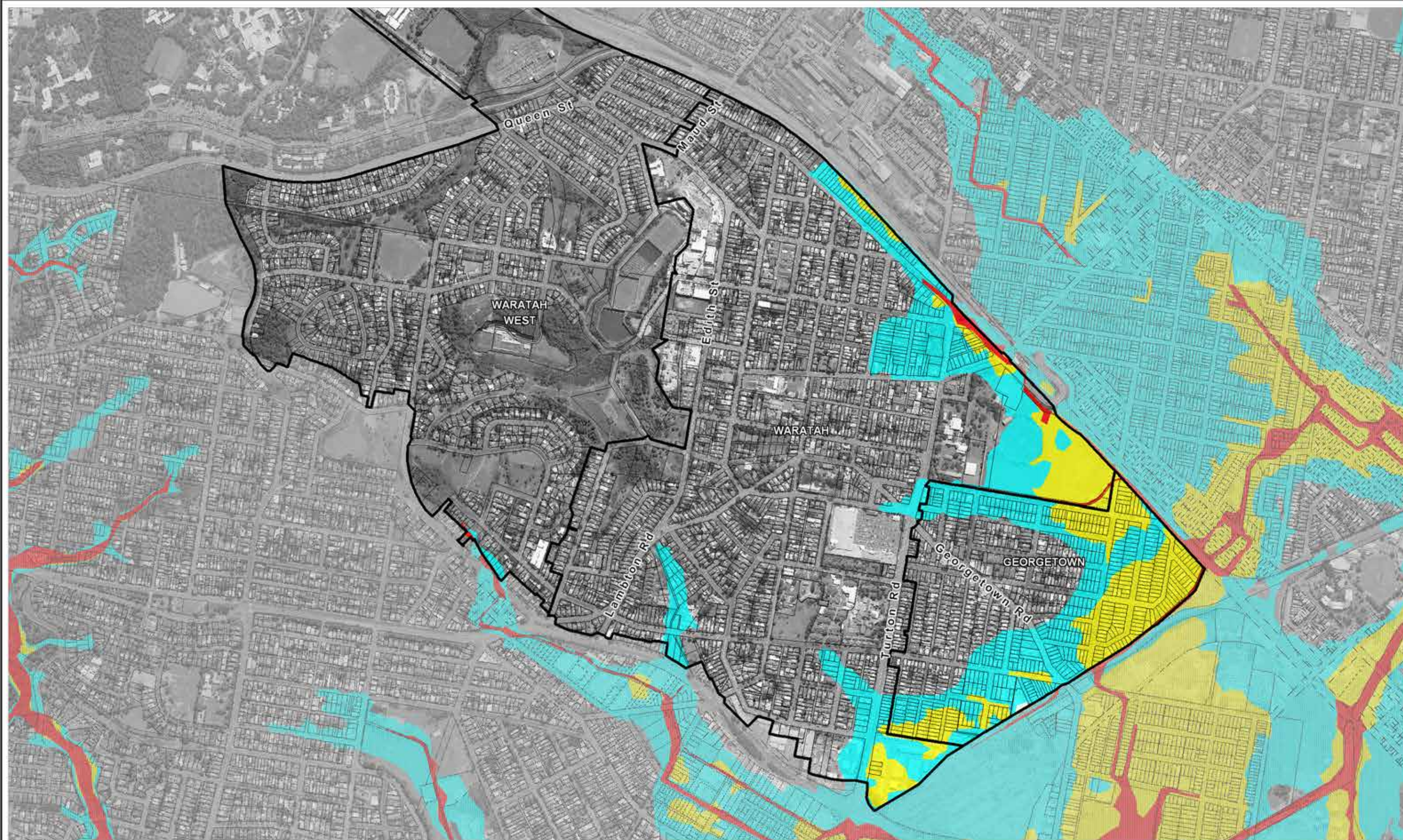
5-F

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_506_111219_Map5-F.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

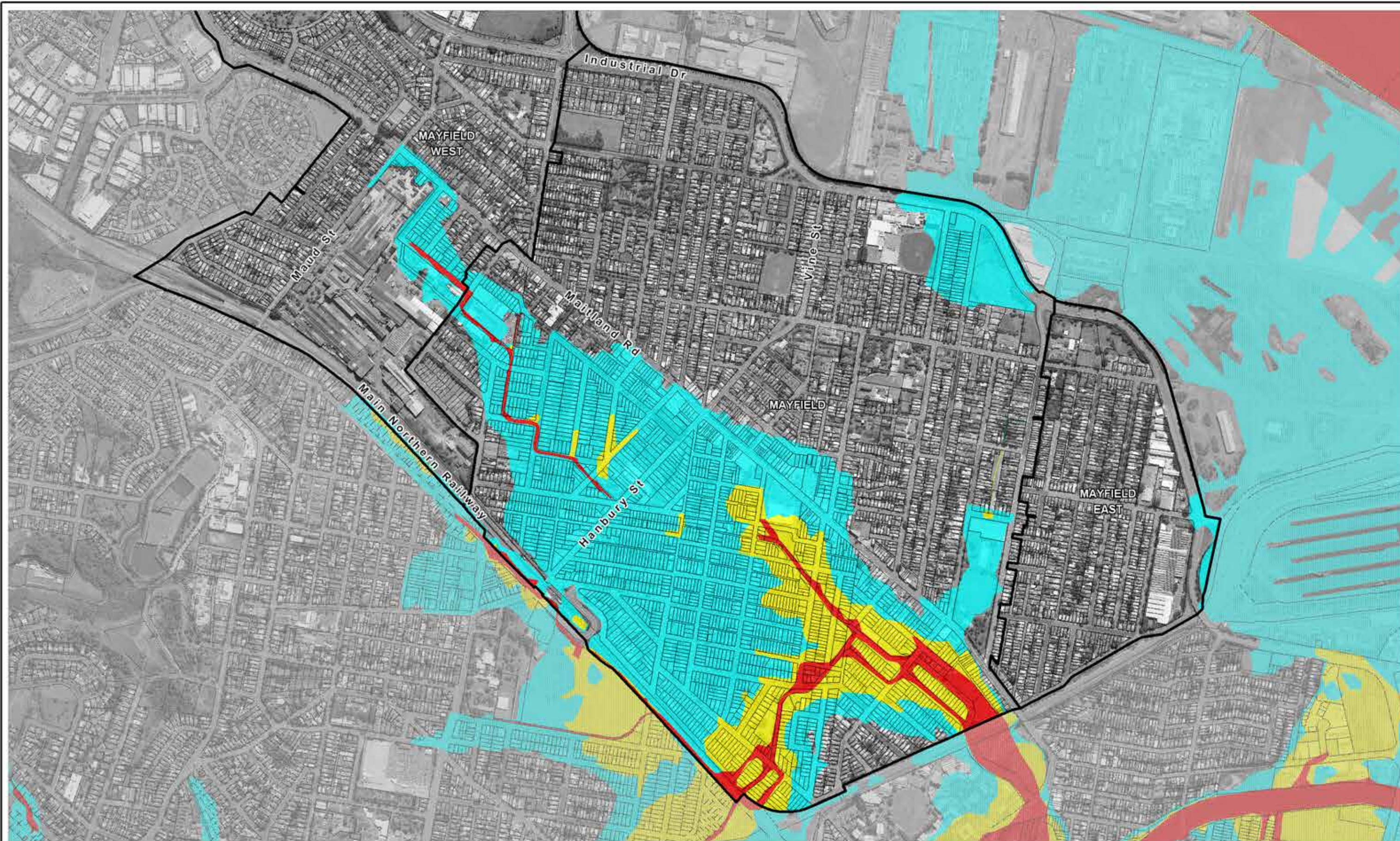
5-G

Rev:

A



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LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

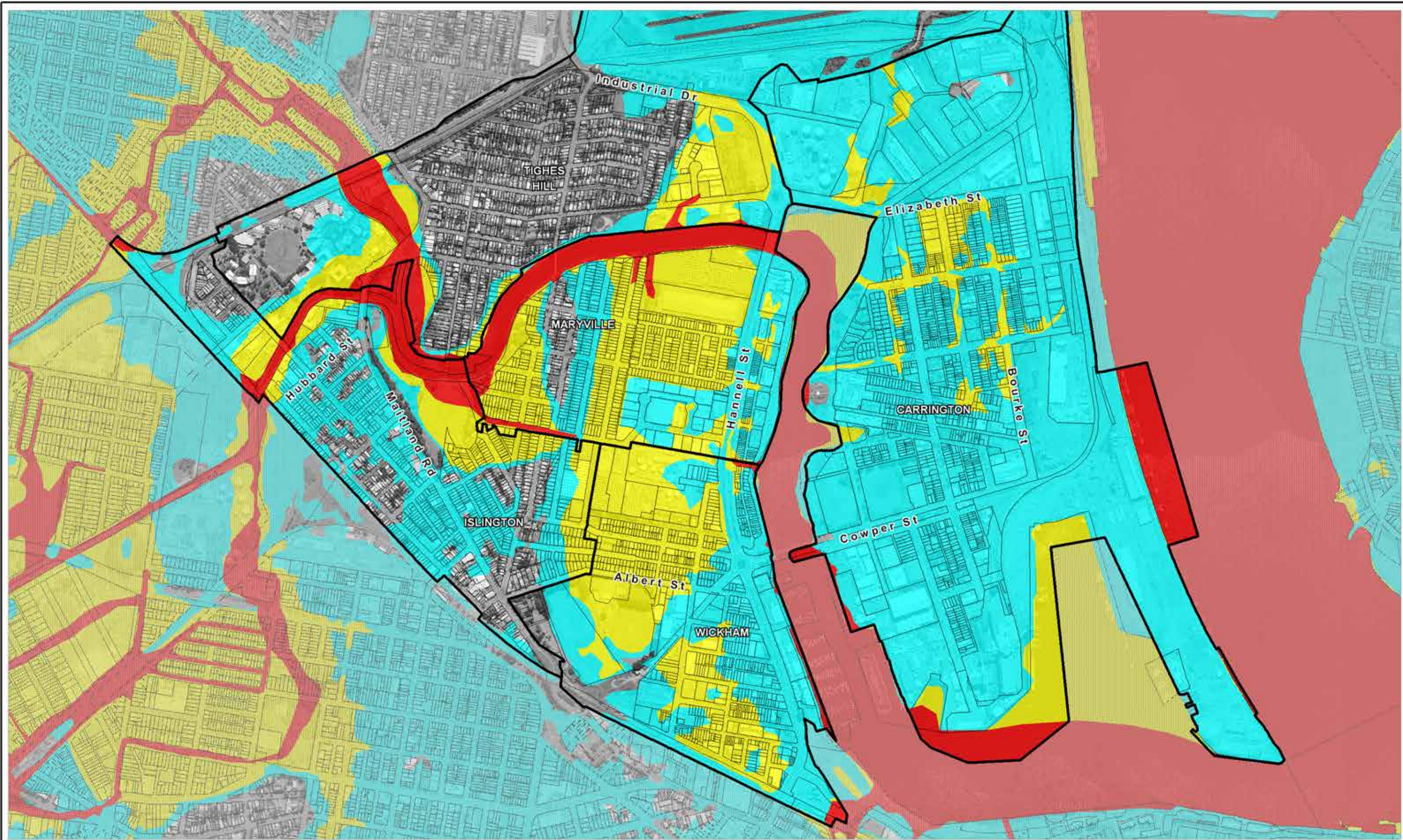
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Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_508_111219_Map5-H.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

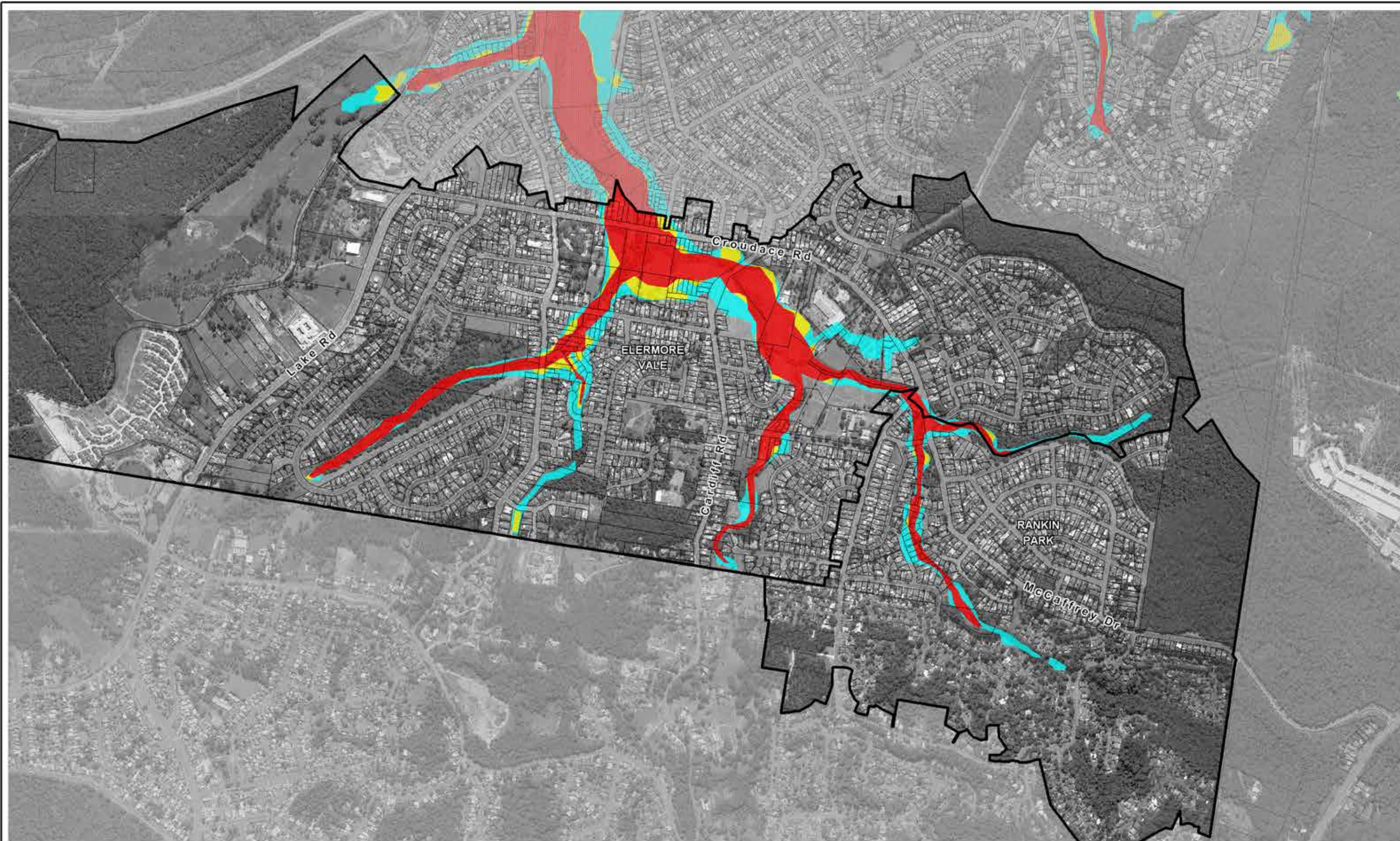
5-1

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_509_111219_Map5-1.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

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0 250 500m
Approx. Scale

Map:

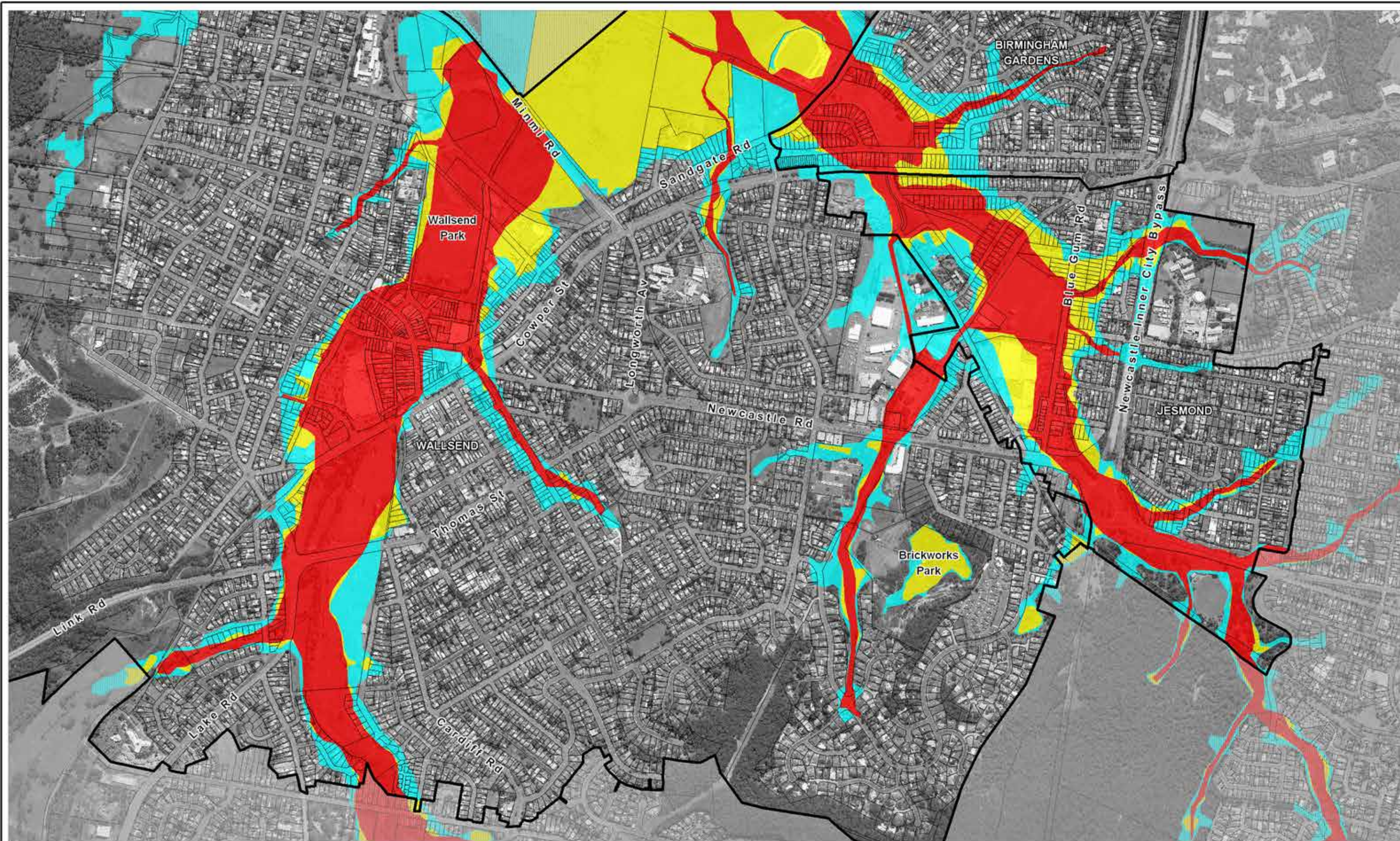
5-J

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_510_111219_Map5-J.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

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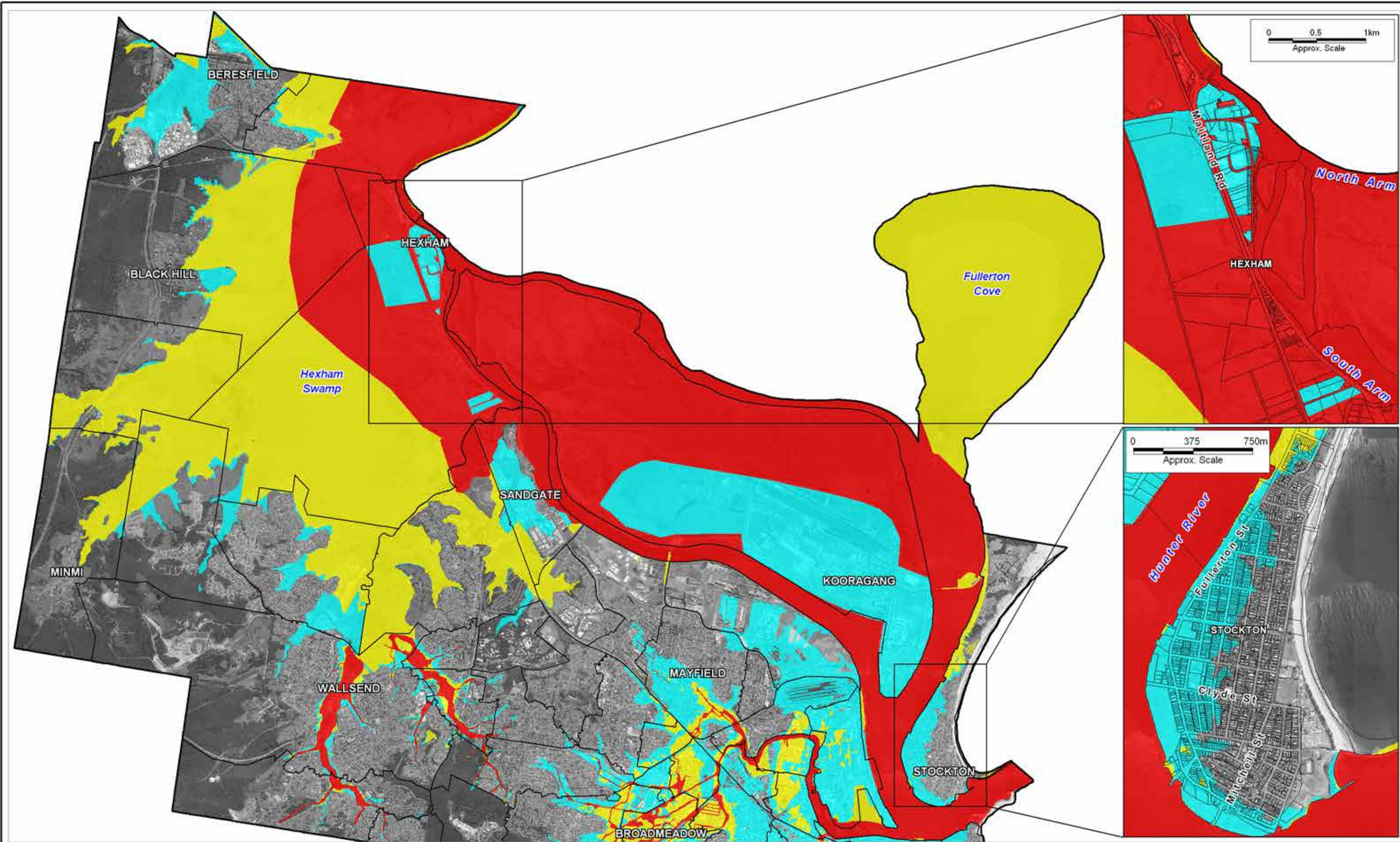
5-K

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_511_111219_Map5-K.WOR



LEGEND

- Floodway
- Flood Storage
- Flood Fringe

Title:

Newcastle Floodplain Risk Management Study Map Series 5 - PMF Flood Impact Categories

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0 1.25 2.5km
Approx. Scale

Map:

5-L

Rev:

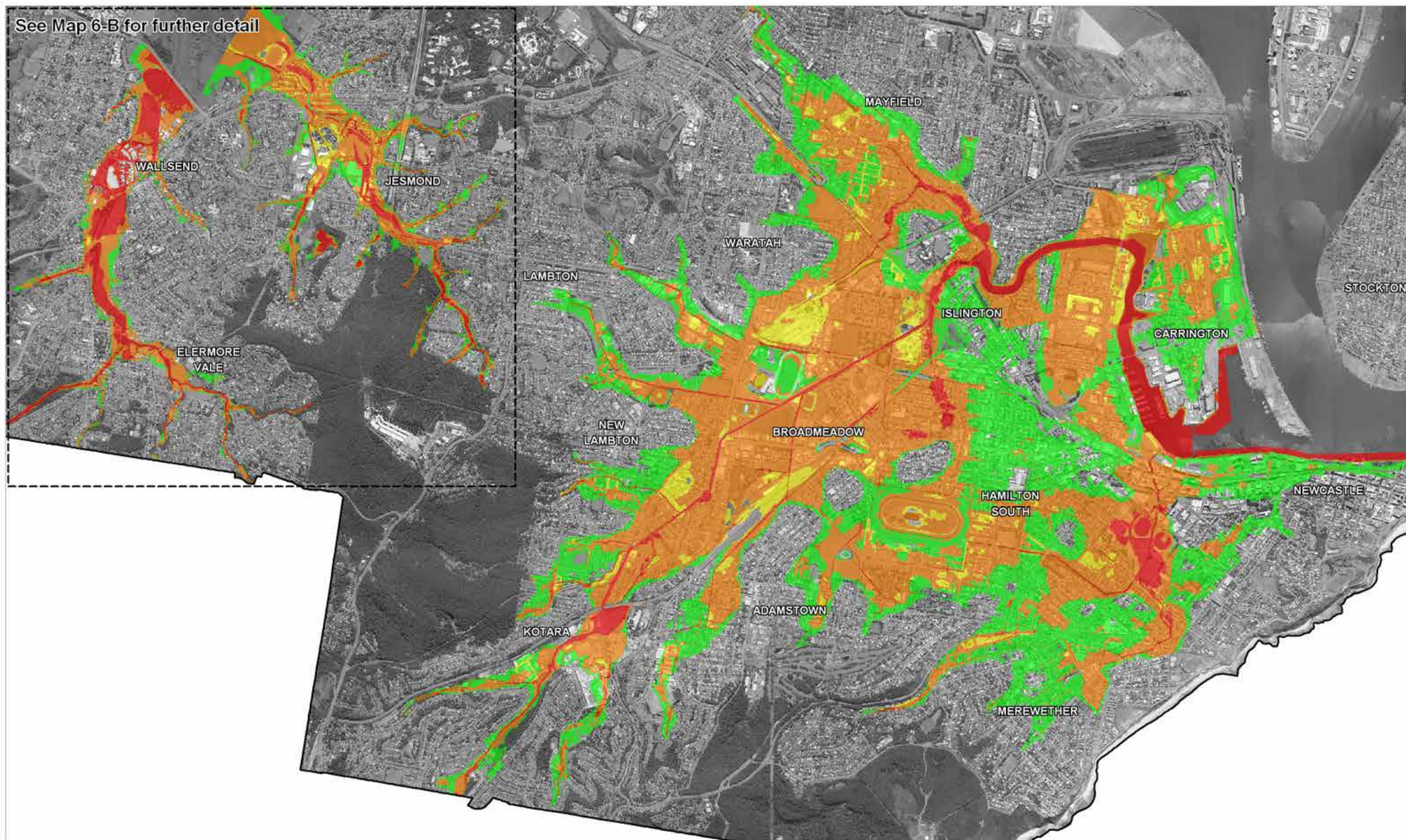
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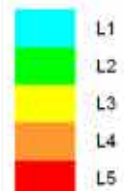
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See Map 6-B for further detail



LEGEND

Risk to Life Hazards



Title:

Newcastle Floodplain Risk Management Study Map Series 6 - Flash Flood Risk to Life Hazards (L1-L5)

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 0.75 1.5km
Approx. Scale

Figure:

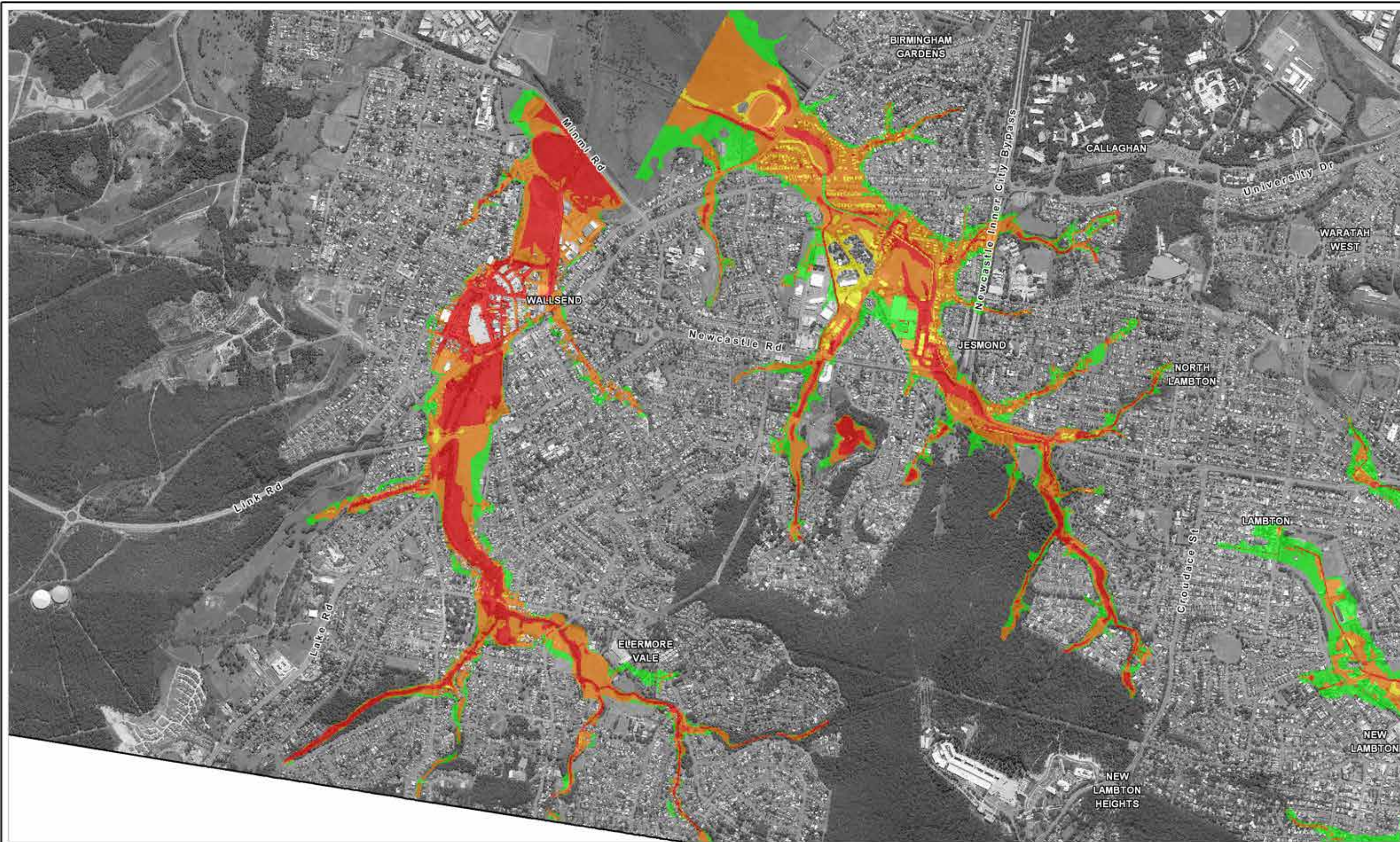
6-A

Rev:

A

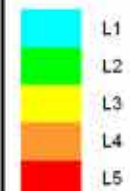


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LEGEND

Risk to Life Hazards



Title:

Newcastle Floodplain Risk Management Study Map Series 6 - Flash Flood Risk to Life Hazards (L1-L5)

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0 375 750m
Approx. Scale

Figure:

6-B

Rev:

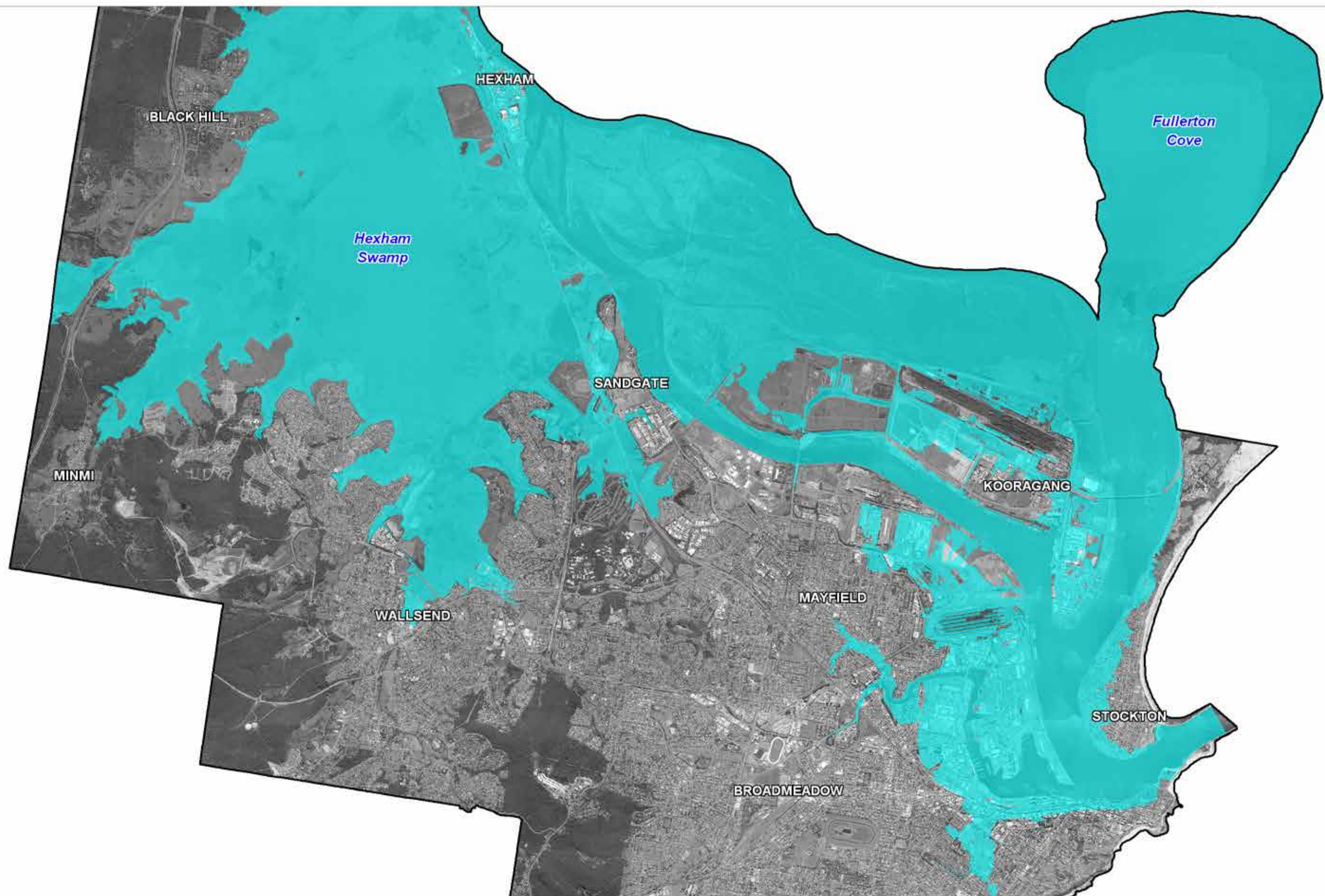
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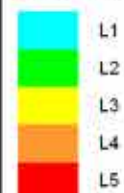


LEGEND Risk to Life Hazards L1 L2 L3 L4 L5	Title: Newcastle Floodplain Risk Management Study Map Series 6 - Hunter River Risk to Life Hazards (L1-L5) <small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small>	Figure: 6-C	Rev: A
	 N 0 1.25 2.5km Approx. Scale	 BMT WBM www.bmtwbm.com.au	
Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_603_111221_Map6-C.WOR			



LEGEND

Risk to Life Hazards



Note: Adopted ocean level = 3.4m AHD
(PMF with 0.9m sea level rise included)

Title:

Newcastle Floodplain Risk Management Study Map Series 6 - Ocean Flood Risk to Life Hazards (L1-L5)

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0 1.25 2.5km
Approx. Scale

Figure:

6-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_604_111221_Map6-D.WOR

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CALLAGHAN	Not Mapped
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MINMI	Not Mapped
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NORTH LAMBTON	See Map 7-F
RANKIN PARK	See Map 7-J
SANDGATE	Not Mapped
SHORTLAND	Not Mapped
STOCKTON	Not Mapped
TARRO	Not Mapped
THE HILL	See Map 7-A
THE JUNCTION	See Map 7-B
TIGHES HILL	See Map 7-I
WALLSEND	See Map 7-K
WARABROOK	Not Mapped
WARATAH	See Map 7-G
WARATAH WEST	See Map 7-G
WICKHAM	See Map 7-I



Note: Mapping presented for flash flooding only

LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Title:
Newcastle Floodplain Risk Management Study
Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 1.25 2.5km
Approx. Scale

Map:
7-INDEX

Rev:
A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_700_111220_Map7-INDEX.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

7-A

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_701_111216_Map7-A.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

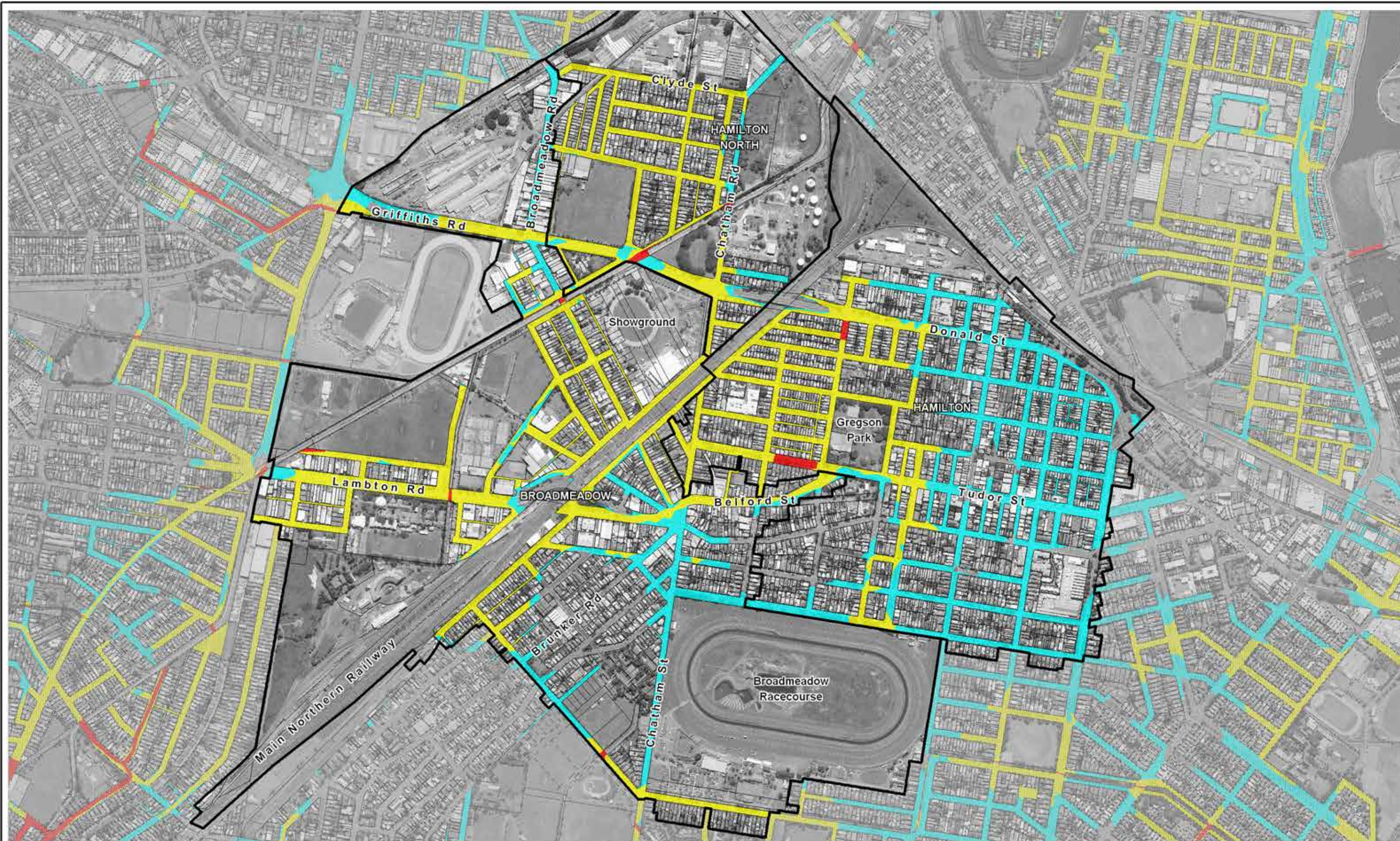
7-B

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_702_111216_Map7-B.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

7-C

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_703_111216_Map7-C.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

7-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_704_111216_Map7-D.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

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0 250 500m
Approx. Scale

Map:

7-E

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_705_111216_Map7-E.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

7-F

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_706_111216_Map7-F.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 250 500m
Approx. Scale

Map:

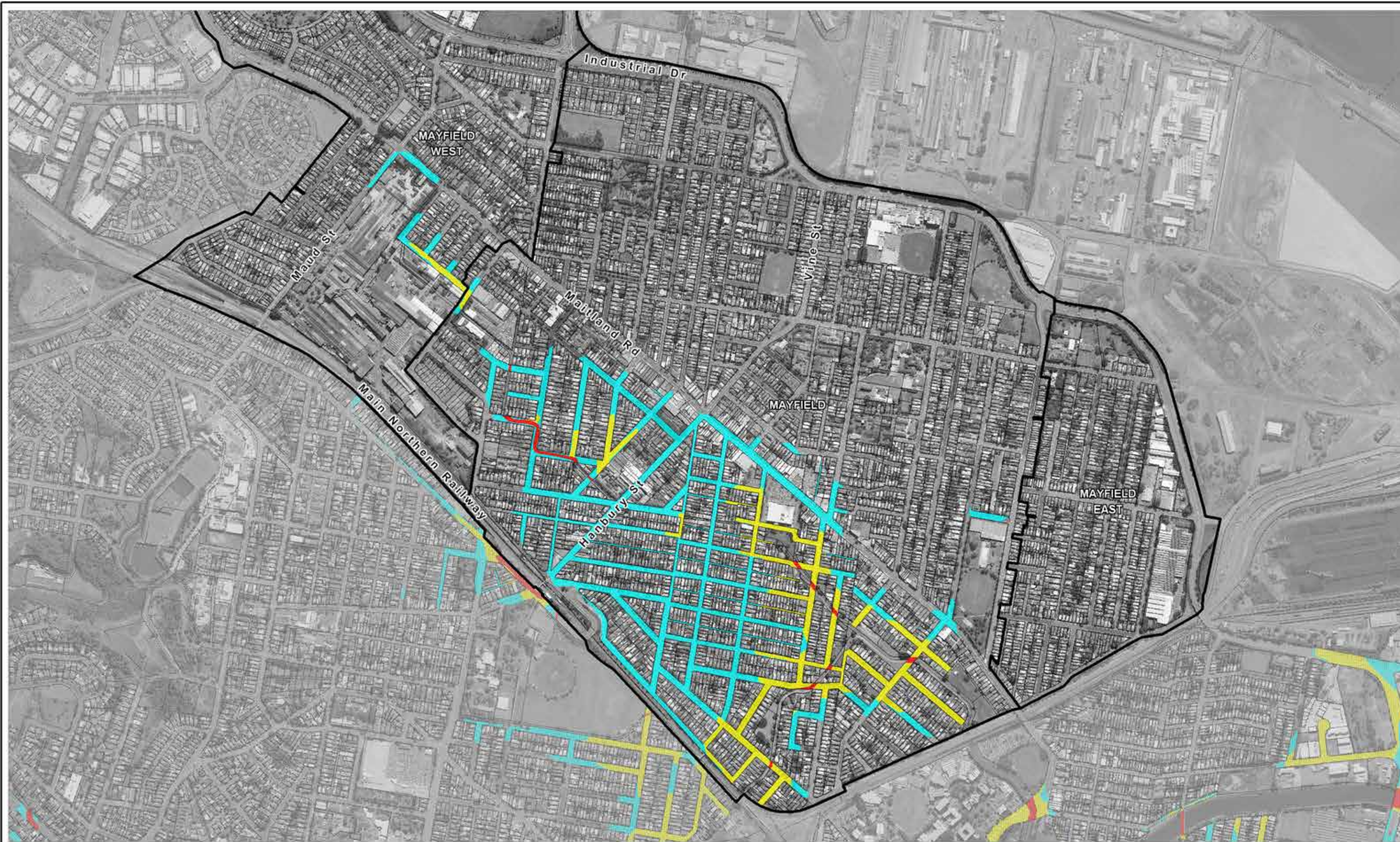
7-G

Rev:

A



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LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

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0 250 500m
Approx. Scale

Map:

7-H

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_708_111216_Map7-H.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

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0 250 500m
Approx. Scale

Map:

7-1

Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_709_111216_Map7-1.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 7 - Risks to Life on Roads

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0 250 500m
Approx. Scale

Map:

7-J

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_710_111216_Map7-J.WOR



LEGEND

- Roads which become floodways or are flooded to a significant depth (1m) during frequent or infrequent events
- Roads which become floodways or are flooded to a significant depth (1m) during an extreme event
- Roads which are flooded to a minimum depth of 0.3m during an extreme event

Note: Mapping presented for flash flooding only

<p>Title:</p> <p>Newcastle Floodplain Risk Management Study</p> <p>Map Series 7 - Risks to Life on Roads</p> <p><small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small></p> <p>Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_711_111216_Map7-K.WOR</p>		<p>Map:</p> <p>7-K</p>	<p>Rev:</p> <p>A</p>
<p>0 250 500m</p> <p>Approx. Scale</p>		<p>BMT WBM</p> <p>www.bmtwbm.com.au</p>	

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TARRO	Not Mapped
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THE JUNCTION	See Map 8-B
TIGHES HILL	See Map 8-I
WALLSEND	See Map 8-K
WARABROOK	Not Mapped
WARATAH	See Map 8-G
WARATAH WEST	See Map 8-G
WICKHAM	See Map 8-I



Note: Mapping presented for flash flooding only

LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Title:
Newcastle Floodplain Risk Management Study
Map Series 8 - Risks to Life in Buildings

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0 1.25 2.5km
Approx. Scale

Map:
8-INDEX

Rev:
A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_800_111220_Map8-INDEX.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-A

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_801_111216_Map8-A.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-B

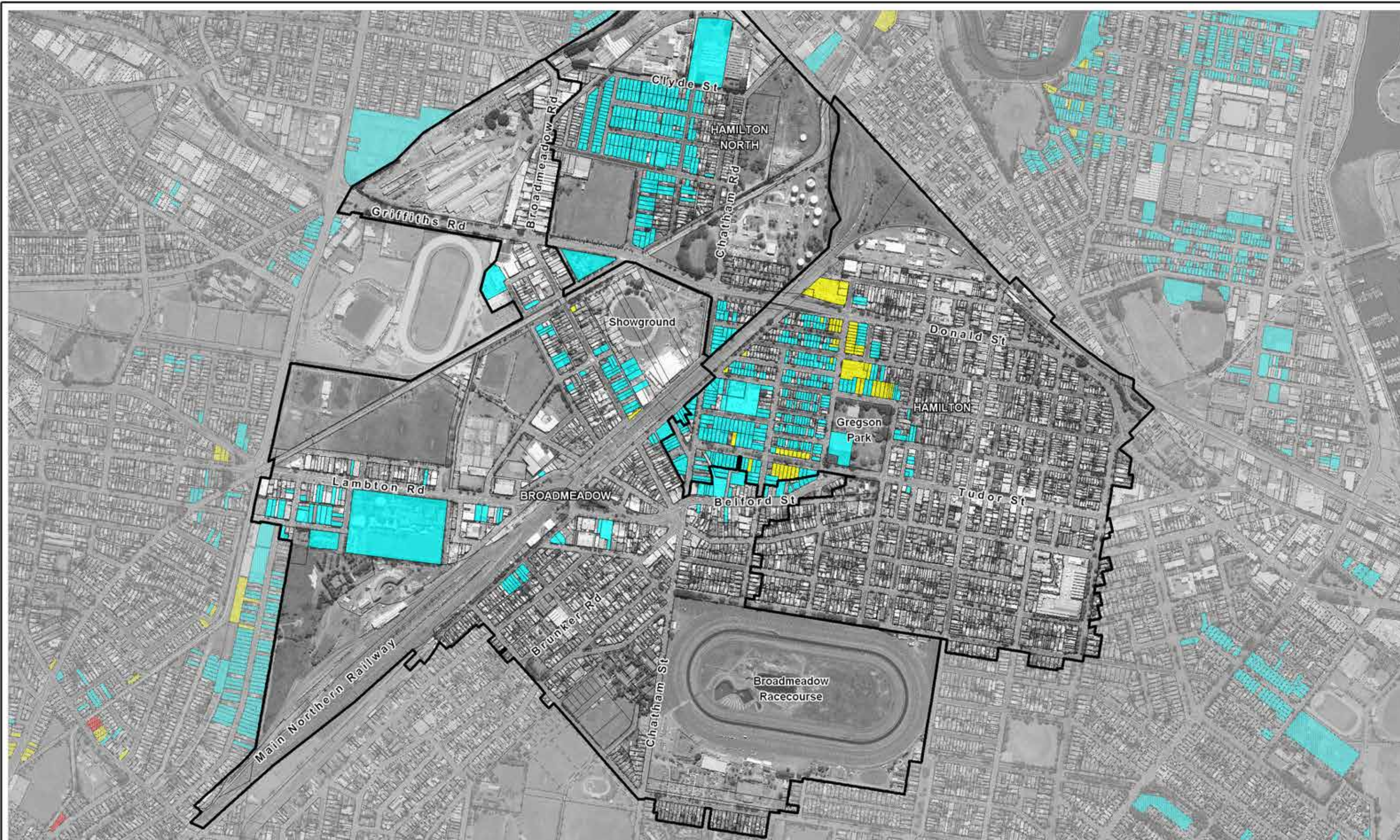
Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_802_111216_Map8-B.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study

Map Series 8 - Risks to Life in Buildings

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Map: **8-C**

Rev: **A**

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0 250 500m

Approx. Scale

Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_803_111216_Map8-C.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_804_111216_Map8-D.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-E

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_805_111216_Map8-E.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-F

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_806_111216_Map8-F.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

<p>Title: Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings</p>		<p>Map: 8-G</p>	<p>Rev: A</p>
<p><small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small></p>		<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>N</p> </div> <div> <p>0 250 500m</p> <p>Approx. Scale</p> </div> </div>	
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LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-H

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_808_111216_Map8-H.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
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Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-1

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_809_111216_Map8-1.WOR



LEGEND

- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings

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0 250 500m
Approx. Scale

Map:

8-J

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_810_111216_Map8-J.WOR



LEGEND

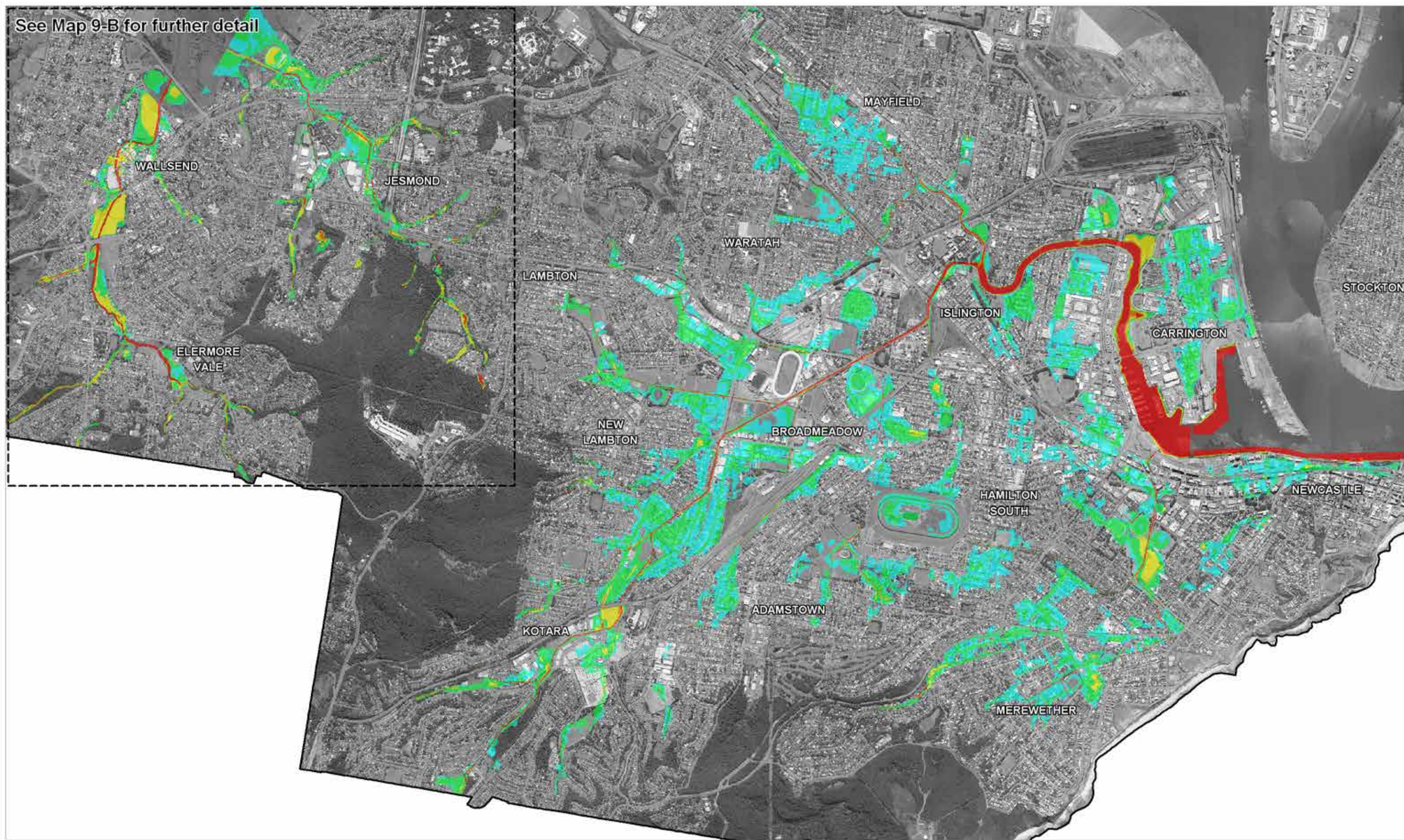
- Buildings that are within floodways or are flooded to a significant depth (1m above floor) during frequent or infrequent events
- Buildings that are within floodways or are flooded to a substantial depth (2m above floor) during an extreme event
- Buildings that are flooded to a significant depth (1m above floor) during an extreme event

Note: Mapping presented for flash flooding only

Title: Newcastle Floodplain Risk Management Study Map Series 8 - Risks to Life in Buildings		Map: 8-K	Rev: A
<small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small>			
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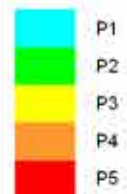
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See Map 9-B for further detail



LEGEND

Risk to Property Hazards



Title:

Newcastle Floodplain Risk Management Study Map Series 9 - Flash Flood Risk to Property Hazards (P1-P5)

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0 0.75 1.5km
Approx. Scale

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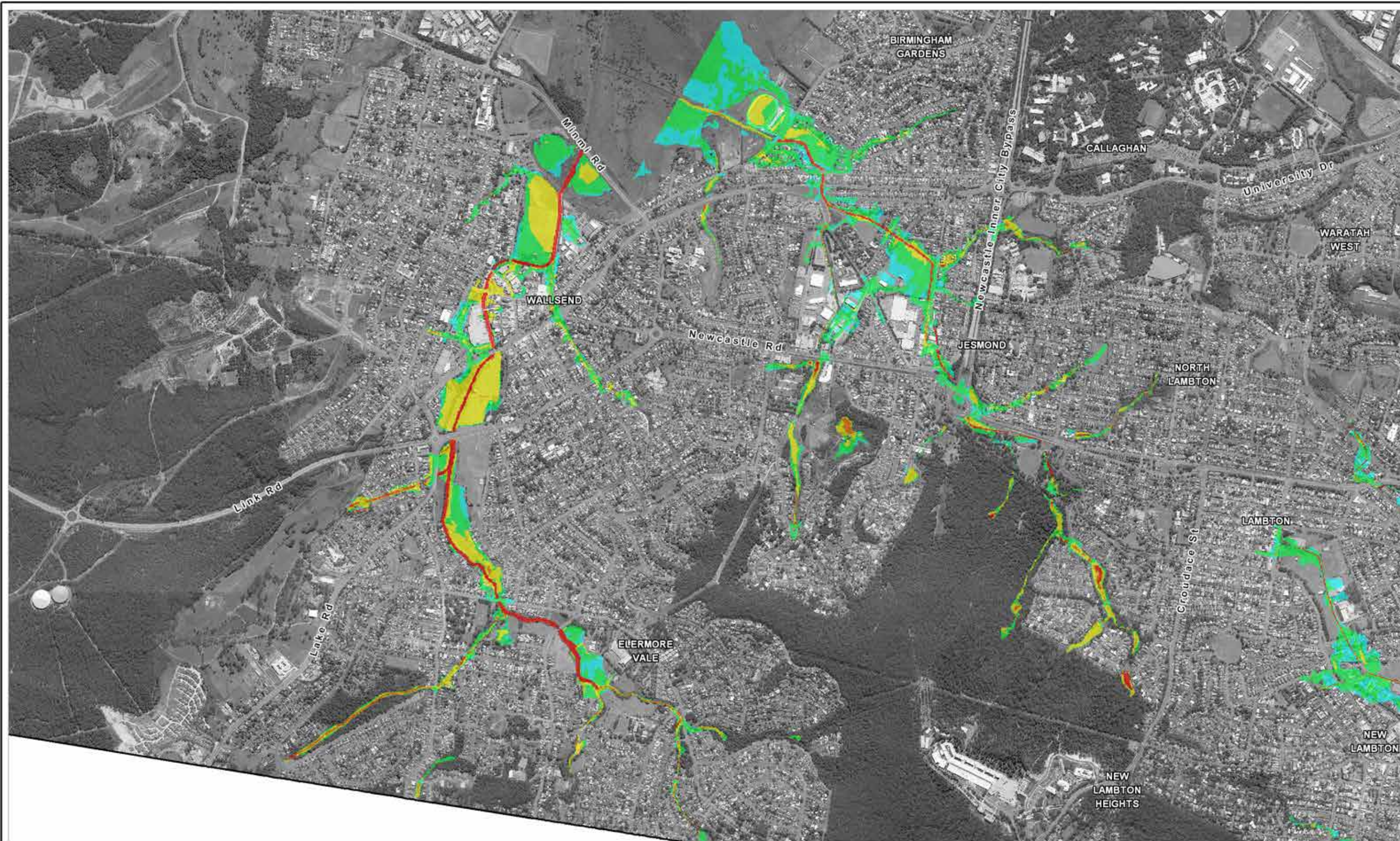
Figure:

9-A

Rev:

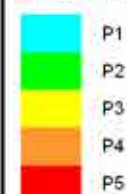
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LEGEND

Risk to Property Hazards



Title:

Newcastle Floodplain Risk Management Study Map Series 9 - Flash Flood Risk to Property Hazards (P1-P5)

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0 375 750m
Approx. Scale

Figure:

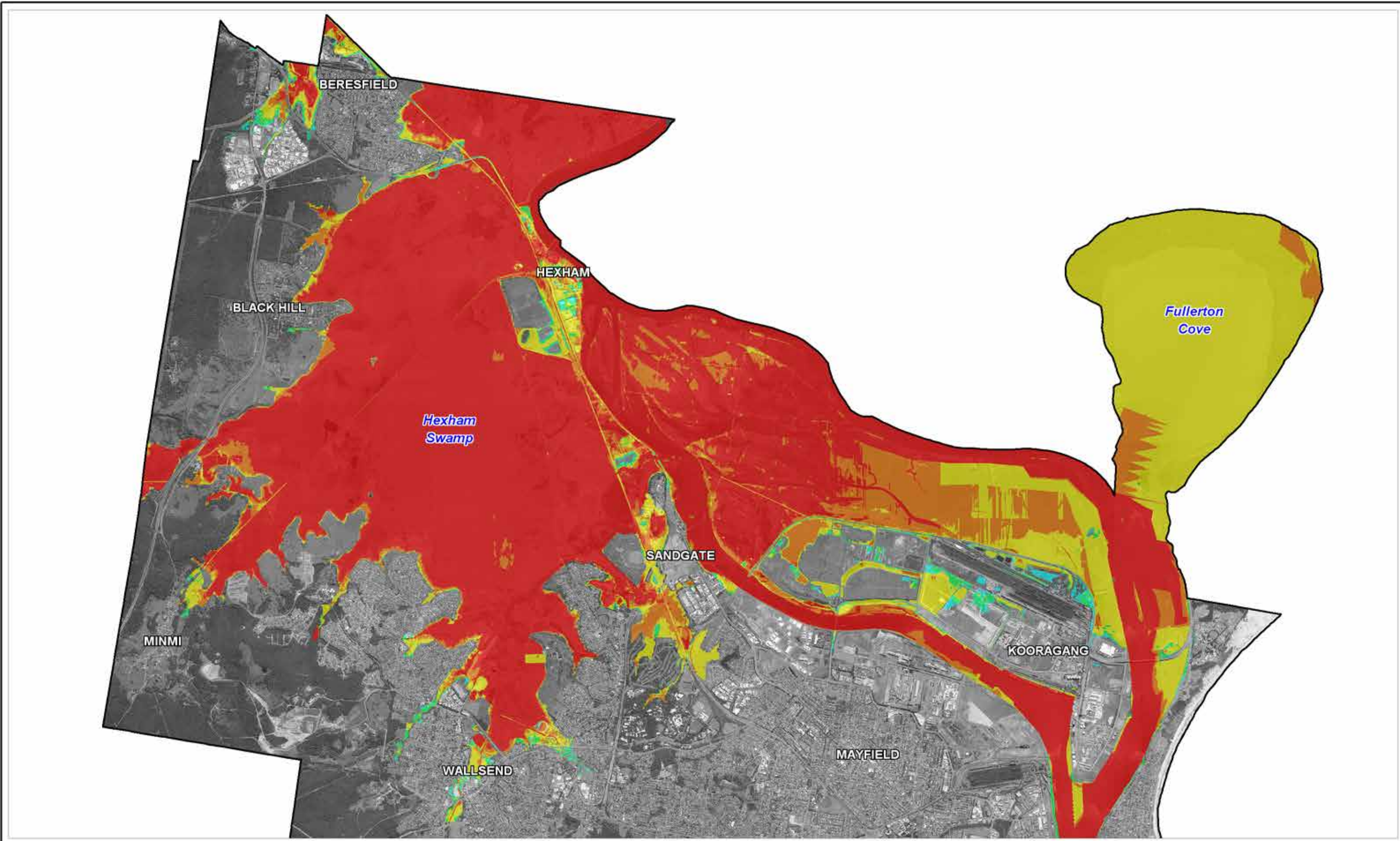
9-B

Rev:

A



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LEGEND

Risk to Property Hazards

	P1
	P2
	P3
	P4
	P5

Title:
Newcastle Floodplain Risk Management Study
Map Series 9 - Hunter River Risk to Property Hazards (P1-P5)

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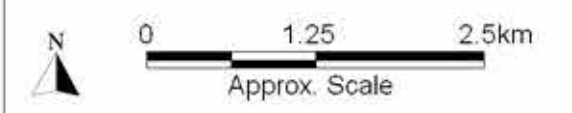
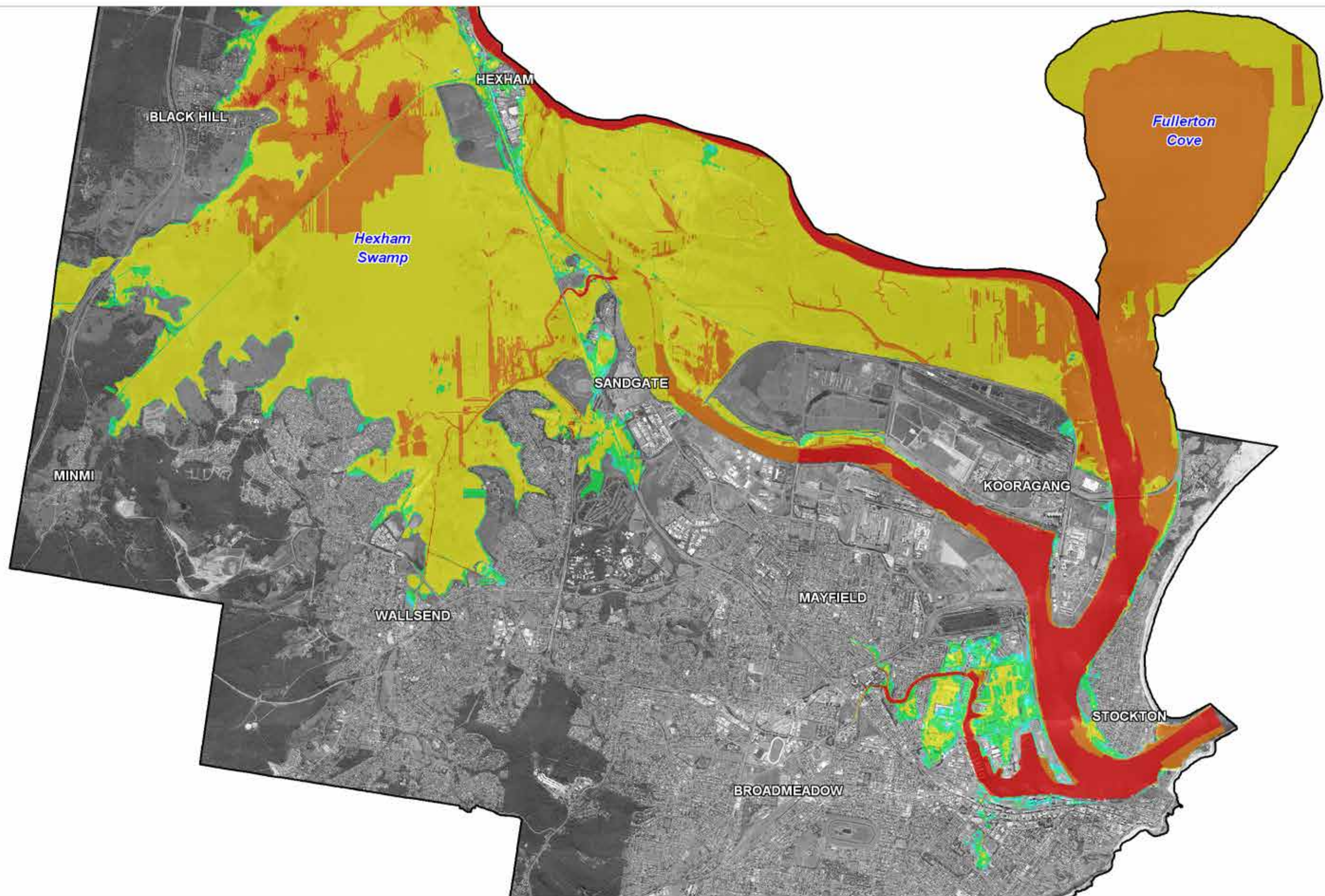


Figure: 9-C	Rev: A
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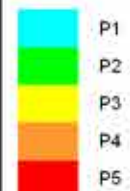
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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_903_111221_Map9-C.WOR



LEGEND

Risk to Property Hazards



Note: Adopted ocean level = 2.3m AHD
(1% AEP with 0.9m sea level rise included)

Title:

Newcastle Floodplain Risk Management Study Map Series 9 - Ocean Flood Risk to Property Hazards (P1-P5)

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0 1.25 2.5km
Approx. Scale

Figure:

9-D

Rev:

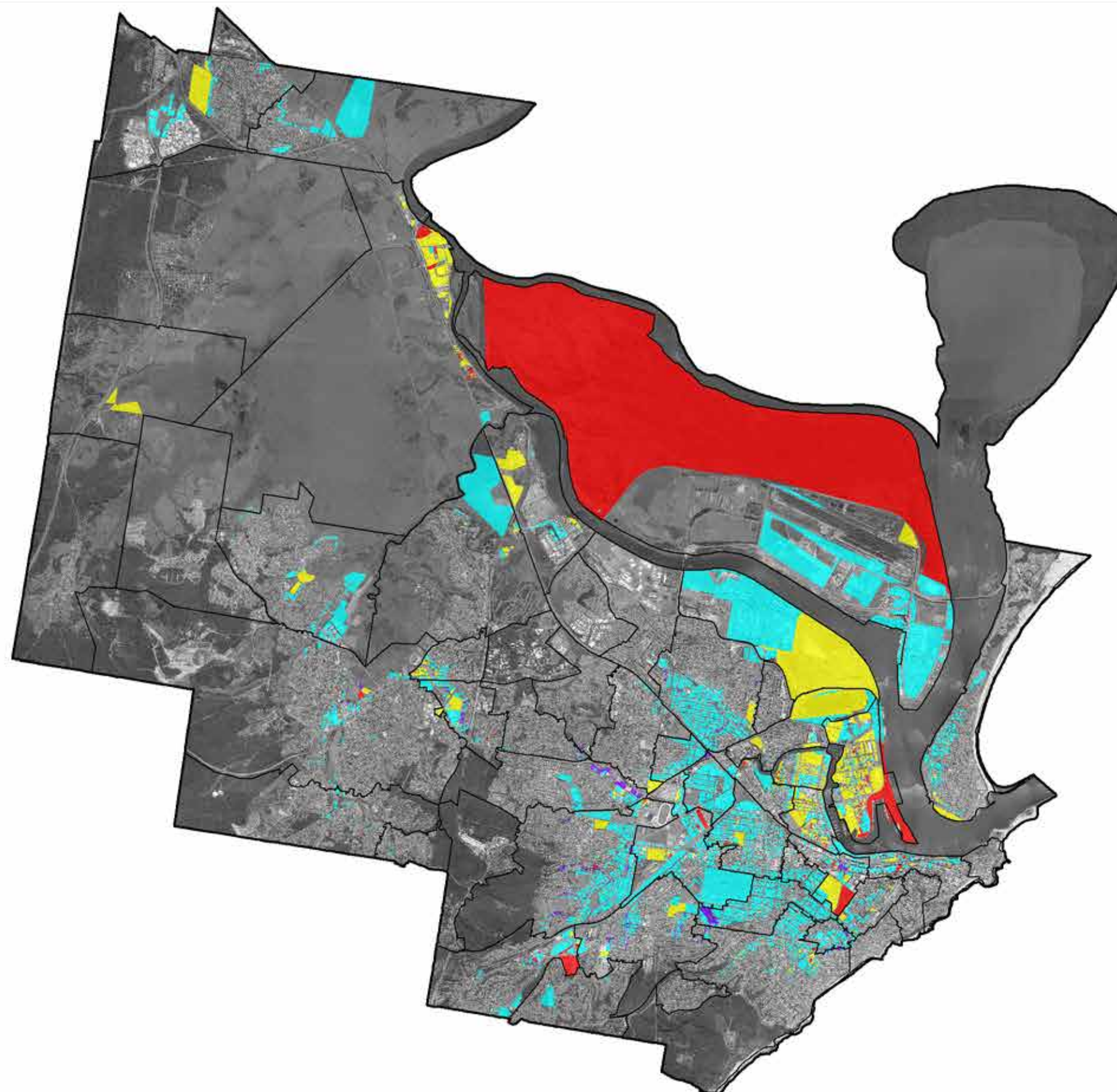
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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_904_111221_Map9-D.WOR

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MINMI.....	Not Mapped
NEWCASTLE.....	See Map 10-A
NEWCASTLE EAST.....	See Map 10-A
NEWCASTLE WEST.....	See Map 10-A
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NEW LAMBTON HEIGHTS.....	Not Mapped
NORTH LAMBTON.....	See Map 10-F
RANKIN PARK.....	See Map 10-J
SANDGATE.....	Not Mapped
SHORTLAND.....	Not Mapped
STOCKTON.....	Not Mapped
TARRO.....	Not Mapped
THE HILL.....	See Map 10-A
THE JUNCTION.....	See Map 10-B
TIGHES HILL.....	See Map 10-I
WALLSEND.....	See Map 10-K
WARABROOK.....	Not Mapped
WARATAH.....	See Map 10-G
WARATAH WEST.....	See Map 10-G
WICKHAM.....	See Map 10-I



LEGEND

■	Buildings that are flooded above floor level during frequent events
■	Buildings that are flooded above floor level during infrequent events
■	Buildings that are flooded above floor level during an extreme event
■	Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 1.25 2.5km
Approx. Scale

Map:

10-INDEX

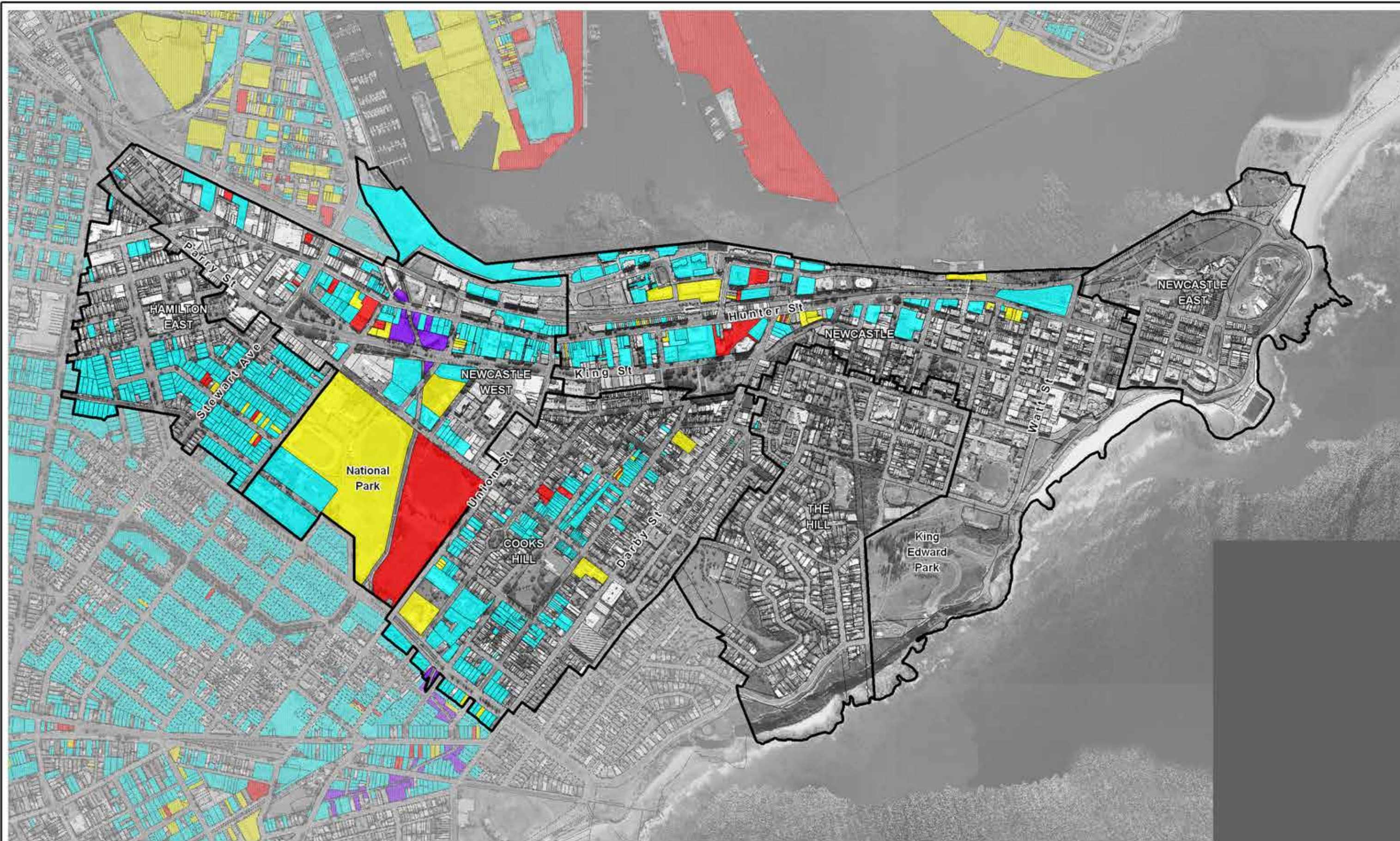
Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1000_111220_Map10-INDEX.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-A

Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1001_111216_Map10-A.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

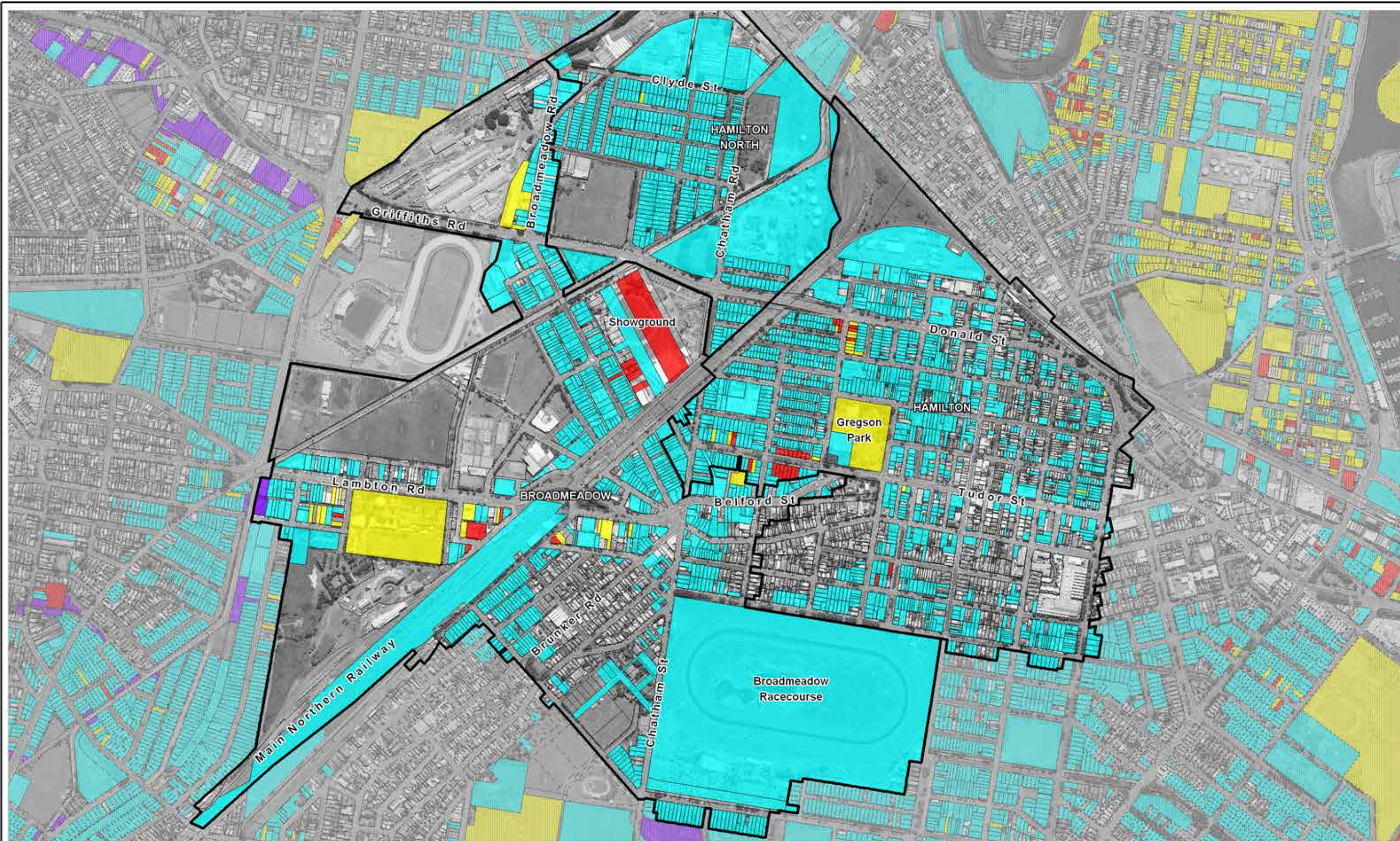
10-B

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1002_111216_Map10-B.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-C

Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1003_111216_Map10-C.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1004_111216_Map10-D.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-E

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1005_111216_Map10-E.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

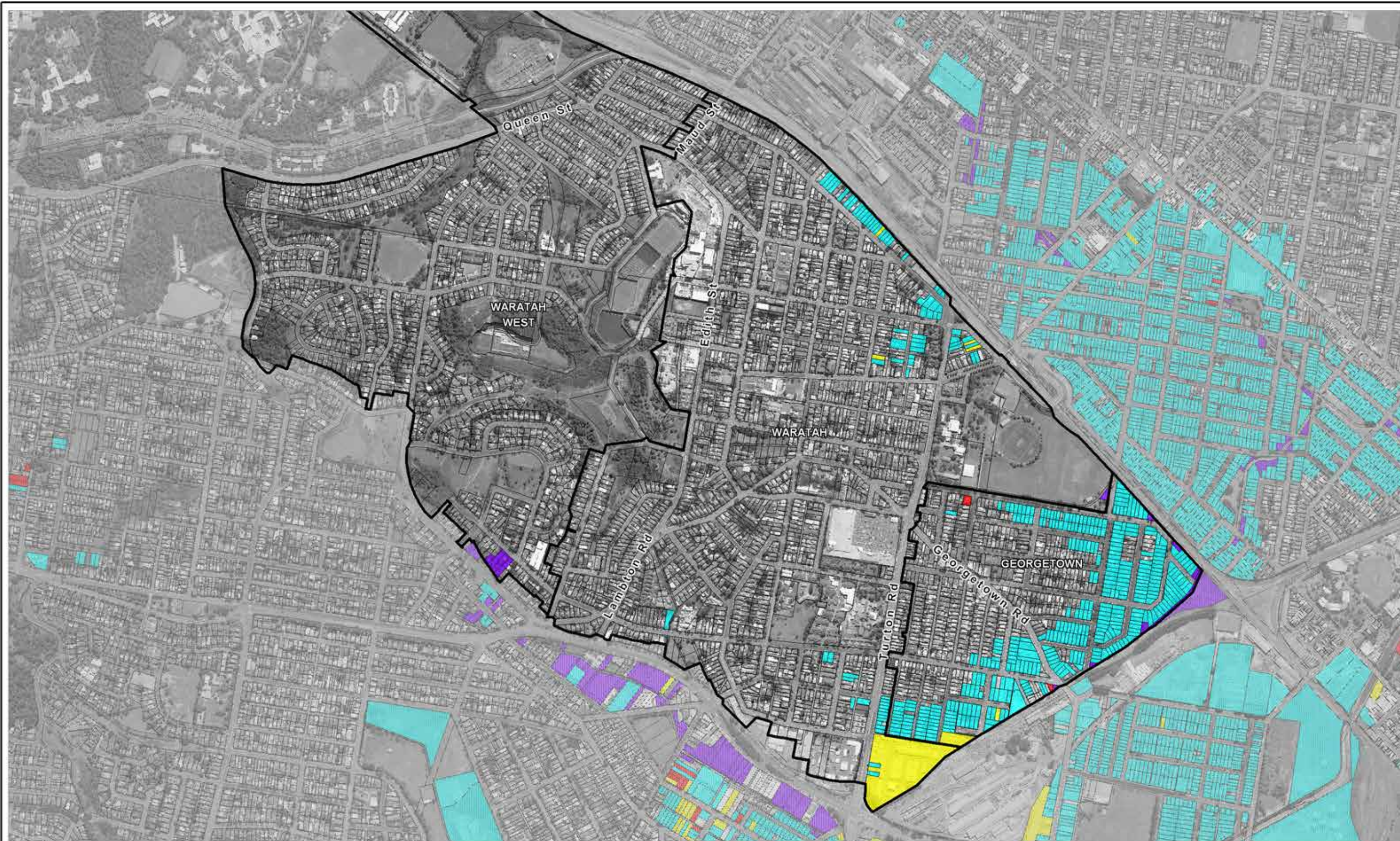
10-F

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1006_111216_Map10-F.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

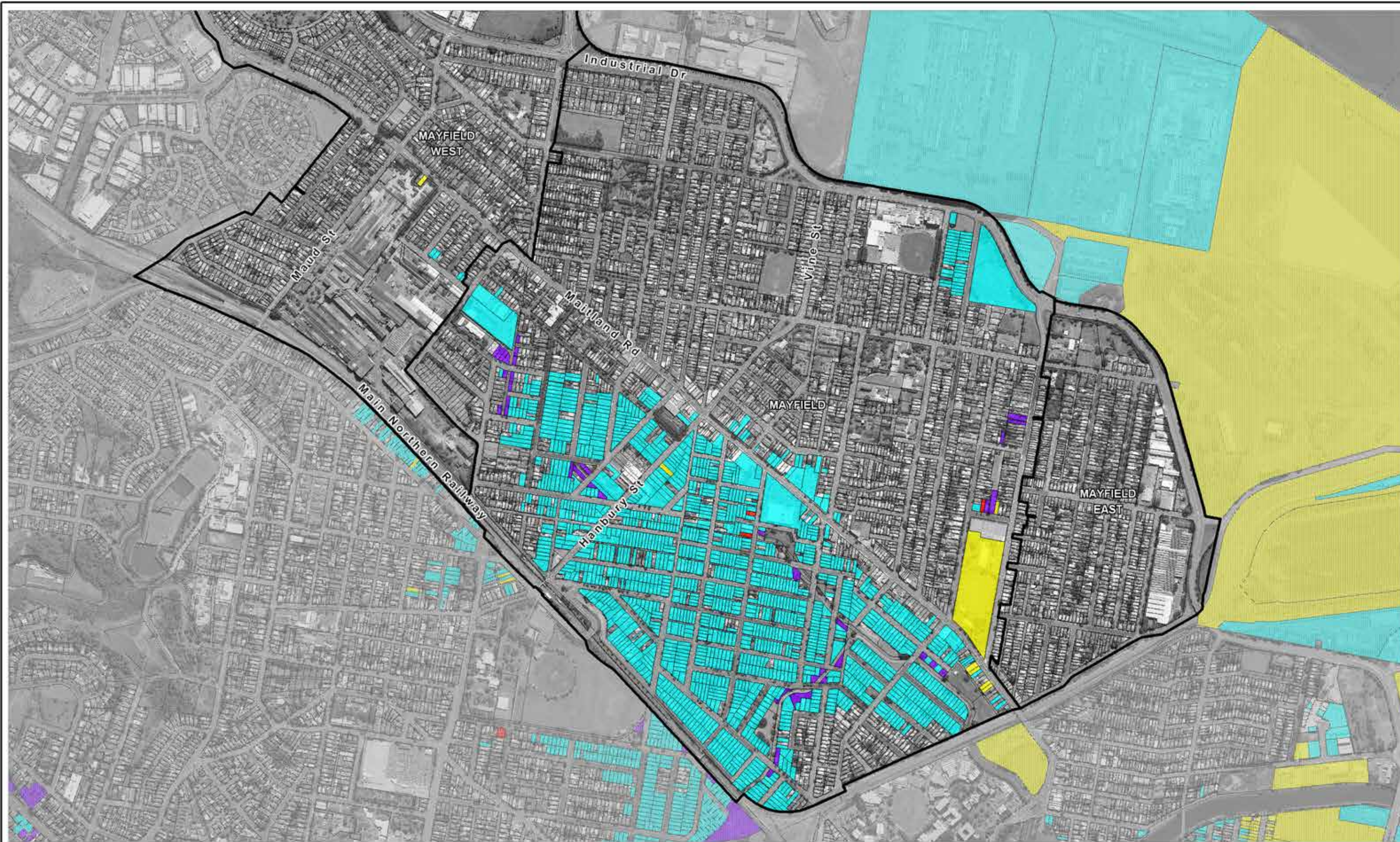
10-G

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1007_111216_Map10-G.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-H

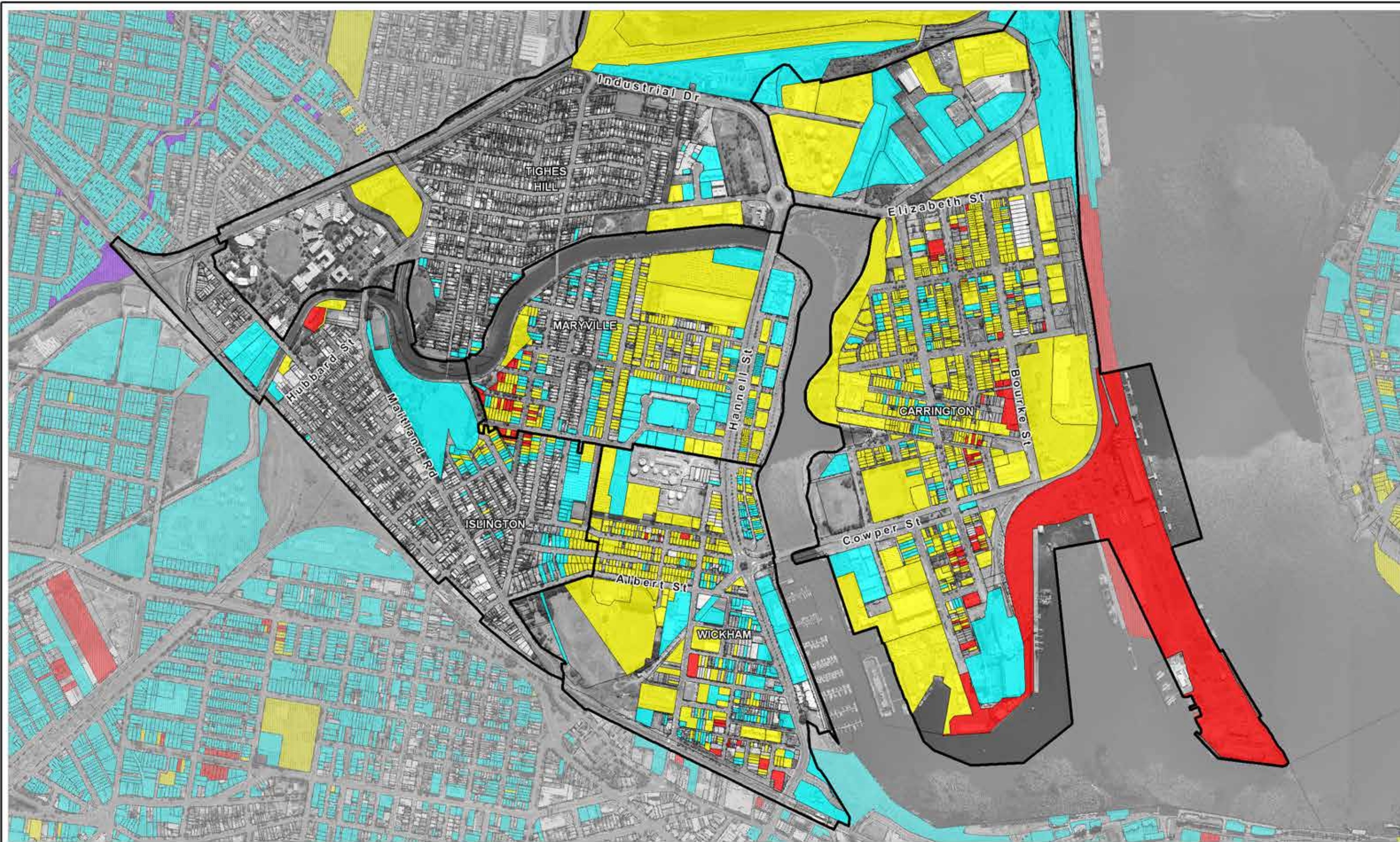
Rev:

A



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Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1008_111216_Map10-H.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-I

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1009_111216_Map10-I.WOR



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 250 500m
Approx. Scale

Map:

10-J


Rev:

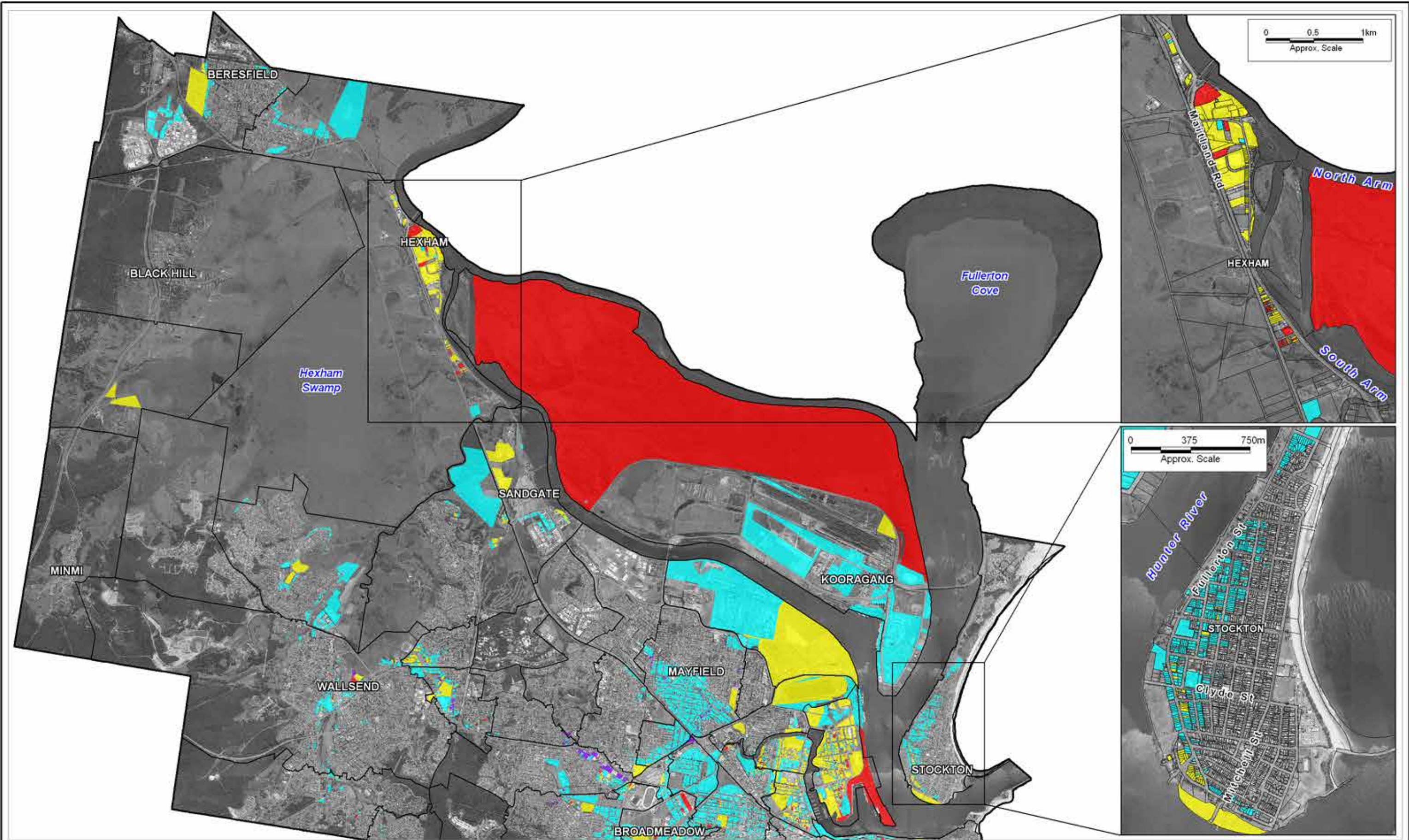
A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1010_111216_Map10-J.WOR



<p>LEGEND</p> <ul style="list-style-type: none"> ■ Buildings that are flooded above floor level during frequent events ■ Buildings that are flooded above floor level during infrequent events ■ Buildings that are flooded above floor level during an extreme event ■ Buildings that are in close proximity to an open channel 	<p>Title: Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage</p> <p><small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small></p> <p>Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1011_111216_Map10-K.WOR</p>	<table border="1"> <tr> <td>Map:</td> <td>Rev:</td> </tr> <tr> <td>10-K</td> <td>A</td> </tr> </table> <div style="text-align: center;">  <p>BMT WBM www.bmtwbm.com.au</p> </div>	Map:	Rev:	10-K	A
Map:	Rev:					
10-K	A					



LEGEND

- Buildings that are flooded above floor level during frequent events
- Buildings that are flooded above floor level during infrequent events
- Buildings that are flooded above floor level during an extreme event
- Buildings that are in close proximity to an open channel

Title:

Newcastle Floodplain Risk Management Study Map Series 10 - Potential for Property Damage

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0 1.25 2.5km

Approx. Scale

Map:

10-L

Rev:

A



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SUBURB INDEX

ADAMSTOWN	See Map 11-D
ADAMSTOWN HEIGHTS	See Map 11-D
BAR BEACH	See Map 11-B
BERESFIELD	Not Mapped
BIRMINGHAM GARDENS	See Map 11-K
BLACK HILL	Not Mapped
BROADMEADOW	See Map 11-C
CALLAGHAN	Not Mapped
CARRINGTON	See Map 11-I
COOKS HILL	See Map 11-A
ELERMORE VALE	See Map 11-J
FLETCHER	Not Mapped
GEORGETOWN	See Map 11-G
HAMILTON	See Map 11-C
HAMILTON EAST	See Map 11-A
HAMILTON NORTH	See Map 11-C
HAMILTON SOUTH	See Map 11-B
HEXHAM	Not Mapped
ISLINGTON	See Map 11-I
JESMOND	See Map 11-K
KOORAGANG	Not Mapped
KOTARA	See Map 11-D
LAMBTON	See Map 11-F
LENAGHAN	Not Mapped
MARYLAND	Not Mapped
MARYVILLE	See Map 11-I
MAYFIELD	See Map 11-H
MAYFIELD EAST	See Map 11-H
MAYFIELD NORTH	Not Mapped
MAYFIELD WEST	See Map 11-H
MEREWETHER	See Map 11-B
MEREWETHER HEIGHTS	Not Mapped
MINMI	Not Mapped
NEWCASTLE	See Map 11-A
NEWCASTLE EAST	See Map 11-A
NEWCASTLE WEST	See Map 11-A
NEW LAMBTON	See Map 11-E
NEW LAMBTON HEIGHTS	Not Mapped
NORTH LAMBTON	See Map 11-F
RANKIN PARK	See Map 11-J
SANDGATE	Not Mapped
SHORTLAND	Not Mapped
STOCKTON	Not Mapped
TARRO	Not Mapped
THE HILL	See Map 11-A
THE JUNCTION	See Map 11-B
TIGHES HILL	See Map 11-I
WALLSEND	See Map 11-K
WARABROOK	Not Mapped
WARATAH	See Map 11-G
WARATAH WEST	See Map 11-G
WICKHAM	See Map 11-I



Note: Mapping presented for flash flooding only

LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Title:
Newcastle Floodplain Risk Management Study
Map Series 11 - Potential Locations for Elevated Refuge

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0 1.25 2.5km
Approx. Scale

Map:
11-INDEX

Rev:
A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1100_111221_Map11-INDEX.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-A

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1101_111221_Map11-A.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:
Newcastle Floodplain Risk Management Study
Map Series 11 - Potential Locations for Elevated Refuge

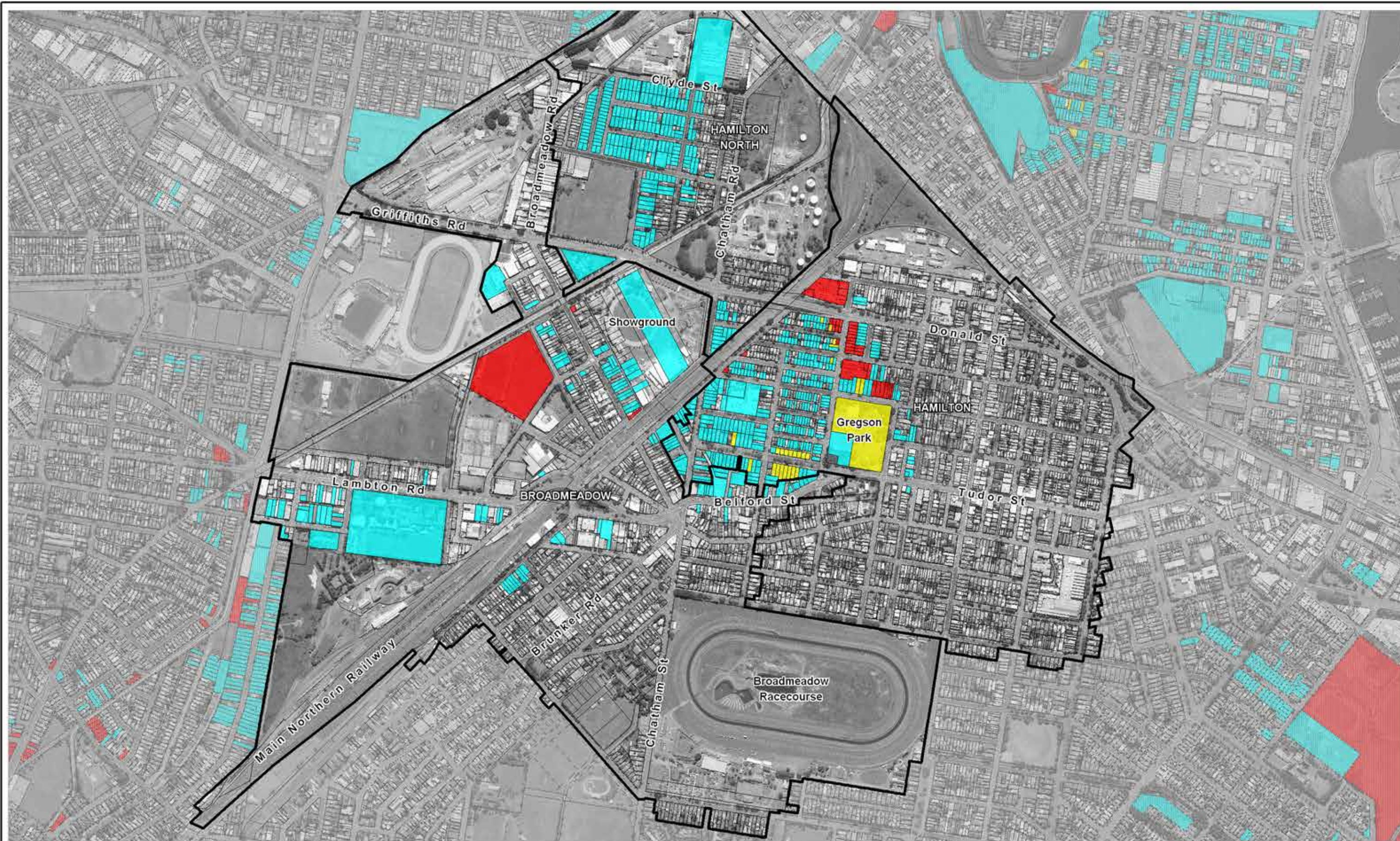
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Map:	Rev:
11-B	A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1102_111221_Map11-B.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-C

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1103_111221_Map11-C.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-D

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1104_111221_Map11-D.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-E

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1105_111221_Map11-E.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-F

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1106_111221_Map11-F.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

<p>Title: Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge</p> <p><small>BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.</small></p>		<p>Map: 11-G</p>	<p>Rev: A</p>
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<p>BMT WBM www.bmtwbm.com.au</p>			



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-H

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1108_111221_Map11-H.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-I

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1109_111221_Map11-I.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-J

Rev:

A



Filepath : K:\N2246_Newcastle_FRMS_Stage2\Mapinfo\workspaces\DRG_1110_111221_Map11-J.WOR



LEGEND

- Requires further investigation
- Requires structural work to address hydrostatic loading
- No additional structural works required

Note: Mapping presented for flash flooding only

Title:

Newcastle Floodplain Risk Management Study Map Series 11 - Potential Locations for Elevated Refuge

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0 250 500m
Approx. Scale

Map:

11-K

Rev:

A



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