

# **Darlington Point**

## **Floodplain Risk Management Study & Plan**

**Floodplain Risk Management Study and Plan**  
**Volume 2 of 2: Figures**

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- Figure 30 Murrumbidgee River mainstream Hazard Categorisation for 1% AEP Design Flood Event
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- Figure 33 Murrumbidgee River mainstream Hydraulic Categorisation for 1% AEP Design Flood Event
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- Figure 43 Compatibility of existing land use with flood hazard for Extreme Design Flood Event









Murrumbidgee  
COUNCIL

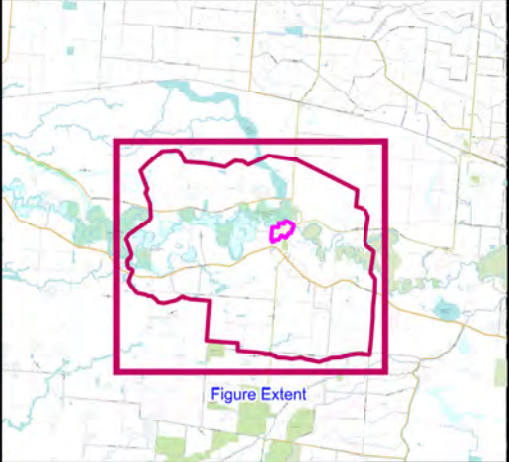


Figure Extent

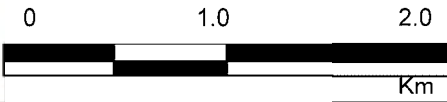
**LEGEND**

- Study Area
- Local Catchment Model Extent
- Watercourse

Notes:



Scale 1:35,000 (at A3)



0 1.0 2.0  
Km

**Figure 1:  
Darlington Point  
Study Area**

Prepared By:



**Catchment Simulation Solutions**  
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Sydney, NSW 2000

File Name: Darlington Point Study  
Area.wor



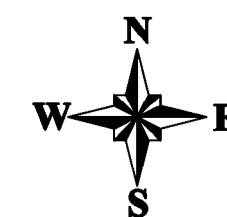


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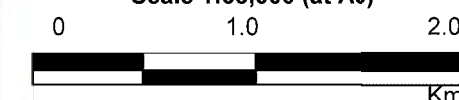
Ground Surface Elevation (mAHD)

- < 114
- 116
- 118
- 120
- 122
- 124
- 126
- 128
- 130
- > 132

Notes:



Scale 1:35,000 (at A3)



**Figure 2:  
Digital Elevation  
Model**

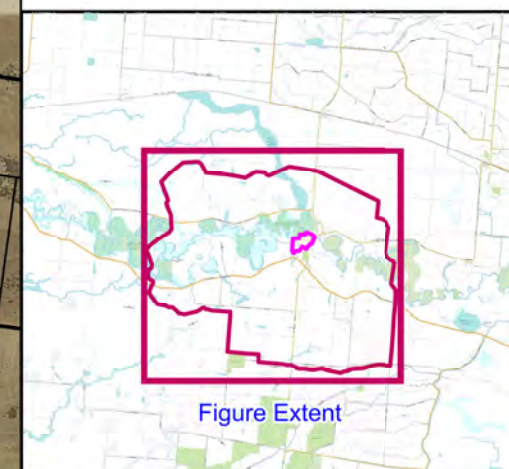
Prepared By:

**CatchmentSimulationSolutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000










File Name: DEM.wor

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

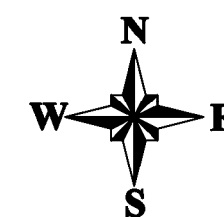




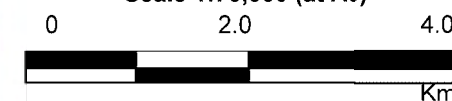
### LEGEND

-  Study Area
-  Local Catchment Model Extent
-  Floor Level Information Obtained as Part of This Study
-  5m 2009 LiDAR Extent
-  1m 2009 LiDAR Extent
-  Survey Cross Section Location
-  Location of Final Alignment of Upgraded Levee
-  Stormwater Culvert
-  Stormwater Pit

Notes:



Scale 1:70,000 (at A3)

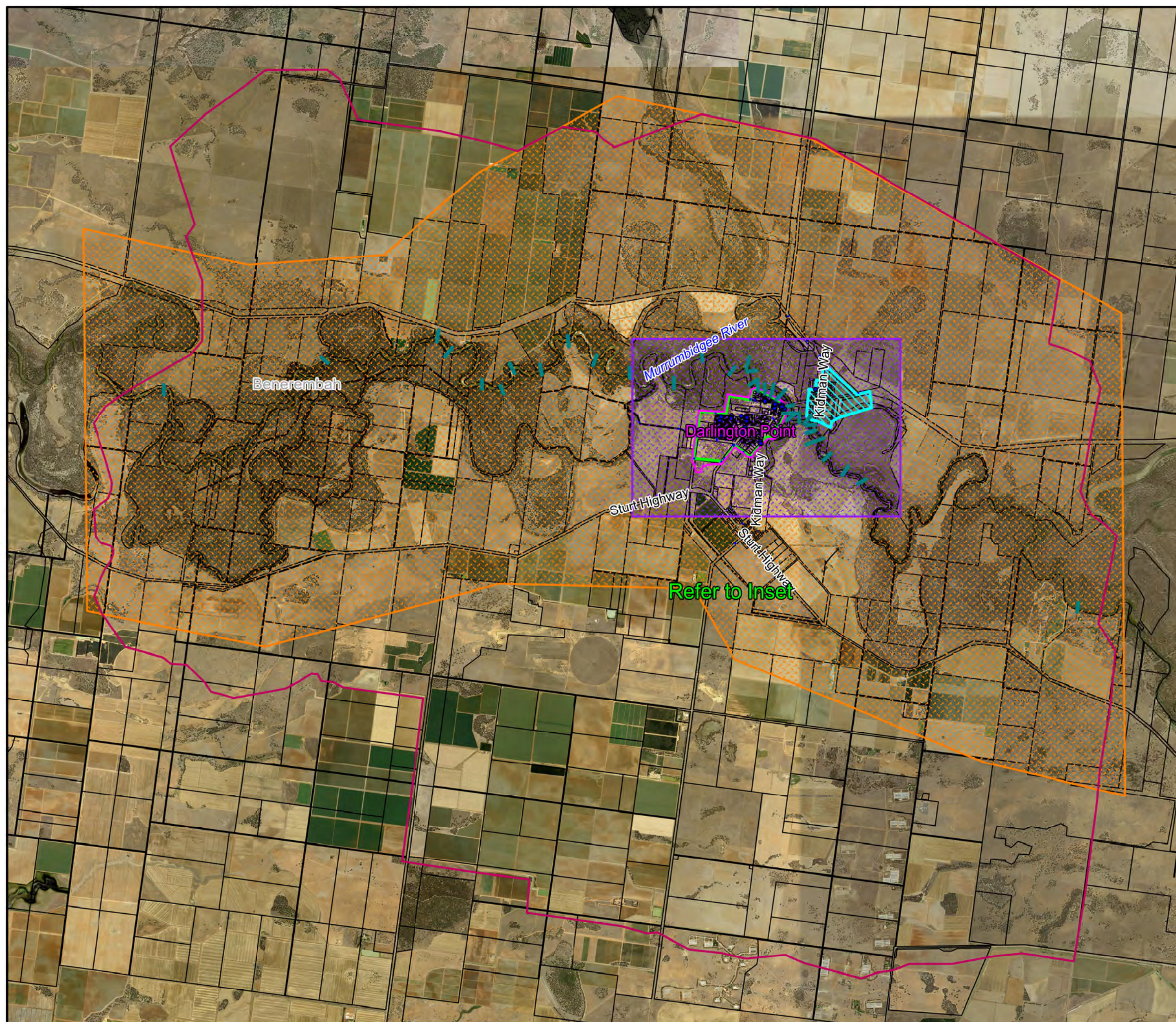


**Figure 3:  
Existing Datasets**

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 **Catchment Simulation Solutions**  
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Sydney, NSW 2000

File Name: Existing Datasets.wor









Murrumbidgee  
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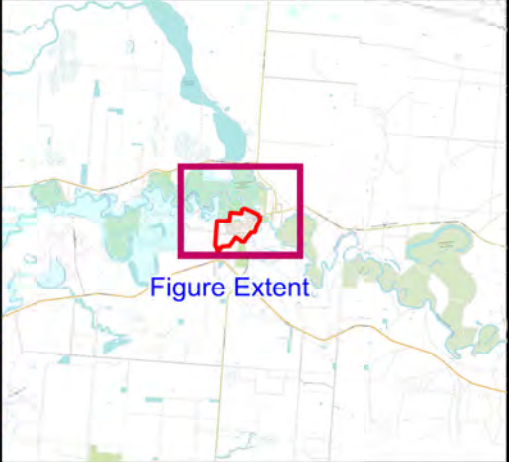
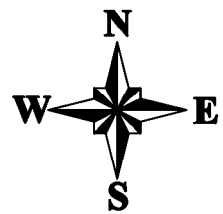


Figure Extent

**LEGEND**

- Study Area
- Local Catchment Model Extent
- Floor Level Information Obtained as Part of This Study
- 5m 2009 LiDAR Extent
- 1m 2009 LiDAR Extent
- Survey Cross Section Location
- Location of Final Alignment of Upgraded Levee
- Stormwater Culvert
- Stormwater Pit

Notes:

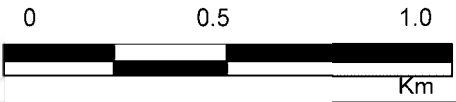


Scale 1:15,000 (at A3)

0 0.5 1.0 Km

**Figure 3.1:  
Existing Datasets**

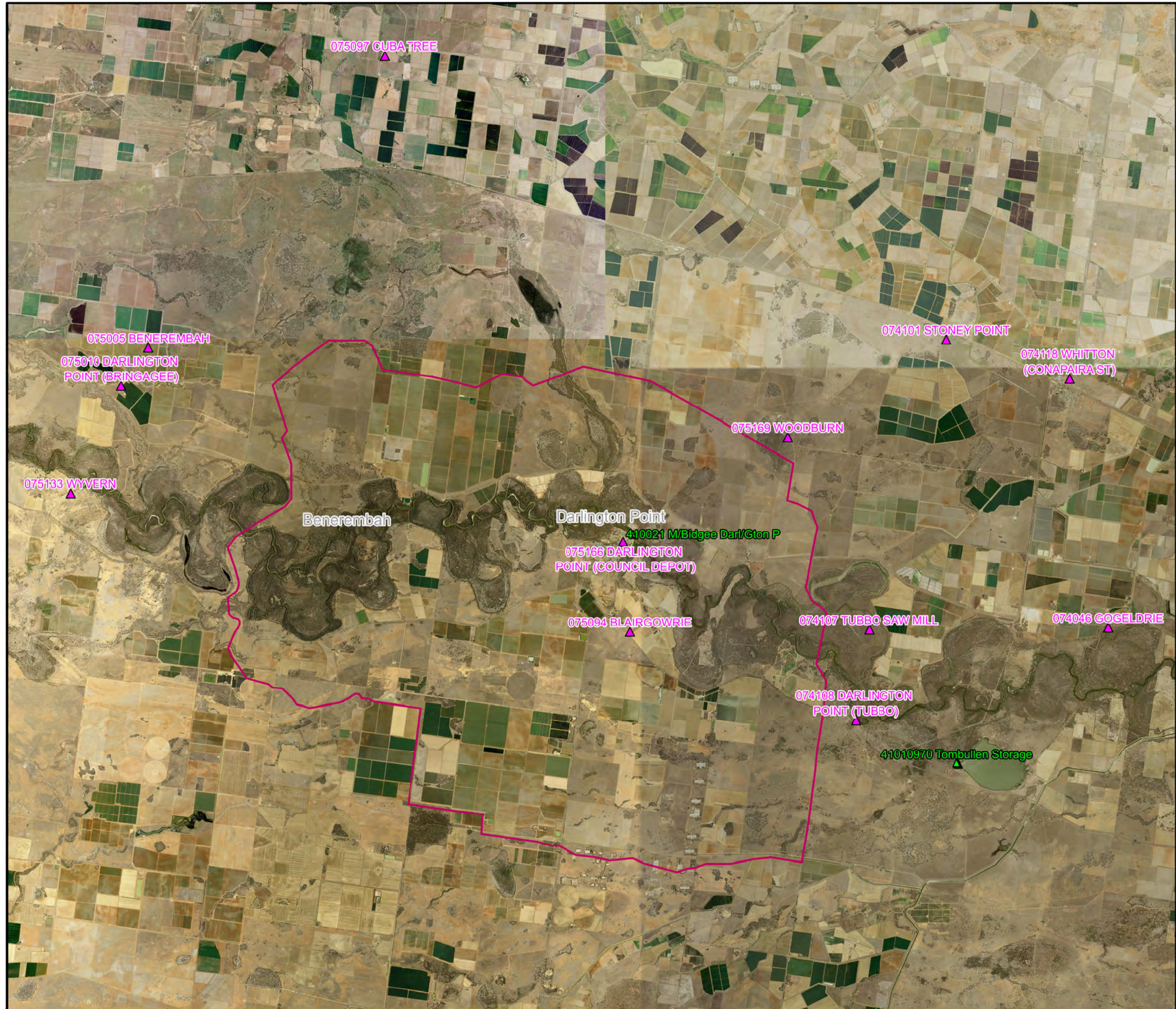
Prepared By:




Catchment Simulation Solutions  
Suite 10.01, 70 Phillip St  
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File Name: Existing Datasets.wor







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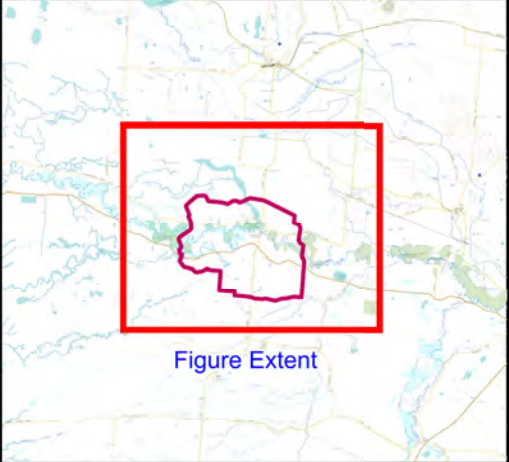



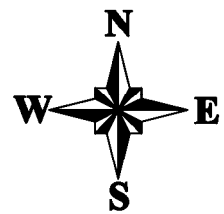


Figure Extent

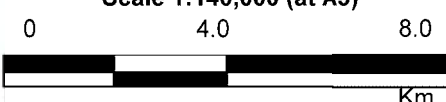
**LEGEND**

-  Study Area
-  BOM Rainfall Gauge
-  Stream Gauge

Notes:




Scale 1:140,000 (at A3)



0 4.0 8.0  
Km

**Figure 4:**  
**Location of Gauges**

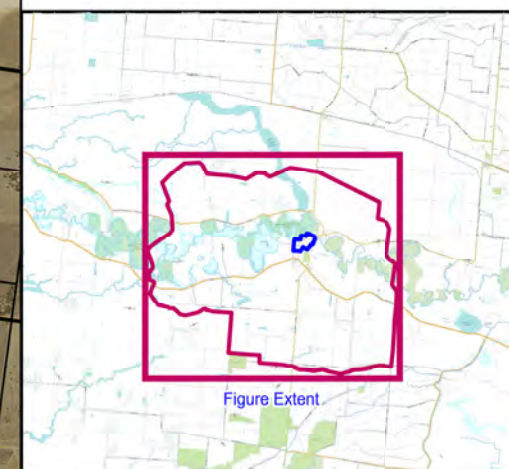
Prepared By:



Catchment Simulation Solutions  
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Sydney, NSW 2000

File Name: Location of Gauges.wor

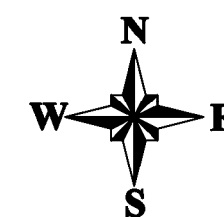




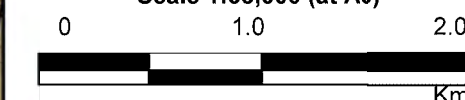
## LEGEND

	Study Area
	Location of Final Alignment of Upgraded Levee
<b>Land Zone</b>	<b>Environmental</b>
Residential	E1
R5	E3
<b>Rural</b>	<b>Waterways</b>
RU1	W1
RU5	W2
<b>Recreation</b>	<b>Special Activities</b>
RE1	SP2

Notes:




Scale 1:35,000 (at A3)

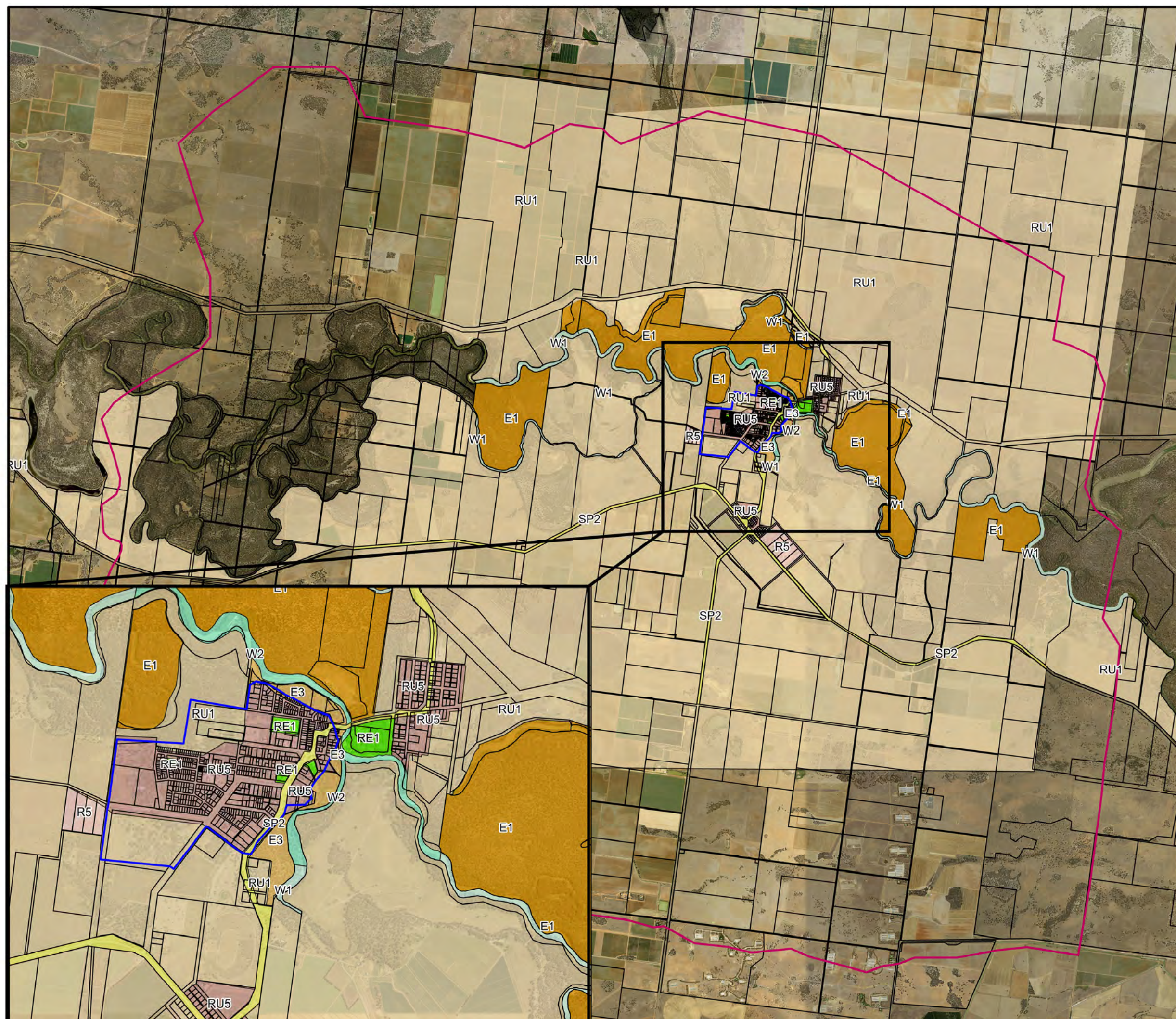


**Figure 5:  
Land Zoning**

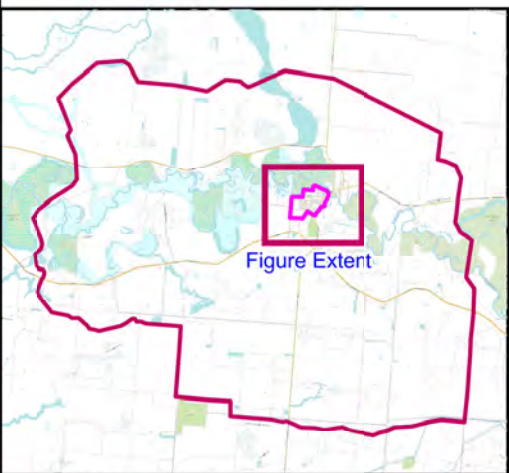
Prepared By:

 **Catchment Simulation Solutions**  
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File Name: Land Zoning.wor



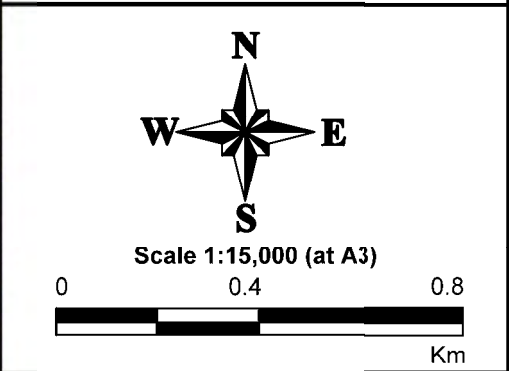




**LEGEND**

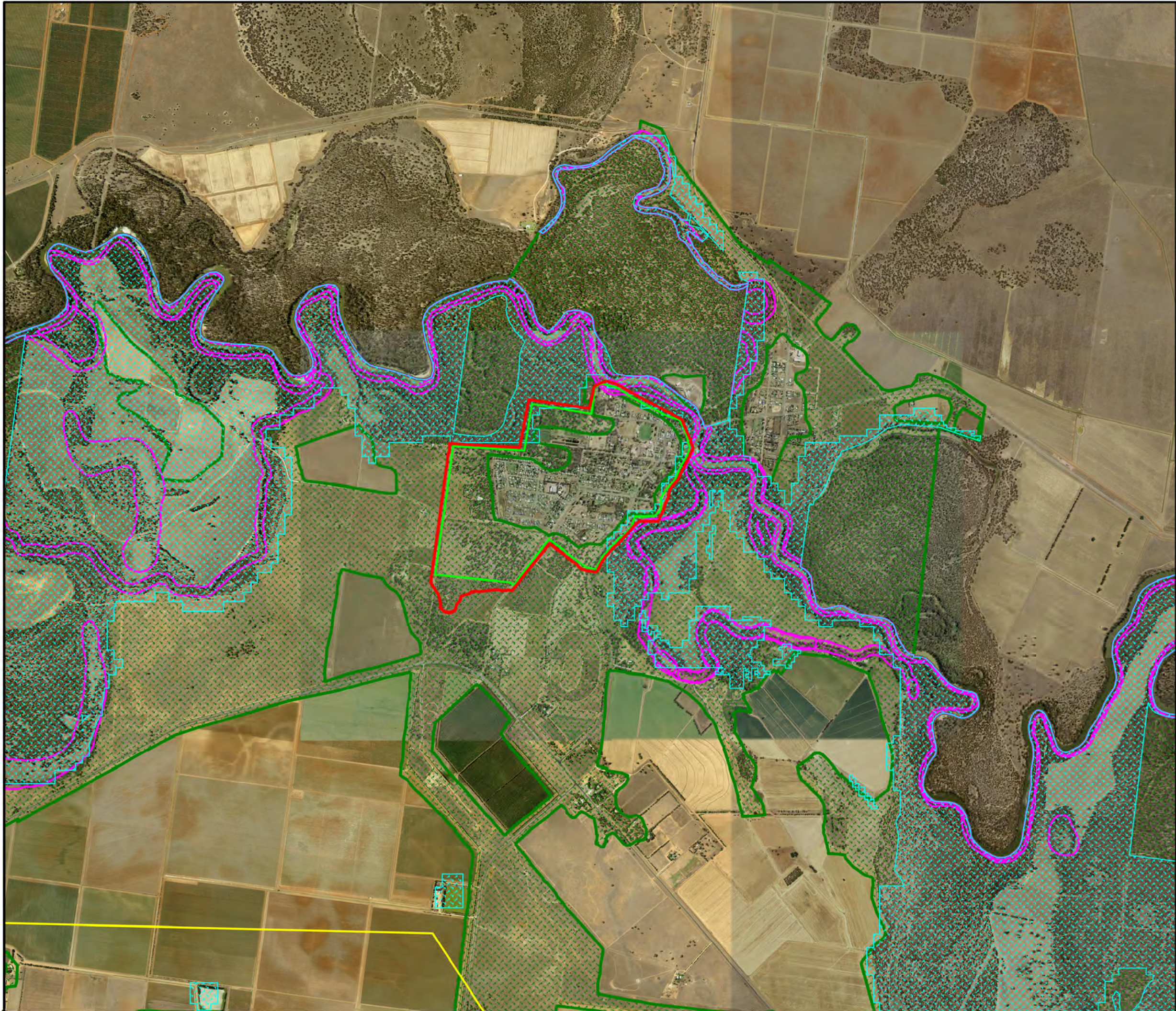
-  Study Area
-  Location of Final Alignment of Upgraded Levee
- Heritage Sites
  -  Aboriginal Heritage Site
  -  General Heritage Site
  -  Archaeological Heritage Site


Notes:



**Figure 6:  
Aboriginal Cultural and  
Heritage Constraints**







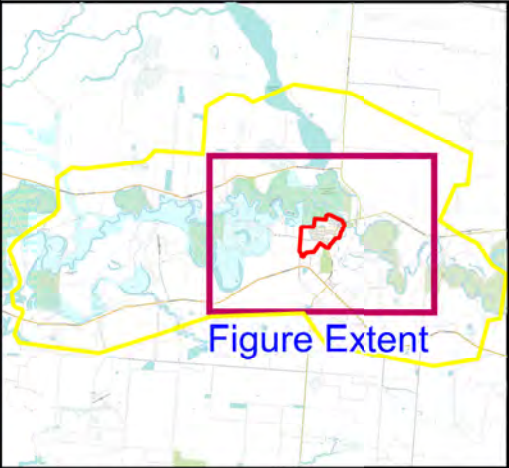
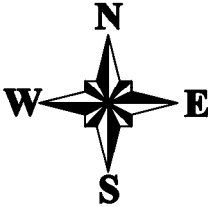


Figure Extent


**LEGEND**

- Study Area
- Catchment Boundary
- Wetlands
- Riparian Lands and Watercourses
- Biodiversity

Notes:




Scale 1:15,000 (at A3)



0 0.4 0.8 Km

**Figure 7:  
Environmental Constraints**

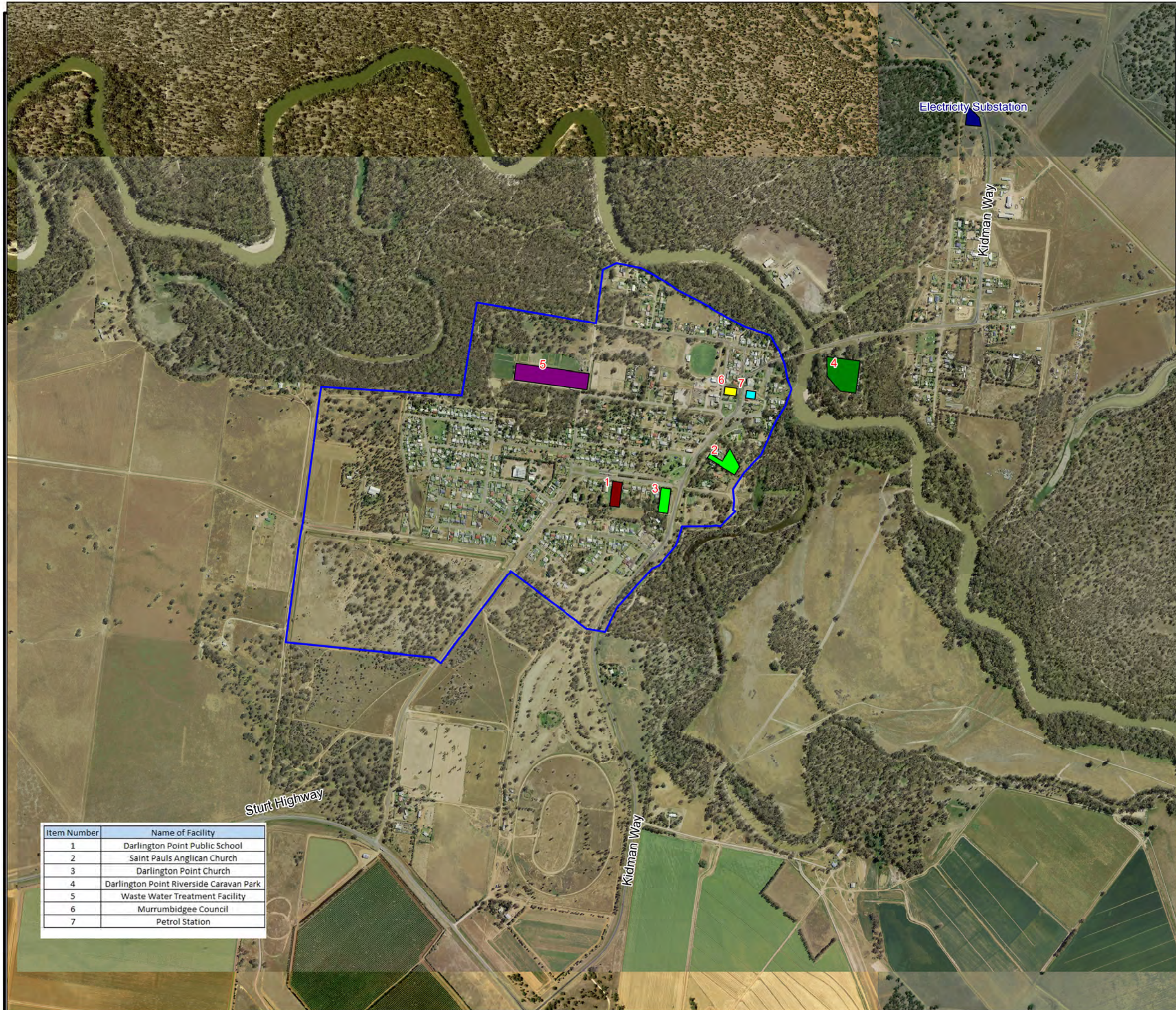
Prepared By:



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Sydney, NSW 2000

File Name: Environmental Constraints.wor





**LEGEND**

- Study Area
- Location of Final Alignment of Upgraded Levee
- Critical Facility
- Vulnerable Facility
  - Council
  - Church
  - Caravan Park
  - School
  - Petrol Station
  - Waste Water Treatment Facility

Notes:

List of facilities is not exhaustive and there may be additional locations that are not identified on this plan.

Scale 1:15,000 (at A3)

0 0.4 0.8 Km

**Figure 8:  
Vulnerable and Critical  
Facilities**

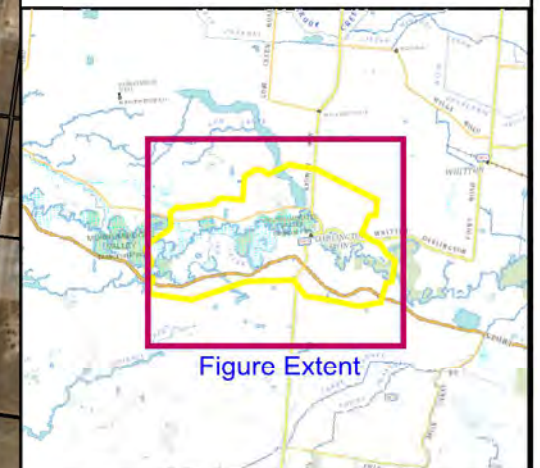
Prepared By:

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Sydney, NSW 2000



File Name: Vulnerable and Critical Facilities.wor

Item Number	Name of Facility
1	Darlington Point Public School
2	Saint Pauls Anglican Church
3	Darlington Point Church
4	Darlington Point Riverside Caravan Park
5	Waste Water Treatment Facility
6	Murrumbidgee Council
7	Petrol Station





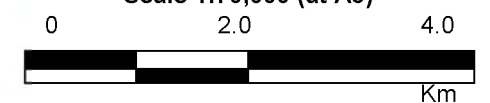
### LEGEND

-  Model Extent
-  Location of Model Extension

Notes:




Scale 1:70,000 (at A3)



**Figure 9:  
Model Extension  
Areas**

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File Name: Model Extension Areas.wor









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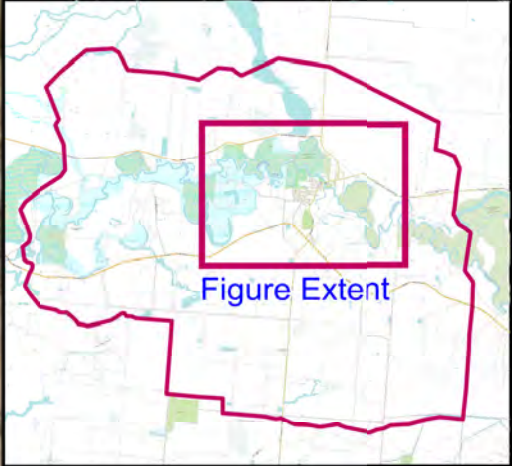
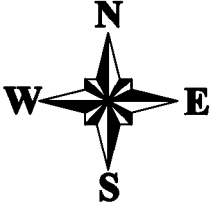


Figure Extent


**LEGEND**

- Study Area
- Survey Cross Section Location
- Location of Final Alignment of Upgraded Levee
- Stormwater Culvert
- Stormwater Pit
- Additional Structures Added into updated model

Notes:




Scale 1:35,000 (at A3)



0 1.0 2.0  
Km

**Figure 10:  
Stormwater Pipe Network  
of Local Darlington  
Point Study Area**

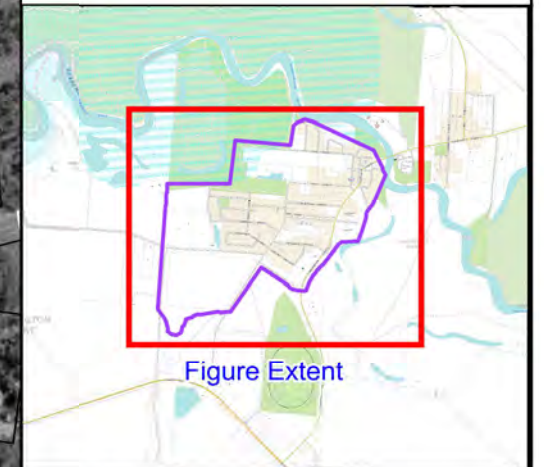
Prepared By:



Catchment Simulation Solutions  
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Sydney, NSW 2000

File Name: Stormwater Pipe Network of  
Local Darlington Point Study Area.wor





### LEGEND

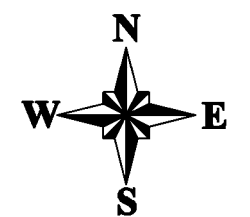
- Local Catchment Model Extent
- Location of Final Alignment of Upgraded Levee

#### Depths (m)

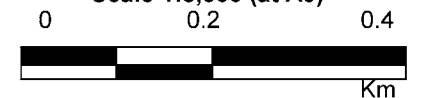
- 0.10 to 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



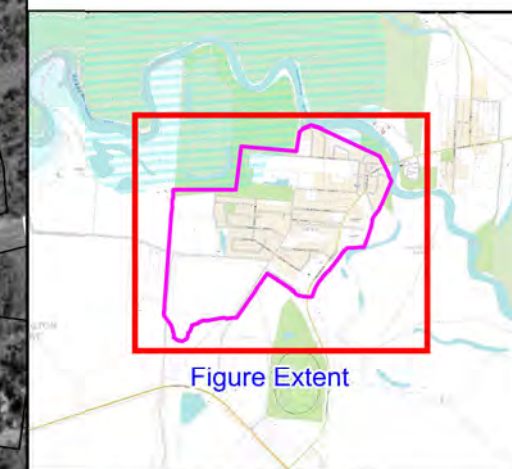
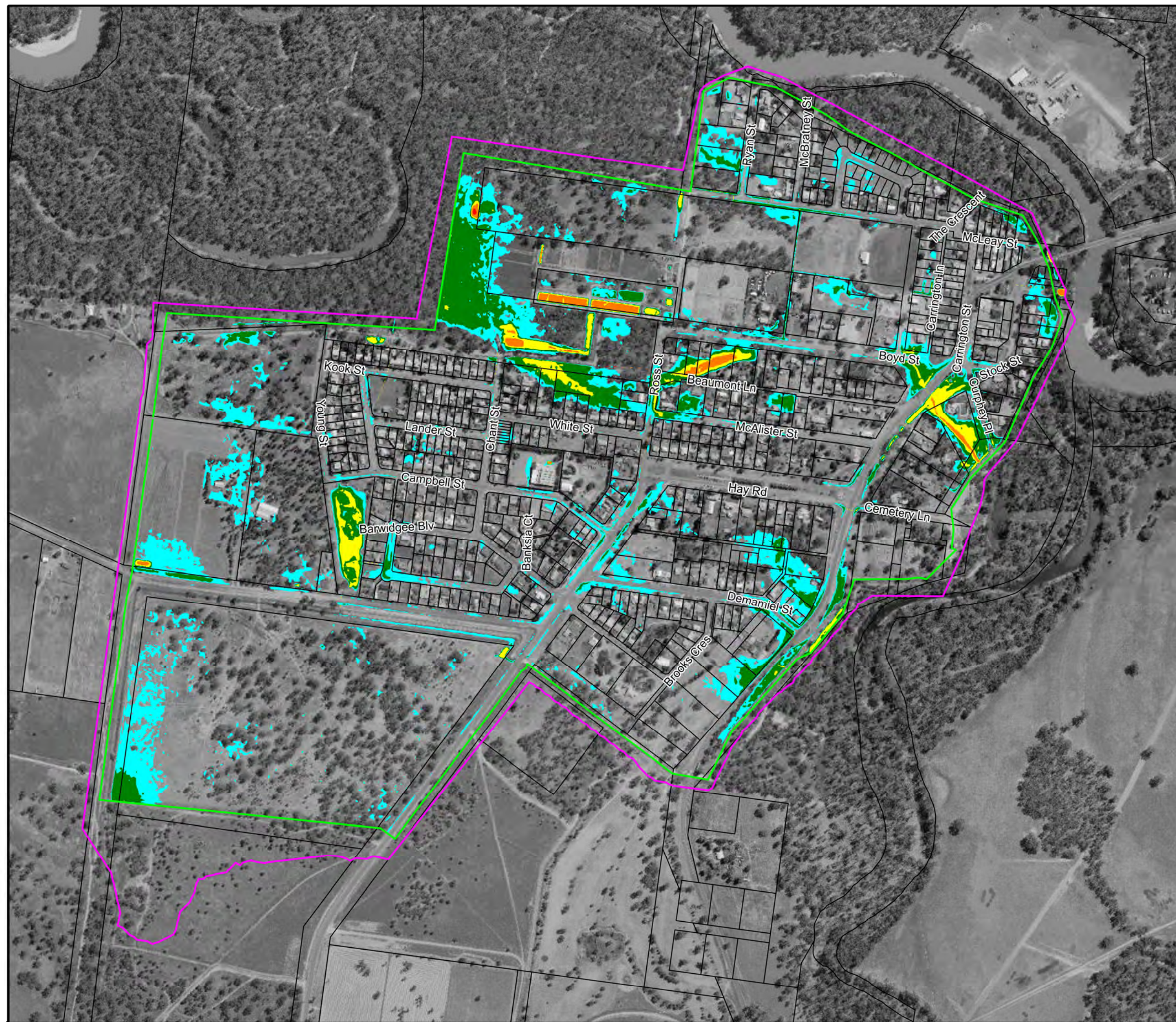
**Figure 11:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 10% AEP Design Flood**

Prepared By:



 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 11: Local Catchment Inundation Peak Floodwater Depths for 10% AEP Design Flood.wor





### LEGEND

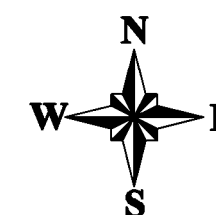
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

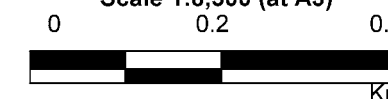
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



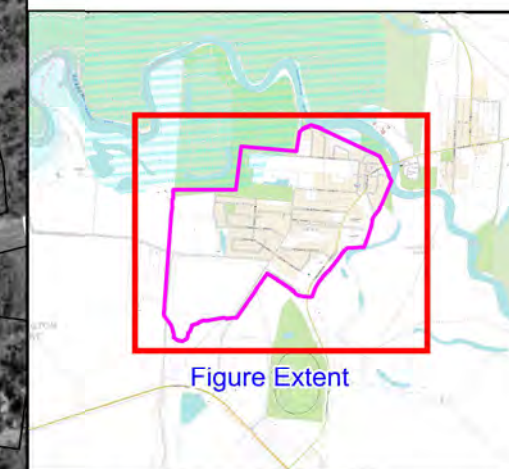
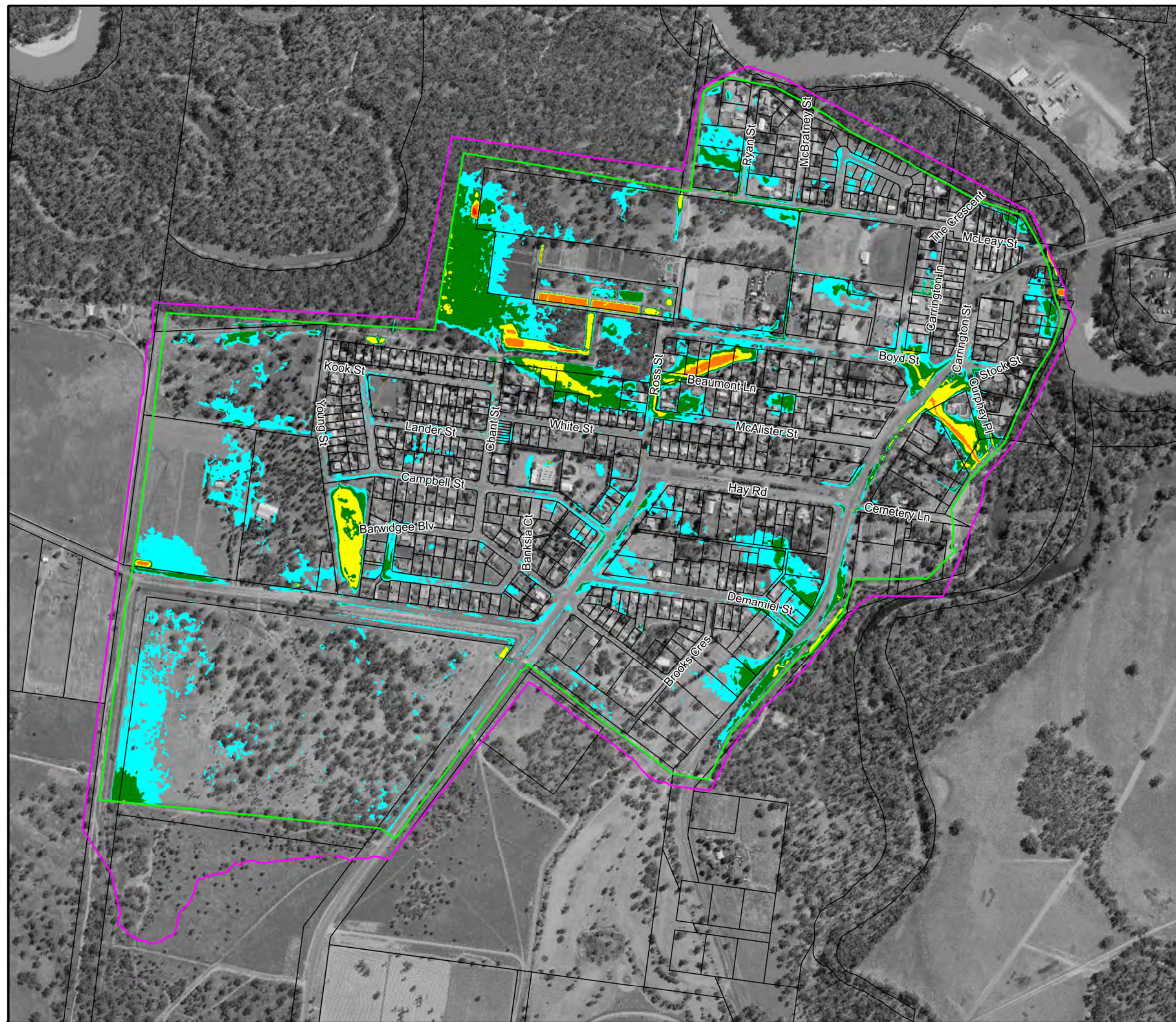
**Figure 12:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 5% AEP Design Flood**

Prepared By:



 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 12: Local Catchment Inundation Peak Floodwater Depths for 5% AEP Design Flood.wor





### LEGEND

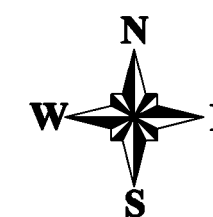
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

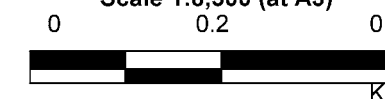
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



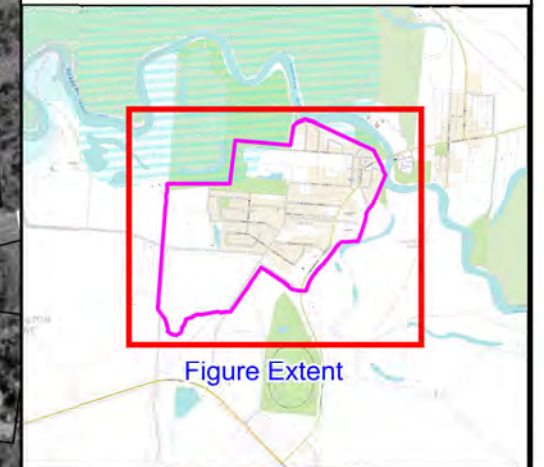
**Figure 13:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 2% AEP Design Flood**

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 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 13: Local Catchment Inundation Peak Floodwater Depths for 2% AEP Design Flood.wor







### LEGEND

-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

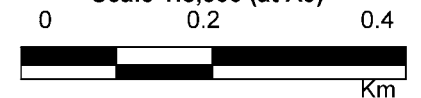
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



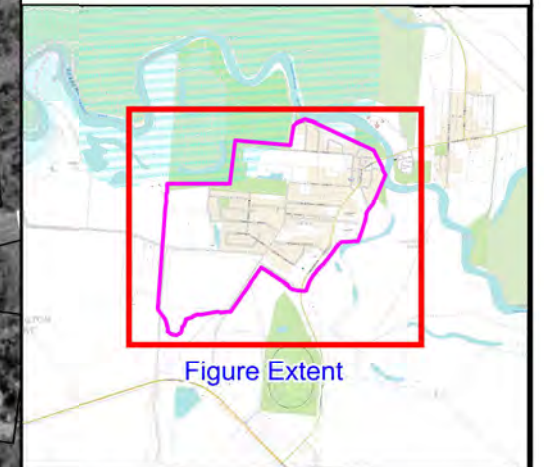
**Figure 14:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 1% AEP Design Flood**

Prepared By:



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Sydney, NSW 2000

File Name: Figure 14: Local Catchment Inundation Peak Floodwater Depths for 1% AEP Design Flood.wor








### LEGEND

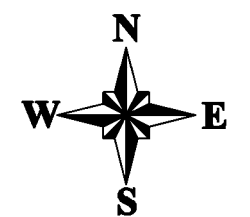
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

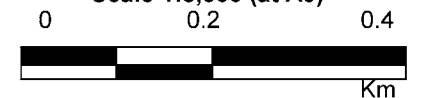
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



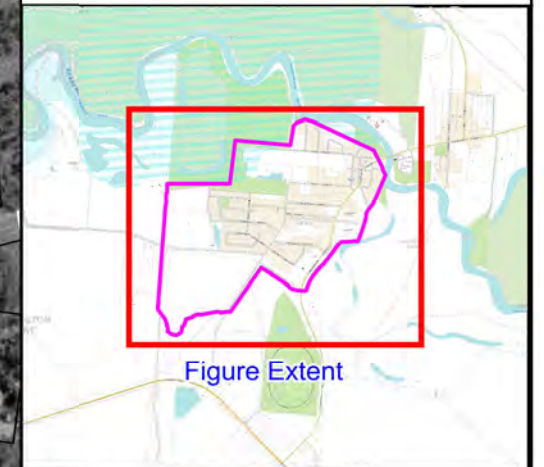
**Figure 15:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 0.5% AEP Design Flood**

Prepared By:



 **Catchment Simulation Solutions**  
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Sydney, NSW 2000

File Name: Figure 15: Local Catchment Inundation Peak Floodwater Depths for 0.5% AEP Design Flood.wor










### LEGEND

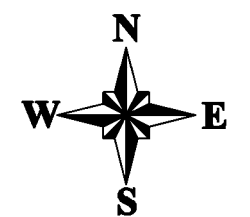
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

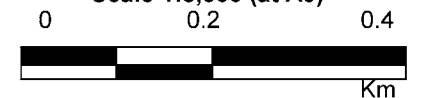
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



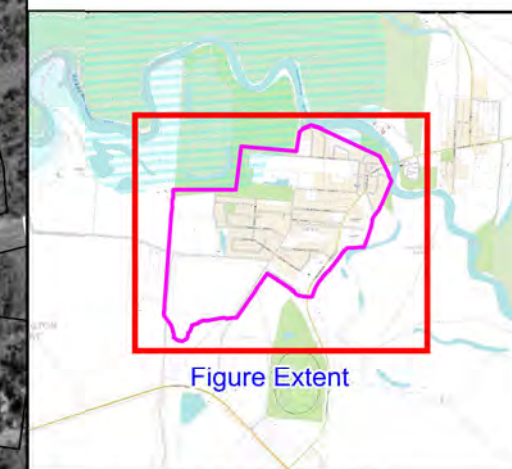
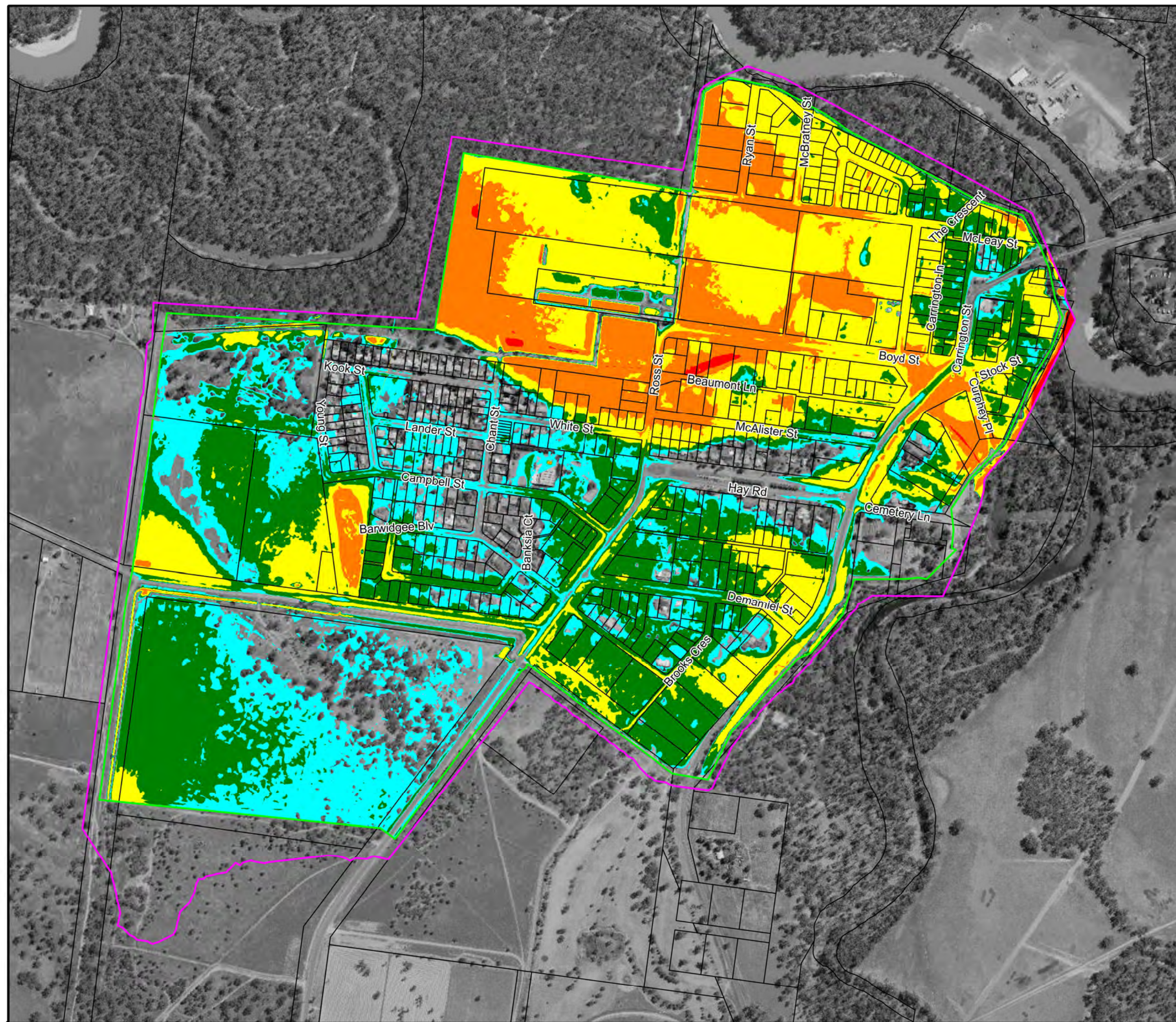
**Figure 16:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for 0.2% AEP Design Flood**

Prepared By:



 **Catchment Simulation Solutions**  
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Sydney, NSW 2000

File Name: Figure 16: Local Catchment Inundation Peak Floodwater Depths for 0.2% AEP Design Flood.wor





### LEGEND

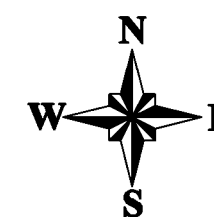
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee

#### Depths (m)

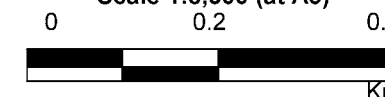
-  0.10 to 0.25
-  0.25 to 0.5
-  0.5 to 1.0
-  1.0 to 2.0
-  >2.0

#### Notes:

Only depths greater than 0.10 metres are included in mapping. Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)



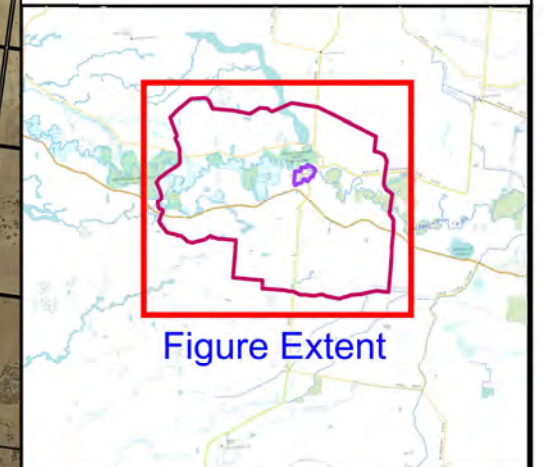
**Figure 17:**  
**Local Catchment Inundation**  
**Peak Floodwater Depths**  
**for Extreme Design Flood**

Prepared By:









 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 17: Local Catchment Inundation Peak Floodwater Depths for Extreme Design Flood.wor





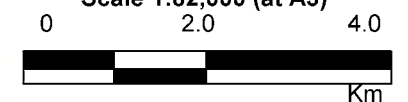
### LEGEND

-  Model Extent
  -  Local Catchment Model Extent
  -  Location of Final Alignment of Upgraded Levee
- Depths (m)
-  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

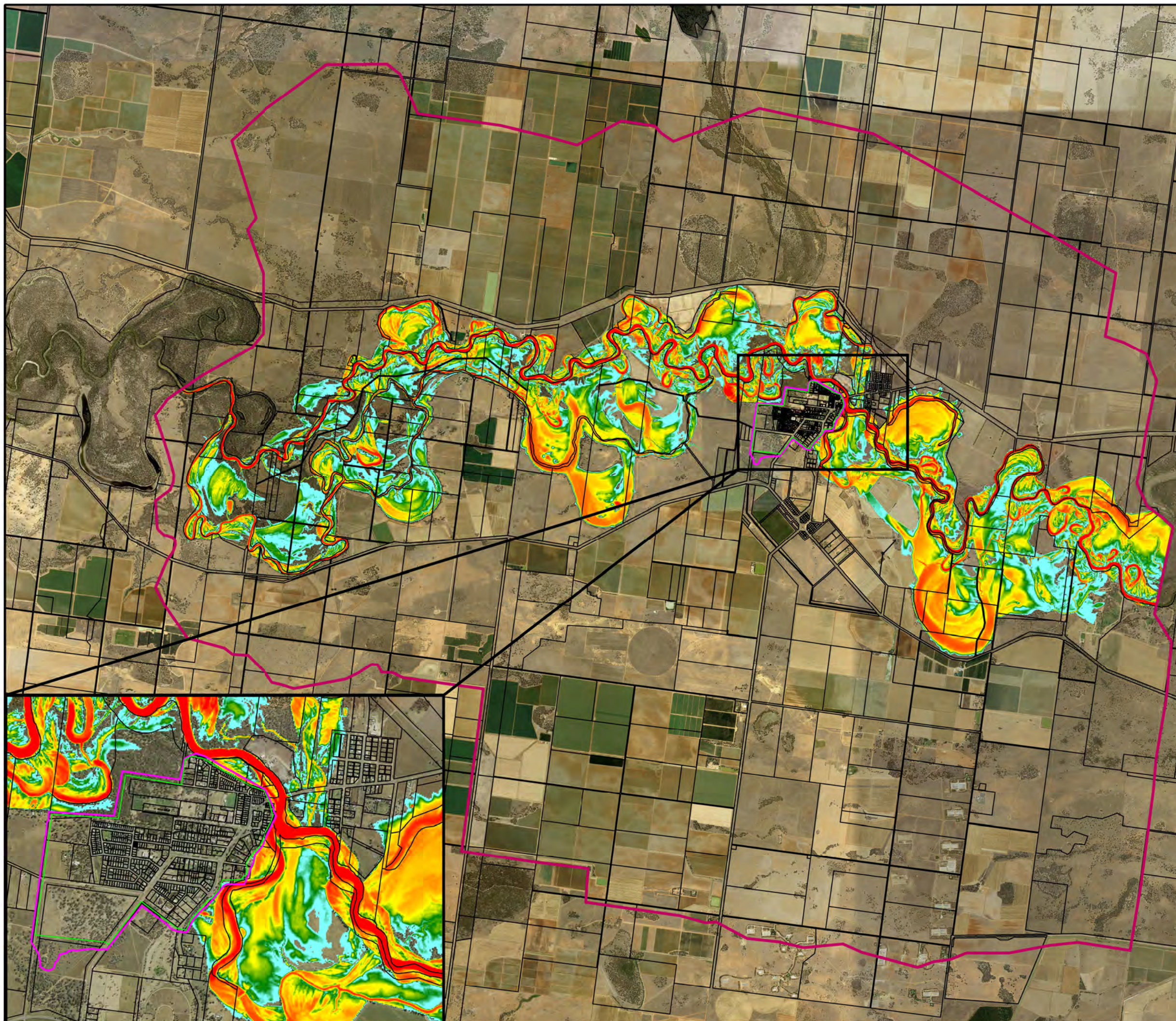


**Figure 18**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 20% AEP**  
**Design flood**

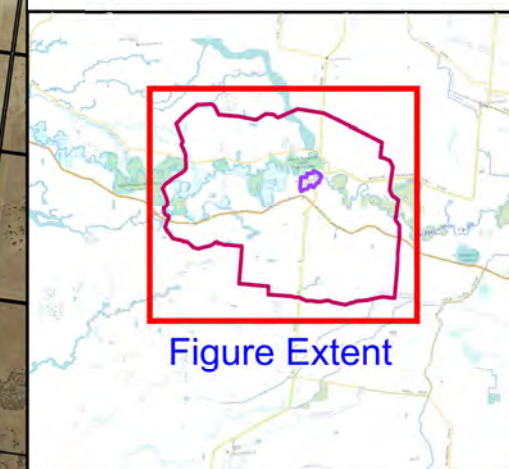
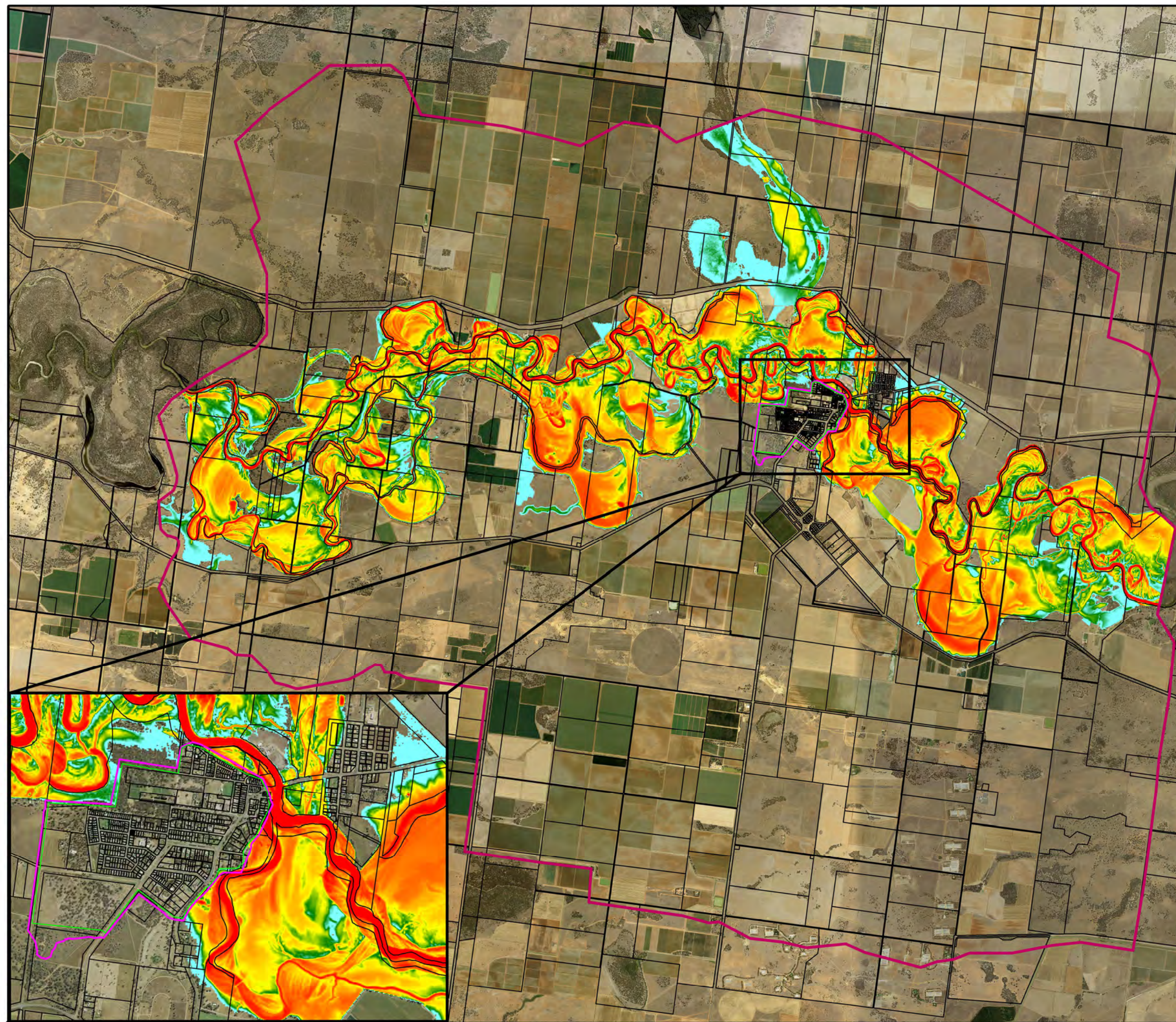
Prepared By:

 **Catchment Simulation Solutions**  
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Sydney, NSW 2000









File Name: Figure 18 Murrumbidgee River mainstream Peak Floodwater  
Depths for 20% AEP Design flood.wor



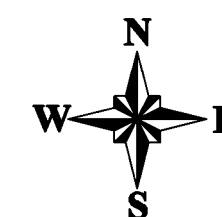




### LEGEND


-  Model Extent
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Depths (m)
  -  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



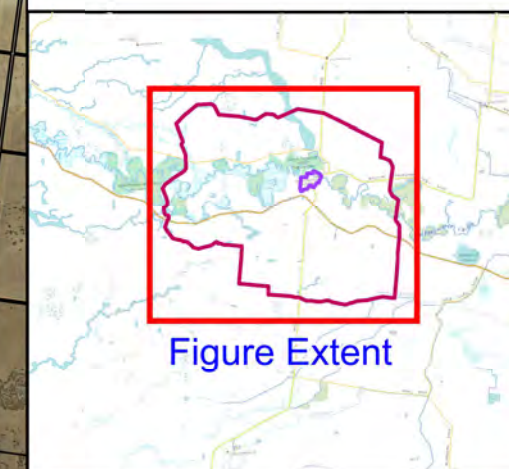
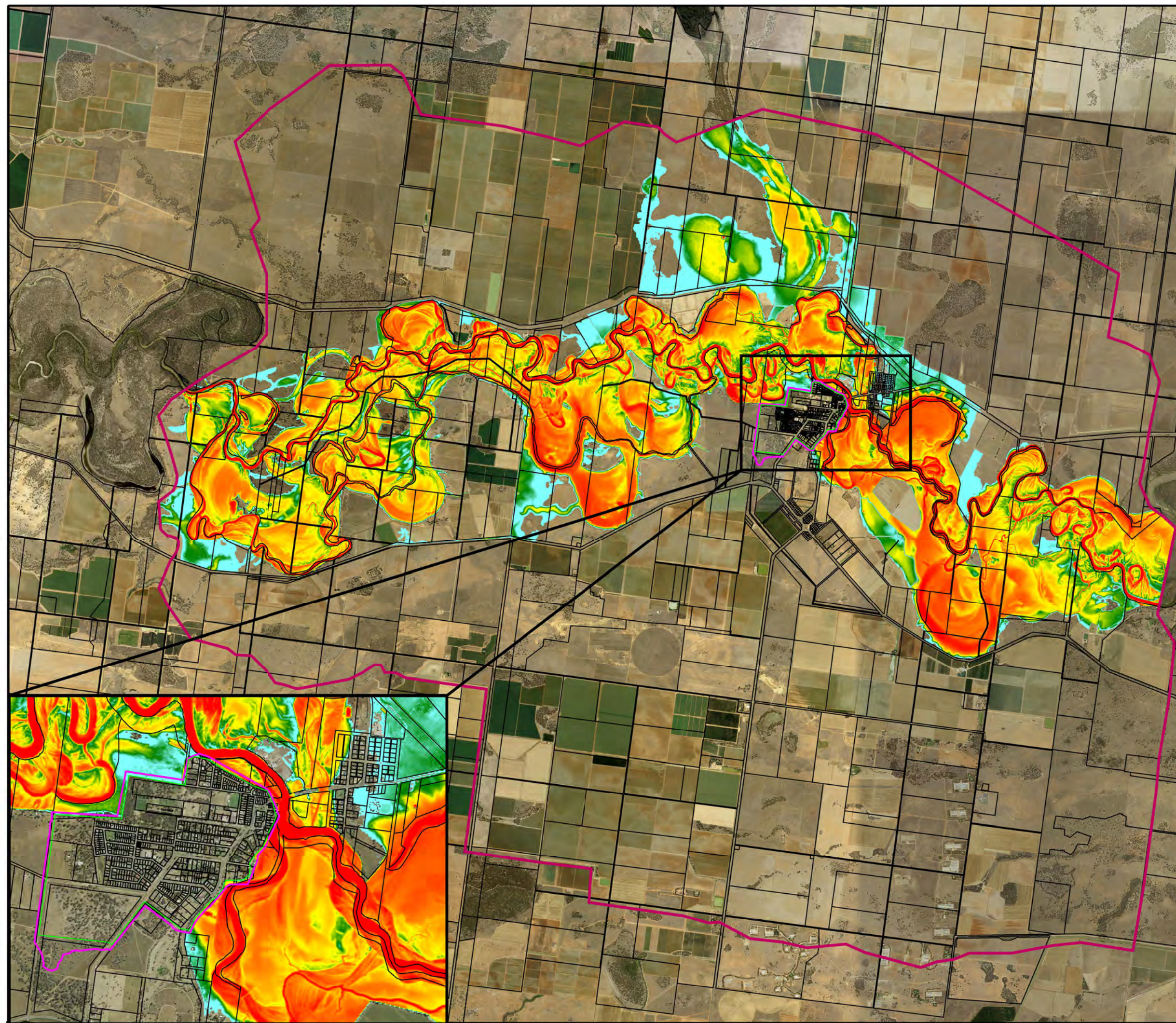
Scale 1:82,000 (at A3)  
0 2.0 4.0  
Km

**Figure 19**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 10% AEP**  
**Design flood**









Prepared By:  
 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 19 Murrumbidgee River mainstream Peak Floodwater  
Depths for 10% AEP Design flood.wor

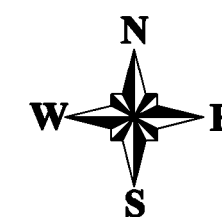




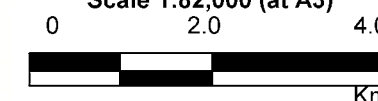
### LEGEND

-  Model Extent
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Depths (m)
  -  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)



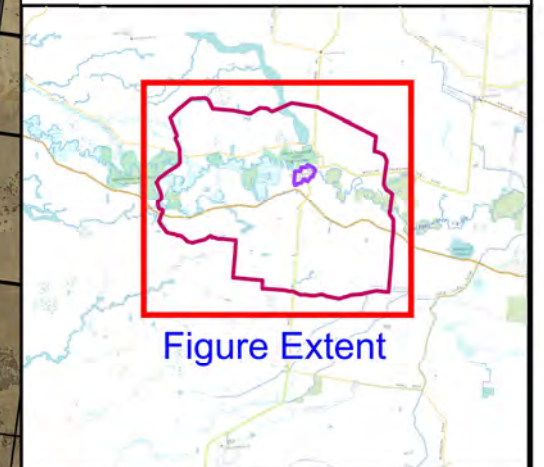
**Figure 20**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 5% AEP**  
**Design flood**

Prepared By:









 **Catchment Simulation Solutions**  
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Sydney, NSW 2000

File Name: Figure 20 Murrumbidgee River mainstream Peak Floodwater Depths for 5% AEP Design flood.wor

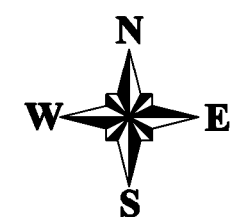




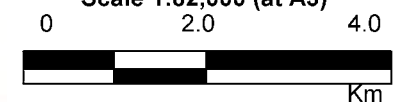
# LEGEND

-  Model Extent
  -  Local Catchment Model Extent
  -  Location of Final Alignment of Upgraded Levee
- Depths (m)
-  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

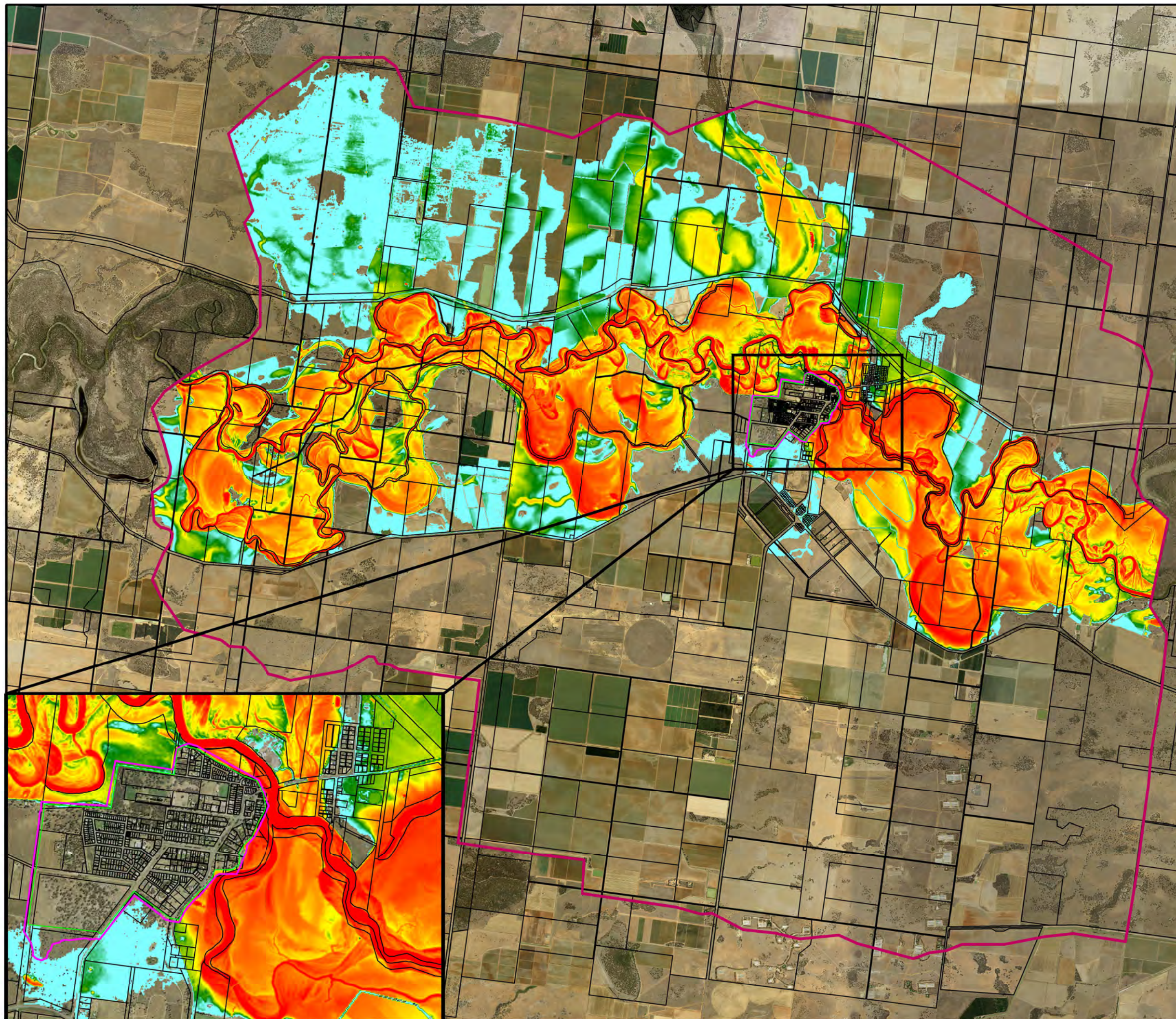


**Figure 21  
Murrumbidgee River main  
stream Peak Floodwater  
Depths for 2% AEP  
Design flood**

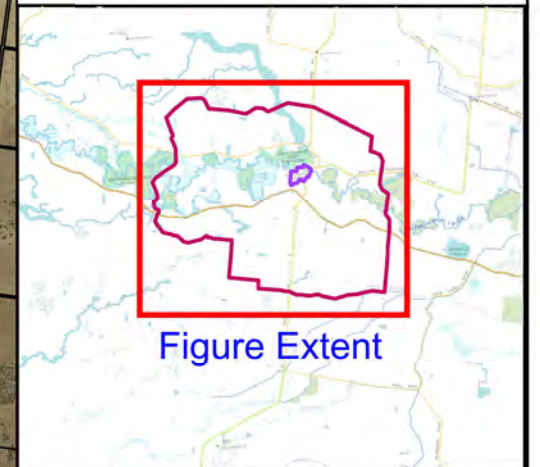
Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000









File Name: Figure 21 Murrumbidgee River mainstream Peak Floodwater Depths for 2% AEP Design flood.wor



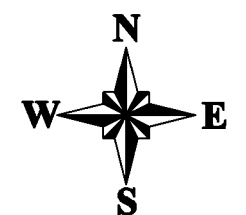




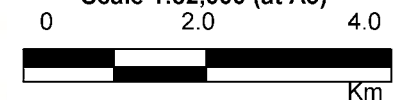
### LEGEND

-  Model Extent
  -  Local Catchment Model Extent
  -  Location of Final Alignment of Upgraded Levee
- Depths (m)
-  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

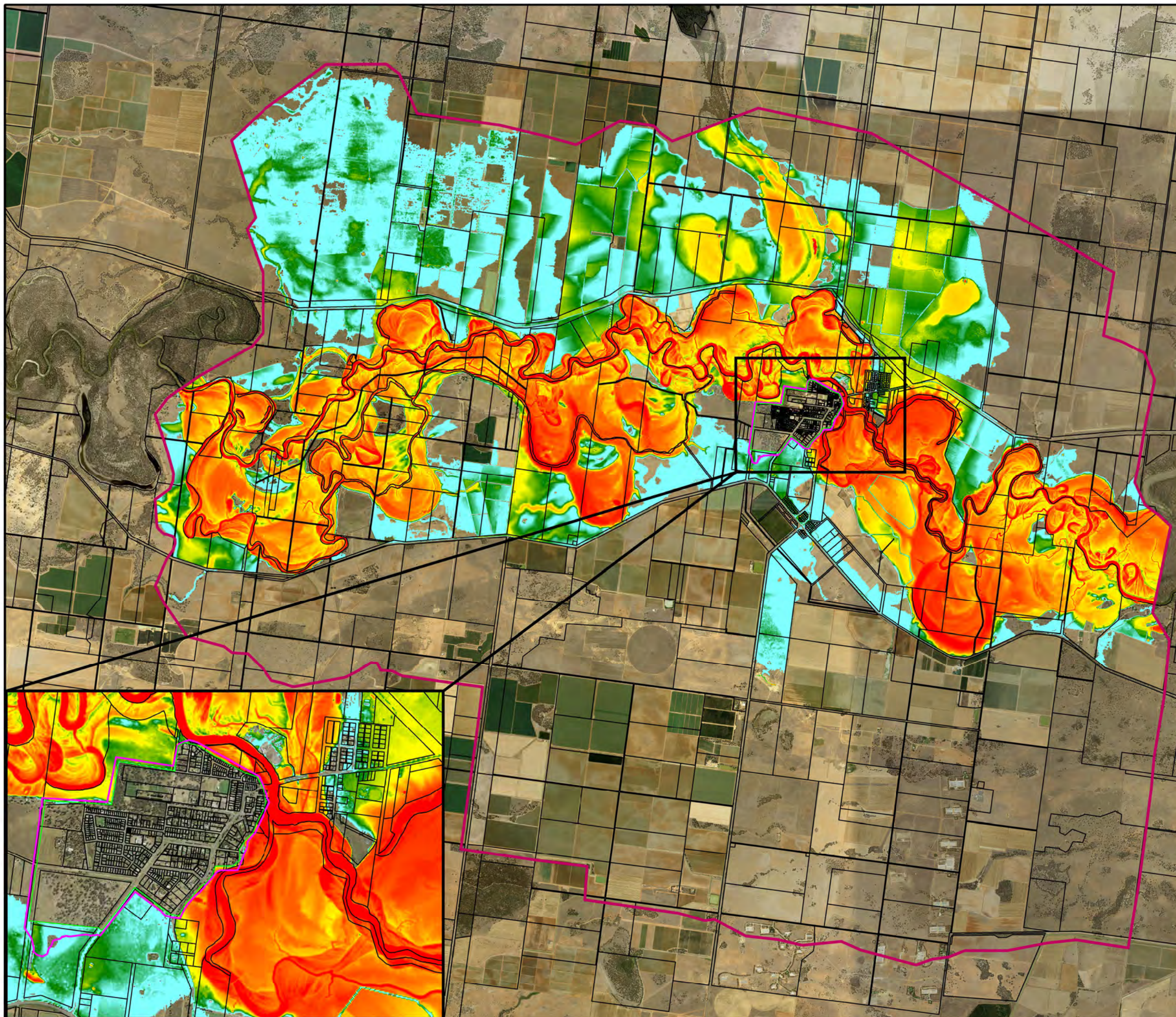


**Figure 22**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 1% AEP**  
**Design flood**

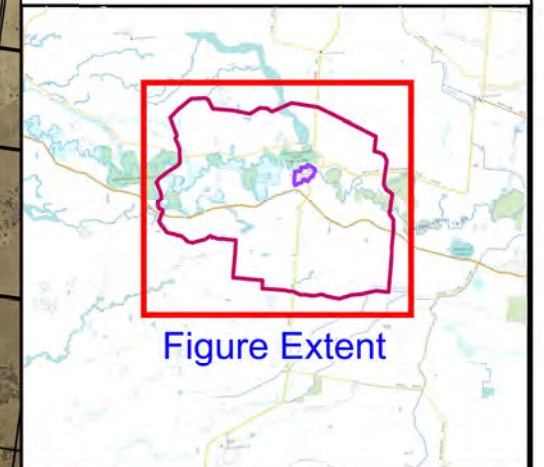
Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000









File Name: Figure 22 Murrumbidgee River mainstream Peak Floodwater Depths for 1% AEP Design flood.wor



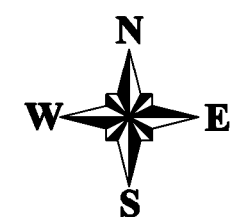




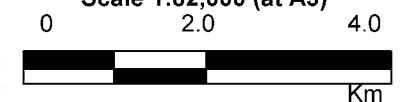
# LEGEND

-  Model Extent
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Depths (m)
  -  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

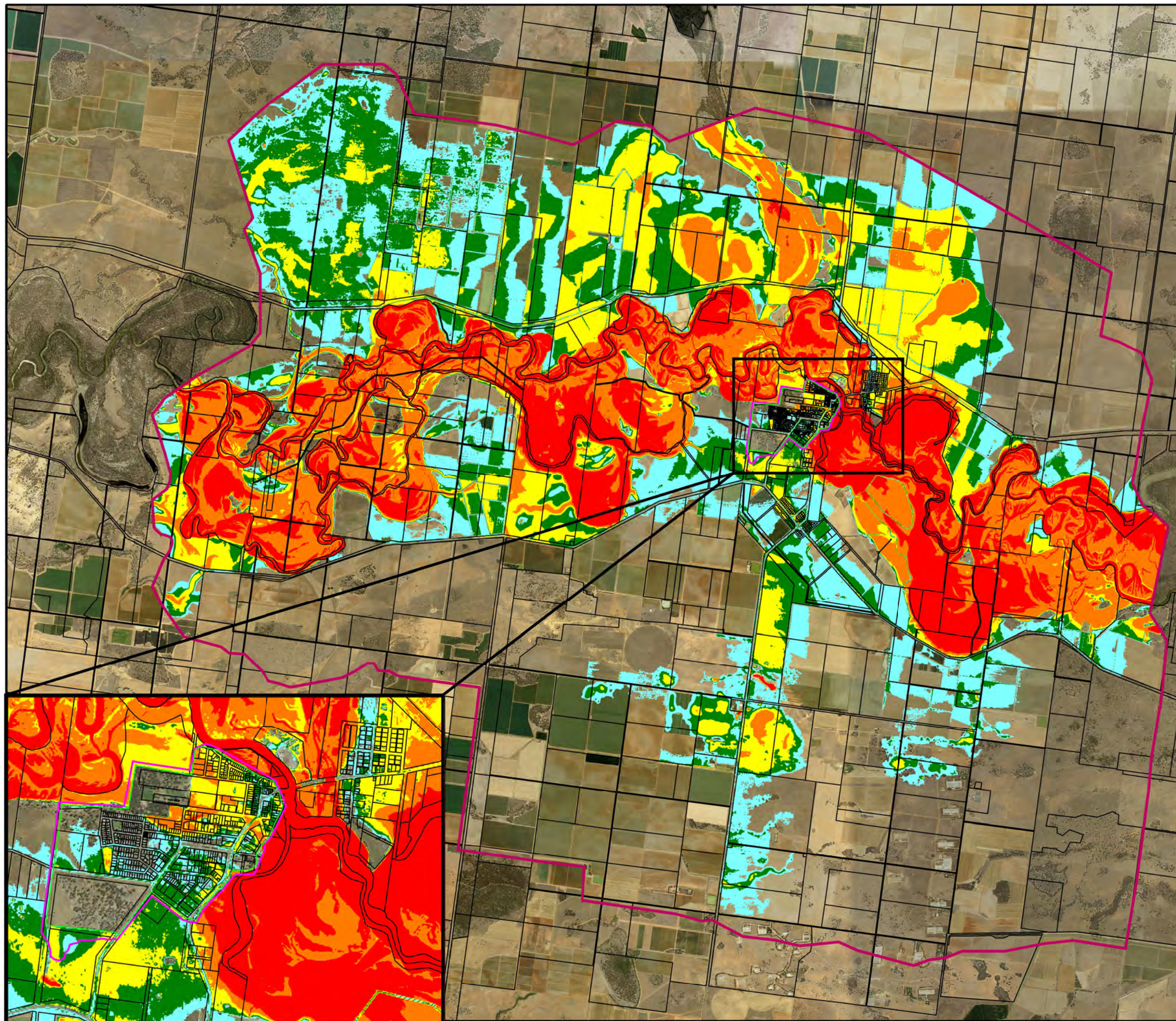


**Figure 23**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 0.5% AEP**  
**Design flood**

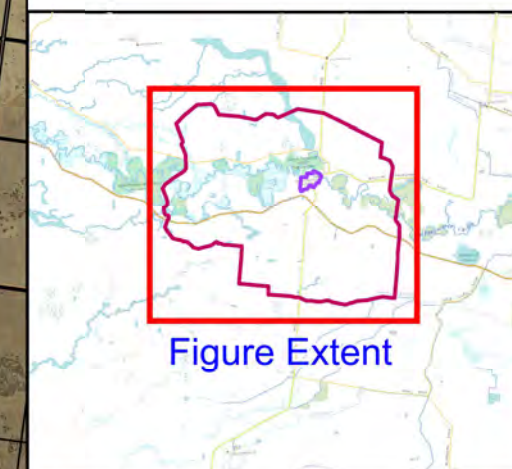
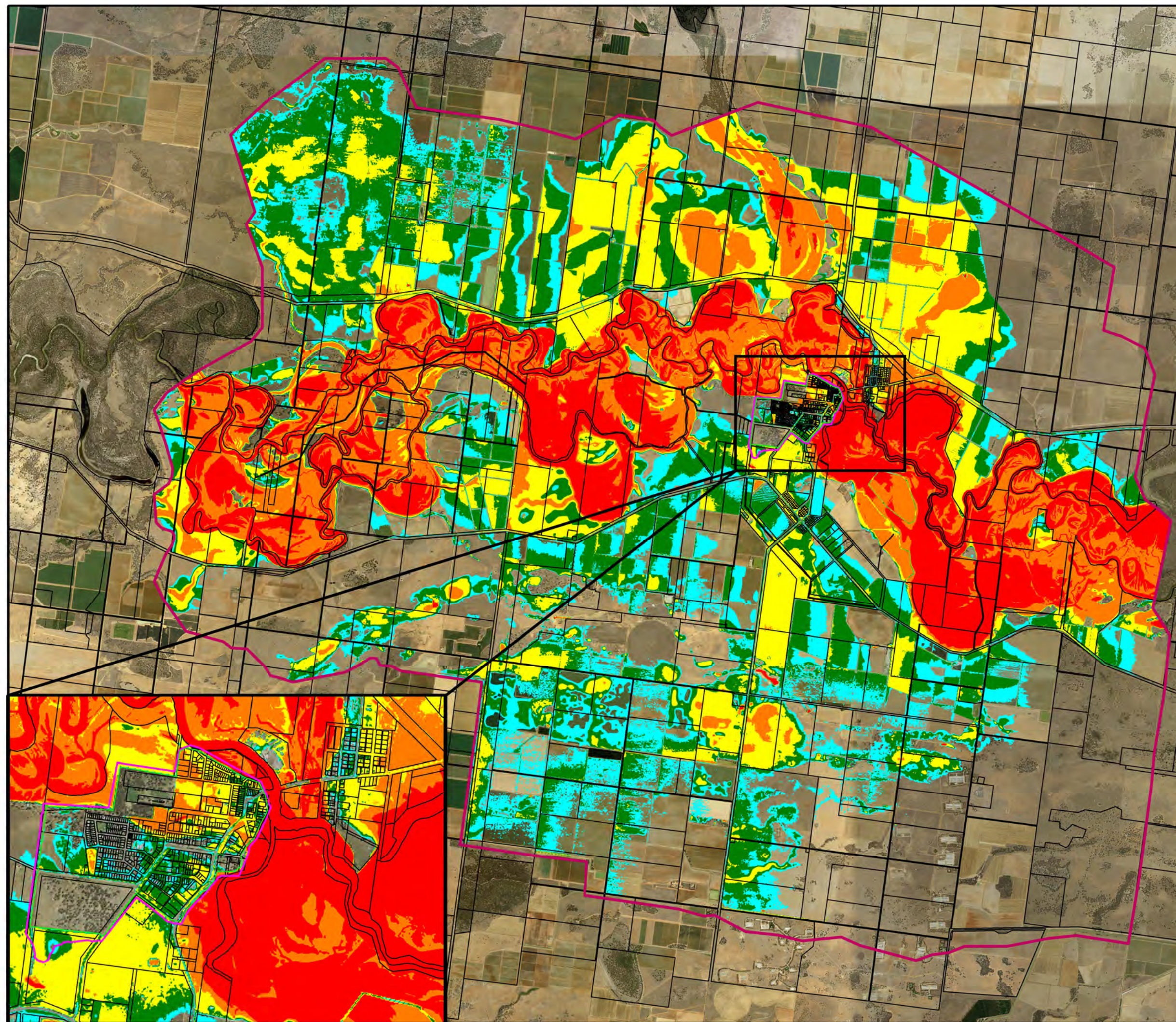
Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000









File Name: Figure 23 Murrumbidgee River mainstream Peak Floodwater Depths for 0.5% AEP Design flood.wor



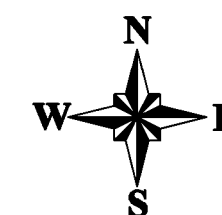




### LEGEND


-  Model Extent
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Depths (m)**
  -  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



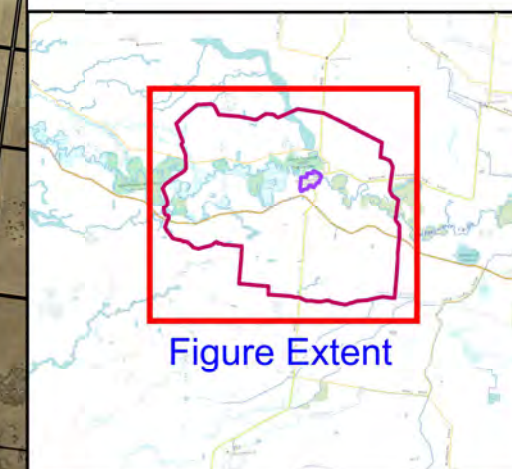
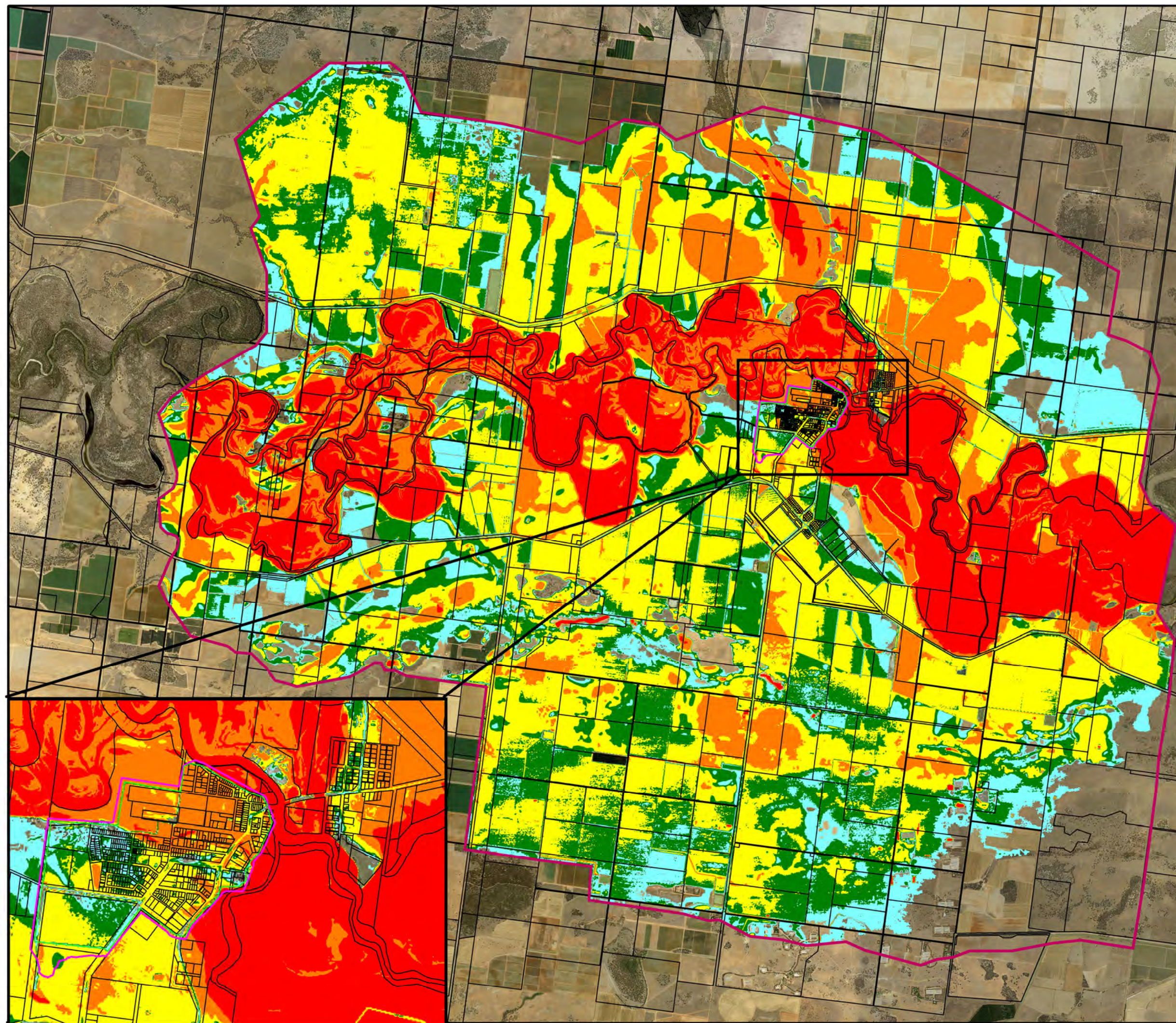
Scale 1:82,000 (at A3)  
0 2.0 4.0  
Km

**Figure 24**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for 0.2% AEP**  
**Design flood**









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File Name: Figure 24 Murrumbidgee River mainstream Peak Floodwater  
Depths for 0.2% AEP Design flood.wor

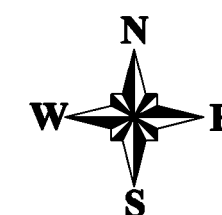




### LEGEND

-  Model Extent
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Depths (m)
  -  0 to 0.25
  -  0.25 to 0.5
  -  0.5 to 1.0
  -  1.0 to 2.0
  -  >2.0

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



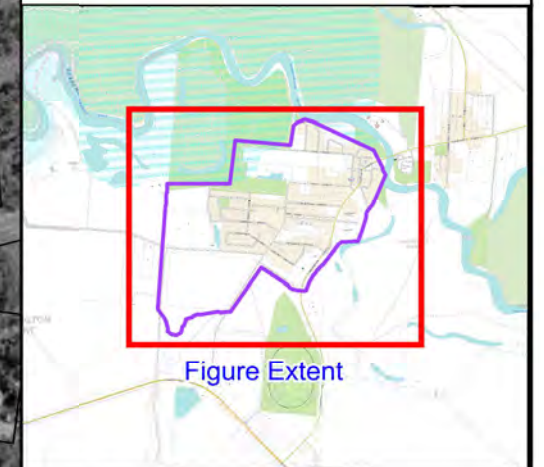
Scale 1:82,000 (at A3)  
0 2.0 4.0  
Km

**Figure 25**  
**Murrumbidgee River main**  
**stream Peak Floodwater**  
**Depths for Extreme**  
**Design flood**









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Sydney, NSW 2000

File Name: Figure 25 Murrumbidgee River mainstream Peak Floodwater  
Depths for Extreme Design flood.wor





### LEGEND

-  Local Catchment Model Extent  
 Location of Final Alignment of Upgraded Levee
- Hazard Category**
- |   |    |
|---|----|
|    | H1 |
|    | H2 |
|   | H3 |
|  | H4 |
|  | H5 |
|  | H6 |

**Notes:**  
 Only depths greater than 0.10 metres are included in mapping.  
 Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:8,500 (at A3)

0 0.2 0.4  
Km

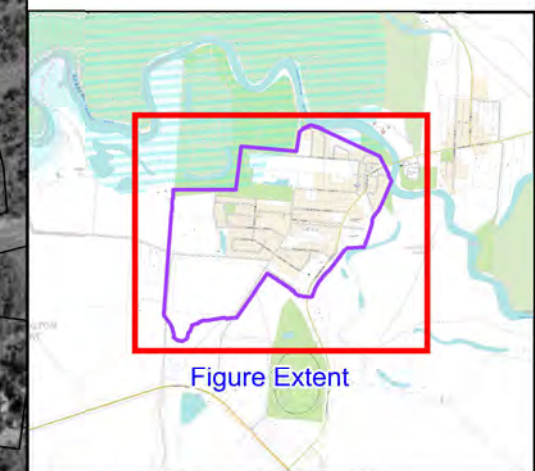
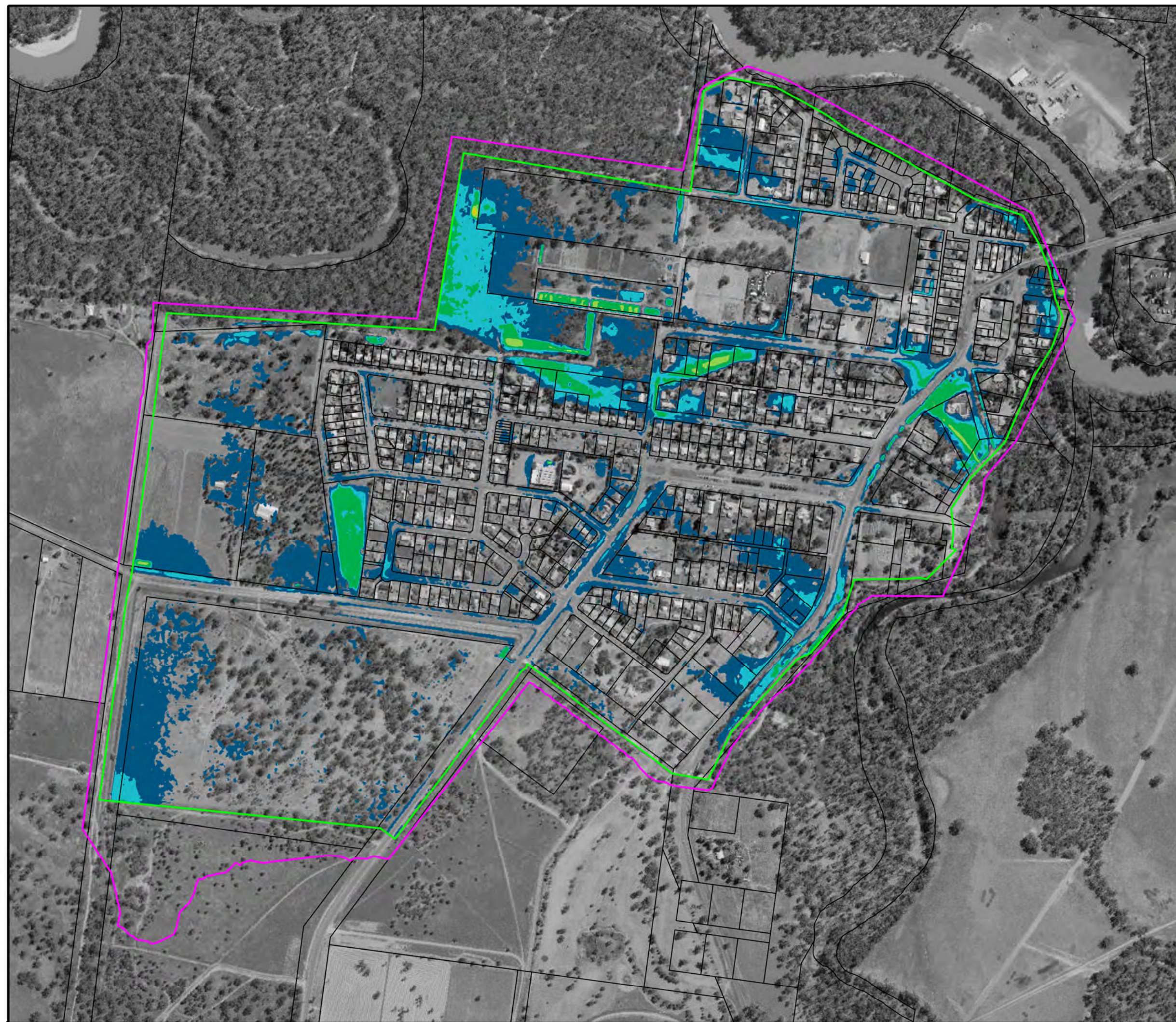
**Figure 26:**  
**Local Catchment Hazard**  
**Categorisation for**  
**5% AEP Design flood**

Prepared By:









 **Catchment Simulation Solutions**  
 Suite 10.01, 70 Phillip St  
 Sydney, NSW 2000

File Name: Figure 26 Local Catchment Hazard Categorisation for 5% AEP Design flood.wor

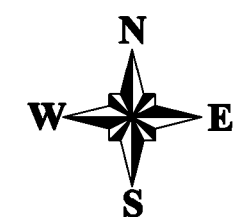




### LEGEND

-  Local Catchment Model Extent  
 Location of Final Alignment of Upgraded Levee
- Hazard Category**
- |   |    |
|---|----|
|    | H1 |
|    | H2 |
|   | H3 |
|  | H4 |
|  | H5 |
|  | H6 |


**Notes:**  
Only depths greater than 0.10 metres are included in mapping.  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



Scale 1:8,500 (at A3)  
0 0.2 0.4  
Km

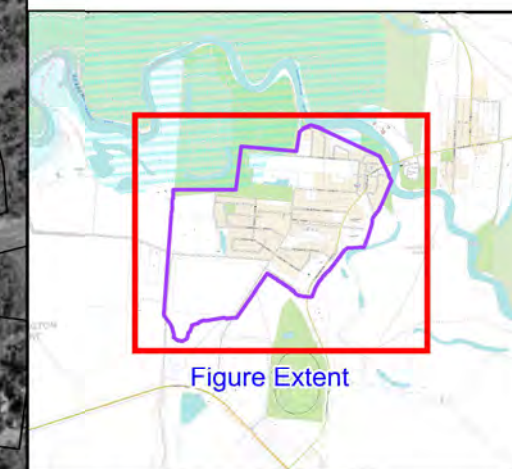
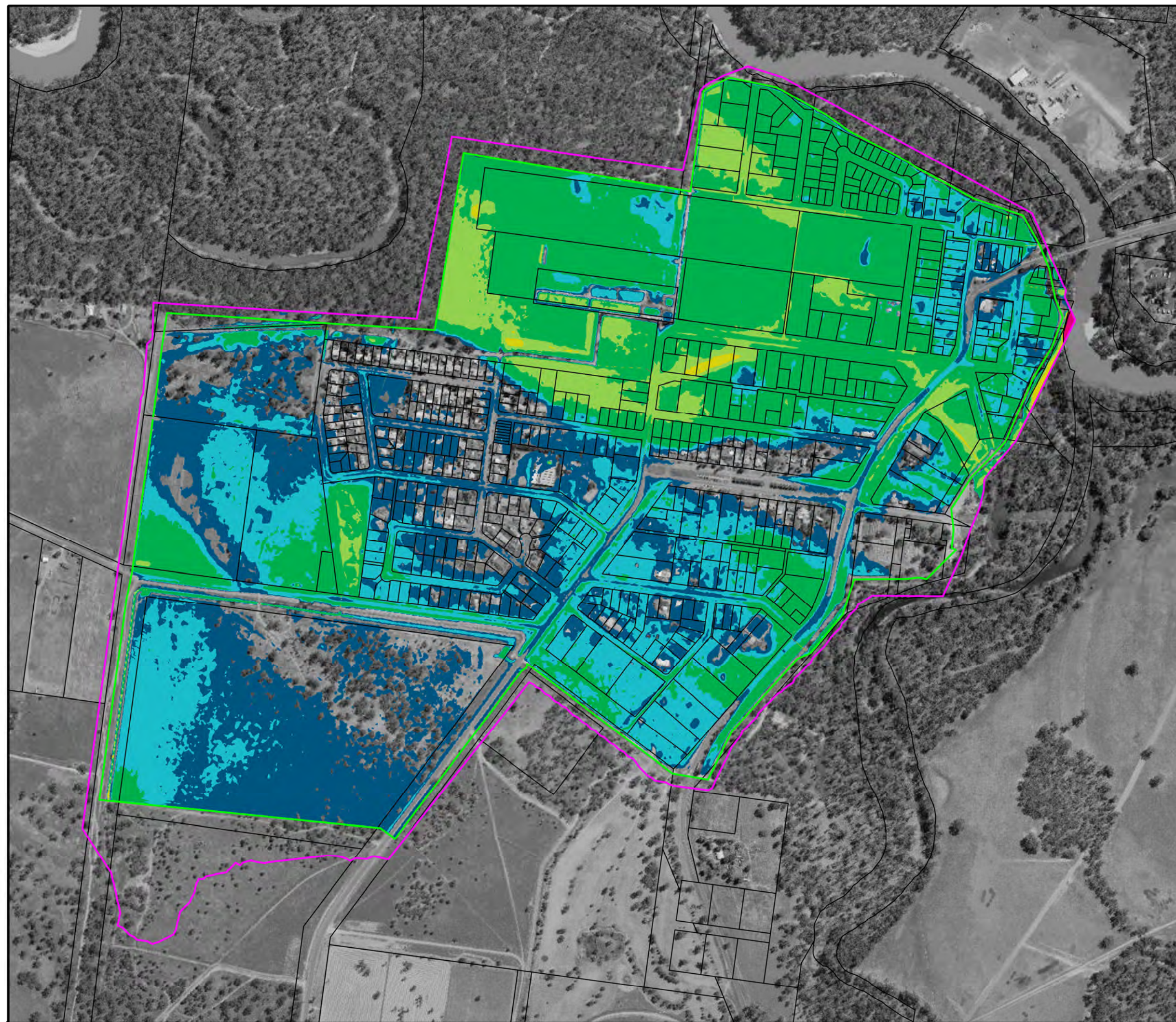
**Figure 27:**  
**Local Catchment Hazard**  
**Categorisation for**  
**1% AEP Design flood**

Prepared By:









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Sydney, NSW 2000

File Name: Figure 27 Local Catchment Hazard Categorisation for 1% AEP Design flood.wor

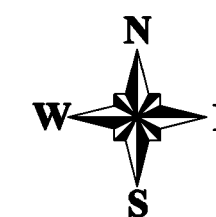




### LEGEND

-  Local Catchment Model Extent  
 Location of Final Alignment of Upgraded Levee
- Hazard Category**
- |   |    |
|---|----|
|    | H1 |
|    | H2 |
|   | H3 |
|  | H4 |
|  | H5 |
|  | H6 |


**Notes:**  
Only depths greater than 0.10 metres are included in mapping.  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



Scale 1:8,500 (at A3)  
0 0.2 0.4  
Km

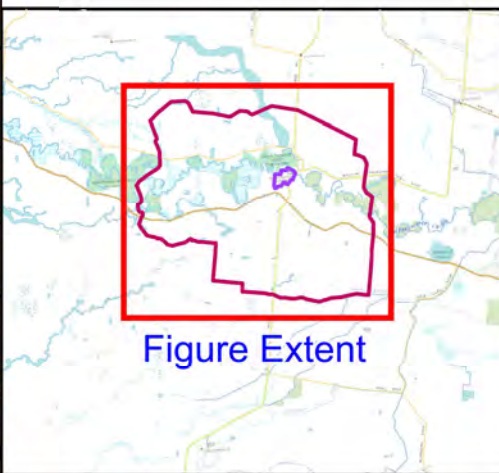
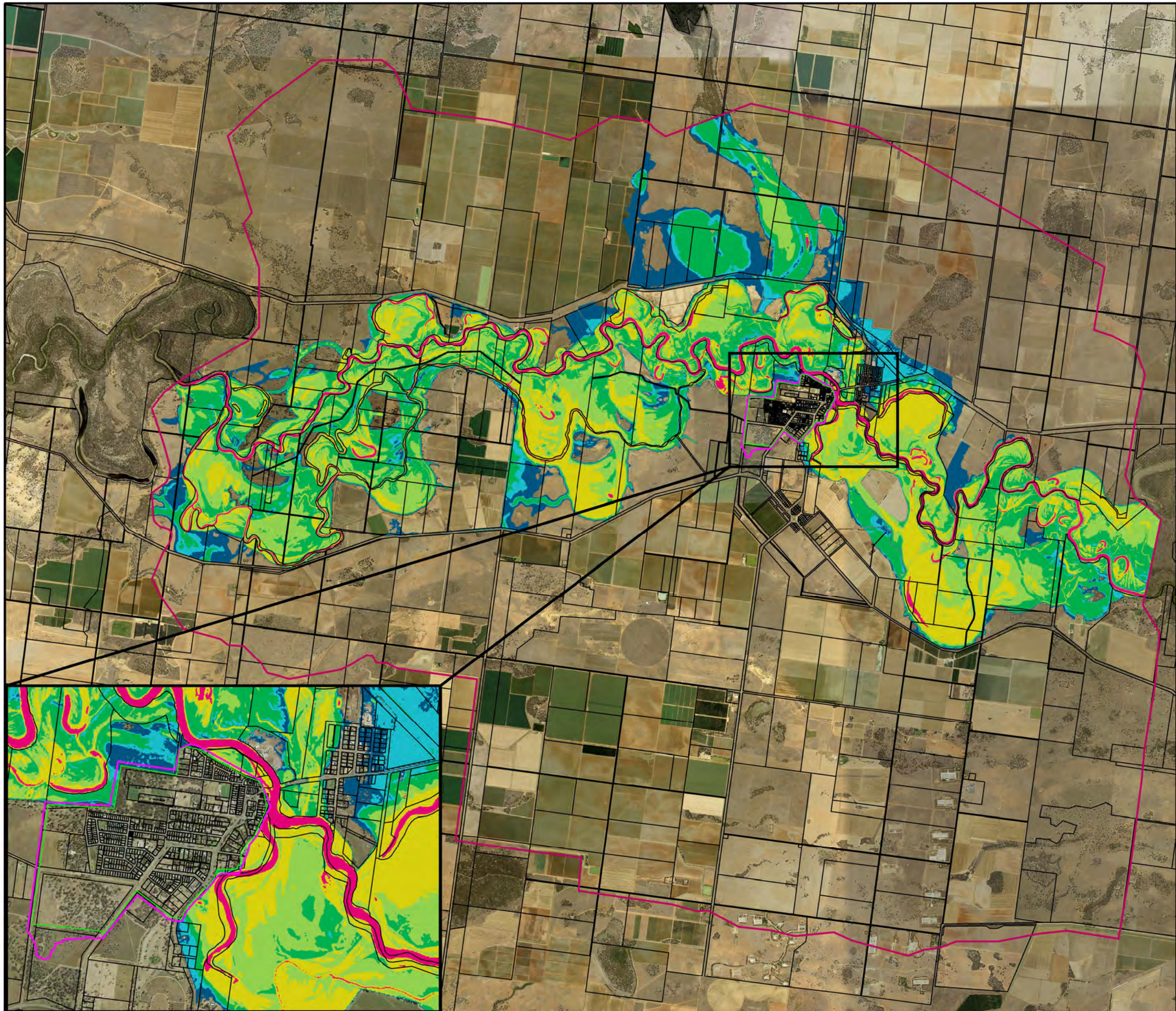
**Figure 28:**  
**Local Catchment Hazard**  
**Categorisation for**  
**Extreme Design flood**

Prepared By:










 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 28 Local Catchment Hazard Categorisation for Extreme Design flood.wor

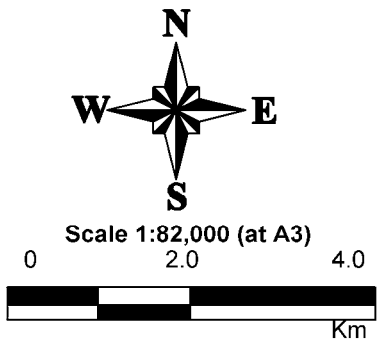





**LEGEND**

-  Study area
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Hazard Category**
-  H1
-  H2
-  H3
-  H4
-  H5
-  H6

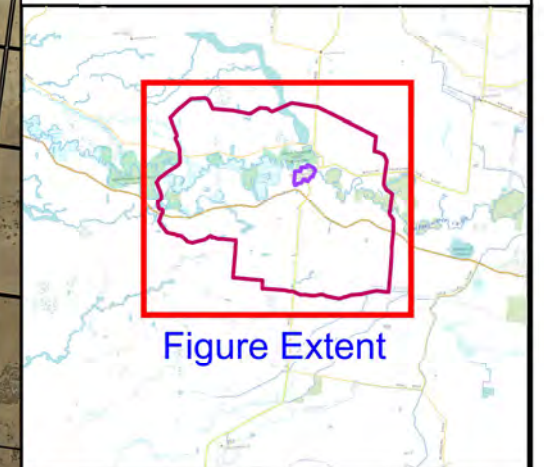
**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.



**Figure 29**  
**Murrumbidgee River main**  
**stream Hazard Categorisation**  
**for 5% AEP Design flood**

Prepared By:  
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Sydney, NSW 2000





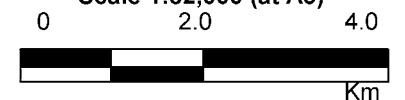
### LEGEND

- Study area
  - Local Catchment Model Extent
  - Location of Final Alignment of Upgraded Levee
- Hazard Category**
- H1
  - H2
  - H3
  - H4
  - H5
  - H6

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

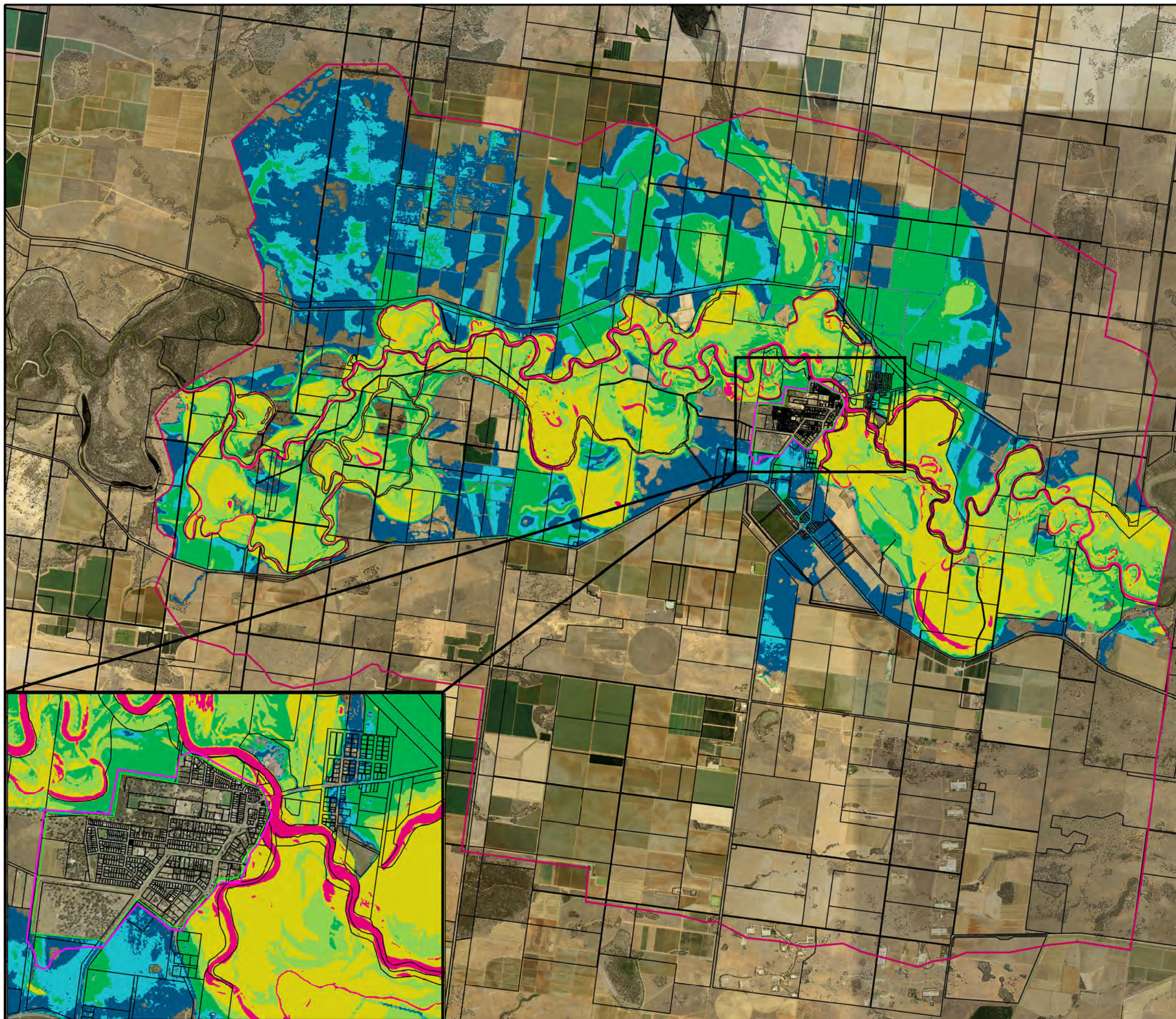


**Figure 30**  
**Murrumbidgee River main stream Hazard Categorisation for 1% AEP Design flood**

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 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 30 Murrumbidgee River mainstream Hazard Categorisation for 1% AEP Design flood.wor





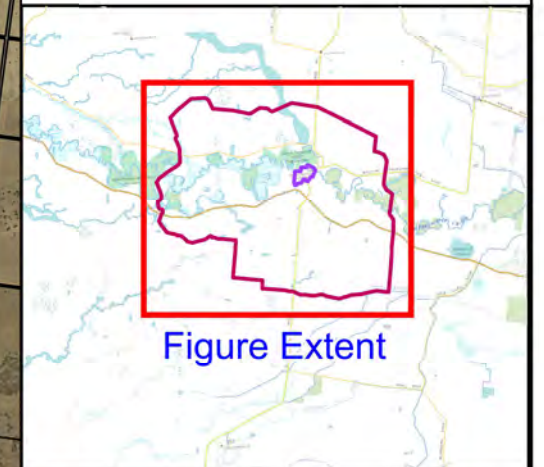









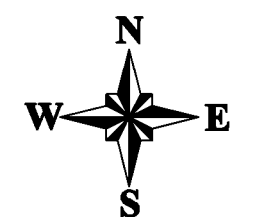


Figure Extent

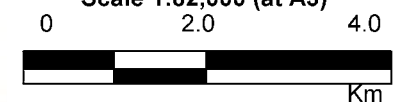
# LEGEND

-  Study area
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Hazard Category**
-  H1
-  H2
-  H3
-  H4
-  H5
-  H6

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

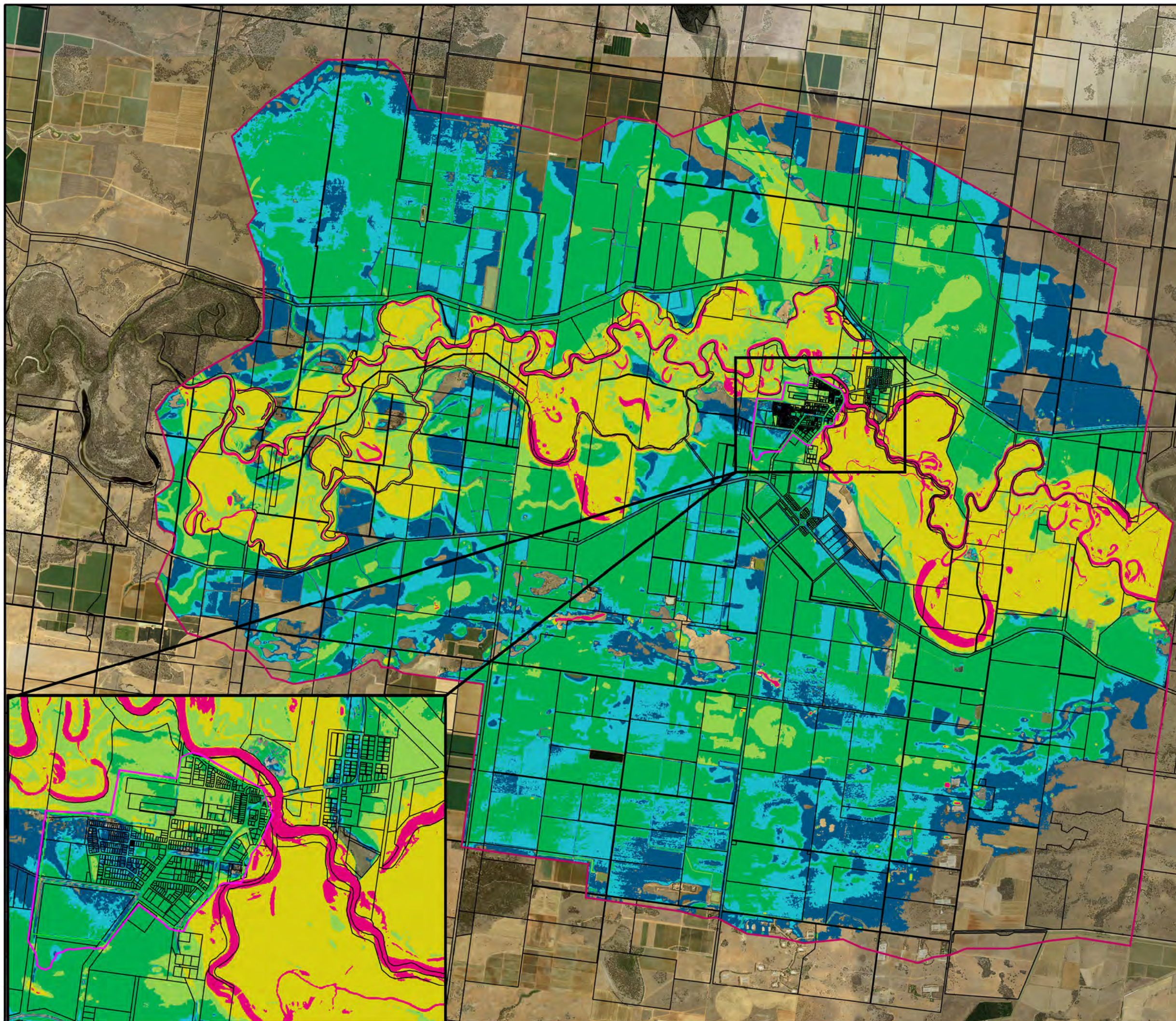


**Figure 31**  
**Murrumbidgee River main stream Hazard Categorisation for Extreme Design flood**

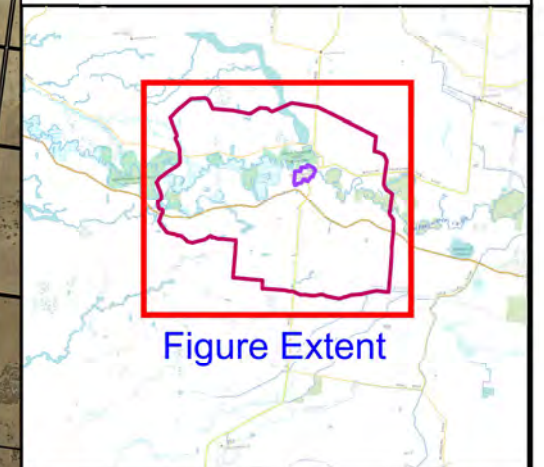
Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000







File Name: Figure 31 Murrumbidgee River mainstream Hazard Categorisation for Extreme Design flood.wor



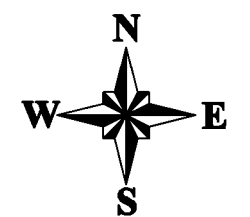




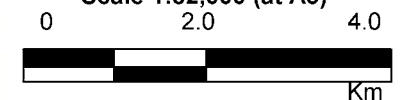
### LEGEND

-  Study Area
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Hydraulic Category**
-  Flood Fringe
-  Flood Storage
-  Floodway

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

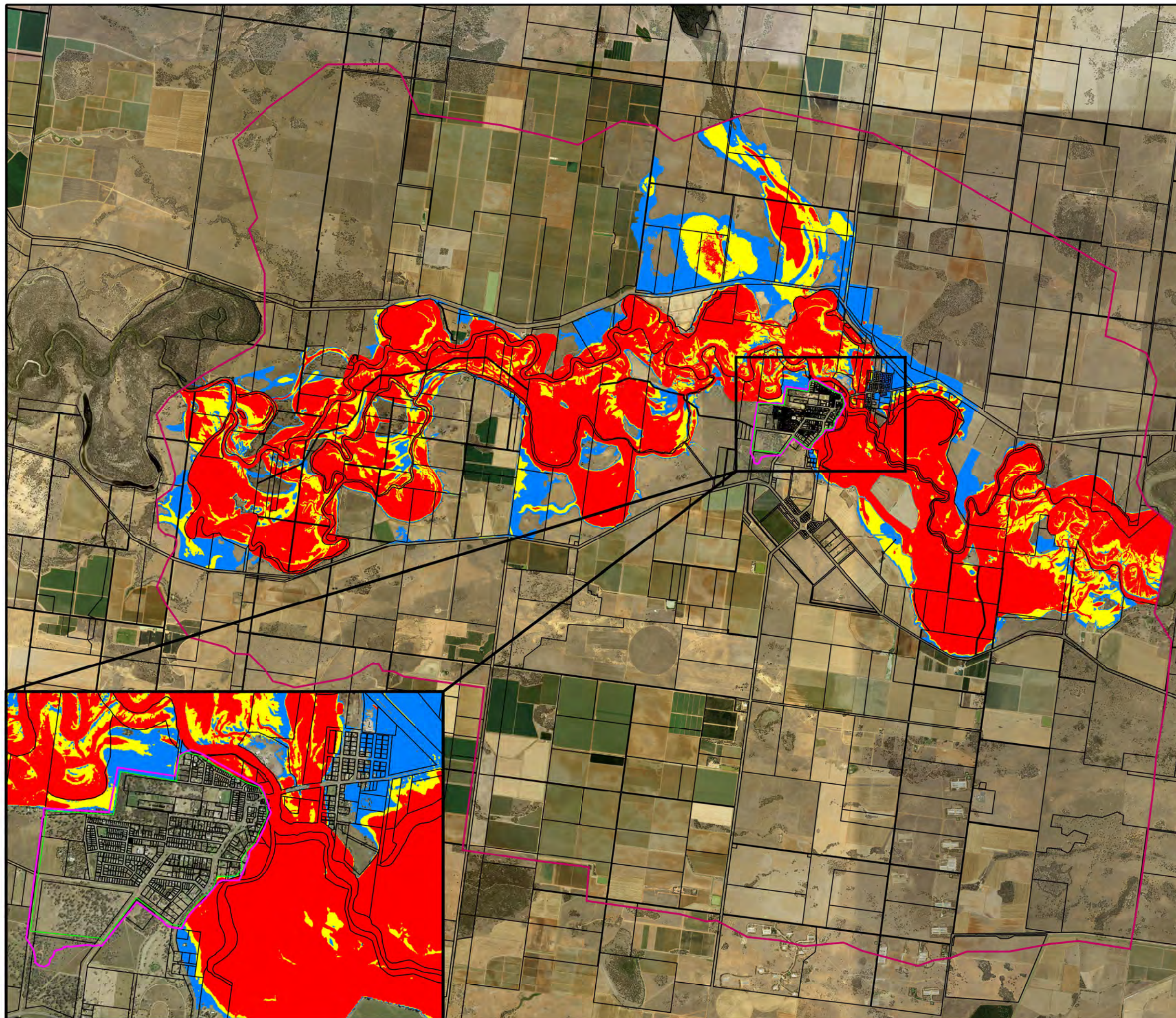


**Figure 32**  
**Murrumbidgee River main**  
**stream Hydraulic**  
**categorisation for 5% AEP**  
**Design flood**

Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 32 Murrumbidgee River mainstream Hydraulic categorisation for 5% AEP Design flood.wor





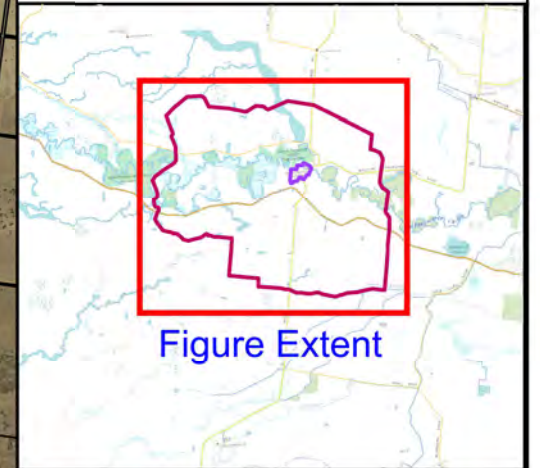






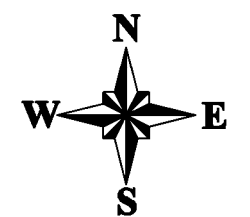


Figure Extent

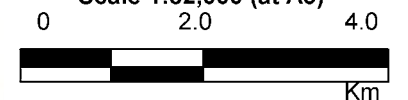
### LEGEND

-  Study Area
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Hydraulic Category
  -  Flood Fringe
  -  Flood Storage
  -  Floodway

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

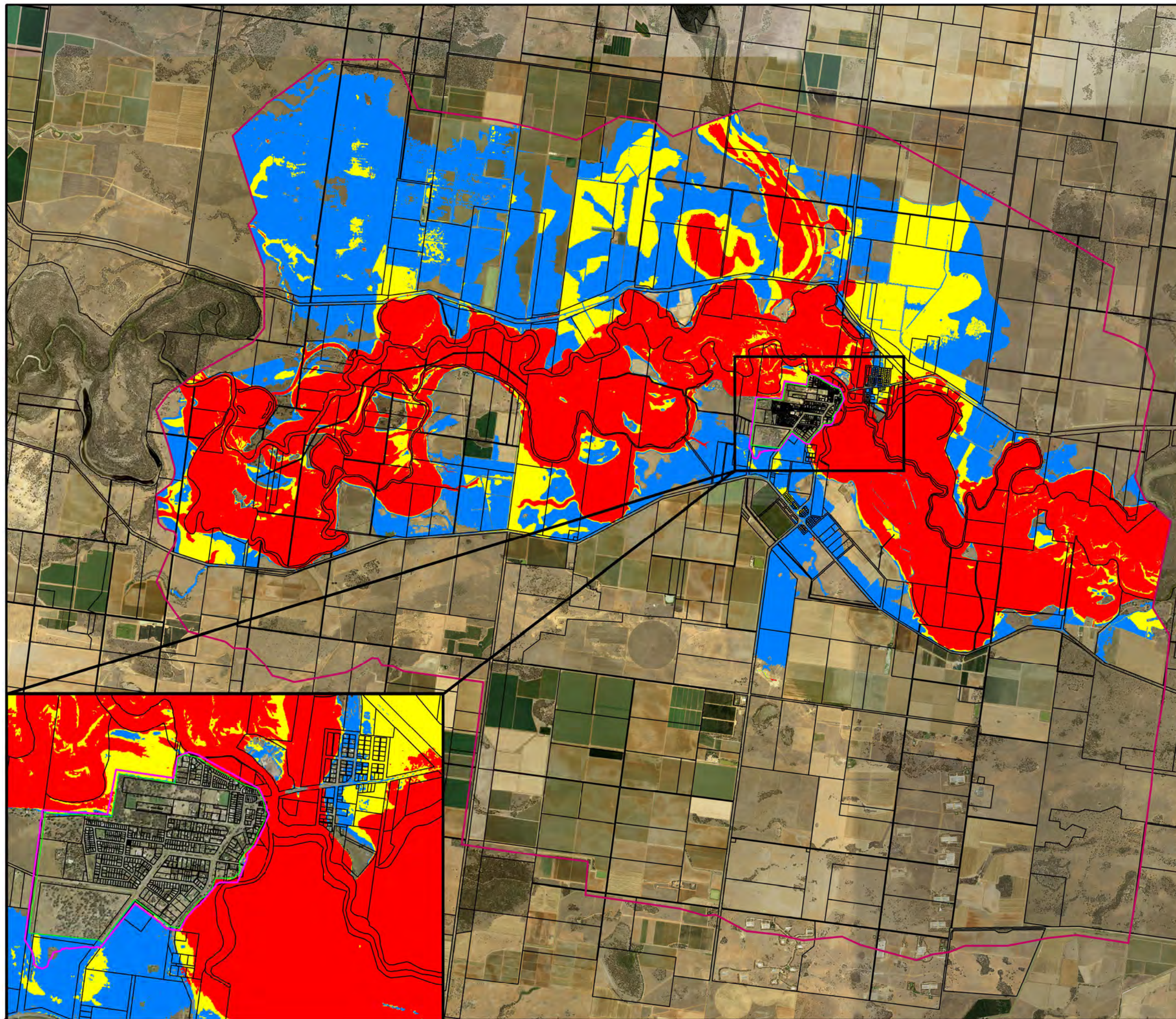


**Figure 33**  
**Murrumbidgee River main stream Hydraulic categorisation for 1% AEP Design flood**

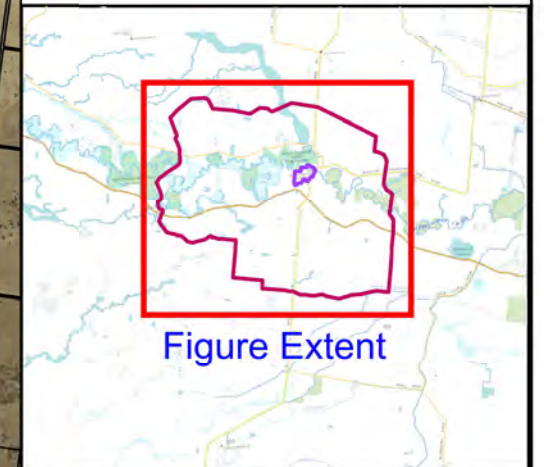
Prepared By:

 **Catchment Simulation Solutions**  
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Sydney, NSW 2000







File Name: Figure 33 Murrumbidgee River mainstream Hydraulic categorisation for 1% AEP Design flood.wor



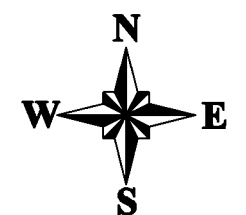




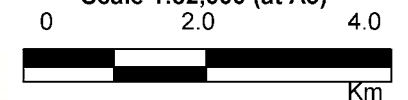
### LEGEND

-  Study Area
-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
- Hydraulic Category
  -  Flood Fringe
  -  Flood Storage
  -  Floodway

**Notes:**  
Inundation patterns and/or peak flood levels shown for design events are based on best available estimates of flood behaviour. Actual inundation patterns may vary slightly during a flood event.




Scale 1:82,000 (at A3)

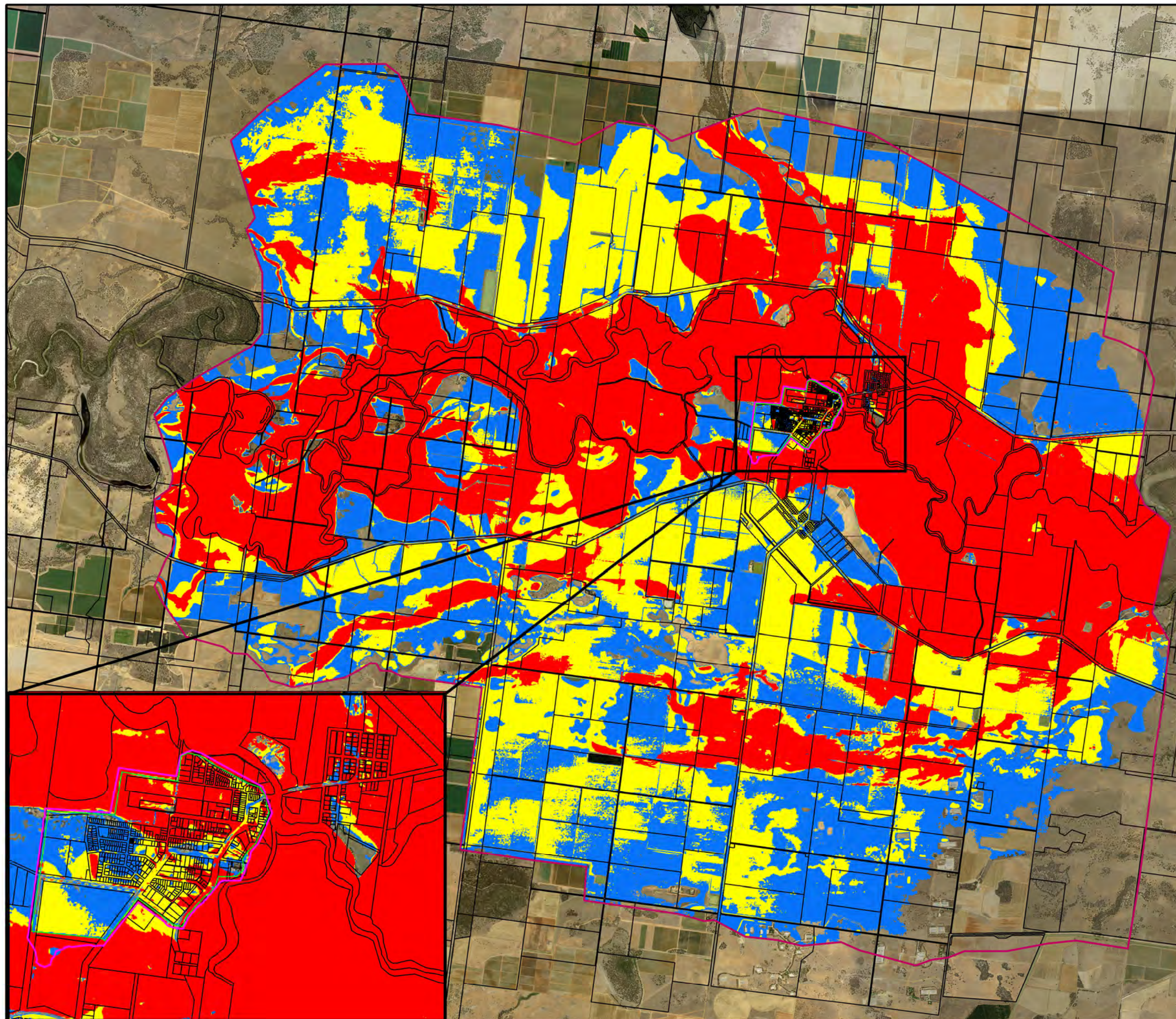


**Figure 34**  
**Murrumbidgee River main stream Hydraulic categorisation for extreme Design flood**

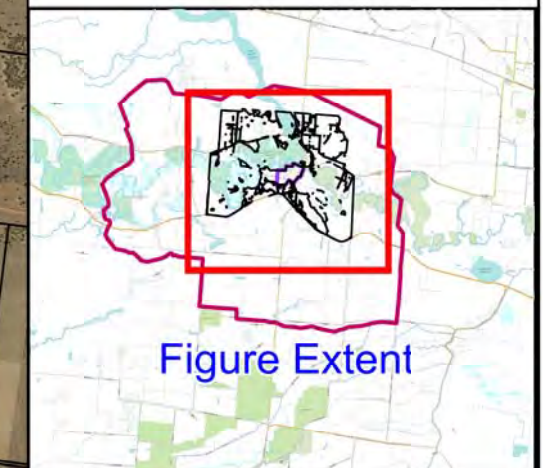
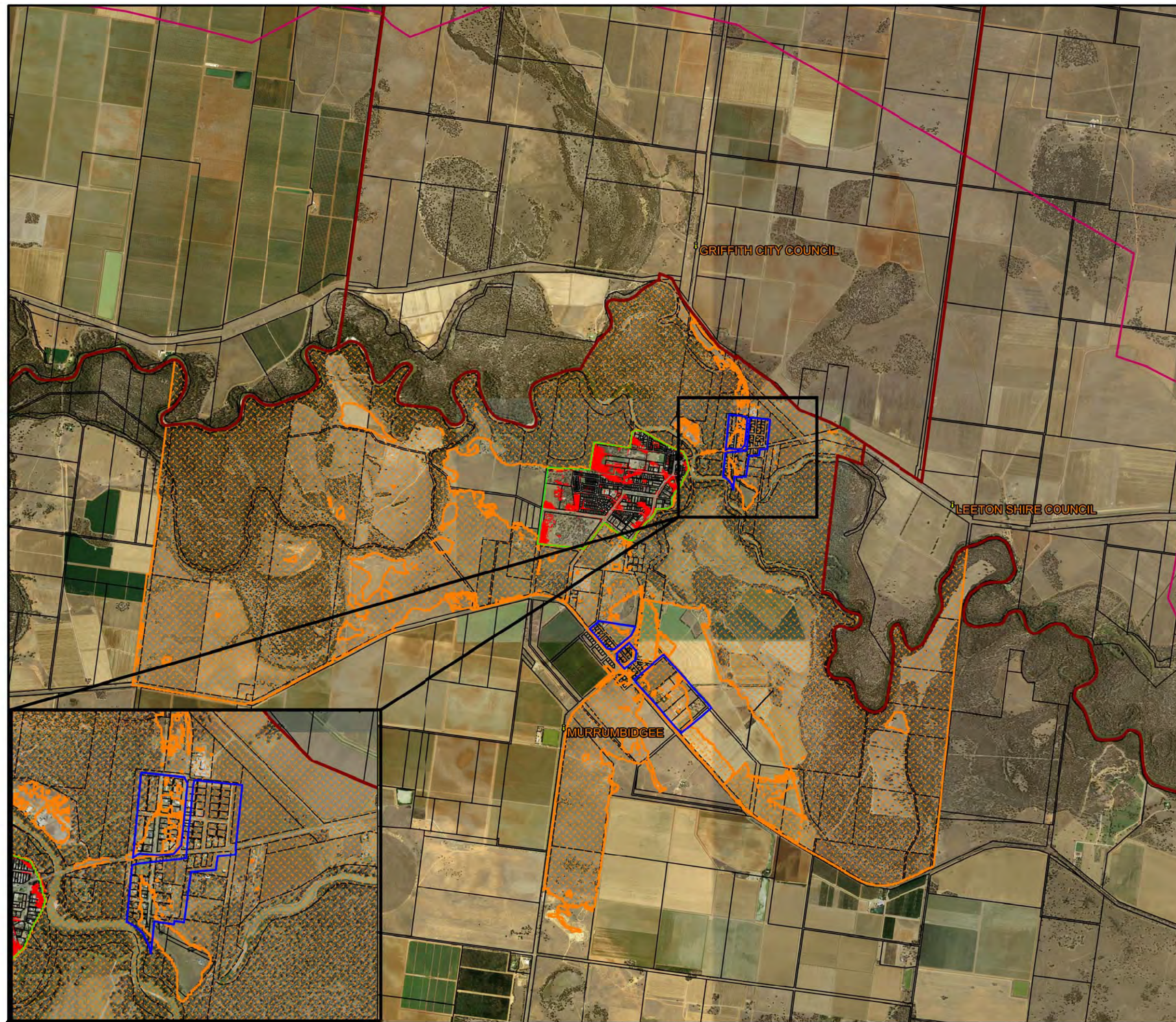
Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000





File Name: Figure 34 Murrumbidgee River mainstream Hydraulic categorisation for Extreme Design flood.wor



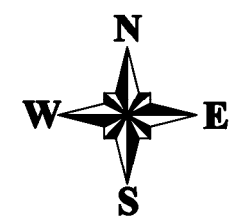




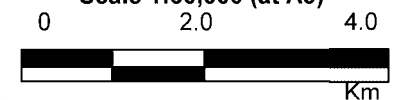
#### LEGEND

-  Local Flood Planning Area
-  Riverine Flood Planning Area
-  Areas currently zoned RU5 and/or R5
-  Location of Final Alignment of Upgraded Levee

Notes:




Scale 1:50,000 (at A3)



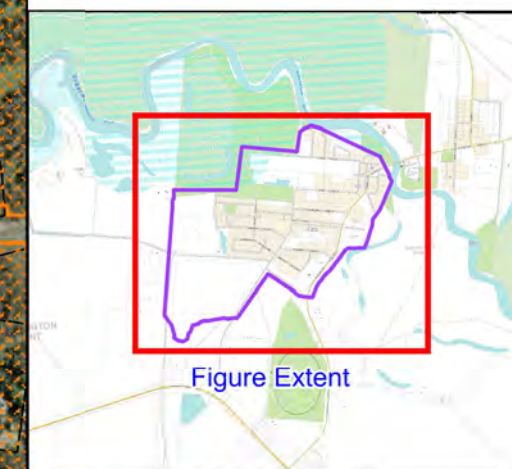
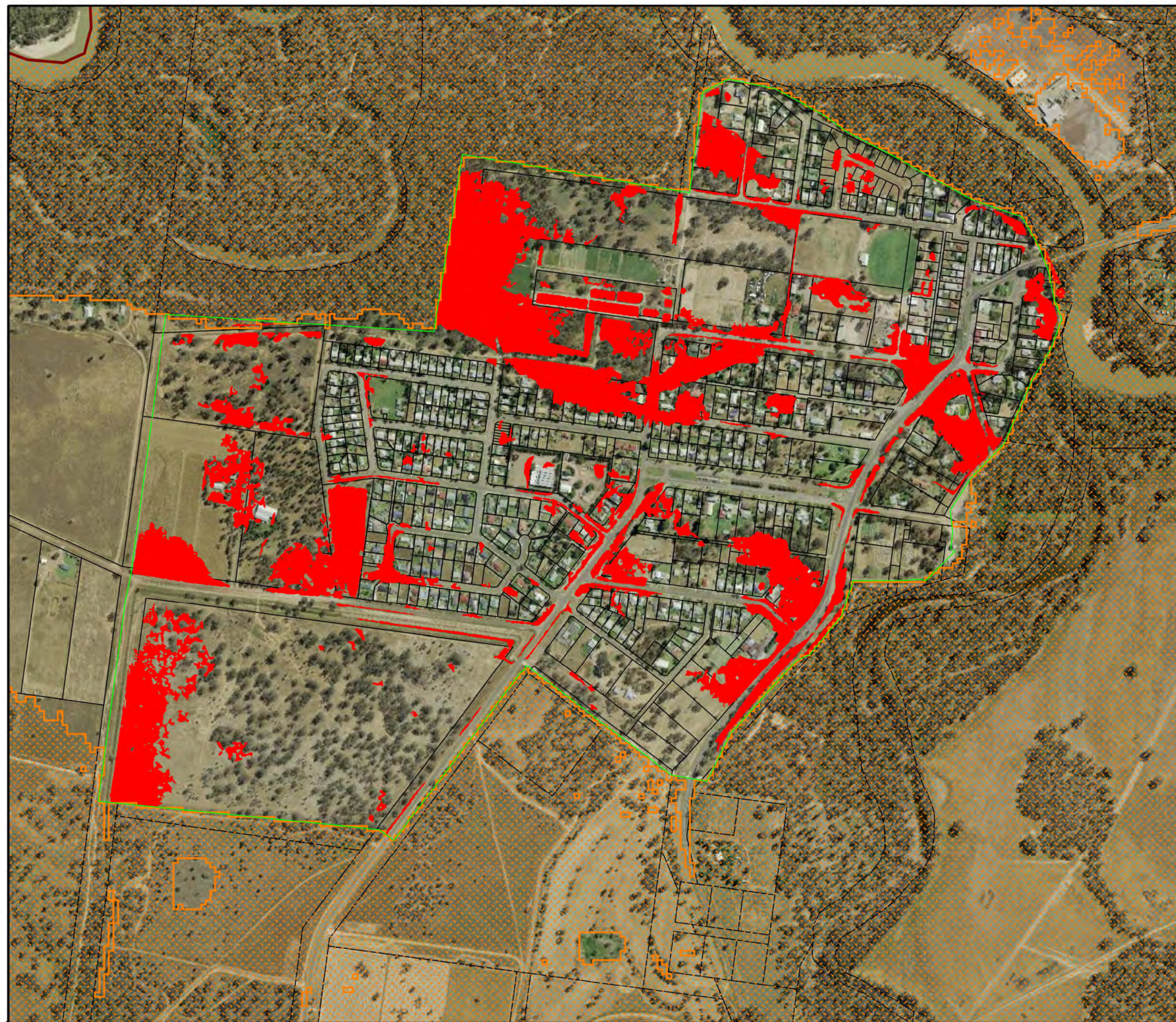
**Figure 35.1:  
Murrumbidgee River  
FPA**

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Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 35 Murrumbidgee River FPA.wor

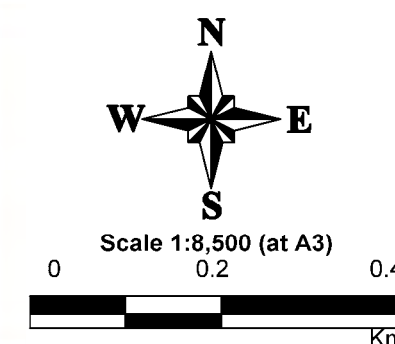




### LEGEND


-  Local Flood Planning Area
-  Riverine Flood Planning Area
-  Location of Final Alignment of Upgraded Levee

Notes:



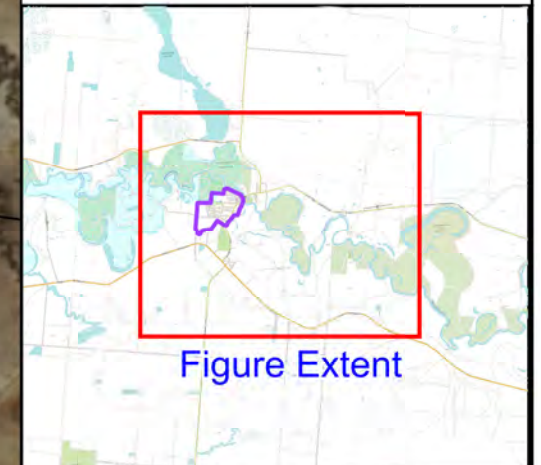
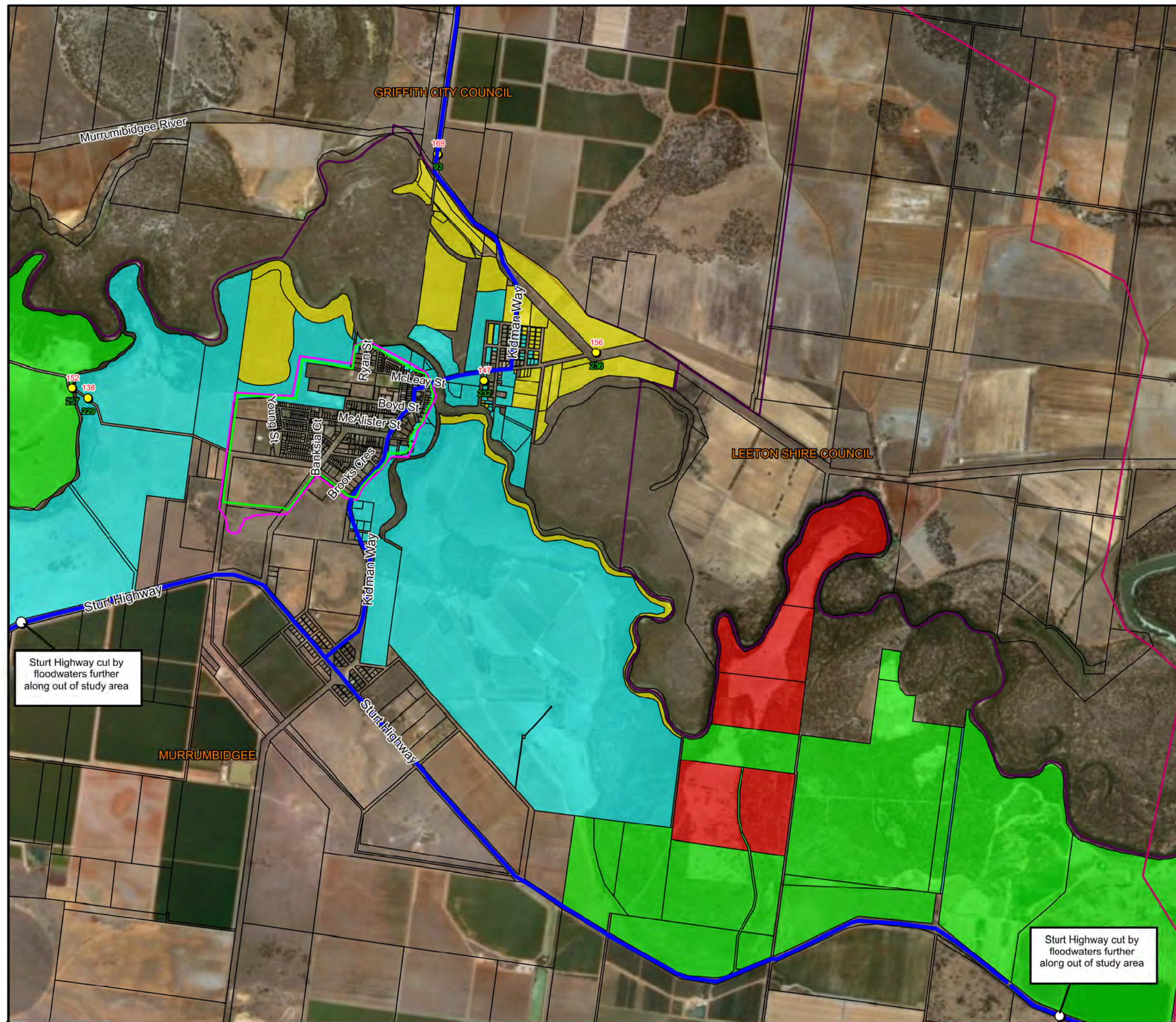
**Figure 35.2:**  
**Local Catchment**  
**FPA**

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Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 35 Local Catchment FPA.wor

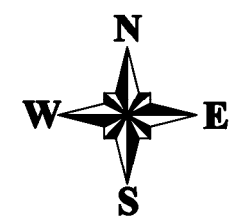




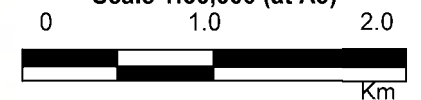
### LEGEND

-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
-  Flooded Isolated Submerged
-  Flooded Exit Route Overland Escape
-  Flooded Isolated Elevated
-  Flooded Exit Route Rising Road
-  Indirect Consequences
-  No Flood Impacts
-  Time Road First Cul (hr)
-  Duration of Road Cut (hr)

Notes:




Scale 1:36,000 (at A3)



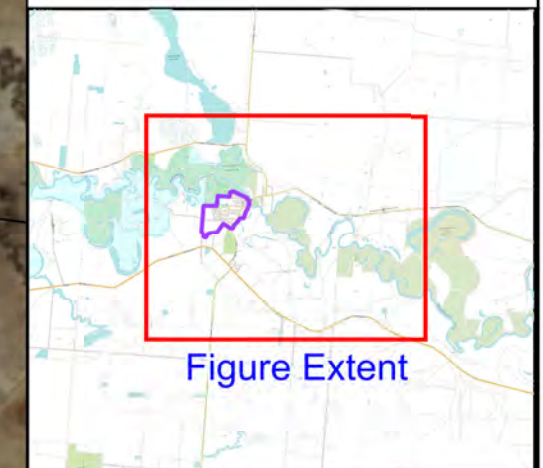
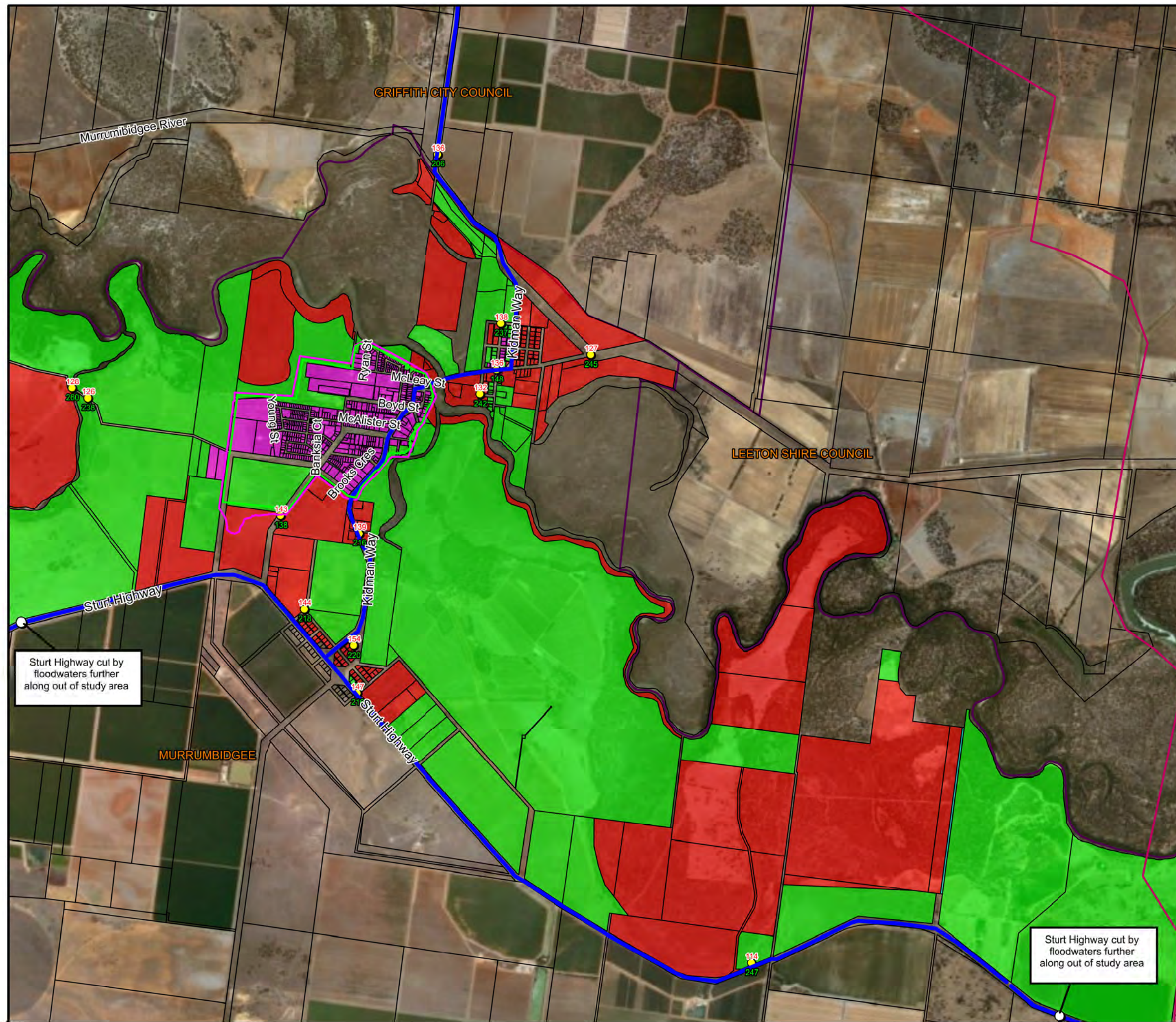
**Figure 36:  
Emergency response  
classification for 5% AEP  
Design flood event**

Prepared By:











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Sydney, NSW 2000

File Name: Figure 36 ERC for 5% AEP Design flood event WOR

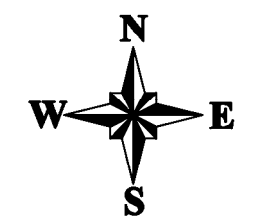




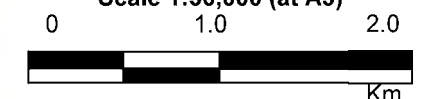
### LEGEND

-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
-  Flooded Isolated Submerged
-  Flooded Exit Route Overland Escape
-  Flooded Isolated Elevated
-  Flooded Exit Route Rising Road
-  Indirect Consequences
-  No Flood Impacts
-  Time Road First Cul (hr)
-  Duration of Road Cut (hr)

Notes:




Scale 1:36,000 (at A3)



**Figure 37:  
Emergency response  
classification for 1% AEP  
Design flood event**

Prepared By:

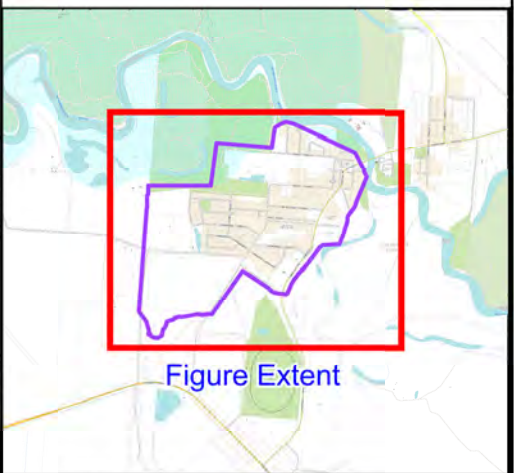
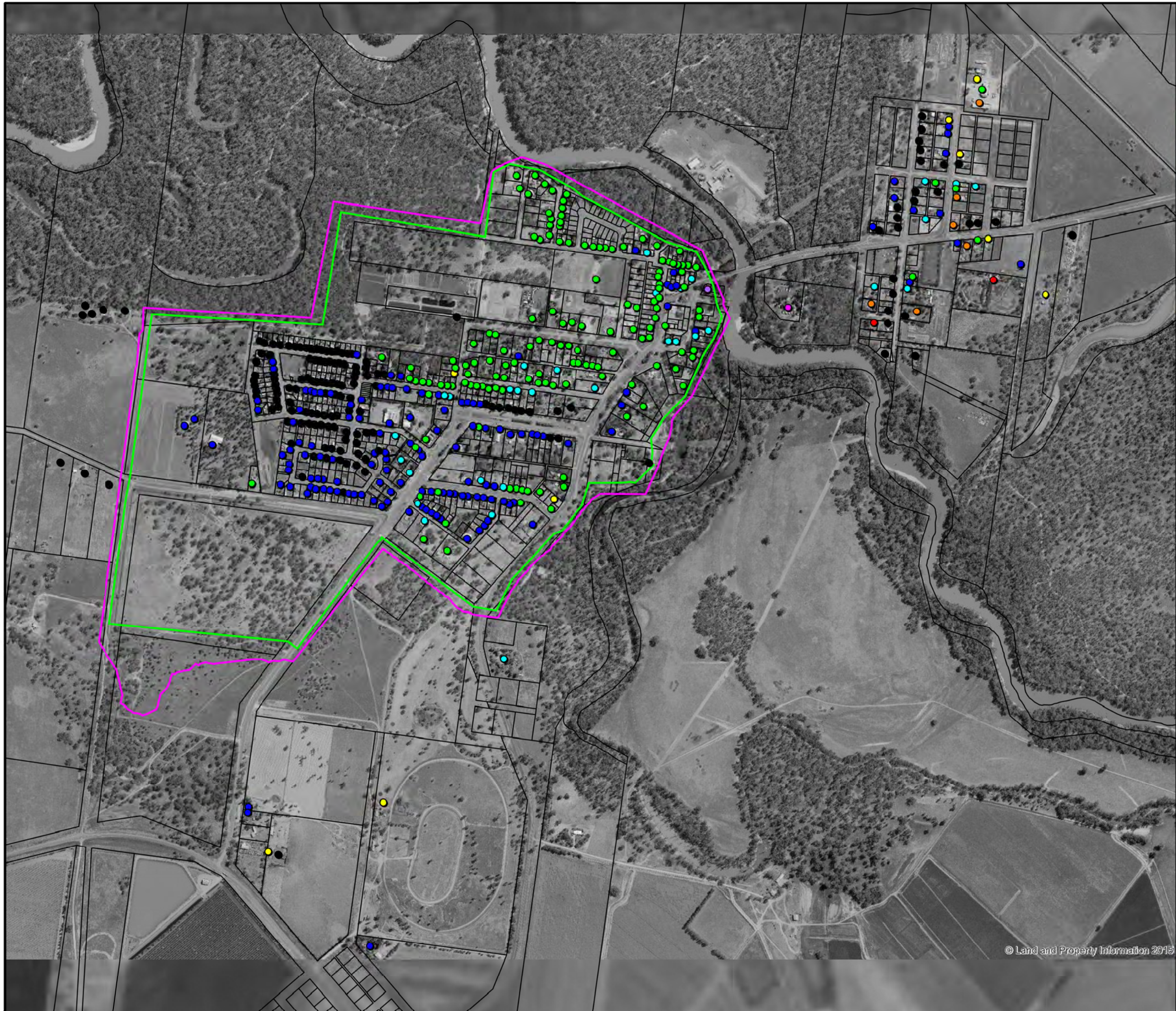
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Sydney, NSW 2000

File Name: Figure 37 ERC for 1% AEP Design flood event WOR









**LEGEND**

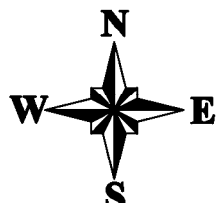
 Local Catchment Model Extent

 Location of Final Alignment of Upgraded Levee

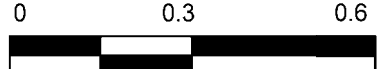
**Above Floor Frequency**

-  Never Above Floor Level
-  Extreme Flood Event
-  0.2% AEP
-  0.5% AEP
-  1% AEP
-  2% AEP
-  5% AEP
-  10% AEP
-  20% AEP

Notes:



Scale 1:12,000 (at A3)



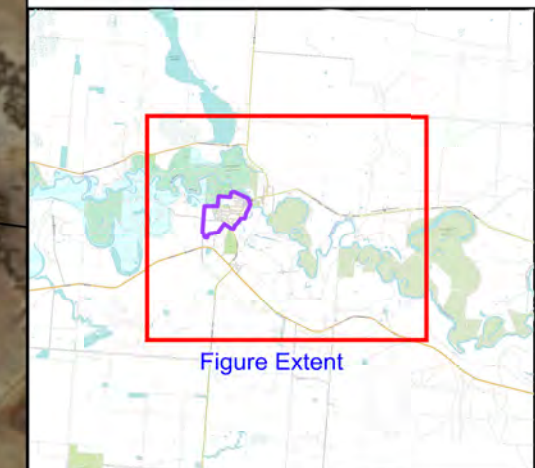
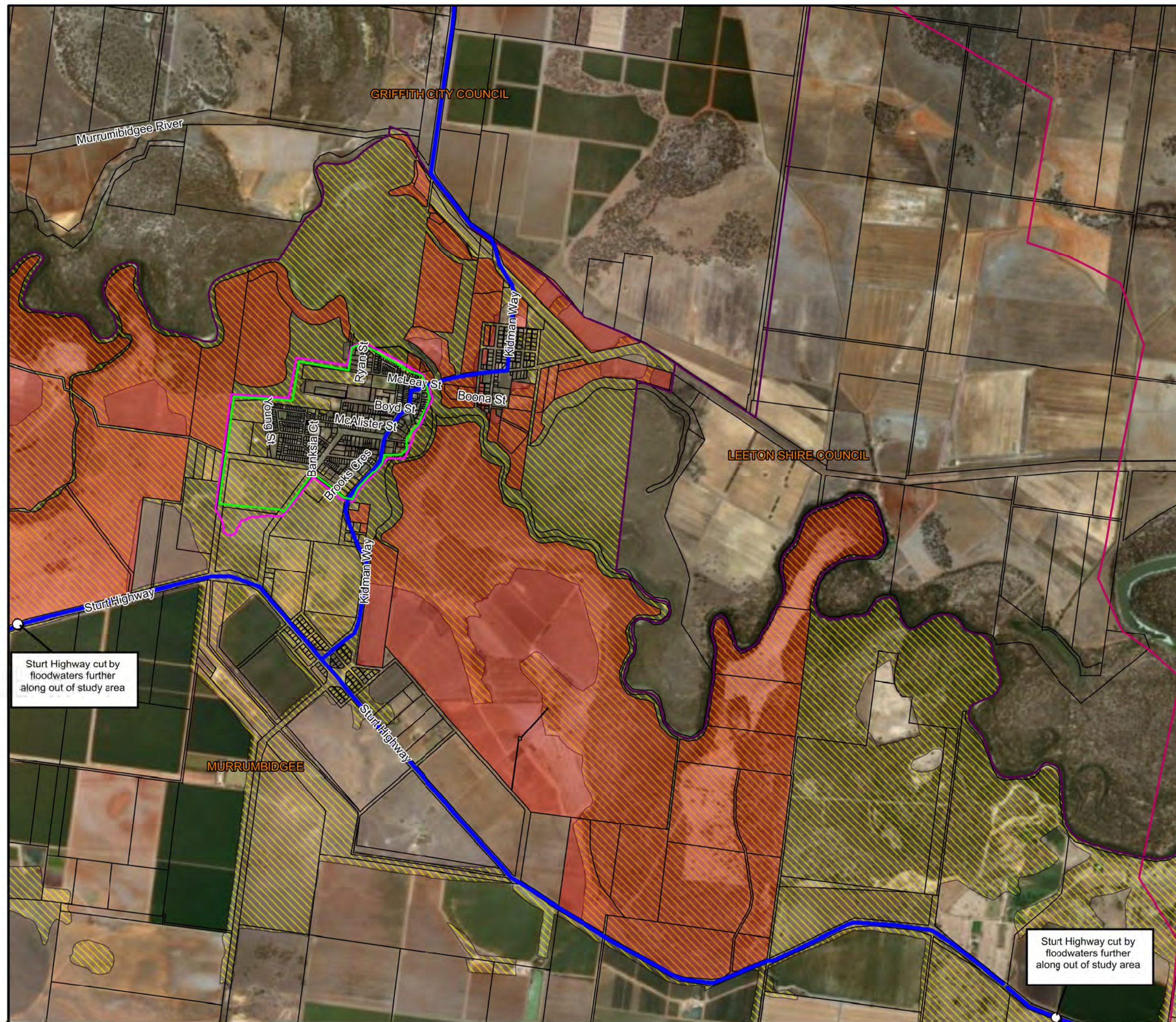
Km

**Figure 39:**  
**Frequency of above floor flooding**





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Sydney, NSW 2000

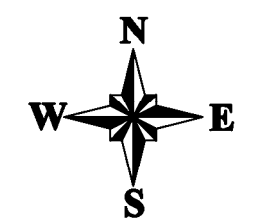




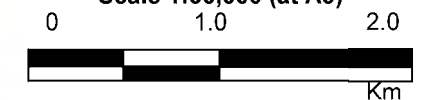
### LEGEND

-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
-  Biodiversity
-  High Flood Risk Precinct

Notes:




Scale 1:36,000 (at A3)



**Figure 40:**  
**High Flood Risk Precinct**  
**in the 1% AEP**  
**Design flood event**

Prepared By:

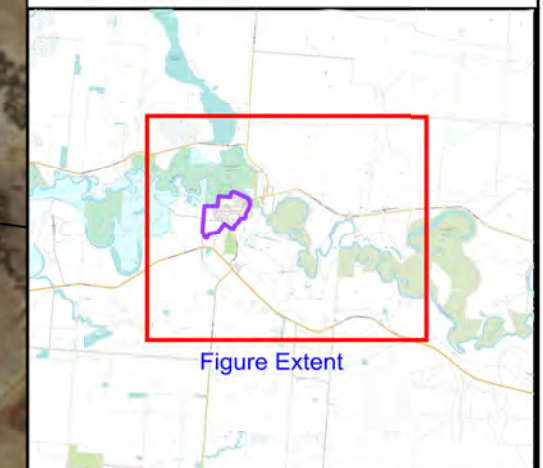
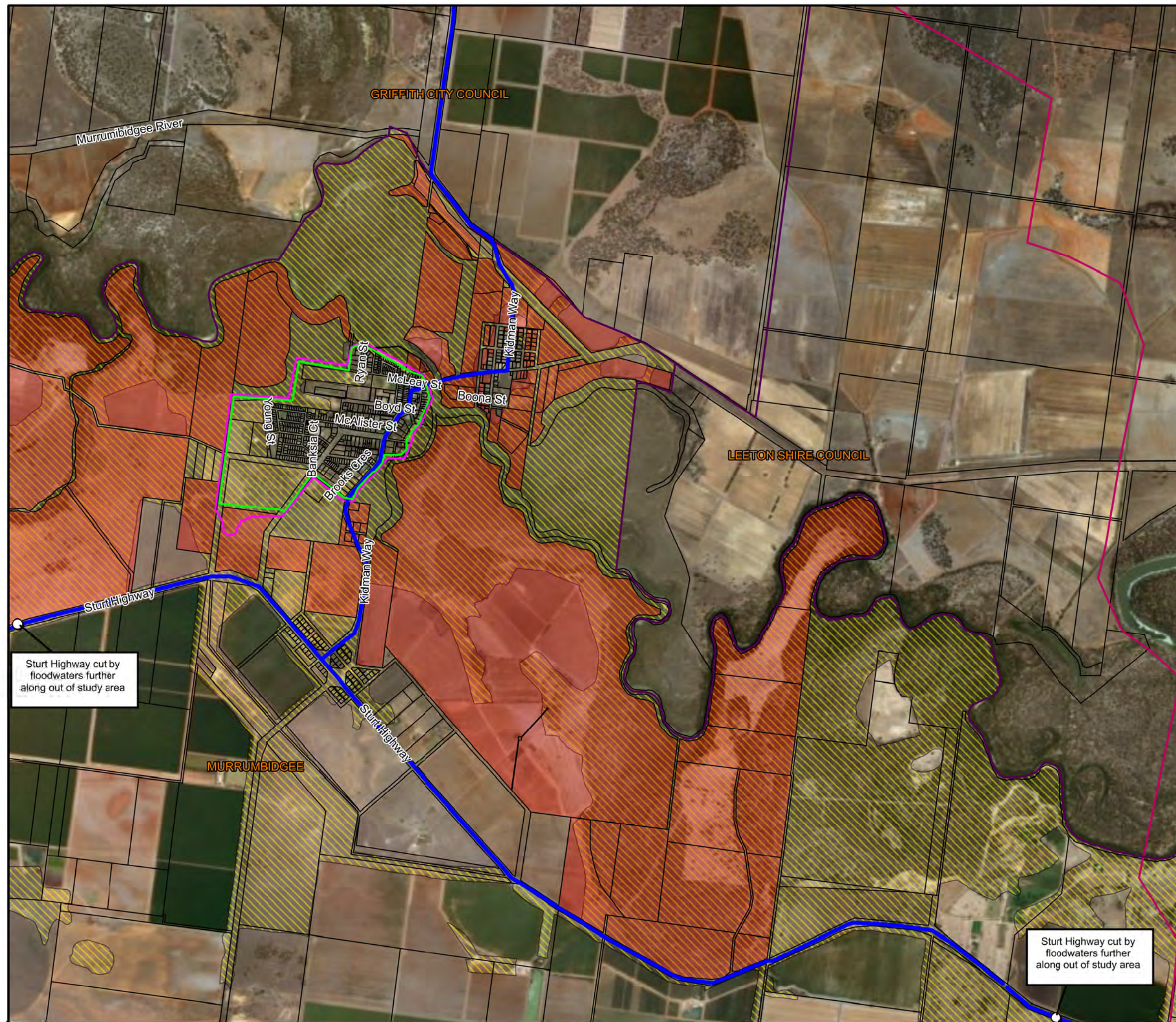
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Sydney, NSW 2000

File Name: Figure 40 High Flood Risk Precinct 1% AEP Design flood event WOR





Sturt Highway cut by  
floodwaters further  
along out of study area

Sturt Highway cut by  
floodwaters further  
along out of study area

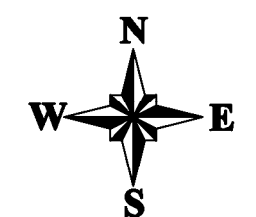




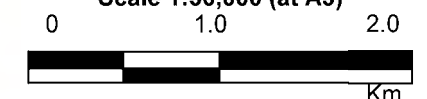
## LEGEND

-  Local Catchment Model Extent
-  Location of Final Alignment of Upgraded Levee
-  Biodiversity
-  High Flood Risk Precinct

Notes:




Scale 1:36,000 (at A3)



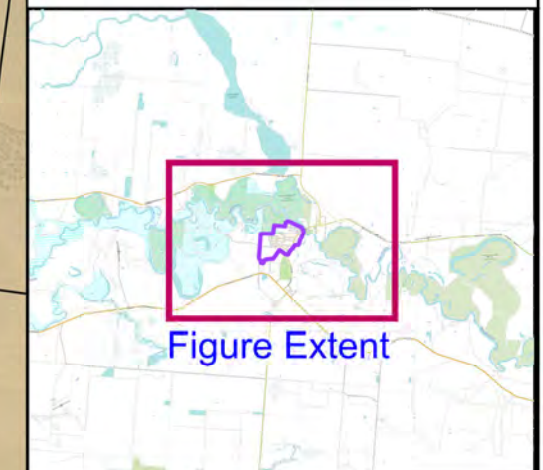
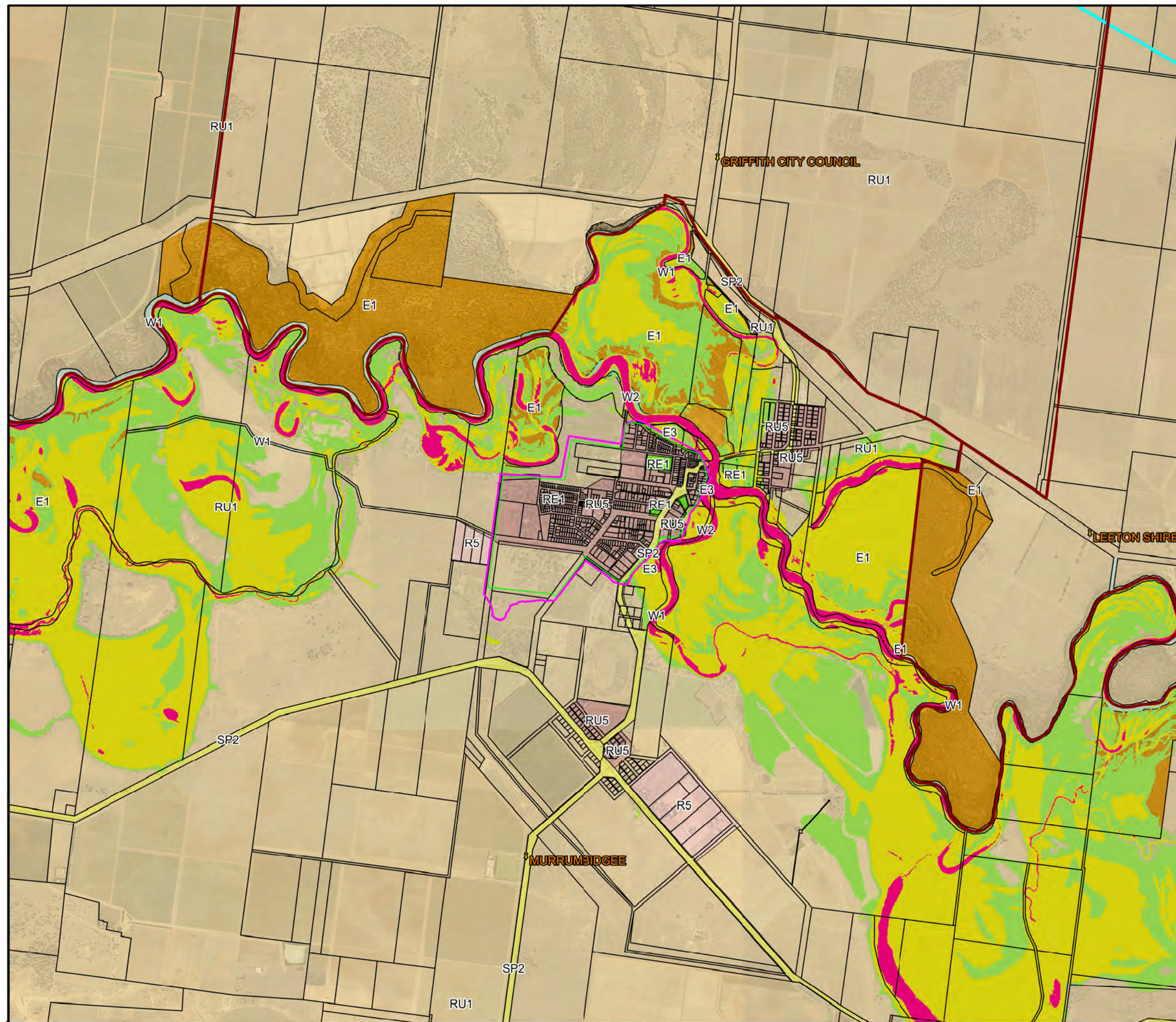
**Figure 41:  
High Flood Risk Precinct  
in the Extreme  
Design flood event**

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Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 41 High Flood Risk Precinct Extreme Design flood event WOR

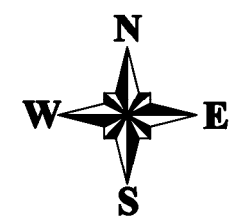




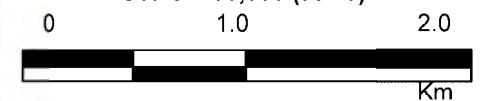
### LEGEND

Land Zone	Environmental
Residential	E1
R5	E3
Rural	Waterways
RU1	W1
RU5	W2
Recreation	Special Activities
RE1	SP2
Hazard Category	
H4	
H5	
H6	

Notes:




Scale 1:35,000 (at A3)



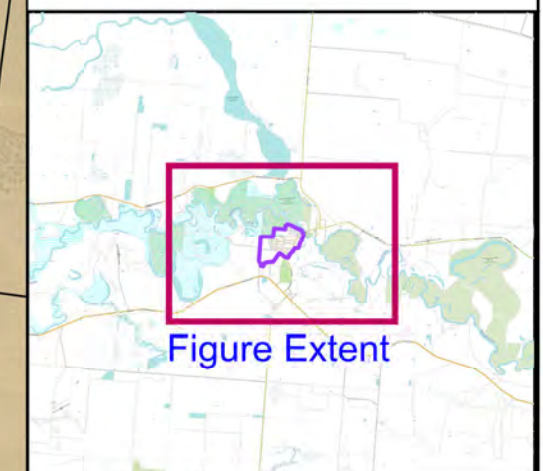
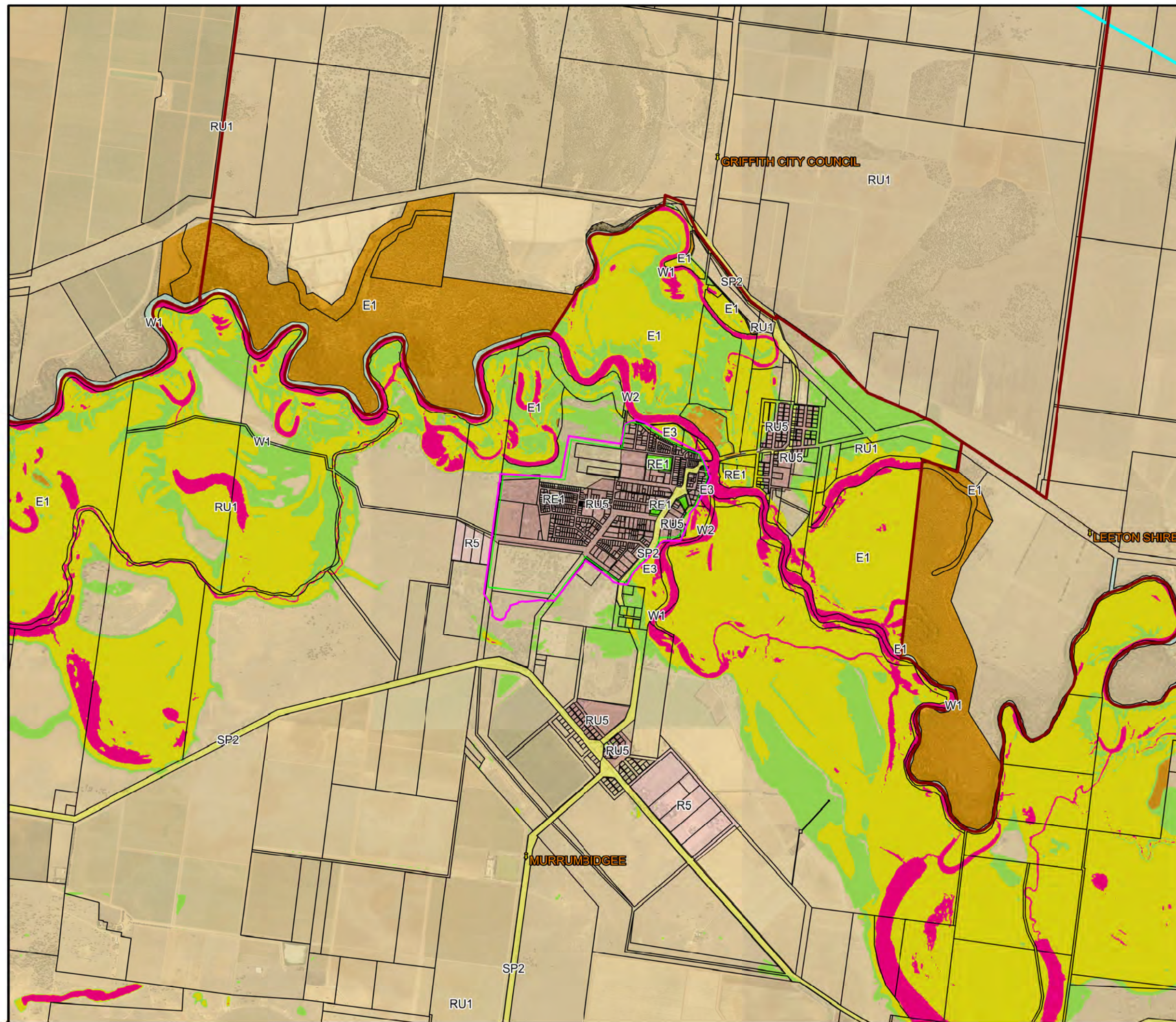
**Figure 42**  
**Compatibility of existing**  
**Land Use with Flood**  
**Hazard for 1% AEP**

Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 42 Compatibility of existing land use with flood hazard for 1% AEP.wor

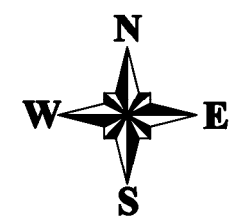




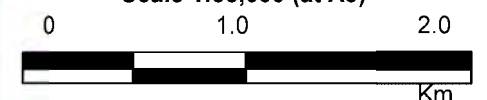
### LEGEND

Land Zone	Environmental
Residential	E1
R5	E3
Rural	Waterways
RU1	W1
RU5	W2
Recreation	Special Activities
RE1	SP2
Hazard Category	
H4	
H5	
H6	

Notes:



Scale 1:35,000 (at A3)



**Figure 43**  
**Compatibility of existing**  
**Land Use with Flood Hazard**  
**for Extreme Flood Event**

Prepared By:

 **Catchment Simulation Solutions**  
Suite 10.01, 70 Phillip St  
Sydney, NSW 2000

File Name: Figure 43 Compatibility of existing land use with flood hazard for extreme flood event.wor