

Peach Tree Creek and Lower Surveyors Creek Flood Study

Final Report
Volume 2 of 3: Figures

April 2019

PENRITH
CITY COUNCIL



Catchment Simulation Solutions

► FIGURES

- Figure 1: Peach Tree & Lower Surveyors Creek Catchment
- Figure 2: Location of Rainfall and Stream Gauges
- Figure 3: Digital Elevation Model
- Figure 4: Remote Sensing Land Use Map
- Figure 5: Location of Drainage Easements
- Figure 6: Data Collected for the Study
- Figure 7: XP-RAFTS Model Layout
- Figure 8: TUFLOW Model Layout

Validation Maps

- Figure 9: Rainfall Isohyet Map for the 2012 Flood
- Figure 10: Simulated Floodwater Depths for the 2012 Flood
- Figure 11: Rainfall Isohyet Map for the 2016 Flood
- Figure 12: Simulated Floodwater Depths for the 2016 Flood
- Figure 13: Rainfall Isohyet Map for the 2006 Flood
- Figure 14: Simulated Floodwater Depths for the 2006 Flood

Design Floodwater Depth Maps

- Figure 15: Peak Water Depths for the 50% AEP Local Catchment Flood
- Figure 16: Peak Water Depths for the 20% AEP Local Catchment Flood
- Figure 17: Peak Water Depths for the 10% AEP Local Catchment Flood
- Figure 18: Peak Water Depths for the 5% AEP Local Catchment Flood
- Figure 19: Peak Water Depths for the 2% AEP Local Catchment Flood
- Figure 20: Peak Water Depths for the 1% AEP Local Catchment Flood
- Figure 21: Peak Water Depths for the 0.5% AEP Local Catchment Flood

- Figure 22: Peak Water Depths for the 0.2% AEP Local Catchment Flood
- Figure 23: Peak Water Depths for the Local Catchment PMF

Design Flood Level Maps

- Figure 24: Peak Water Levels for the 50% AEP Local Catchment Flood
- Figure 25: Peak Water Levels for the 20% AEP Local Catchment Flood
- Figure 26: Peak Water Levels for the 10% AEP Local Catchment Flood
- Figure 27: Peak Water Levels for the 5% AEP Local Catchment Flood
- Figure 28: Peak Water Levels for the 2% AEP Local Catchment Flood
- Figure 29: Peak Water Levels for the 1% AEP Local Catchment Flood
- Figure 30: Peak Water Levels for the 0.5% AEP Local Catchment Flood
- Figure 31: Peak Water Levels for the 0.2% AEP Local Catchment Flood
- Figure 32: Peak Water Levels for the Local Catchment PMF
- Figure 33: Peak Floodwater Surface Profiles

Design Flow Velocity Maps

- Figure 34: Peak Flow Velocities for the 50% AEP Local Catchment Flood
- Figure 35: Peak Flow Velocities for the 20% AEP Local Catchment Flood
- Figure 36: Peak Flow Velocities for the 10% AEP Local Catchment Flood
- Figure 37: Peak Flow Velocities for the 5% AEP Local Catchment Flood
- Figure 38: Peak Flow Velocities for the 2% AEP Local Catchment Flood
- Figure 39: Peak Flow Velocities for the 1% AEP Local Catchment Flood
- Figure 40: Peak Flow Velocities for the 0.5% AEP Local Catchment Flood
- Figure 41: Peak Flow Velocities for the 0.2% AEP Local Catchment Flood
- Figure 42: Peak Flow Velocities for the Local Catchment PMF

Stormwater Capacity Map

- Figure 43: Stormwater Capacity

Flood Hazard Maps

- Figure 44: Flood Hazard for the 5% AEP Local Catchment Flood
- Figure 45: Flood Hazard for the 1% AEP Local Catchment Flood
- Figure 46: Flood Hazard for the 0.5% AEP Local Catchment Flood
- Figure 47: Flood Hazard for the Local Catchment PMF

Flood Emergency Response Classification Maps

- Figure 48: Flood Emergency Response Classifications for the 5% AEP Local Catchment Flood
- Figure 49: Flood Emergency Response Classifications for the 1% AEP Local Catchment Flood
- Figure 50: Flood Emergency Response Classifications for the 1% AEP Flood
- Figure 51: Flood Emergency Response Classifications for the 0.5% AEP Local Catchment Flood
- Figure 52: Flood Emergency Response Classifications for the Local Catchment PMF

Hydraulic Category Maps

- Figure 53: Hydraulic Categories for the 5% AEP Local Catchment Flood
- Figure 54: Hydraulic Categories for the 1% AEP Local Catchment Flood
- Figure 55: Hydraulic Categories for the 0.5% AEP Local Catchment Flood
- Figure 56: Hydraulic Categories for the Local Catchment PMF

Nepean River Sensitivity Simulation Maps

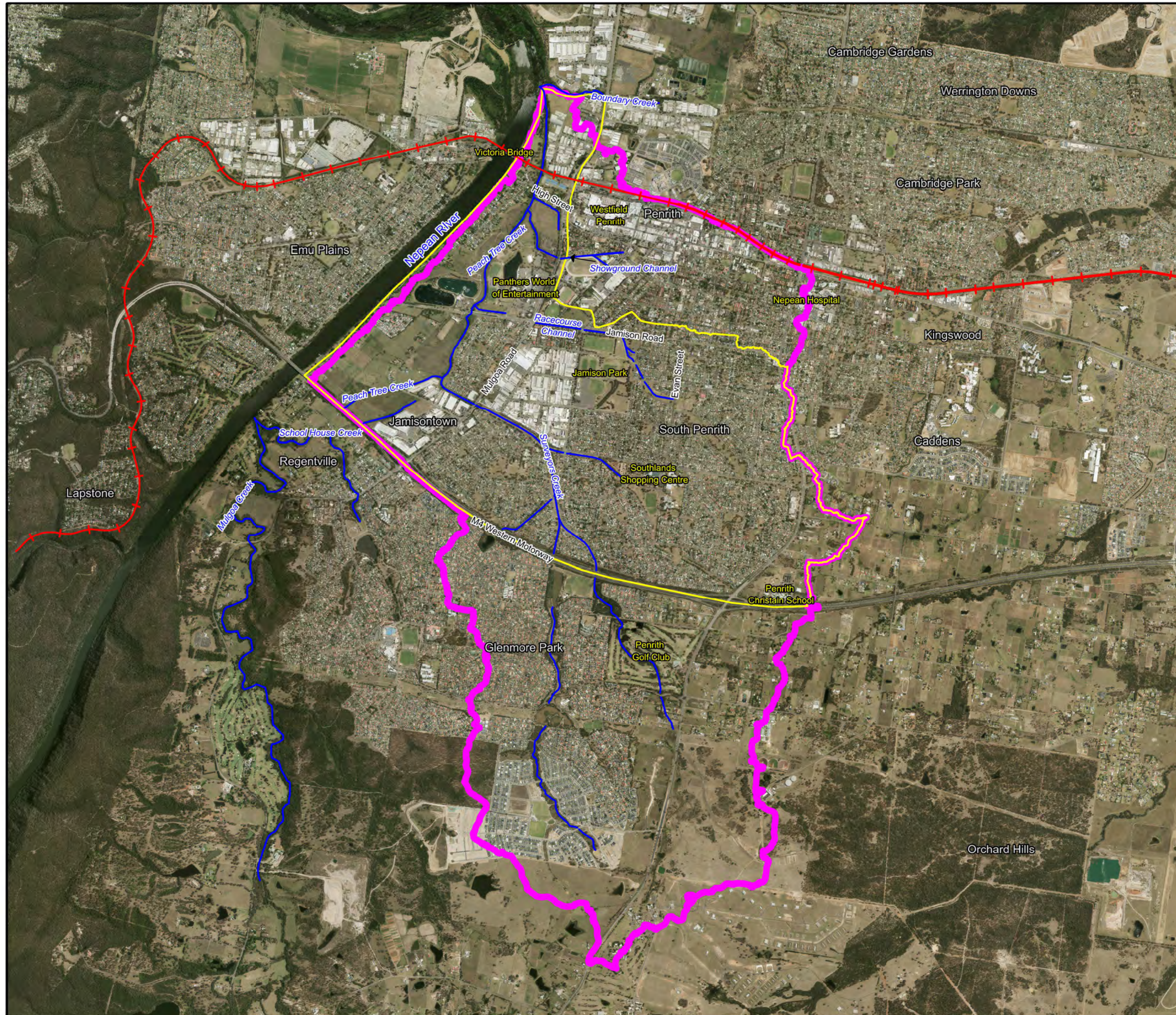
- Figure 57: Peak Water Depths for 5% AEP Local Catchment Flood with 1% AEP Nepean River Tailwater
- Figure 58: Peak Water Depths for 1% AEP Local Catchment Flood with 1% AEP Nepean River Tailwater
- Figure 59: Peak Water Depths for 1% AEP Local Catchment Flood with 0.2% AEP Nepean River Tailwater
- Figure 60: Peak Water Depths for 1% AEP Local Catchment Flood with PMF Nepean River Tailwater

Flood Planning Maps

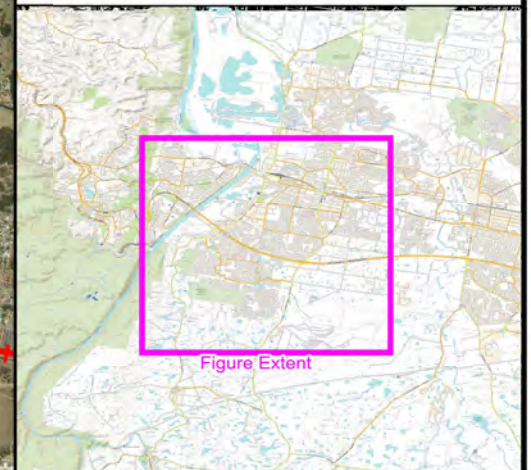
- Figure 61: Peak Water Depths for the 1% AEP Flood
- Figure 62: Peak Water Levels for the 1% AEP Flood
- Figure 63: Peak Flow Velocities for the 1% AEP Flood
- Figure 64: Flood Hazard for the 1% AEP Flood
- Figure 65: Hydraulic Categories for the 1% AEP Flood
- Figure 66: Flood Planning Area
- Figure 67: Flood Planning Constraint Categories

Potential Flood Mitigation Options

- Figure 68: Potential Flood Mitigation Options



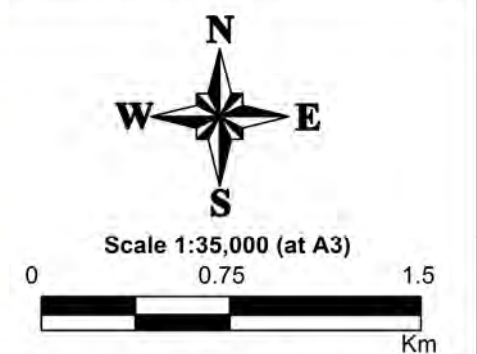
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LEGEND

- Peach Tree & Lower Surveyors Creek Study Area
- Peach Tree & Surveyors Creek Catchment
- Watercourse
- Railway

Notes:
Aerial photograph date: 2016

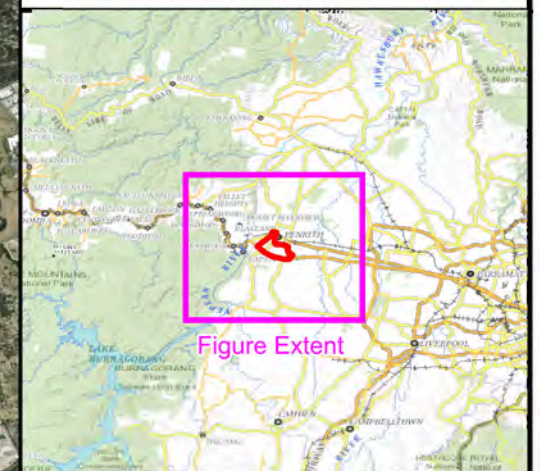


**Figure 1:
Peach Tree &
Surveyors Creeks
Catchment**

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 Catchment Simulation Solutions
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Sydney, NSW 2000

File Name: Fig1 - Peach Tree & Lower
Surveyor Creeks Catchment.wor

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LEGEND

- Peach Tree & Lower Surveyors Creek Study Area
- ▲ Daily Rainfall Gauge
- ▲ Continuous Rainfall Gauge
- River Gauge

Notes:
Aerial photograph date: 2016



Scale 1:80,000 (at A3)

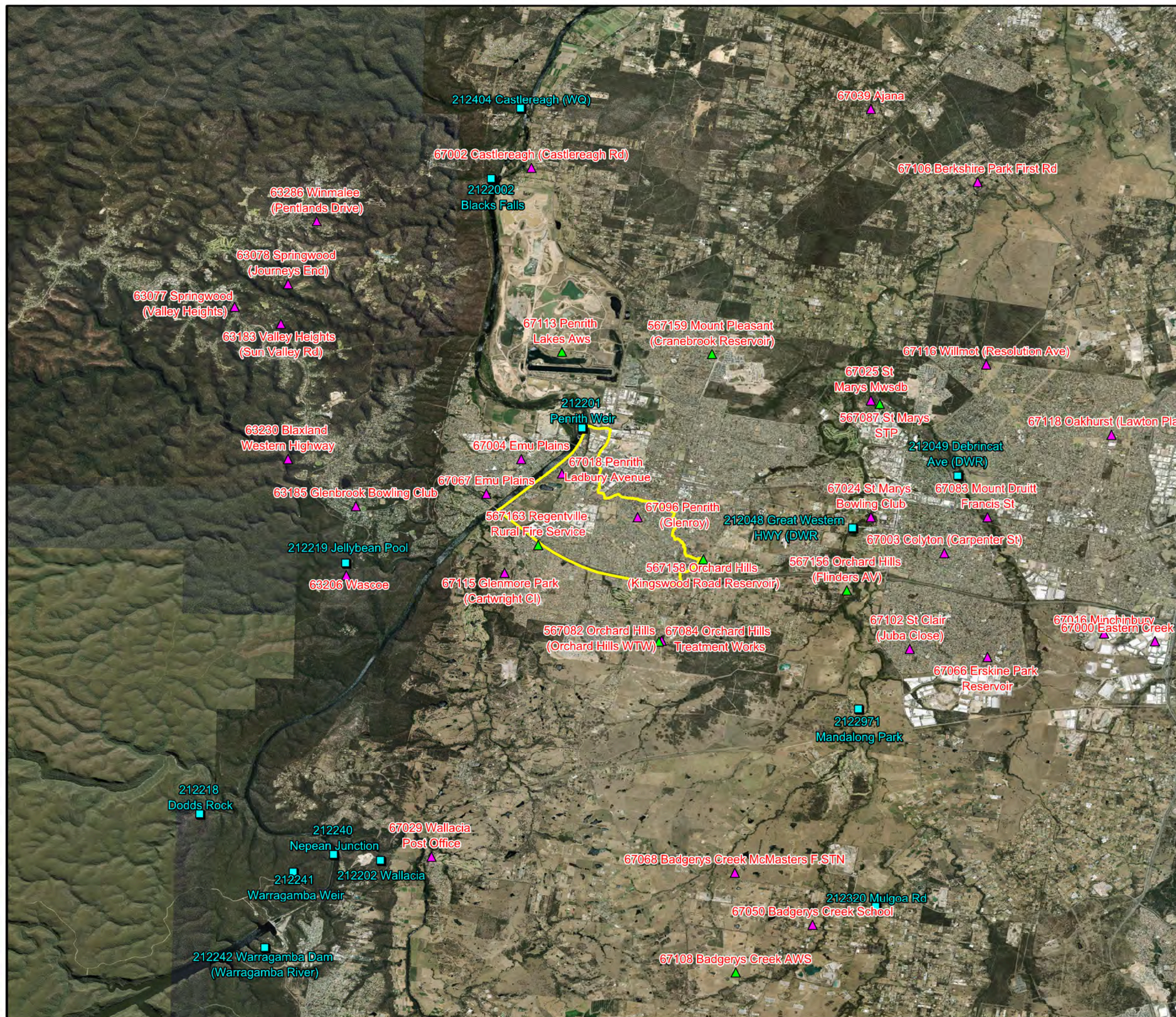


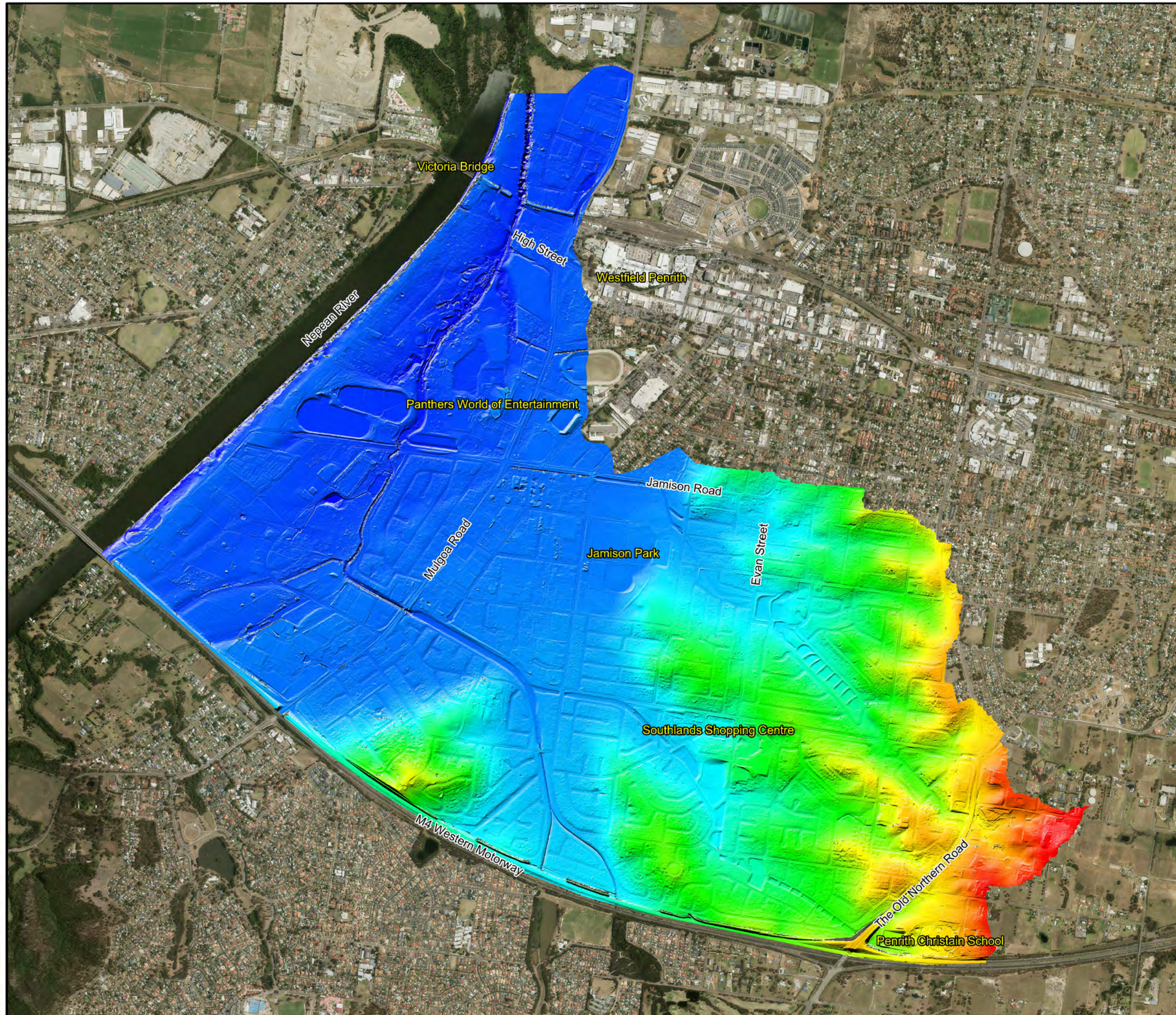
**Figure 2:
Location of Rainfall
and Stream Gauges**

Prepared By:

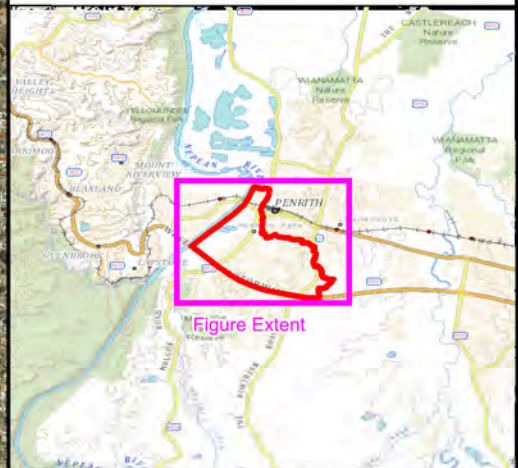
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig2 - Location of Rainfall
Gauge.wor



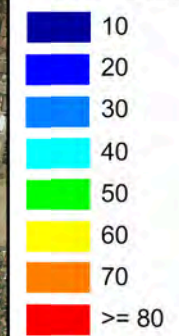


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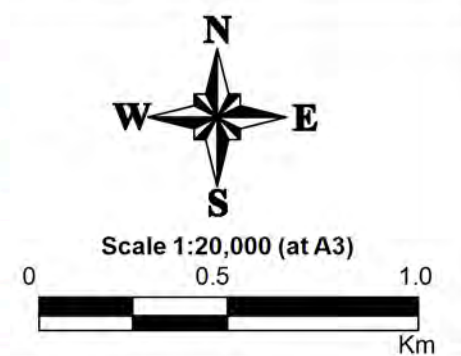


LEGEND


Ground Surface Elevation (mAHD)



Notes:
Aerial photograph date: 2016



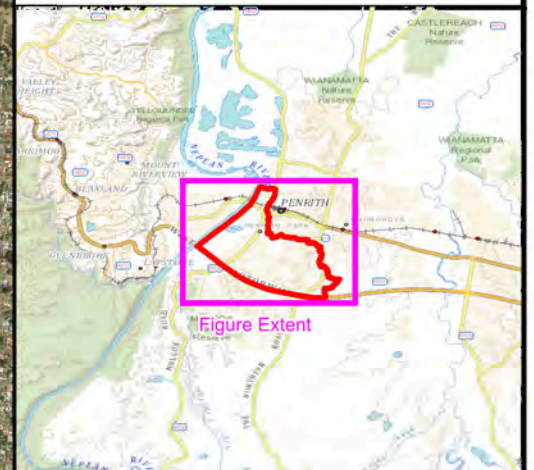
**Figure 3:
Digital Elevation Model**

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File Name: Fig3 - DEM.wor



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LEGEND

Material

- Building
- Water
- Tree
- Grass
- Concrete
- Road

Notes:
Aerial photograph date: 2016



Scale 1:20,000 (at A3)

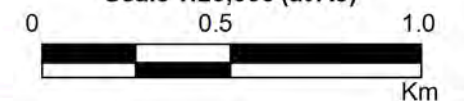

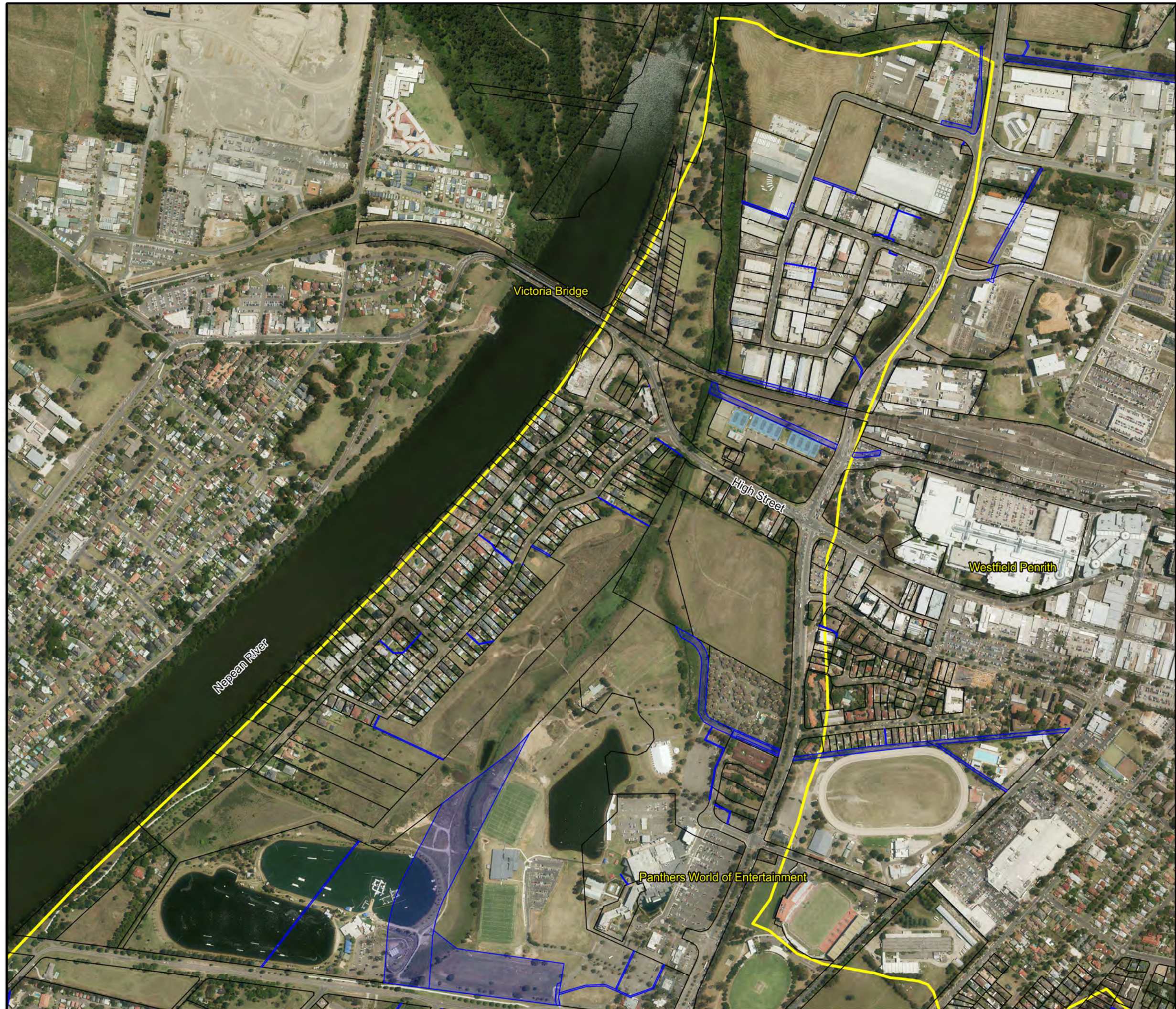


Figure 4:
Remote Sensing
Land Use Map

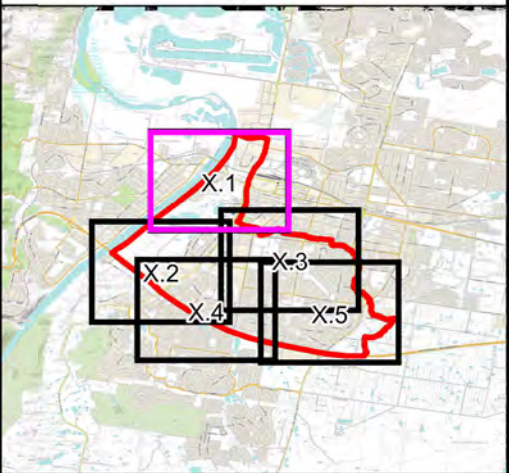
Prepared By:

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File Name: Remote Sensing Land Use
Map.wor



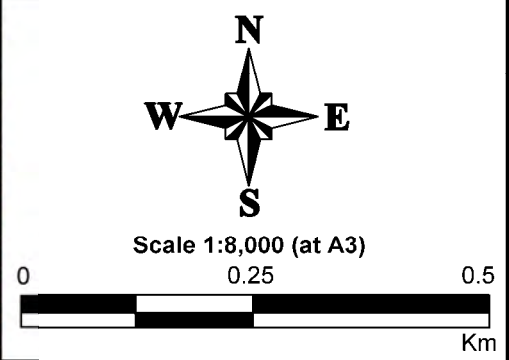
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LEGEND

-  Drainage Easement
-  Peach Tree & Lower Survivors Creek Study Area

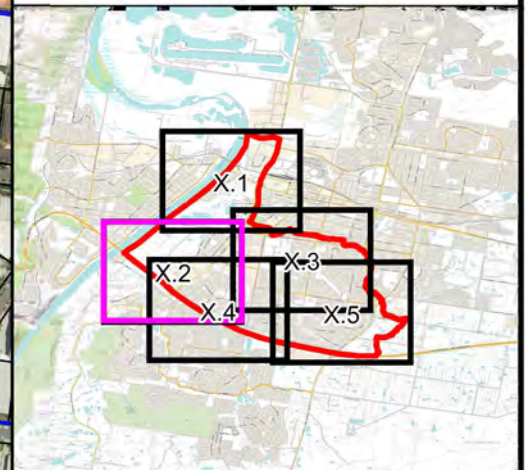
Notes:
Aerial photograph date: 2016





**Figure 5.1:
Location of Drainage
Easements**

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Sydney, NSW 2000

File Name: Fig5.1 - Location of Drainage
Easements.wor



LEGEND

-  Drainage Easement
-  Peach Tree & Lower Survivors Creek Study Area

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

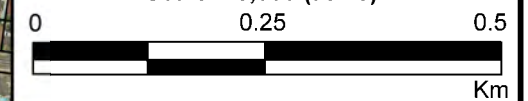

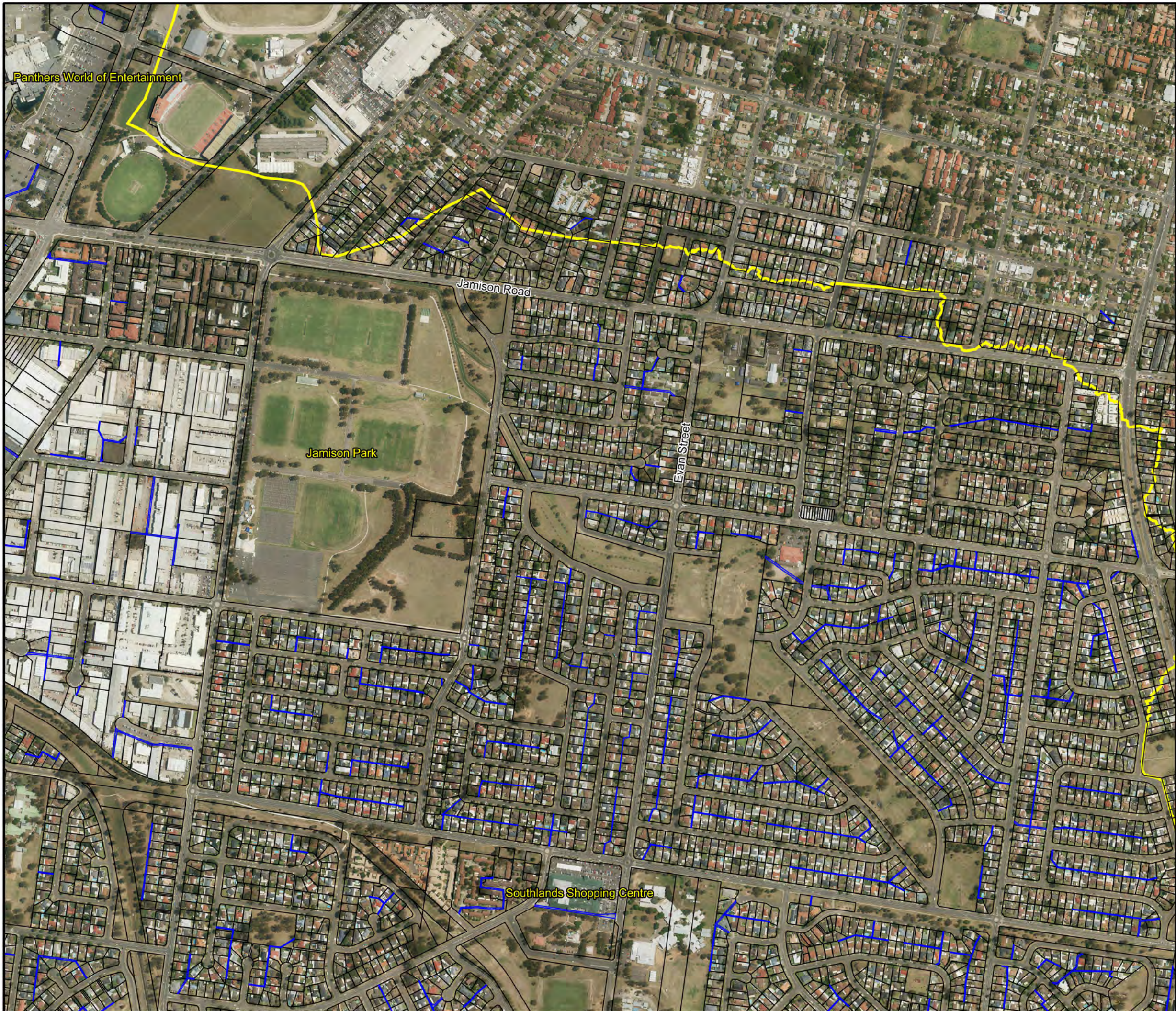


Figure 5.2:
Location of Drainage
Easements

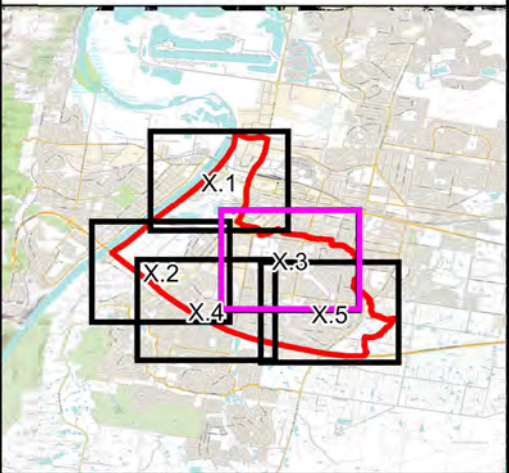
Prepared By:

 **Catchment Simulation Solutions**
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File Name: Fig5.2 - Location of Drainage
Easements.wor



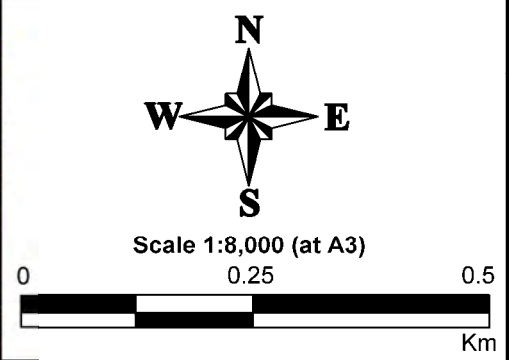
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LEGEND

-  Drainage Easement
-  Peach Tree & Lower Survivors Creek Study Area

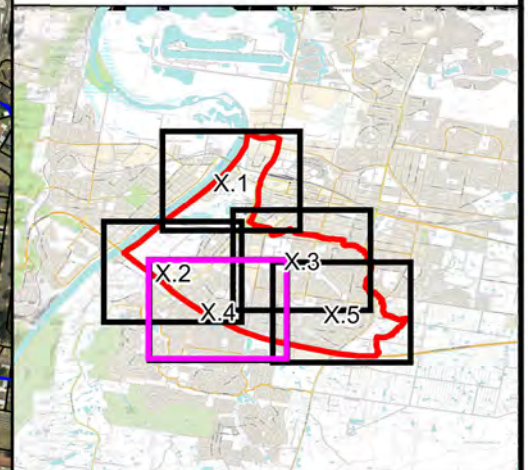
Notes:
Aerial photograph date: 2016





**Figure 5.3:
Location of Drainage
Easements**

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File Name: Fig5.3 - Location of Drainage Easements.wor



LEGEND

-  Drainage Easement
-  Peach Tree & Lower Survivors Creek Study Area

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

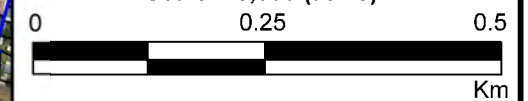

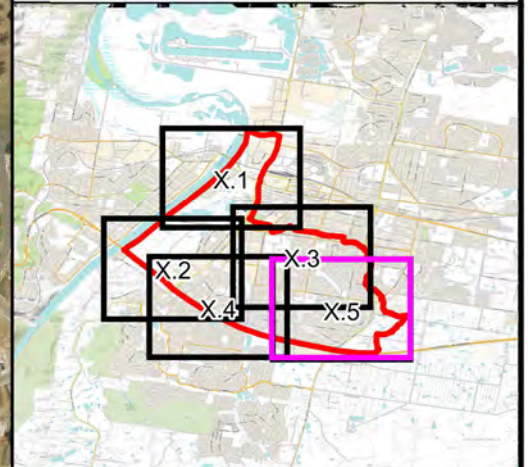




Figure 5.4:
Location of Drainage
Easements

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File Name: Fig5.4 - Location of Drainage
Easements.wor



LEGEND

-  Drainage Easement
-  Peach Tree & Lower Survivors Creek Study Area

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

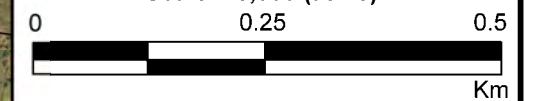



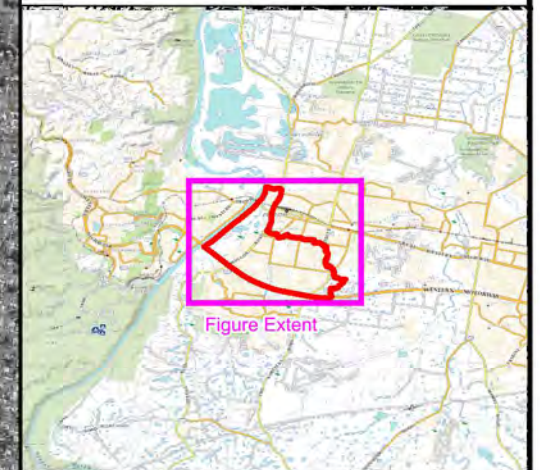
Figure 5.5:
Location of Drainage
Easements

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Sydney, NSW 2000

File Name: Fig5.5 - Location of Drainage
Easements.wor





LEGEND

- Surveyed Structure
- Surveyed Cross Section

Notes:
Aerial photograph date: 2016



Scale 1:20,000 (at A3)

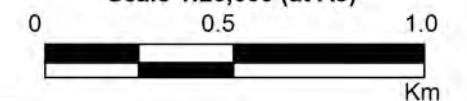


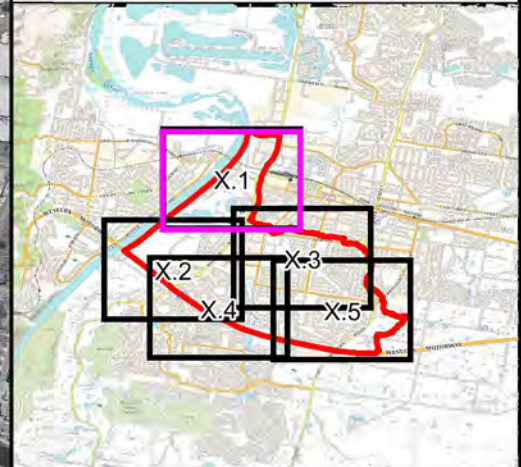
Figure 6:
Data Collected
for the Study

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File Name: Fig6 - Data collected
the study figure.wor

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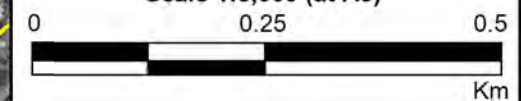
LEGEND

- ▭ XP - RAFTS Node Subcatchment Boundaries
- XP - RAFTS Node
- ▲ XP - RAFTS Basin
- XP - RAFTS Link

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 7.1:
XP-RAFTS Model
Layout**

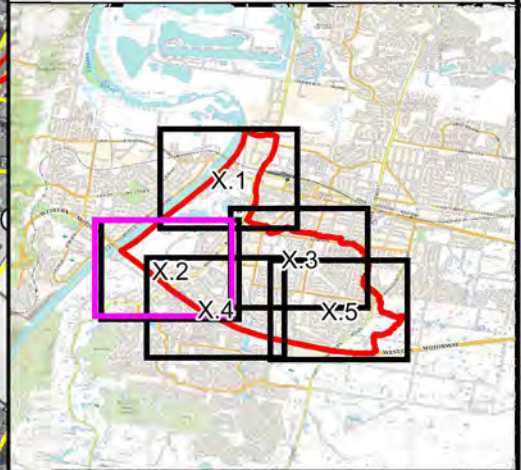
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File Name: Fig7.1 - XP-RAFTS Layout.wor



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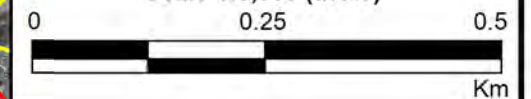
LEGEND

- XP - RAFTS Node Subcatchment Boundaries
- XP - RAFTS Node
- XP - RAFTS Basin
- XP - RAFTS Link

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



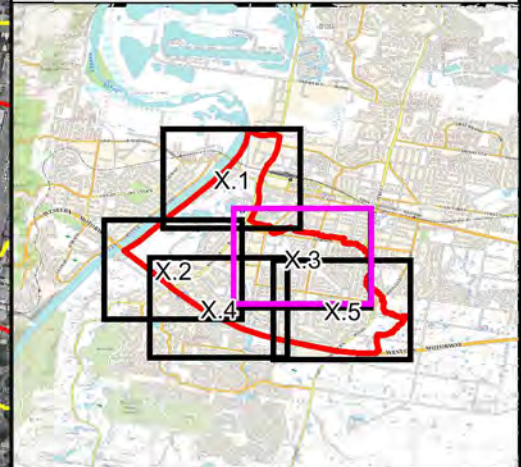
**Figure 7.2:
XP-RAFTS Model
Layout**

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File Name: Fig7.2 - XP-RAFTS Layout.wor

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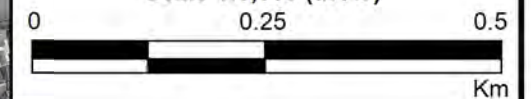
LEGEND

- XP - RAFTS Node
- Subcatchment Boundaries
- XP - RAFTS Node
- XP - RAFTS Basin
- XP - RAFTS Link

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



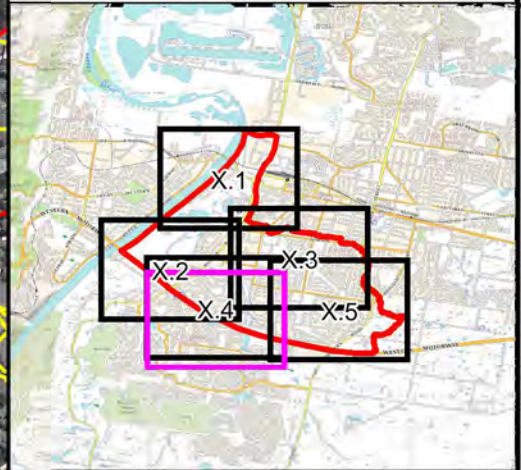
**Figure 7.3:
XP-RAFTS Model
Layout**

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File Name: Fig7.3 - XP-RAFTS Layout.wor

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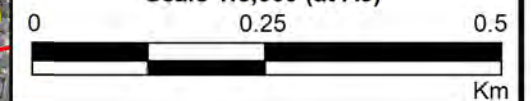
LEGEND

- XP - RAFTS Node
- Subcatchment Boundaries
- XP - RAFTS Node
- XP - RAFTS Basin
- XP - RAFTS Link

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



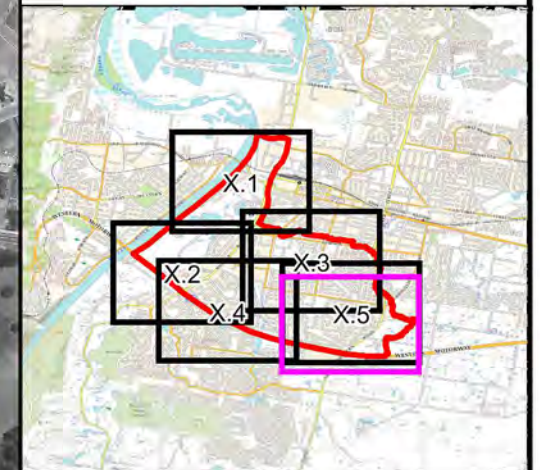
**Figure 7.4:
XP-RAFTS Model
Layout**

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File Name: Fig7.4 - XP-RAFTS Layout.wor

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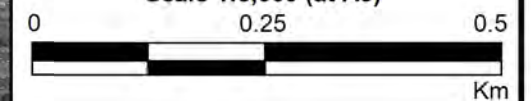
LEGEND

- XP - RAFTS Node Subcatchment Boundaries
- XP - RAFTS Node
- ▲ XP - RAFTS Basin
- XP - RAFTS Link

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 7.5:
XP-RAFTS Model
Layout**

Prepared By:

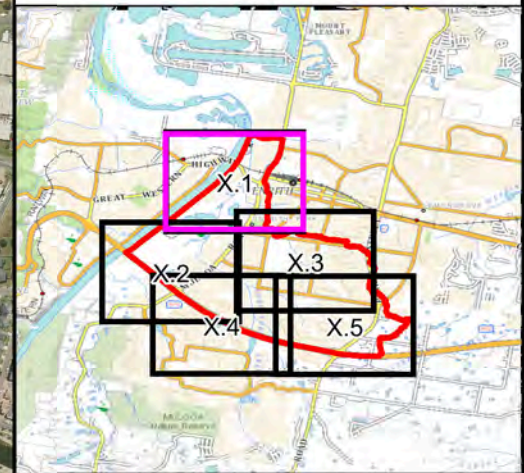
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File Name: Fig7.5 - XP-RAFTS Layout.wor





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LEGEND

- 1D Domain
- 2D Domain
- Stormwater Pit
- Stormwater Pipe
- Bridge
- Culvert
- Cross Section

Notes:
Aerial photograph date: 2016

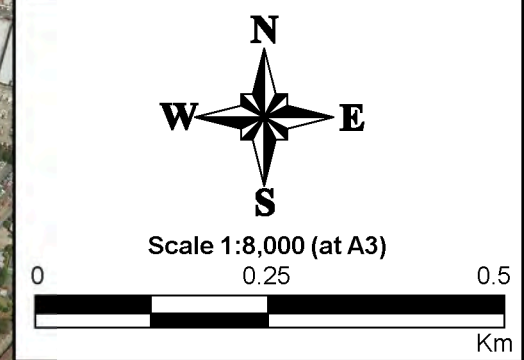
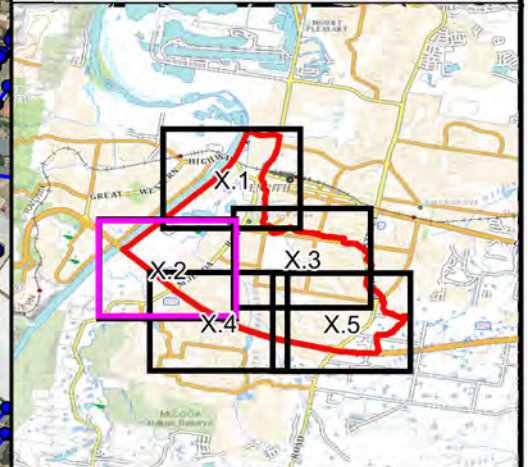


Figure 8.1:
TUFLOW Model
Layout

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File Name: Fig8.1 - TUFLOW Model
Layout.wor

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LEGEND

-  1D Domain
-  2D Domain
-  Stormwater Pit
-  Stormwater Pipe
-  Bridge
-  Culvert
-  Cross Section

Notes:
Aerial photograph date: 2016




Scale 1:8,000 (at A3)

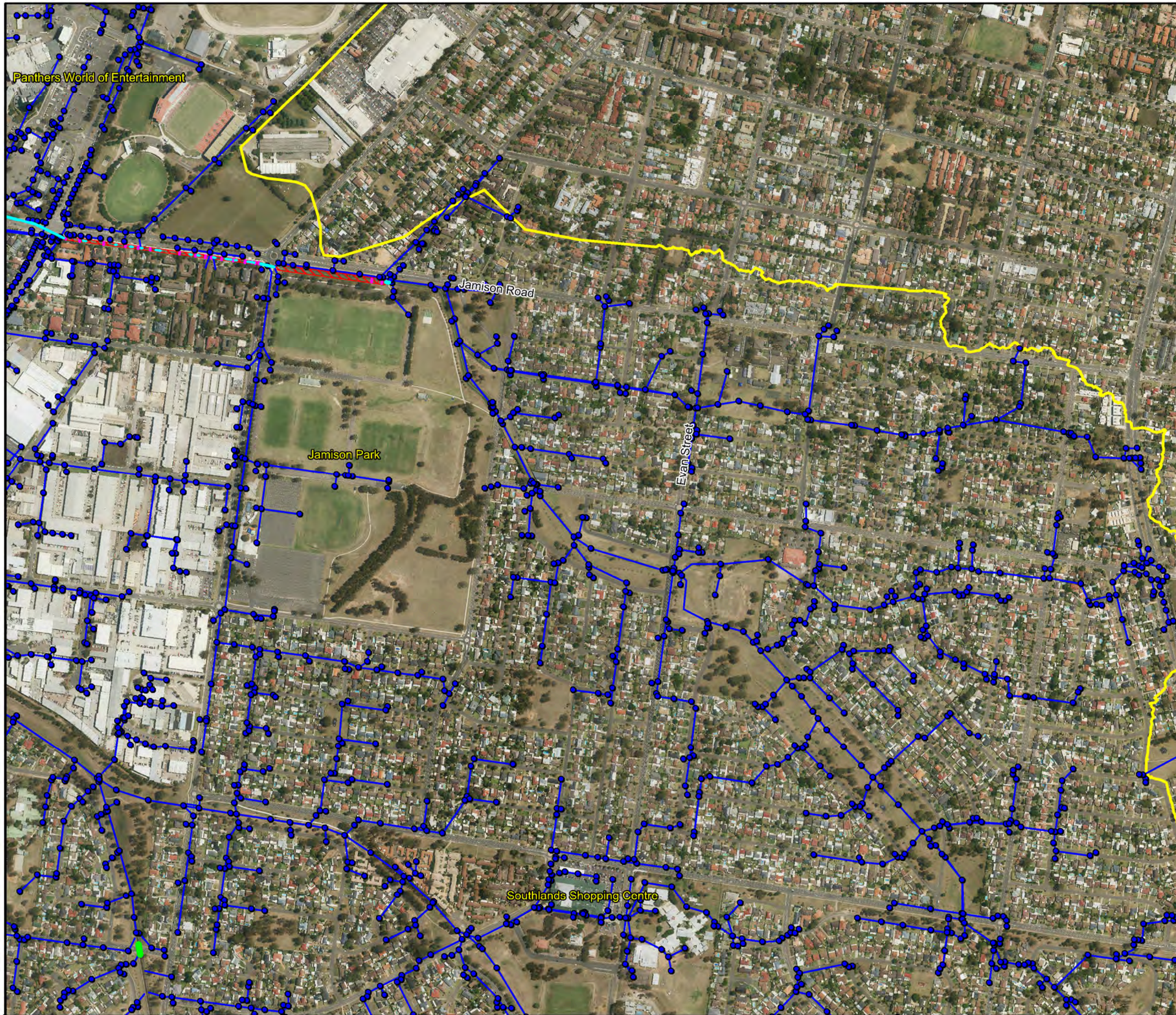


Figure 8.2:
TUFLOW Model
Layout

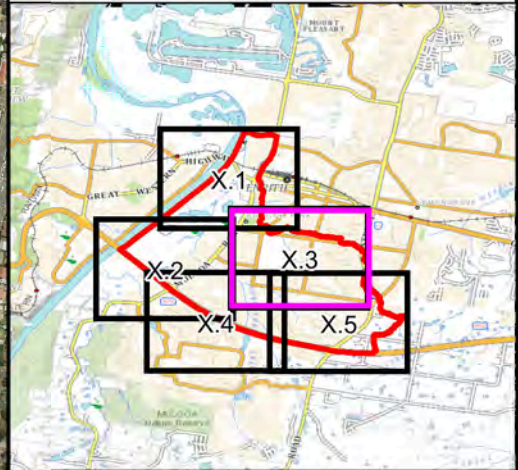
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File Name: Fig8.2 - TUFLOW Model
Layout.wor



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LEGEND

- 1D Domain
- 2D Domain
- Stormwater Pit
- Stormwater Pipe
- Bridge
- Culvert
- Cross Section

Notes:
Aerial photograph date: 2016

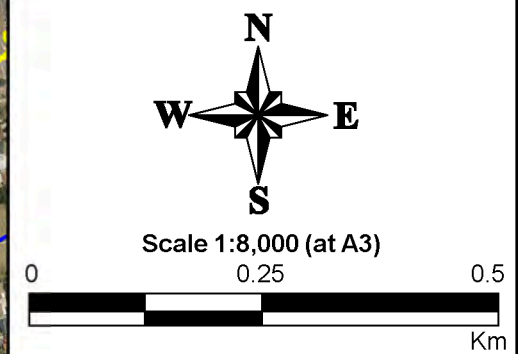
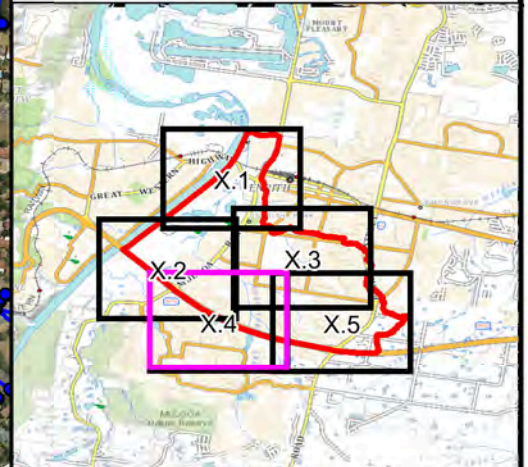


Figure 8.3:
TUFLOW Model
Layout

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Sydney, NSW 2000

File Name: Fig8.3 - TUFLOW Model
Layout.wor

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LEGEND

- 1D Domain
- 2D Domain
- Stormwater Pit
- Stormwater Pipe
- Bridge
- Culvert
- Cross Section

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



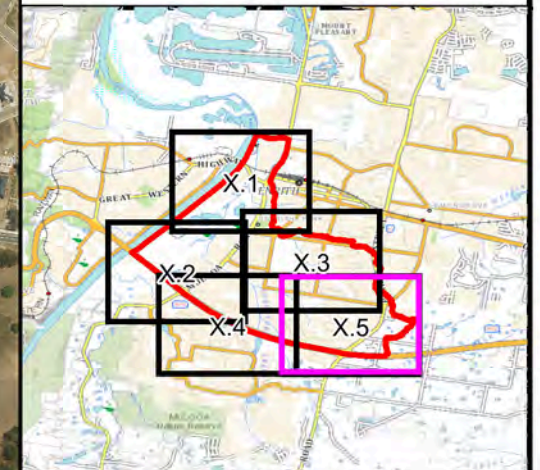
Figure 8.4:
TUFLOW Model
Layout

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Catchment Simulation Solutions
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Sydney, NSW 2000

File Name: Fig8.4 - TUFLOW Model
Layout.wor

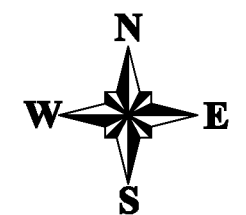
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LEGEND

-  1D Domain
-  2D Domain
-  Stormwater Pit
-  Stormwater Pipe
-  Bridge
-  Culvert
-  Cross Section

Notes:
Aerial photograph date: 2016




Scale 1:8,000 (at A3)



Figure 8.5:
TUFLOW Model
Layout

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Sydney, NSW 2000

File Name: Fig8.5 - TUFLOW Model
Layout.wor





VALIDATION MAPS





LEGEND

- Study Area
 - Catchment Boundary
 - Gauge Number - Name Rainfall (mrr)
 - 200 Rainfall Isohyet (mm)
- Rainfall Depth (mm)
- | | | | |
|--|-----|--|-----|
| | 20 | | 140 |
| | 40 | | 160 |
| | 60 | | 180 |
| | 80 | | 200 |
| | 100 | | 220 |
| | 120 | | |

Notes:



Scale 1:80,000 (at A3)

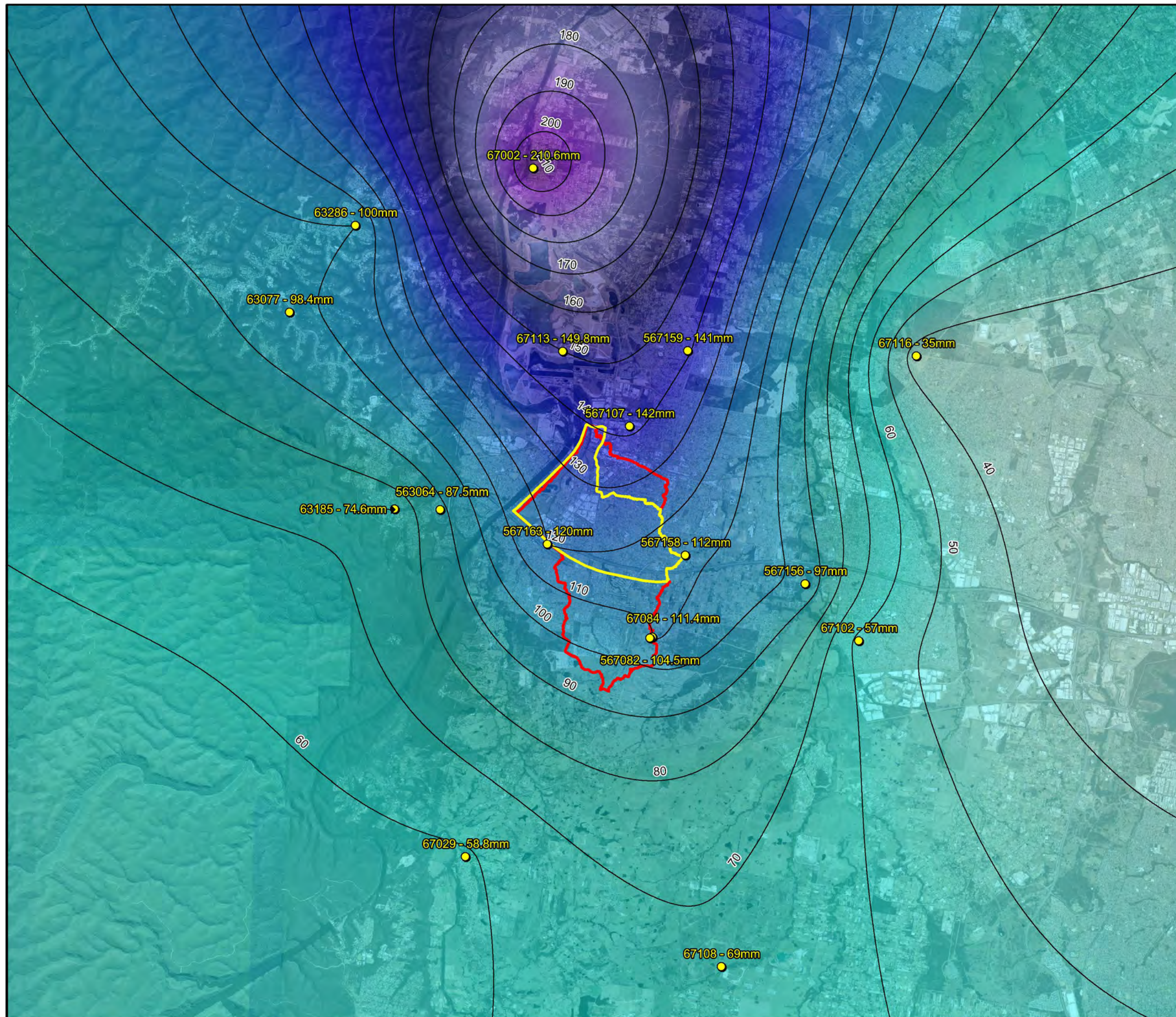


**Figure 9:
Rainfall Isohyet Map
for February 2012**

Prepared By:

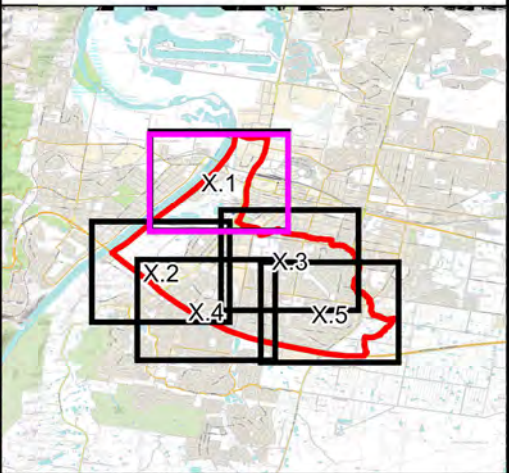
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Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig9 - Rainfall February 2012
.wor





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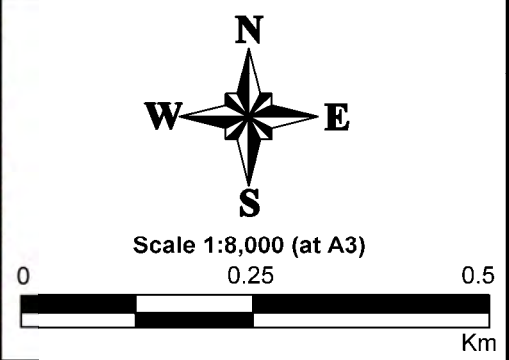
LEGEND

Reported Depth (m) Simulated Depth (m)

Depths (m)

	0.00
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



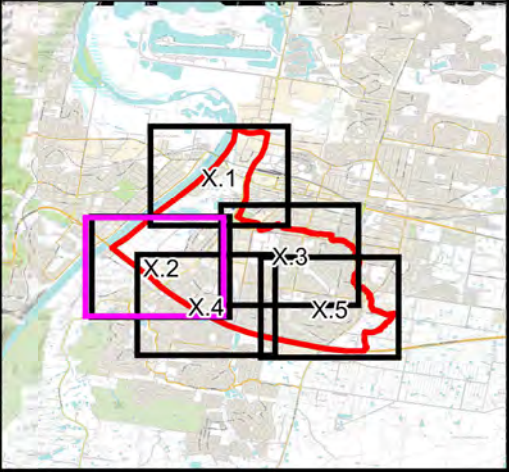
**Figure 10.1:
Simulated Floodwater
Depths for 2012 Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig10.1 - Simulated Floodwater
Depths for 2012 Flood.wor



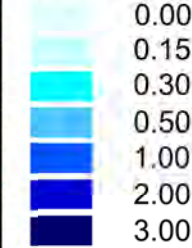
PENRITH CITY COUNCIL



LEGEND

Reported Depth (m) ● Simulated Depth (m)

Depths (m)



Notes:
Aerial photograph date: 2016

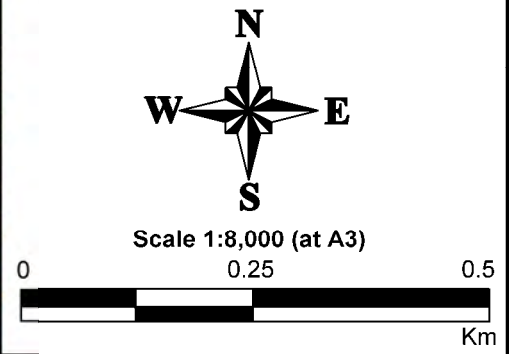
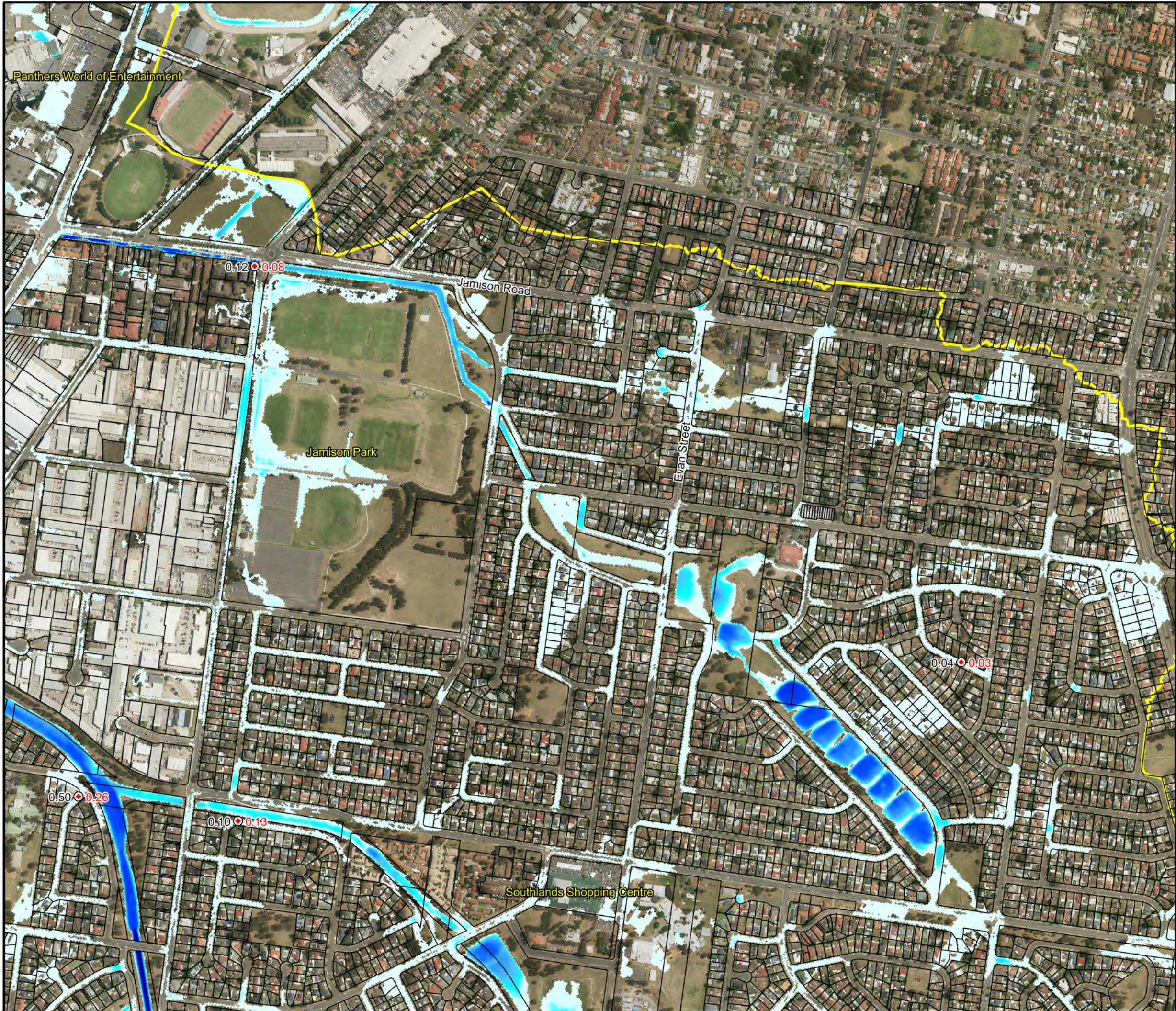


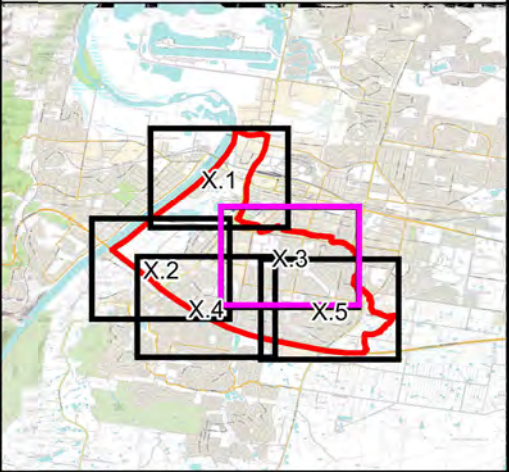
Figure 10.2:
Simulated Floodwater
Depths for 2012 Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig10.2 - Simulated Floodwater
Depths for 2012 Flood.wor



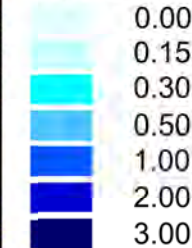
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LEGEND

Reported Depth (m) ● Simulated Depth (m) ■

Depths (m)



Notes:
Aerial photograph date: 2016

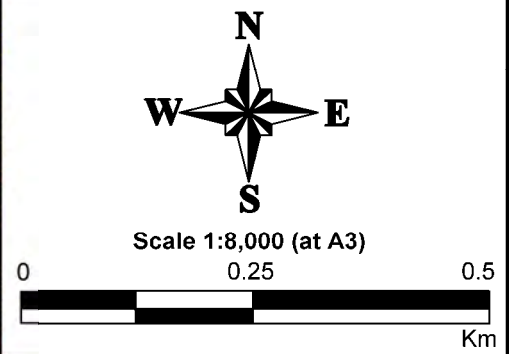
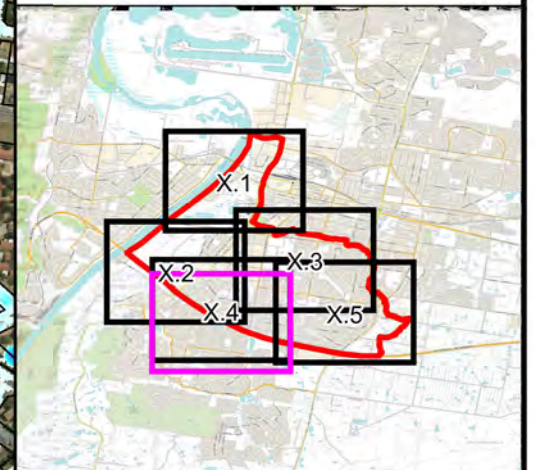


Figure 10.3:
Simulated Floodwater
Depths for 2012 Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig10.3 - Simulated Floodwater
Depths for 2012 Flood.wor



LEGEND

Reported Depth (m) ● Simulated Depth (m)

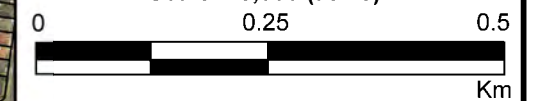
Depths (m)

0.00
0.15
0.30
0.50
1.00
2.00
3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 10.4:
Simulated Floodwater
Depths for 2012 Flood**

Prepared By:

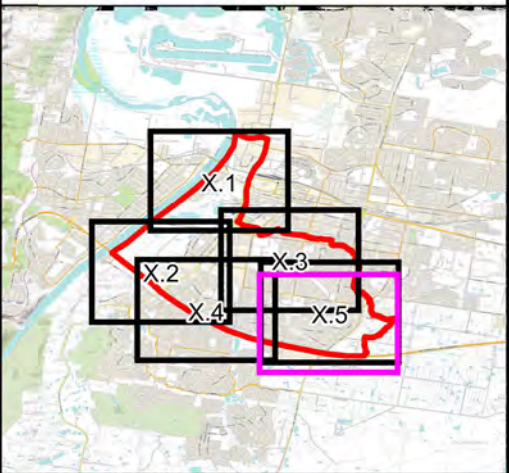
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig10.4 - Simulated Floodwater
Depths for 2012 Flood.wor





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LEGEND

Reported Depth (m)	Simulated Depth (m)
0.00	0.00
0.15	0.15
0.30	0.30
0.50	0.50
1.00	1.00
2.00	2.00
3.00	3.00

Notes:
Aerial photograph date: 2016

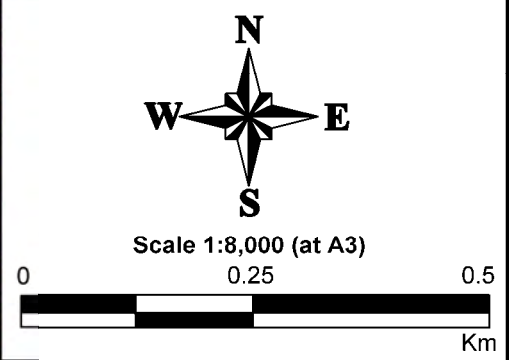
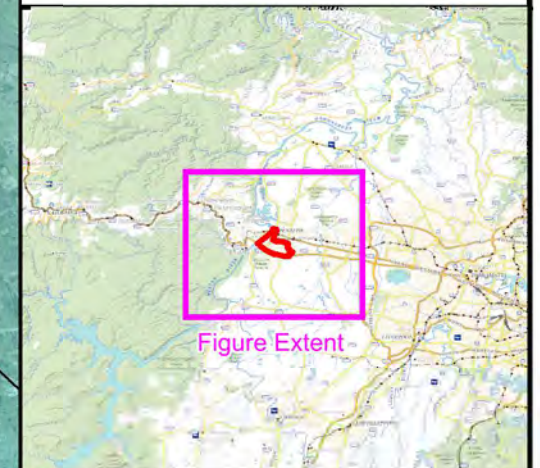


Figure 10.5:
Simulated Floodwater
Depths for 2012 Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig10.5 - Simulated Floodwater
Depths for 2012 Flood.wor



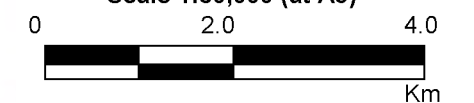
LEGEND

- Study Area
 - Catchment Boundary
 - Gauge Number - Name Rainfall (mm)
 - 200 Rainfall Isohyet (mm)
- Rainfall Depth (mm)
- | | | | |
|---|-----|---|-----|
| ■ | 20 | ■ | 140 |
| ■ | 40 | ■ | 160 |
| ■ | 60 | ■ | 180 |
| ■ | 80 | ■ | 200 |
| ■ | 100 | ■ | 220 |
| ■ | 120 | | |

Notes:



Scale 1:80,000 (at A3)

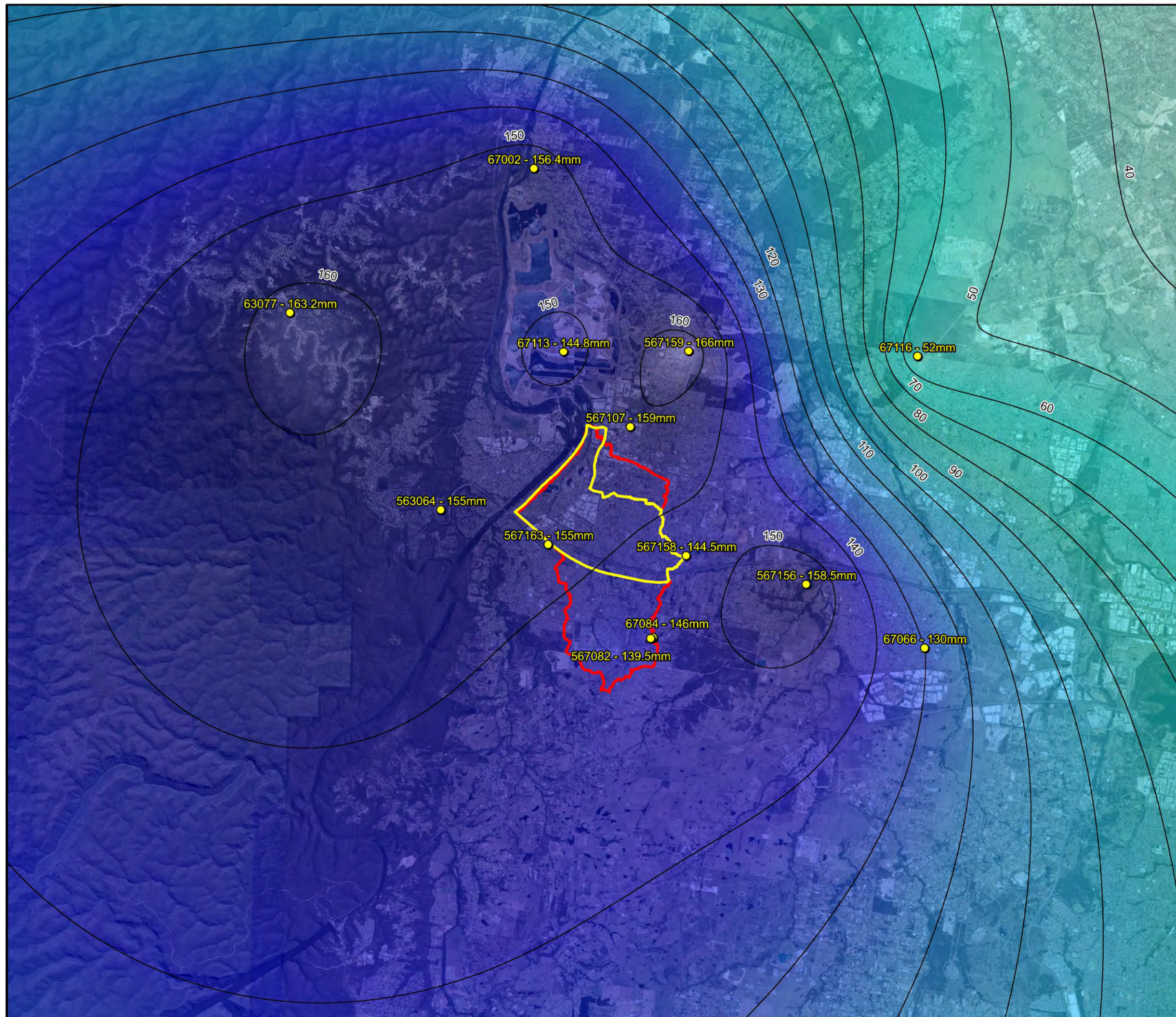


**Figure 11:
Rainfall Isohyet Map
for January 2016**

Prepared By:

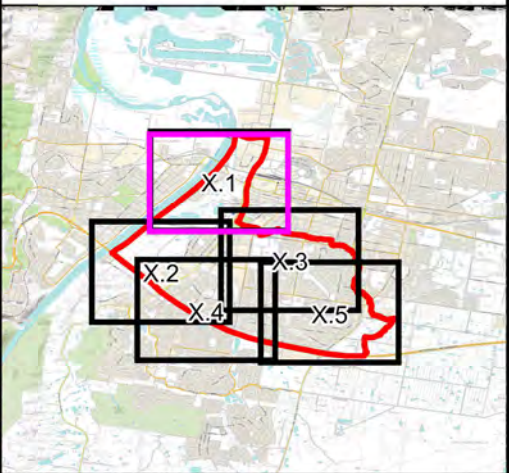
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig11 - Rainfall January 2016
.wor





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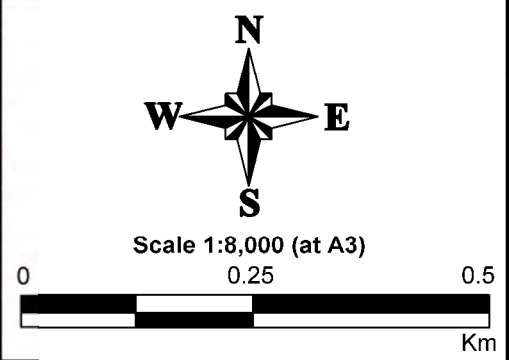
LEGEND

Reported Depth (m) Simulated Depth (m)

Depths (m)

	0.00
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



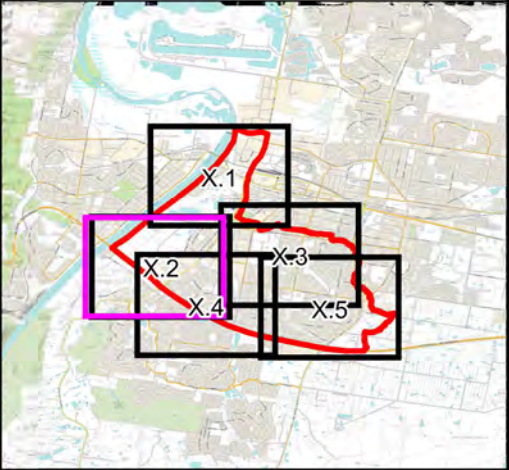
**Figure 12.1:
Simulated Floodwater
Depths for 2016 Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig12.1 - Simulated Floodwater
Depths for 2016 Flood.wor



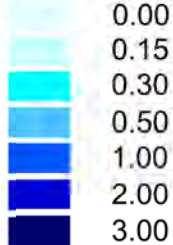
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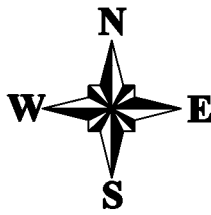
LEGEND

Reported Depth (m) ● Simulated Depth (m)

Depths (m)



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

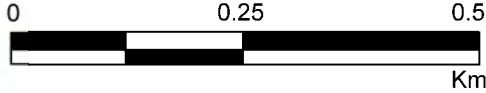

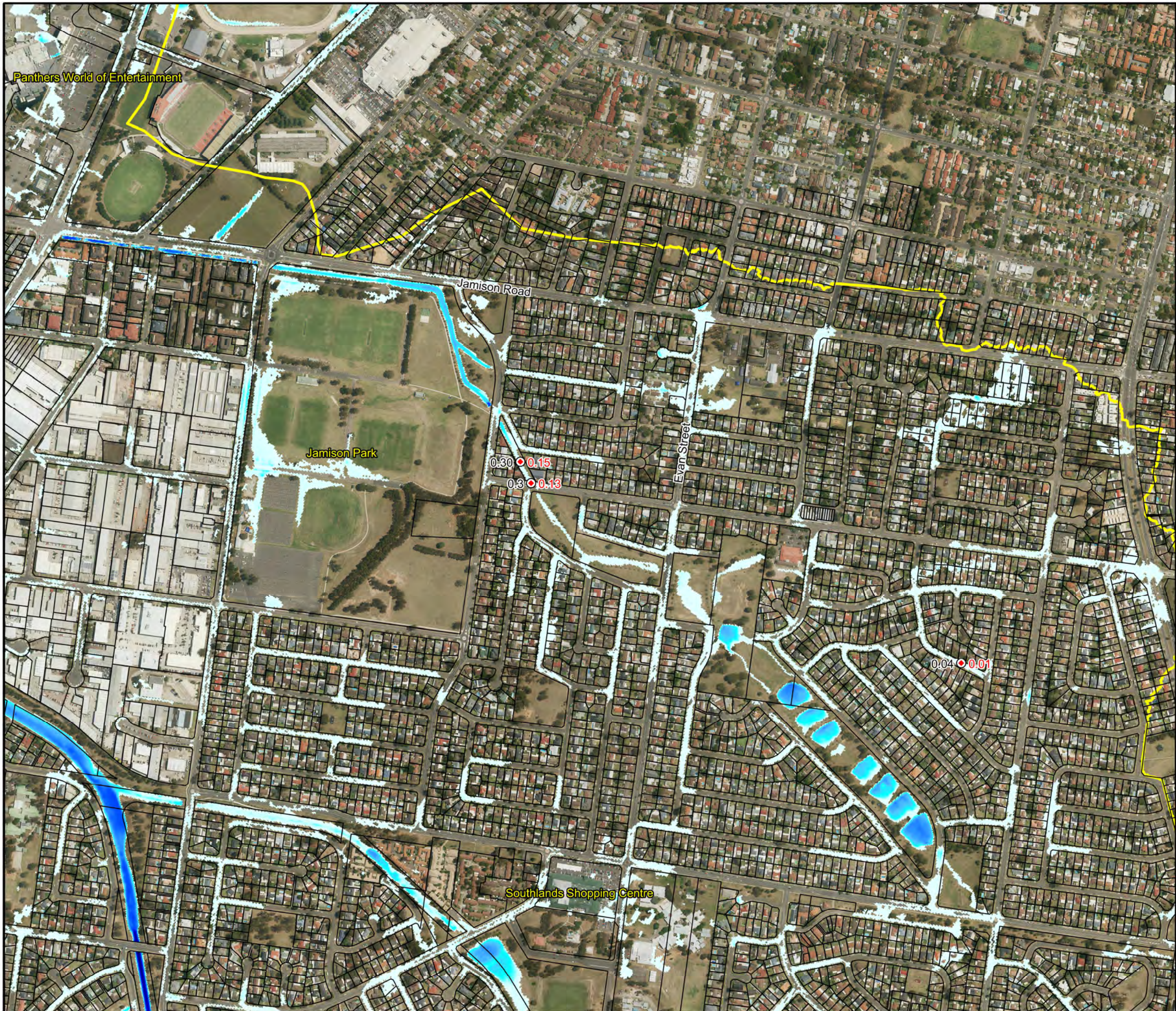


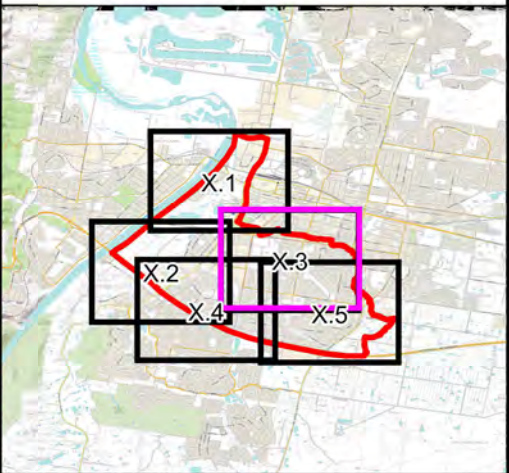
Figure 12.2:
Simulated Floodwater
Depths for 2016 Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig12.2 - Simulated Floodwater
Depths for 2016 Flood.wor

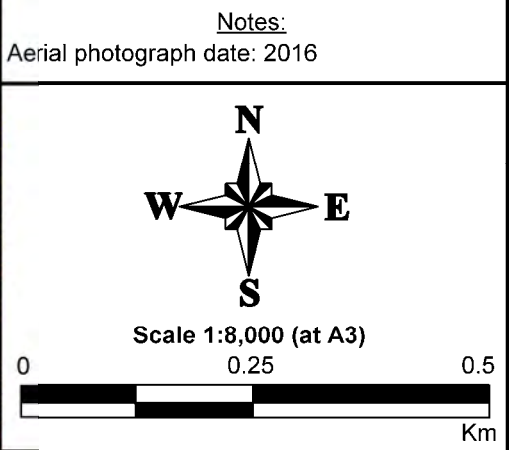


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LEGEND

Reported Depth (m)	Simulated Depth (m)
0.00	0.00
0.15	0.15
0.30	0.30
0.50	0.50
1.00	1.00
2.00	2.00
3.00	3.00

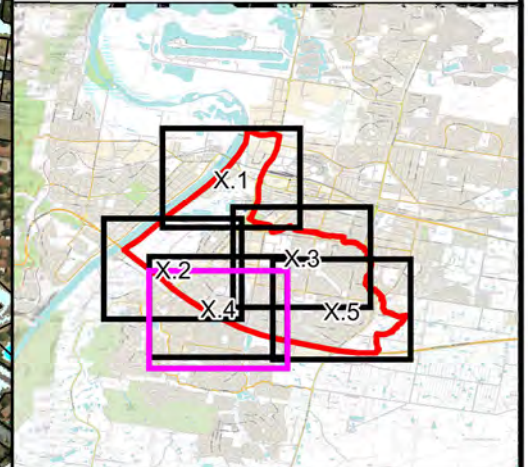


**Figure 12.3:
Simulated Floodwater
Depths for 2016 Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig12.3 - Simulated Floodwater
Depths for 2016 Flood.wor

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LEGEND

Reported Depth (m) ● Simulated Depth (m)

Depths (m)

0.00
0.15
0.30
0.50
1.00
2.00
3.00

Notes:
Aerial photograph date: 2016




Scale 1:8,000 (at A3)

0 0.25 0.5
Km

**Figure 12.4:
Simulated Floodwater
Depths for 2016 Flood**

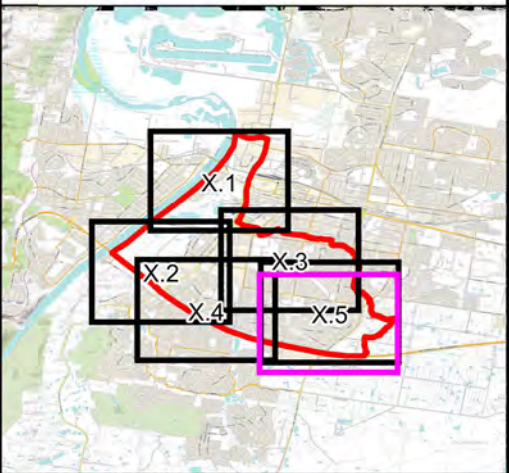
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig12.4 - Simulated Floodwater
Depths for 2016 Flood.wor



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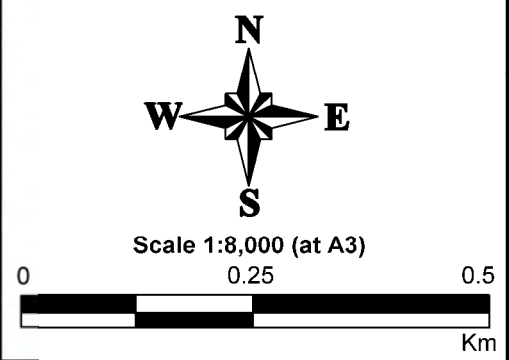
LEGEND

Reported Depth (m) ● Simulated Depth (m)

Depths (m)

0.00
0.15
0.30
0.50
1.00
2.00
3.00

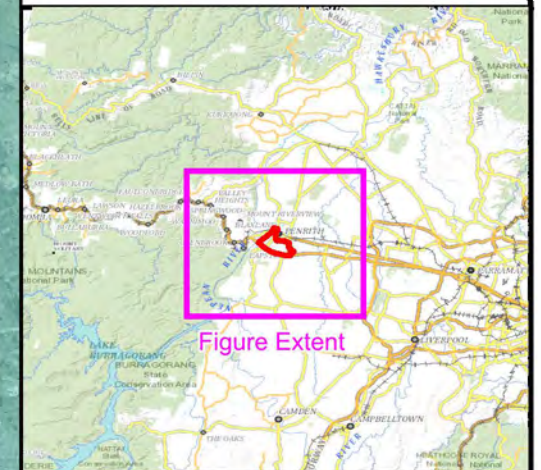
Notes:
Aerial photograph date: 2016



**Figure 12.5:
Simulated Floodwater
Depths for 2016 Flood**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig12.5 - Simulated Floodwater
Depths for 2016 Flood.wor



LEGEND

- Study Area
 - Catchment Boundary
 - Gauge Number - Name Rainfall (mm)
 - Rainfall Isohyet (mm)
- Rainfall Depth (mm)
- | | |
|-----|-----|
| 20 | 140 |
| 40 | 160 |
| 60 | 180 |
| 80 | 200 |
| 100 | 220 |
| 120 | |

Notes:



Scale 1:80,000 (at A3)

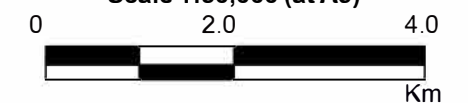

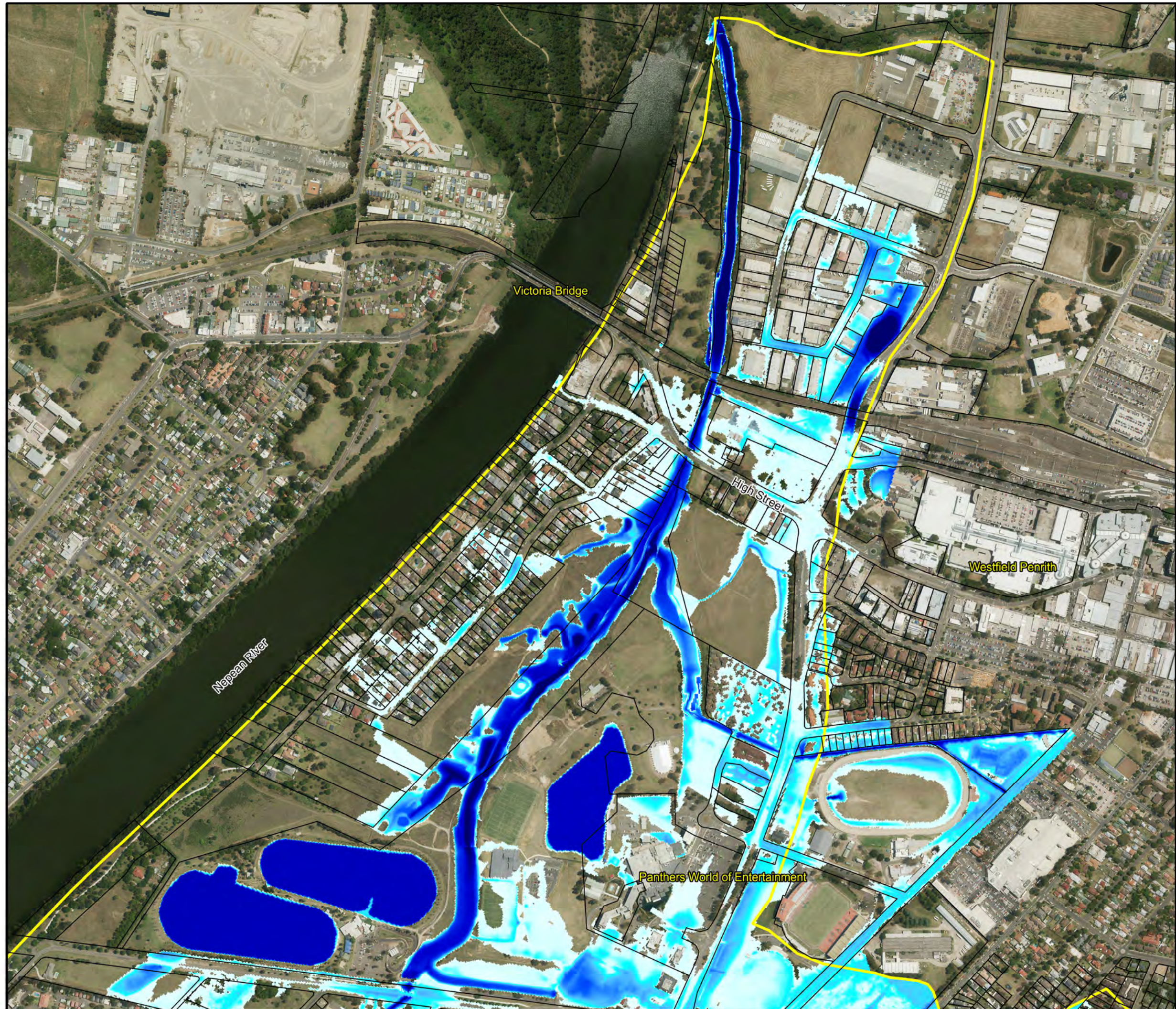


Figure 13:
Rainfall Isohyet Map
for February 2006

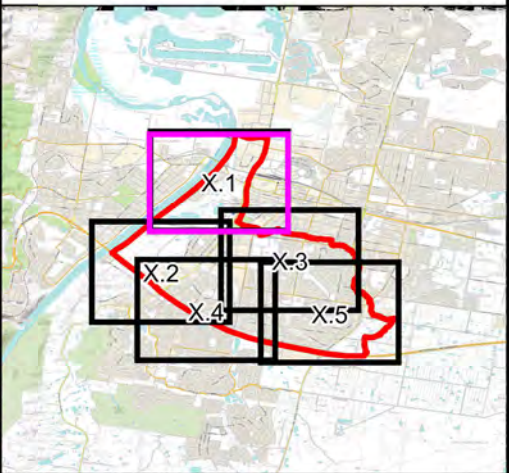
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig13 - Rainfall February 2006
.wor



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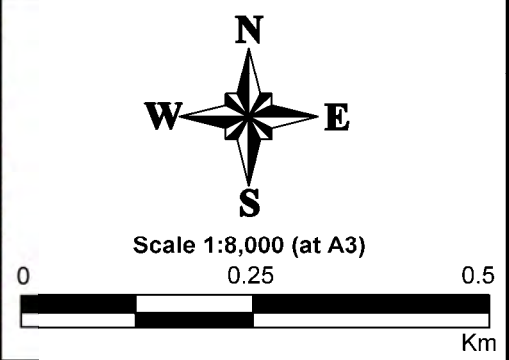
LEGEND

Reported Depth (m) Simulated Depth (m)

Depths (m)

	0.00
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



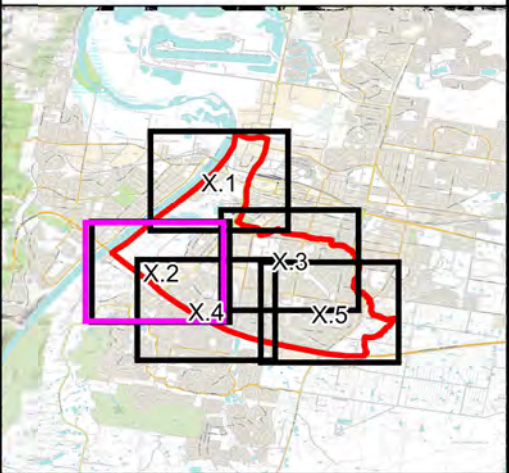
**Figure 14.1:
Simulated Floodwater
Depths for 2006 Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig14.1 - Simulated Floodwater
Depths for 2006 Flood.wor



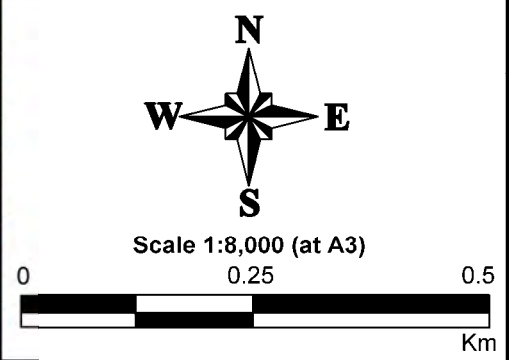
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LEGEND

Reported Depth (m)	Simulated Depth (m)
0.00	0.00
0.15	0.15
0.30	0.30
0.50	0.50
1.00	1.00
2.00	2.00
3.00	3.00

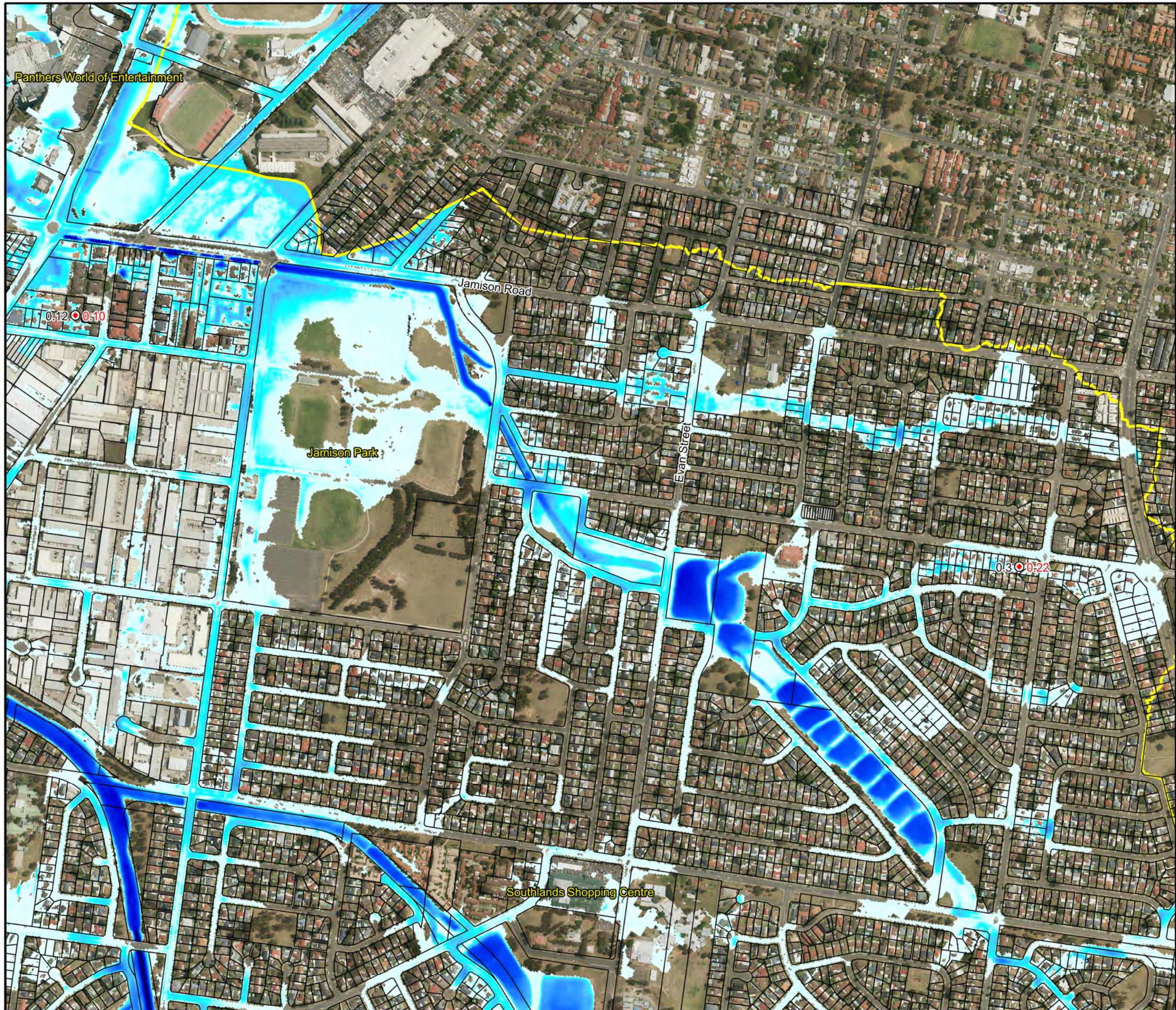
Notes:
Aerial photograph date: 2016



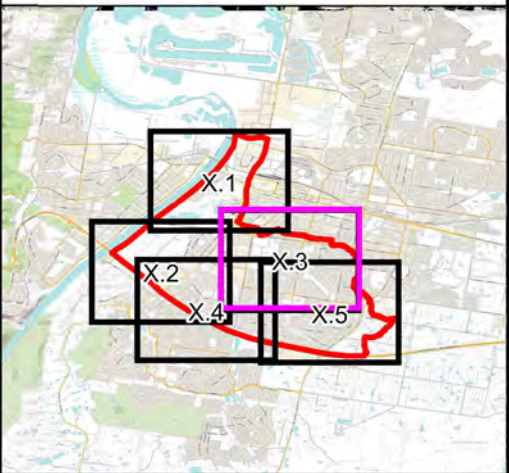
**Figure 14.2:
Simulated Floodwater
Depths for 2006 Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig14.2 - Simulated Floodwater
Depths for 2006 Flood.wor



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LEGEND

Reported Depth (m)	Simulated Depth (m)
0.00	0.00
0.15	0.15
0.30	0.30
0.50	0.50
1.00	1.00
2.00	2.00
3.00	3.00

Notes:
Aerial photograph date: 2016

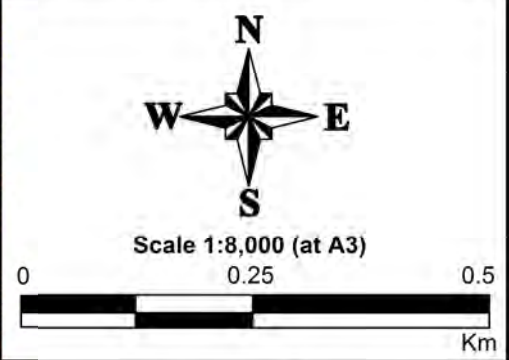
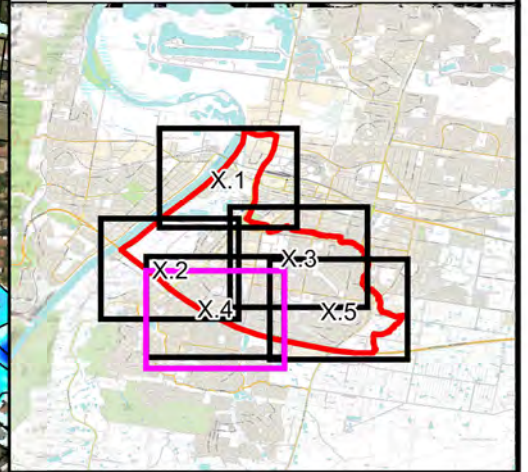


Figure 14.3:
Simulated Floodwater
Depths for 2006 Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig14.3 - Simulated Floodwater
Depths for 2006 Flood.wor

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LEGEND

Reported Depth (m) Simulated Depth (m)

Depths (m)

0.00
0.15
0.30
0.50
1.00
2.00
3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

0 0.25 0.5
Km

**Figure 14.4:
Simulated Floodwater
Depths for 2006 Flood**

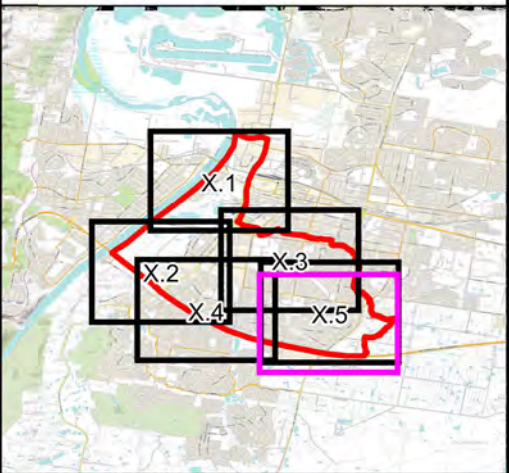
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig14.4 - Simulated Floodwater
Depths for 2006 Flood.wor



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LEGEND

Reported Depth (m)	Simulated Depth (m)
0.00	0.00
0.15	0.15
0.30	0.30
0.50	0.50
1.00	1.00
2.00	2.00
3.00	3.00

Notes:
Aerial photograph date: 2016

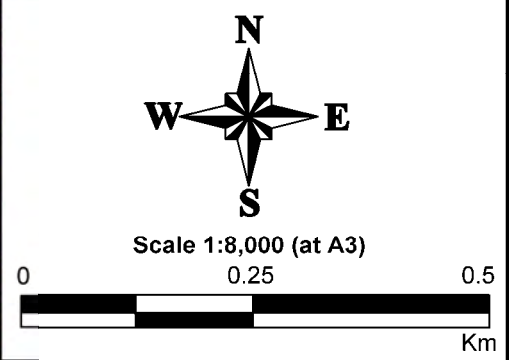


Figure 14.5:
Simulated Floodwater
Depths for 2006 Flood

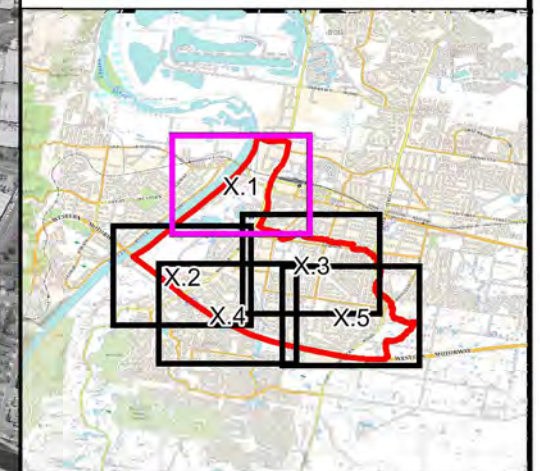
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig14.5 - Simulated Floodwater
Depths for 2006 Flood.wor



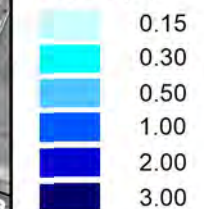
DESIGN FLOODWATER DEPTH MAPS





LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 15.1:
Peak Water Depths
for the 50% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig15.1 - Depths for 50% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

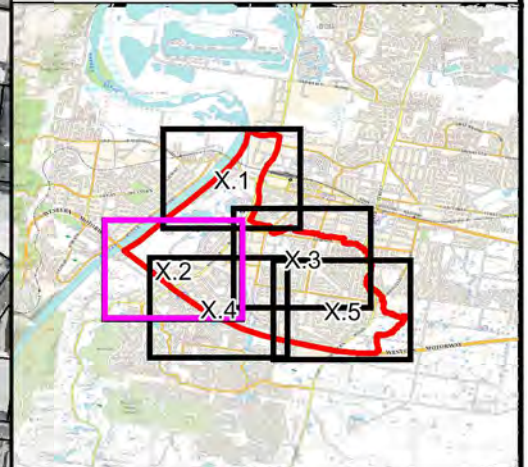
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

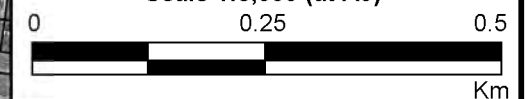


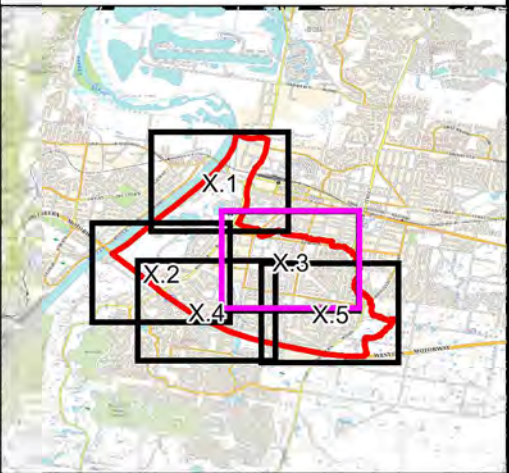
Figure 15.2:
Peak Water Depths
for the 50% AEP Local
Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig15.2 - Depths for 50% AEP
Flood.wor

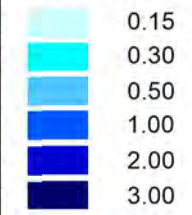


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LEGEND

Depths (m)



Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

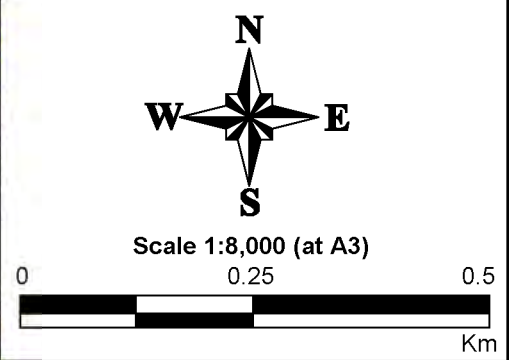
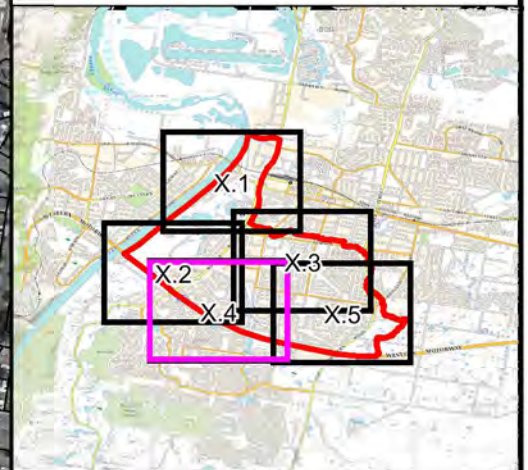


Figure 15.3:
Peak Water Depths
for the 50% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig15.3 - Depths for 50% AEP
Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



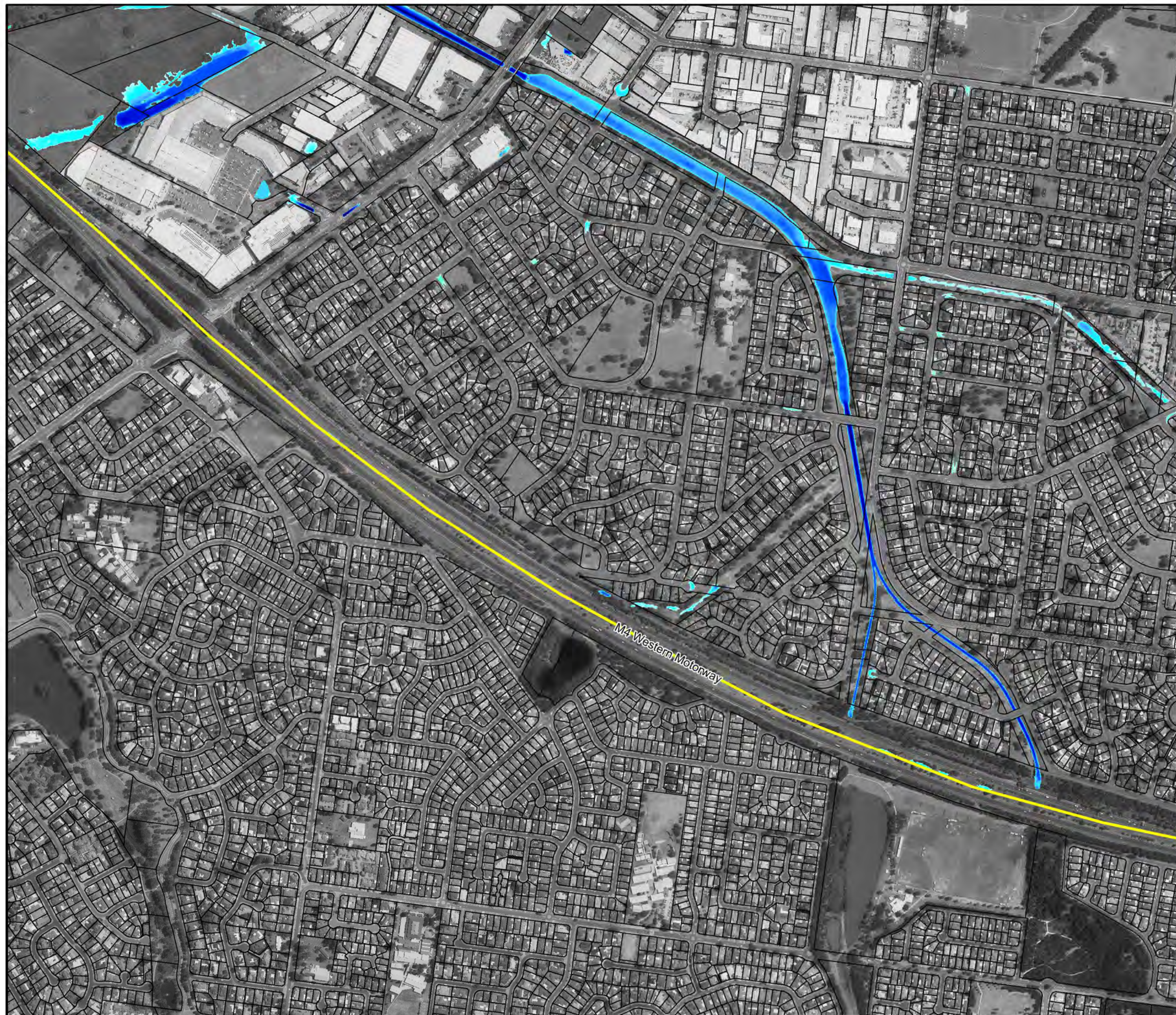
Scale 1:8,000 (at A3)

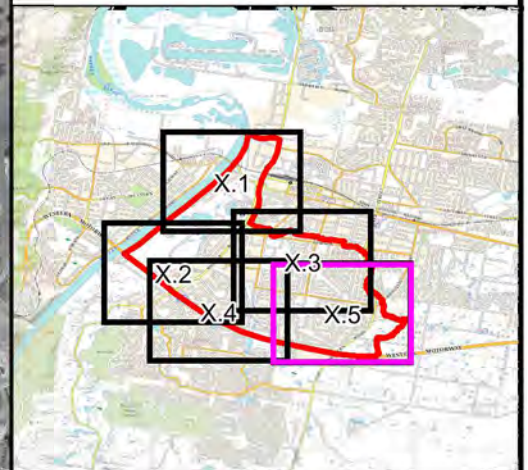


Figure 15.4:
Peak Water Depths
for the 50% AEP Local
Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig15.4 - Depths for 50% AEP
Flood.wor





LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



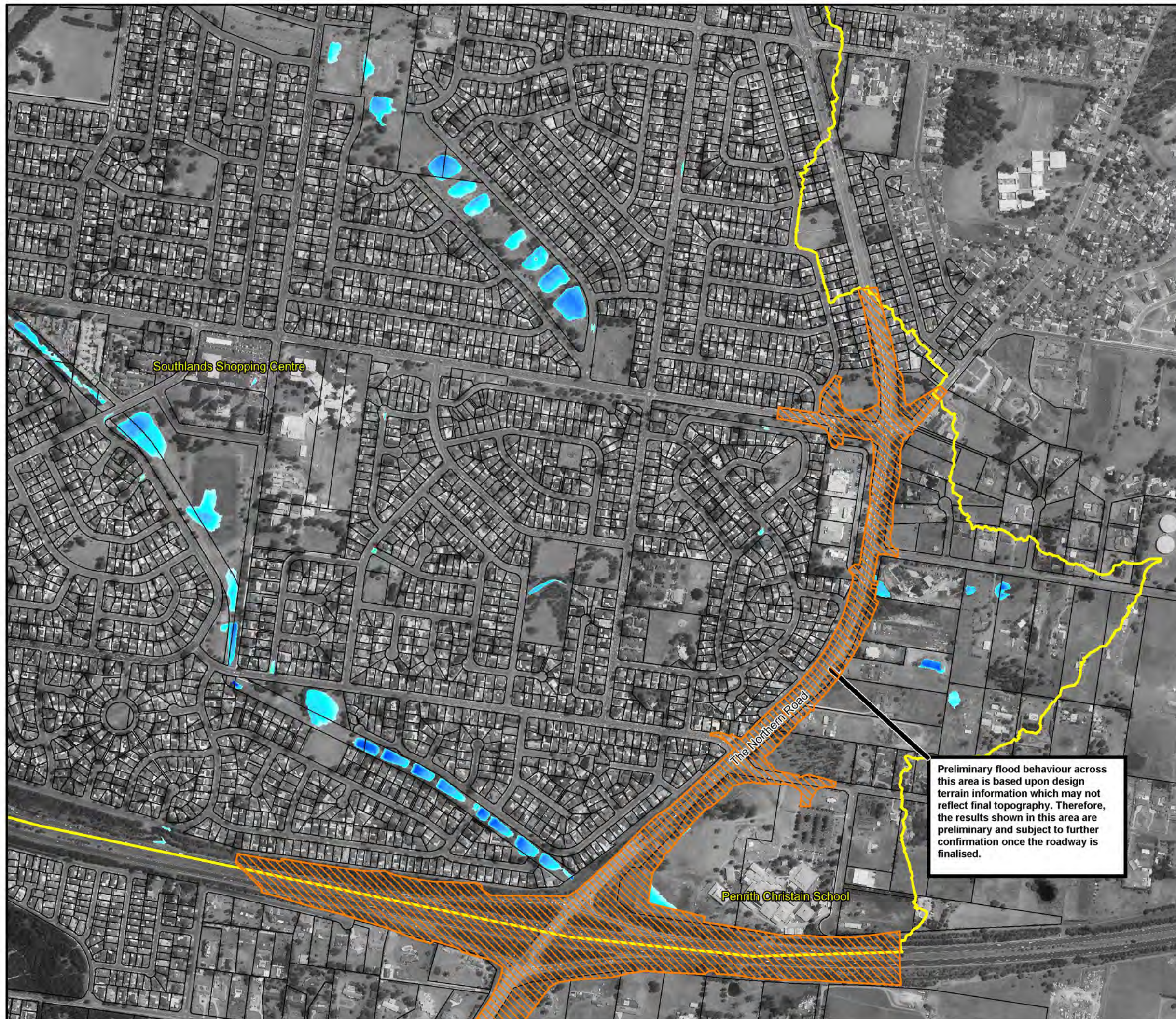
Scale 1:8,000 (at A3)

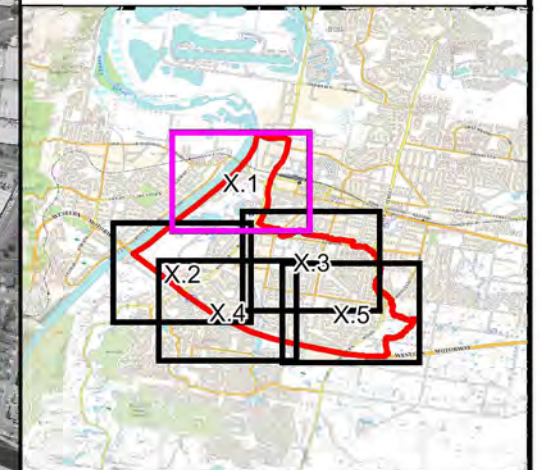


Figure 15.5:
Peak Water Depths
for the 50% AEP Local
Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

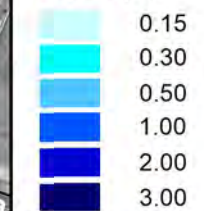
File Name: Fig15.5 - Depths for 50% AEP
Flood.wor





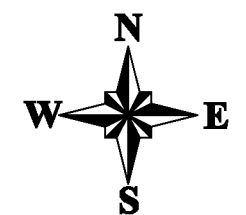
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 16.1:
Peak Water Depths
for the 20% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig16.1 - Depths for 20% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

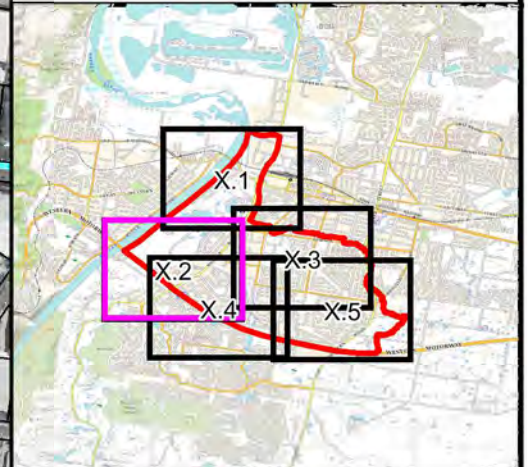
High Street

Westfield Penrith

Panthers World of Entertainment

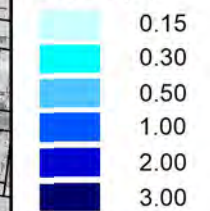
Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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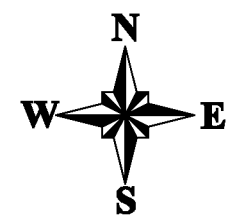
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

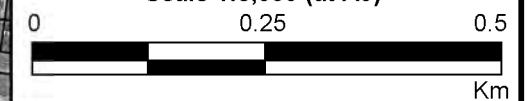



Figure 16.2:
Peak Water Depths
for the 20% AEP
Local Catchment Flood

Prepared By:

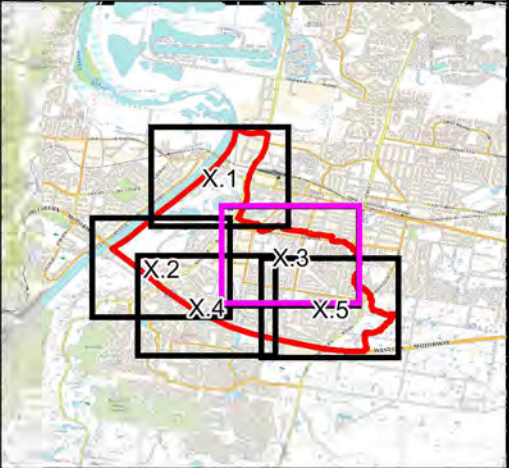
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig16.2 - Depths for 20% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

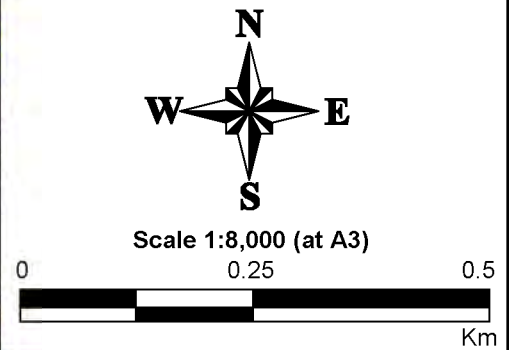
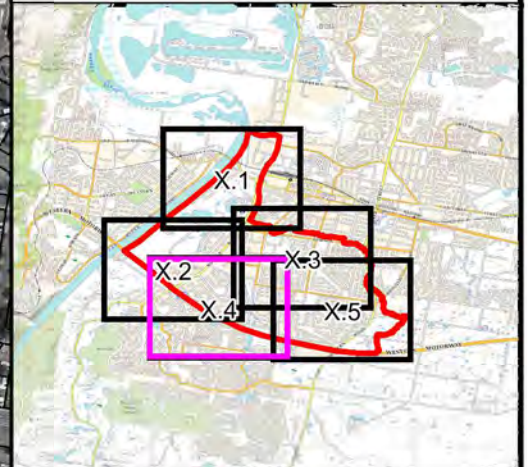


Figure 16.3:
Peak Water Depths
for the 20% AEP
Local Catchment Flood

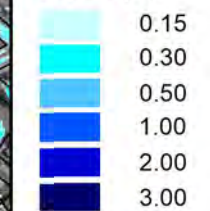
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig16.3 - Depths for 20% AEP Flood.wor



LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

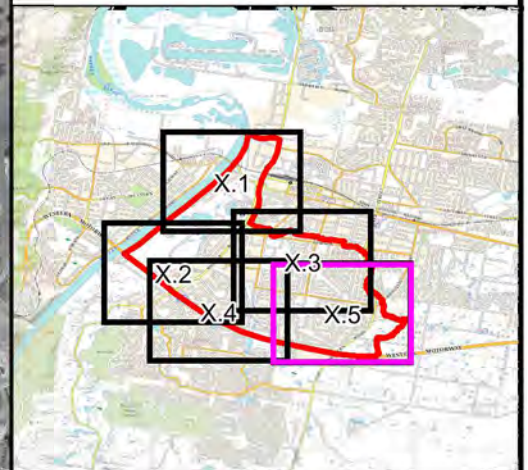


Figure 16.4:
Peak Water Depths
for the 20% AEP
Local Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig16.4 - Depths for 20% AEP
Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

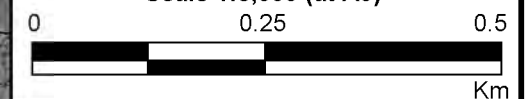
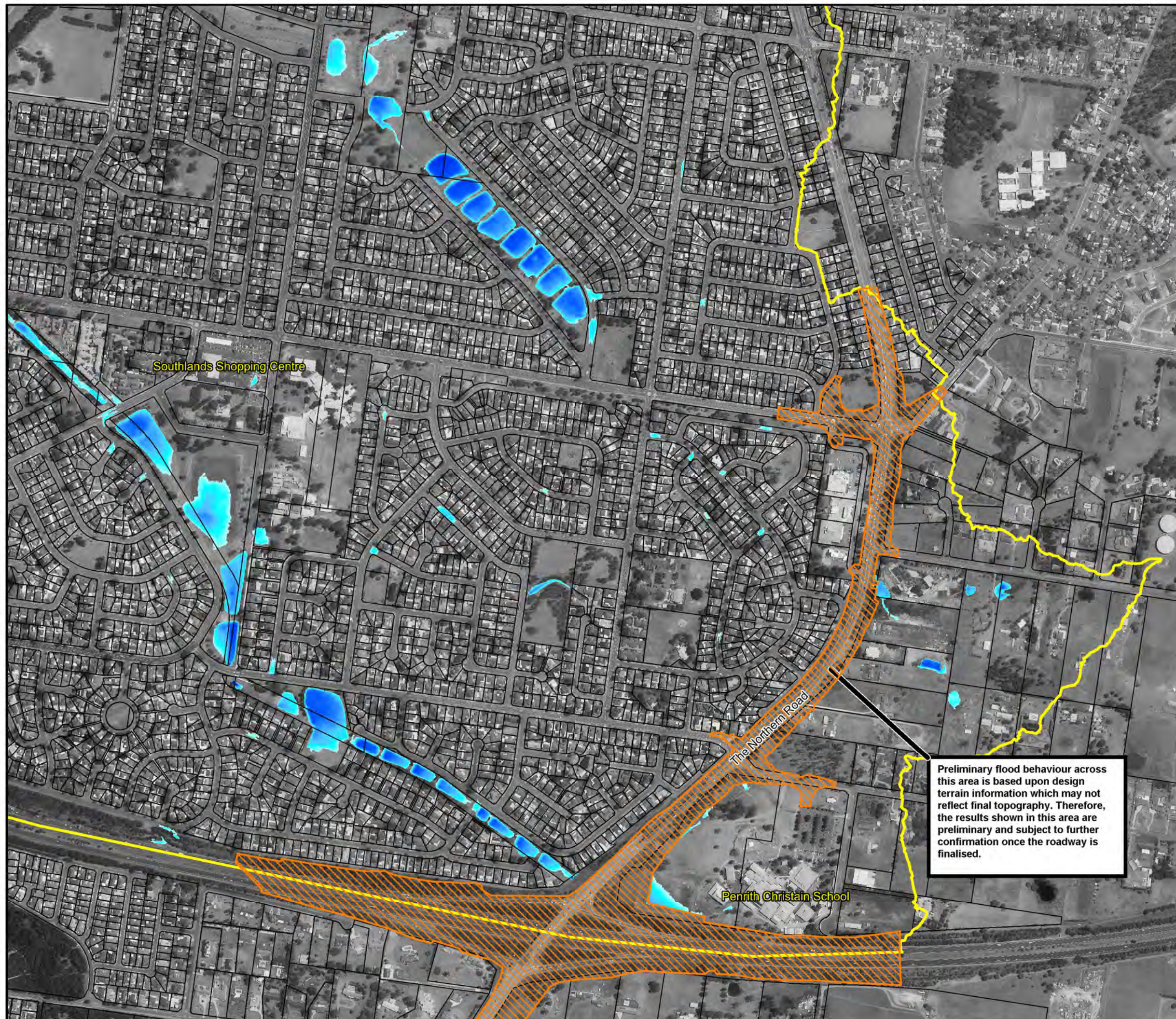
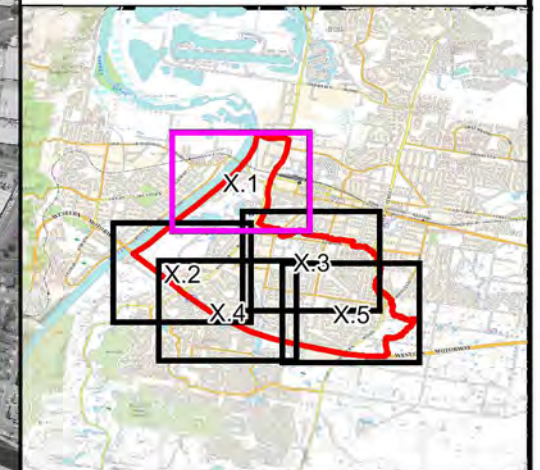


Figure 16.5:
Peak Water Depths
for the 20% AEP
Local Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

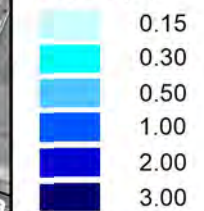
File Name: Fig16.5 - Depths for 20% AEP
Flood.wor





LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

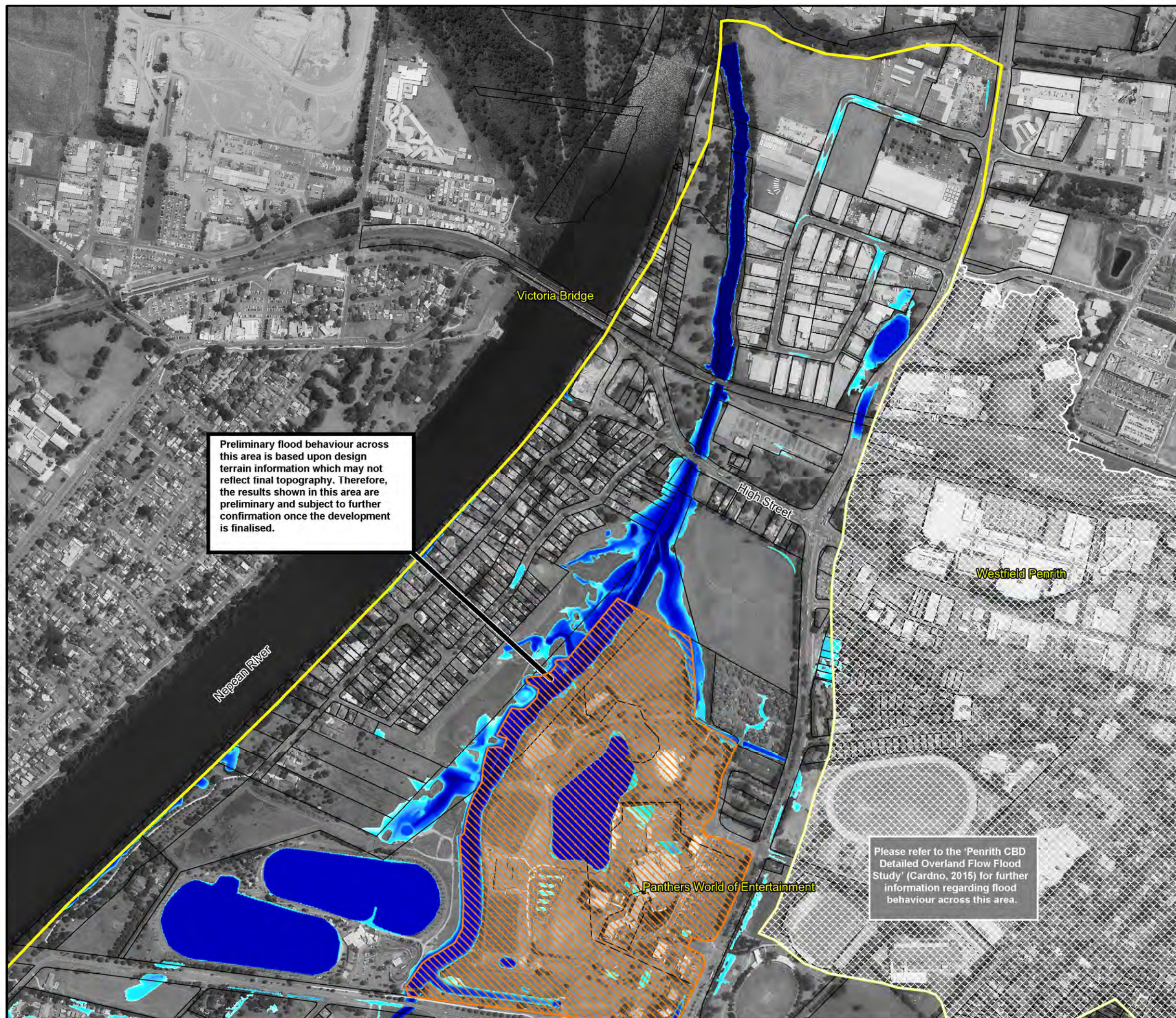


Figure 17.1:
Peak Water Depths
for the 10% AEP
Local Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

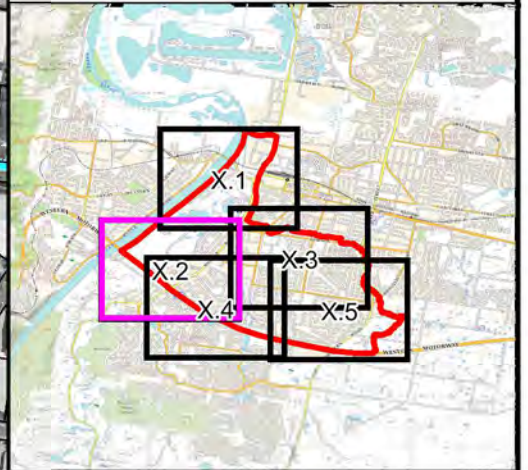
File Name: Fig17.1 - Depths for 10% AEP
Flood.wor



Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

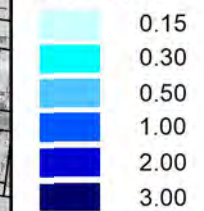
Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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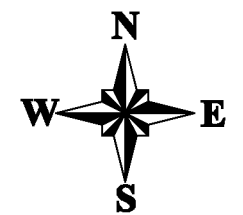
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



Figure 17.2:
Peak Water Depths
for the 10% AEP
Local Catchment Flood

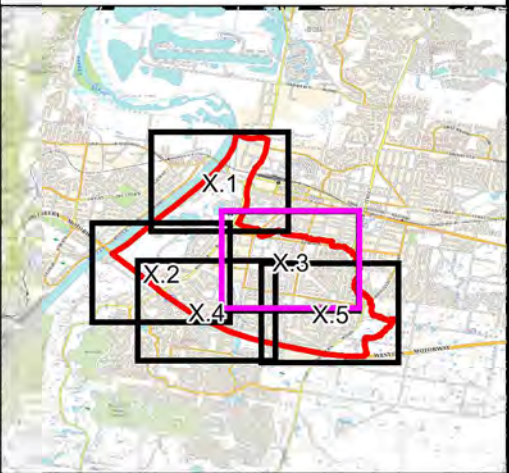
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig17.2 - Depths for 10% AEP
Flood.wor



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LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

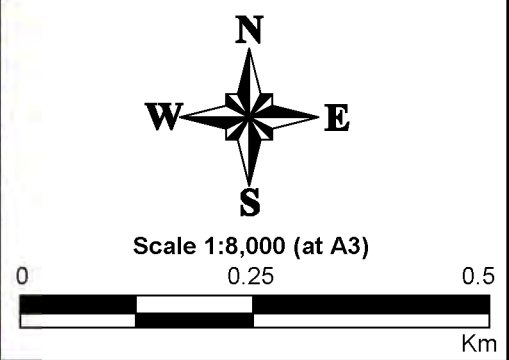
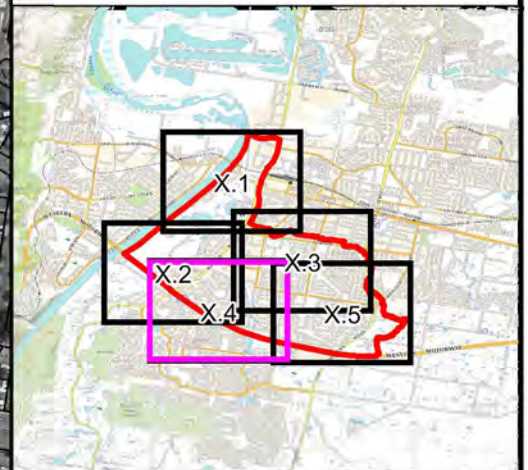


Figure 17.3:
Peak Water Depths
for the 10% AEP
Local Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig17.3 - Depths for 10% AEP
Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

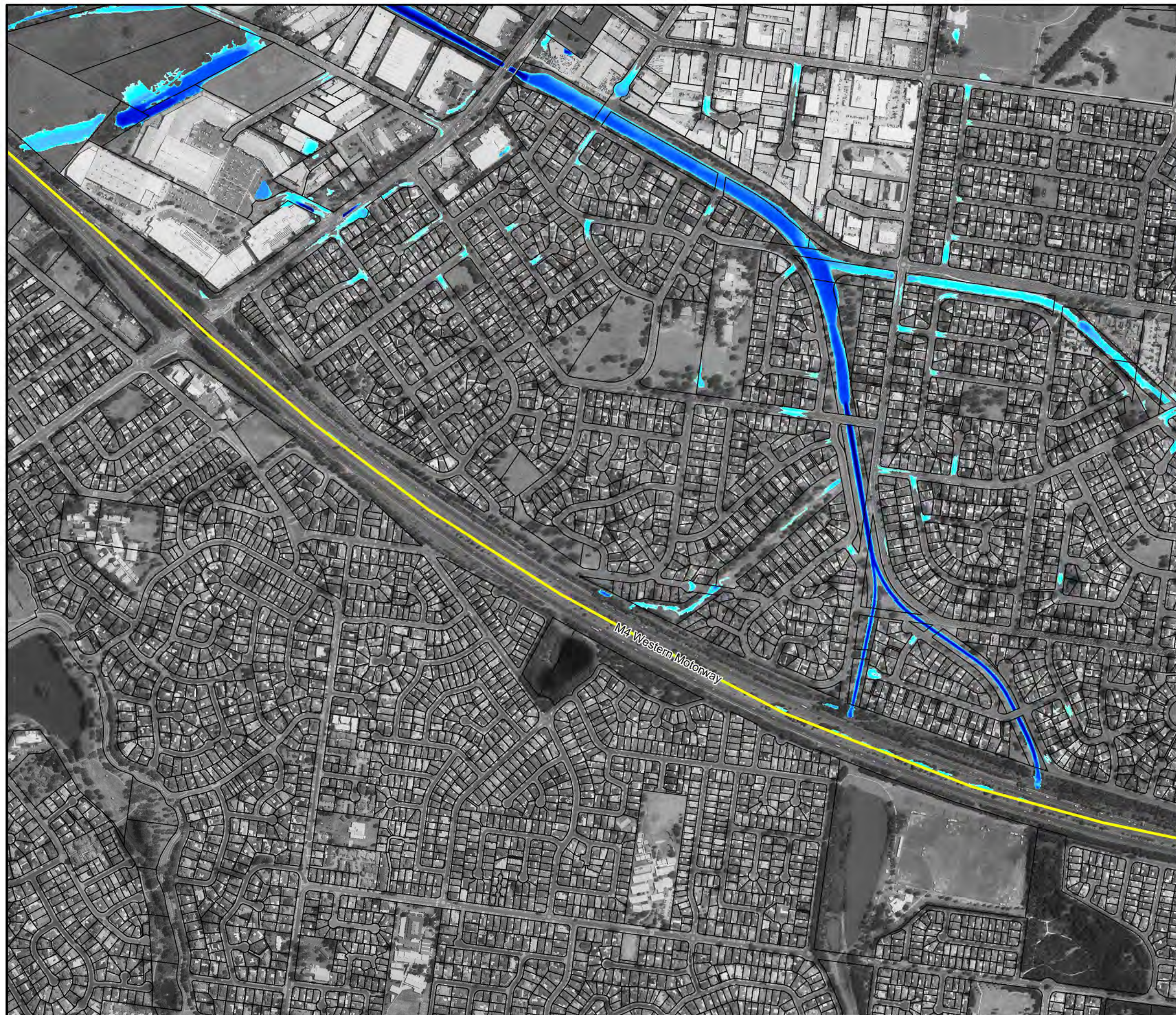


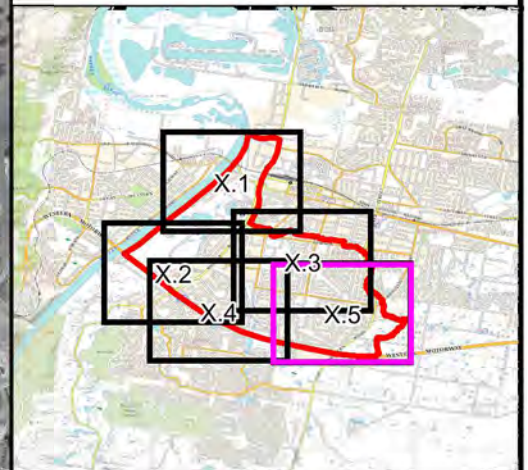
Figure 17.4:
Peak Water Depths
for the 10% AEP
Local Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig17.4 - Depths for 10% AEP
Flood.wor





LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



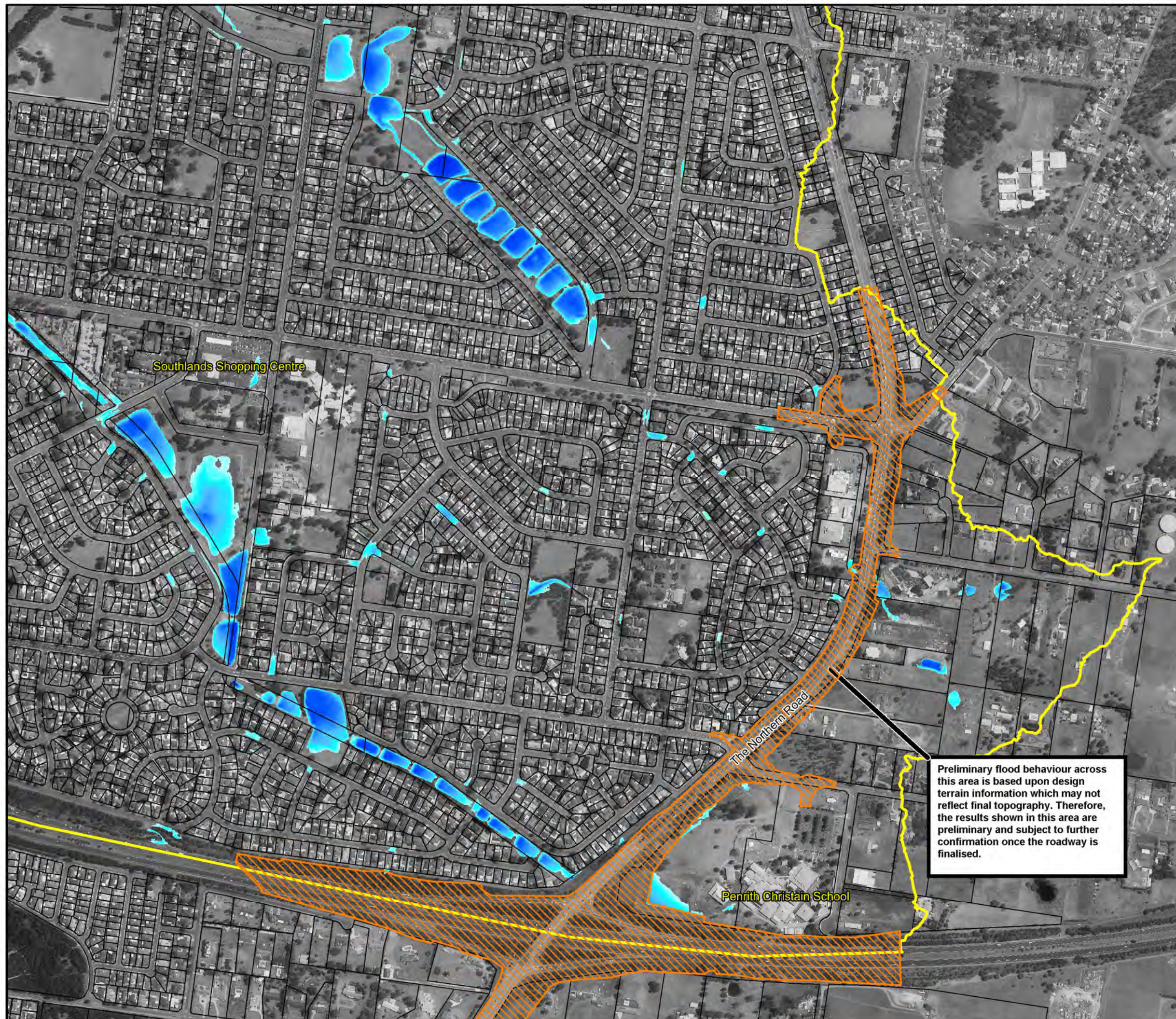
Scale 1:8,000 (at A3)

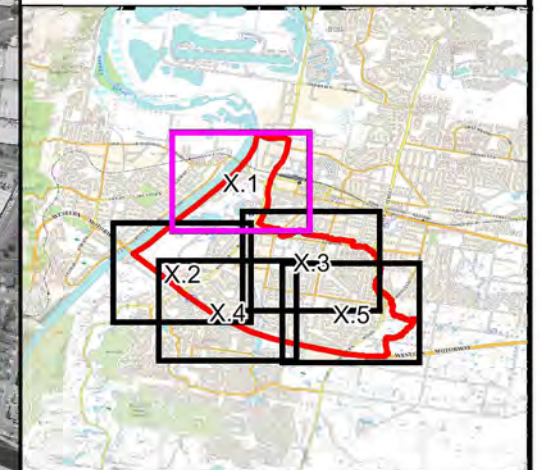


Figure 17.5:
Peak Water Depths
for the 10% AEP
Local Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

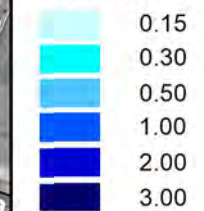
File Name: Fig17.5 - Depths for 10% AEP
Flood.wor





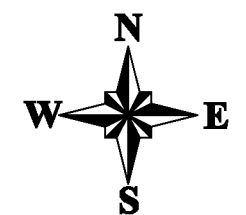
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 18.1:
Peak Water Depths
for the 5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig18.1 - Depths for 5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

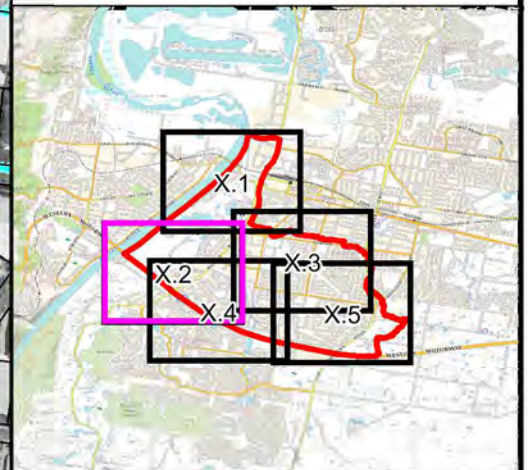
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River



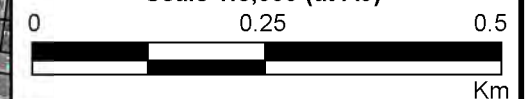
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



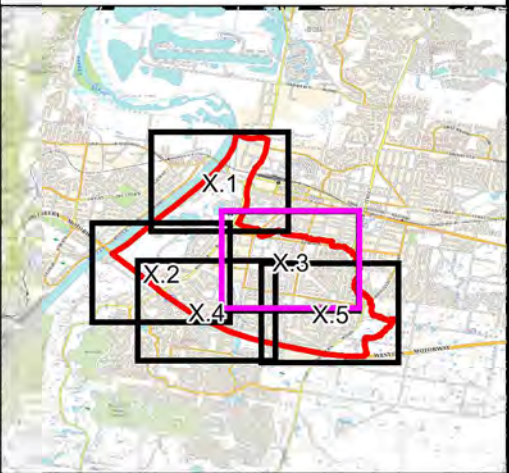
**Figure 18.2:
Peak Water Depths
for the 5% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig18.2 - Depths for 5% AEP
Flood.wor



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LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

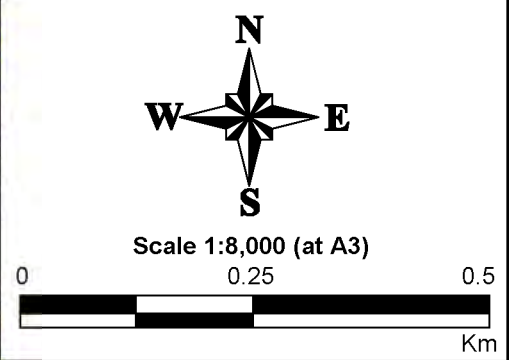
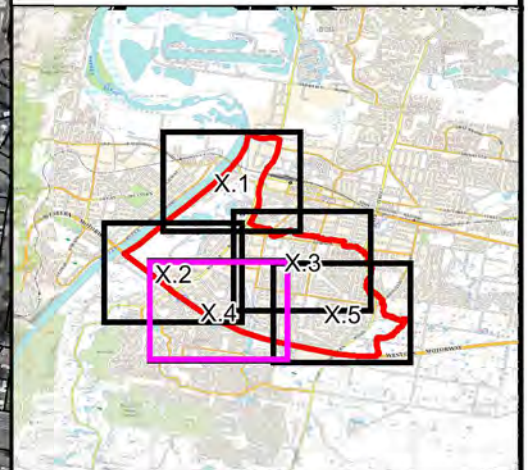


Figure 18.3:
Peak Water Depths
for the 5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig18.3 - Depths for 5% AEP
Flood.wor



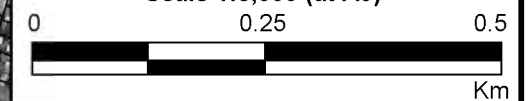
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



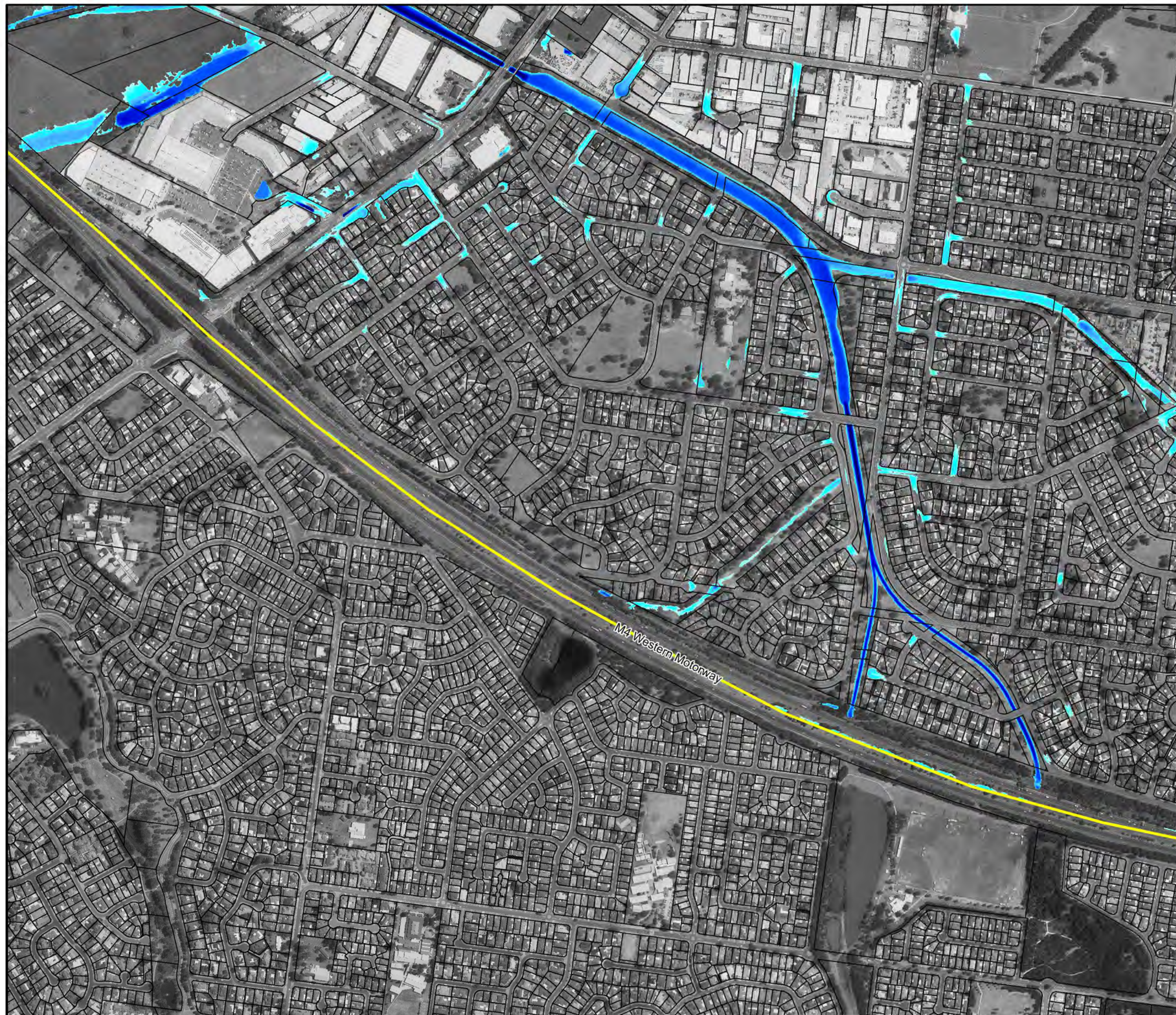
Scale 1:8,000 (at A3)

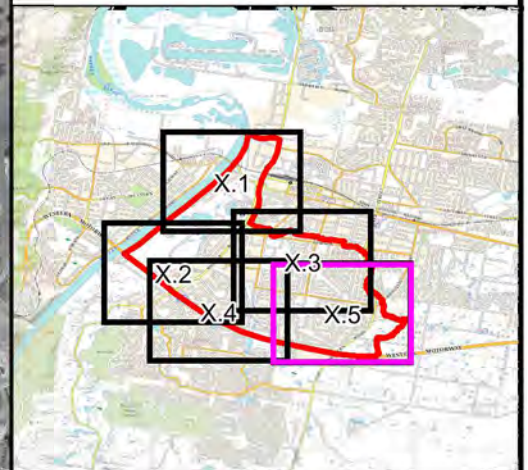


**Figure 18.4:
Peak Water Depths
for the 5% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig18.4 - Depths for 5% AEP
Flood.wor





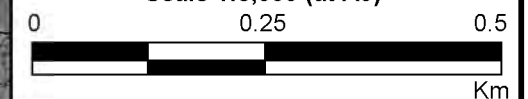
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



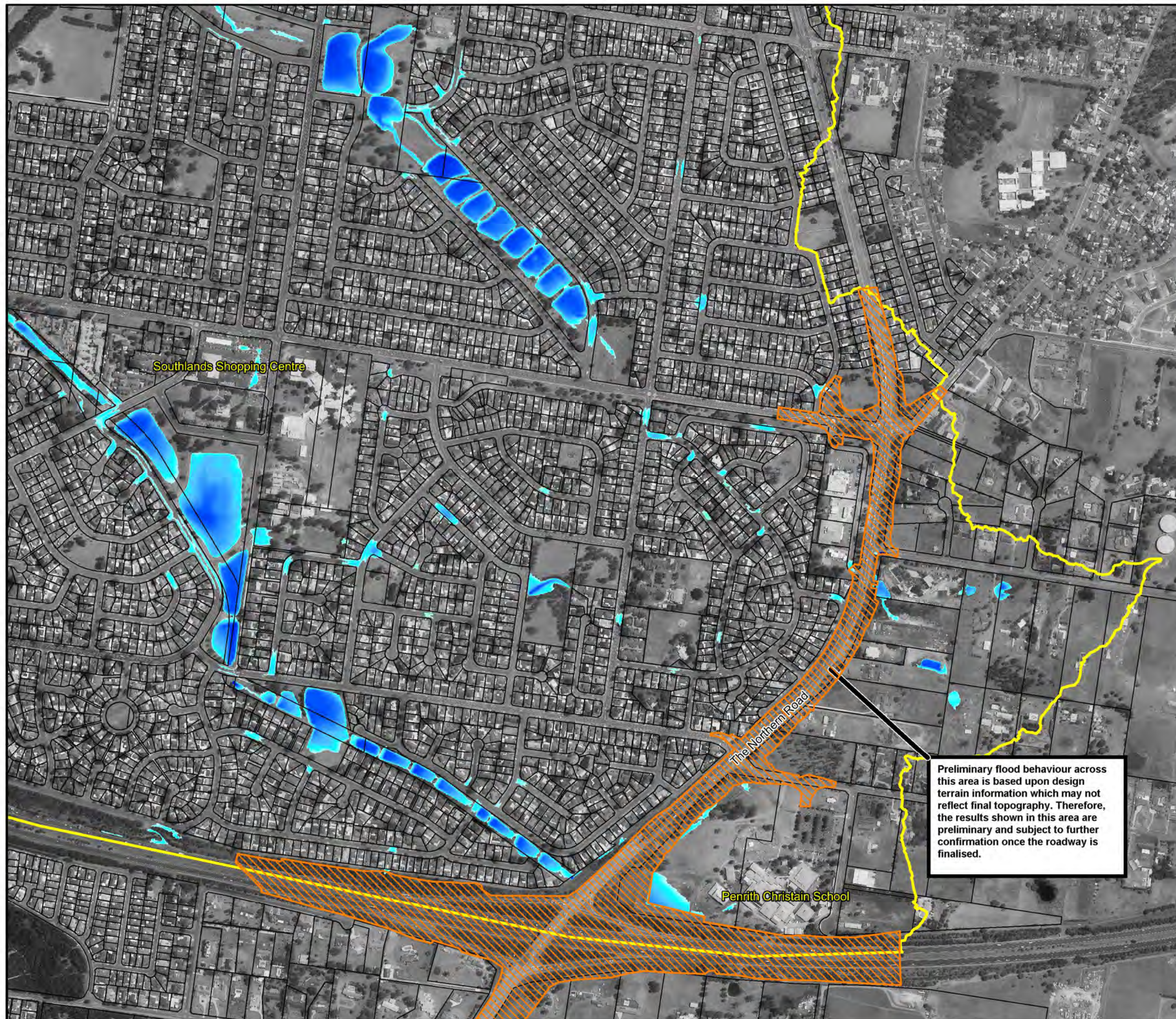
Scale 1:8,000 (at A3)

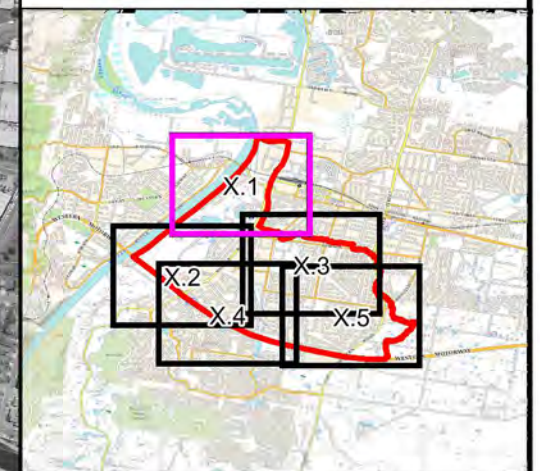


**Figure 18.5:
Peak Water Depths
for the 5% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

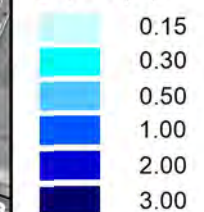
File Name: Fig18.5 - Depths for 5% AEP
Flood.wor





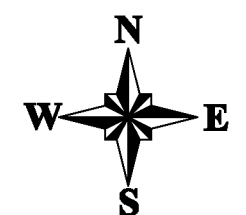
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 19.1:
Peak Water Depths
for the 2% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig19.1 - Depths for 2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

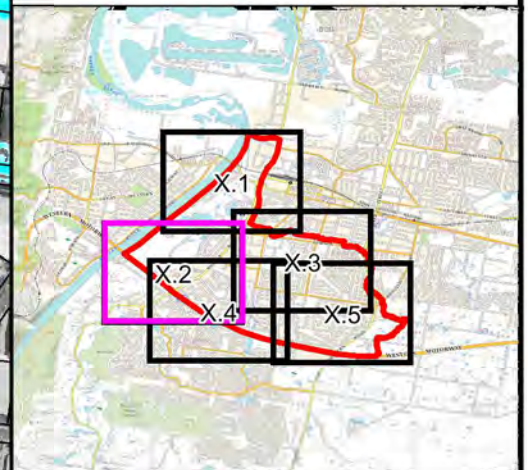
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



LEGEND

Depths (m)

0.15
0.30
0.50
1.00
2.00
3.00


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 19.2:
Peak Water Depths
for the 2% AEP Local
Catchment Flood

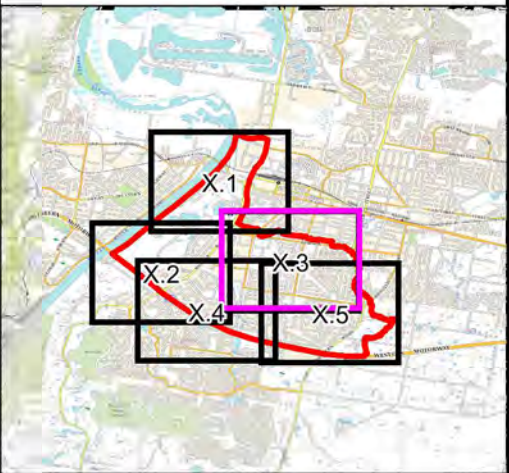
Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig19.2 - Depths for 2% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

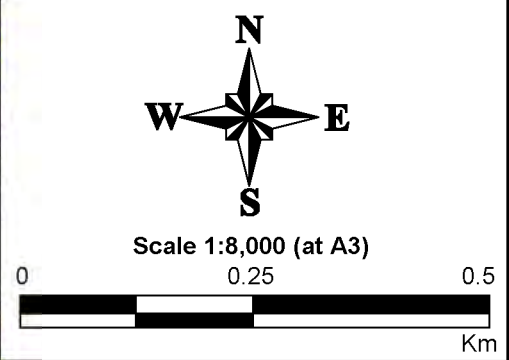
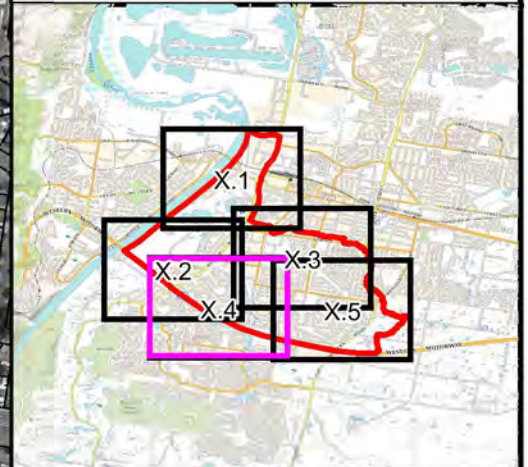


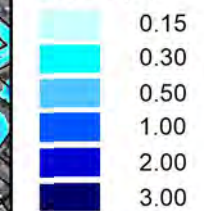
Figure 19.3:
Peak Water Depths
for the 2% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig19.3 - Depths for 2% AEP Flood.wor



LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

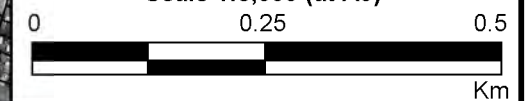
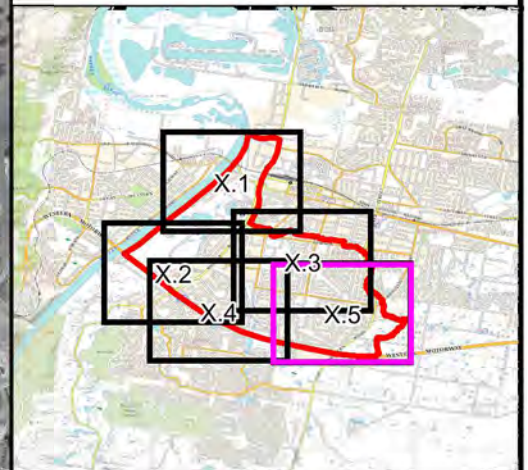


Figure 19.4:
Peak Water Depths
for the 2% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig19.4 - Depths for 2% AEP
Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

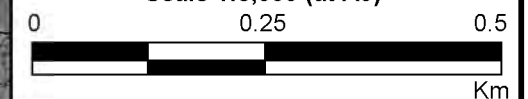
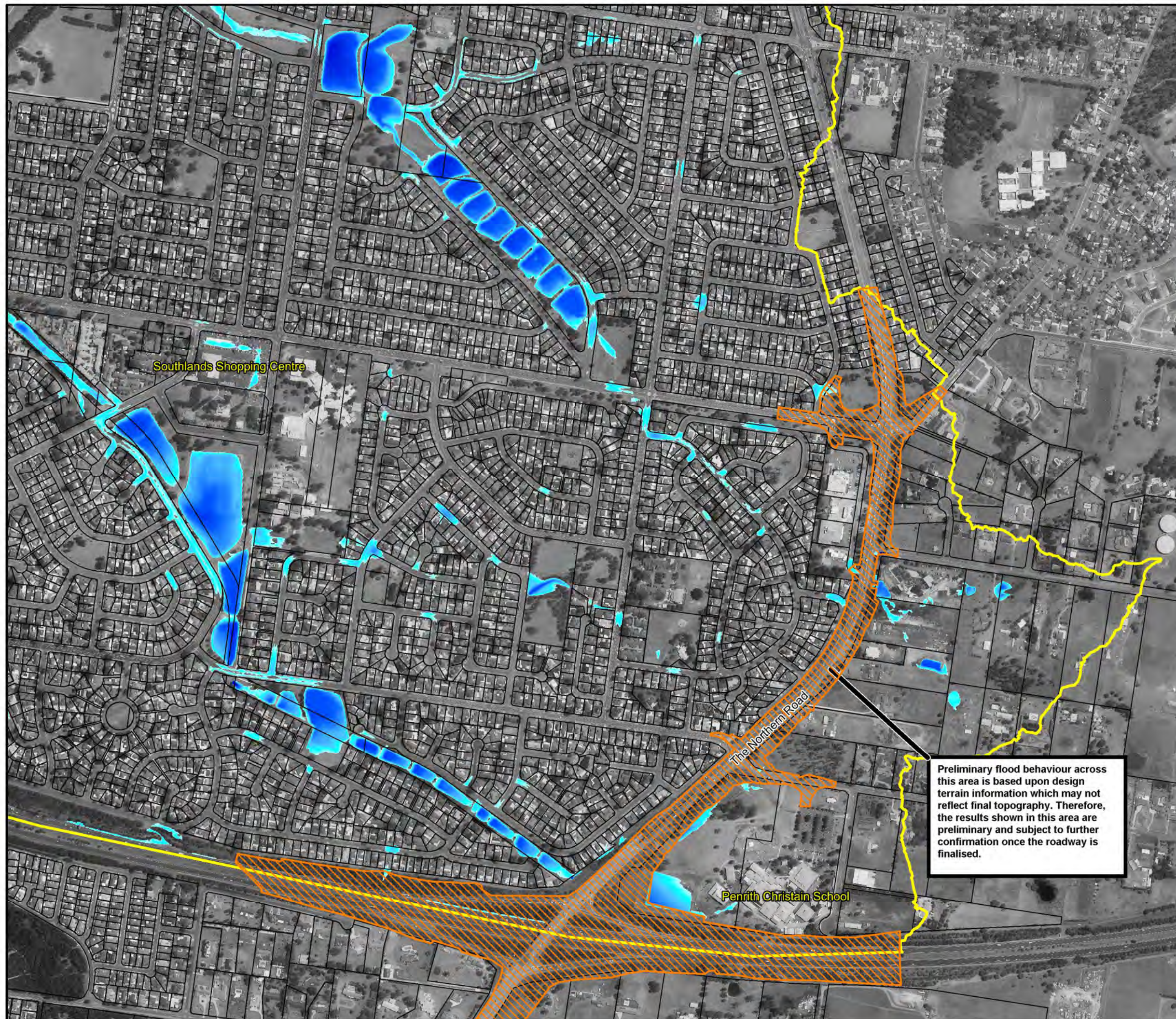
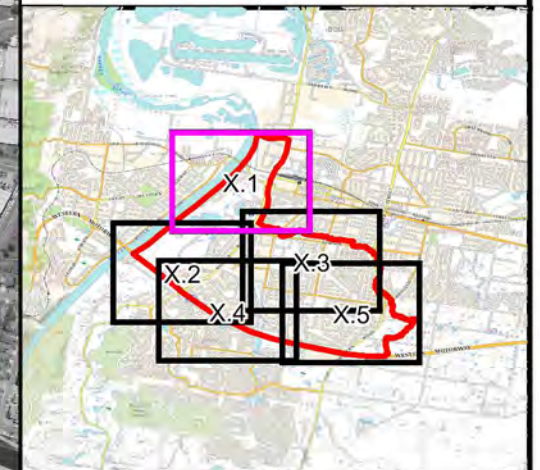


Figure 19.5:
Peak Water Depths
for the 2% AEP Local
Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

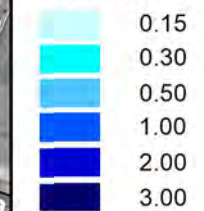
File Name: Fig19.5 - Depths for 2% AEP
Flood.wor





LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 20.1:
Peak Water Depths
for the 1% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig20.1 - Depths for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

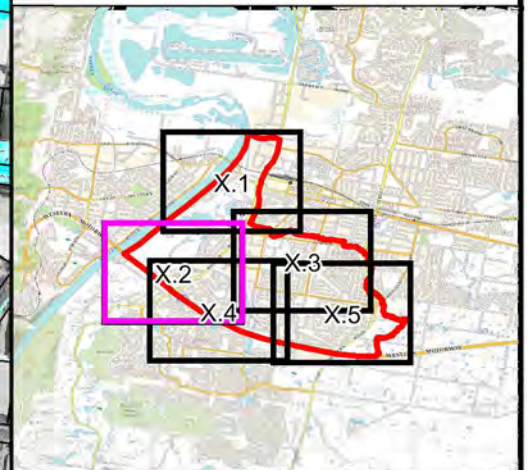
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



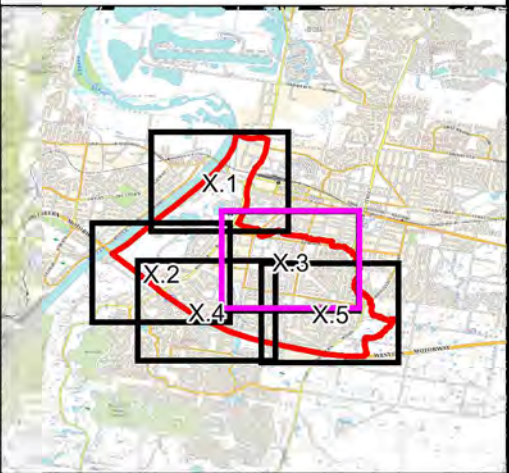
Figure 20.2:
Peak Water Depths
for the 1% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig20.2 - Depths for 1% AEP
Flood.wor



PENRITH CITY COUNCIL



LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

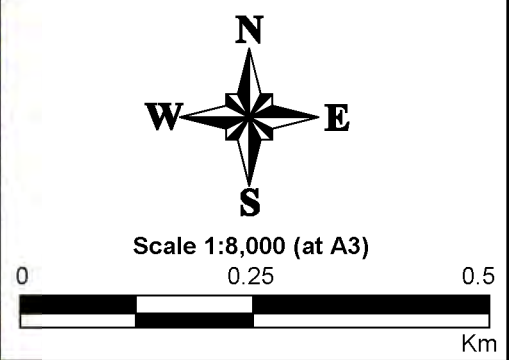
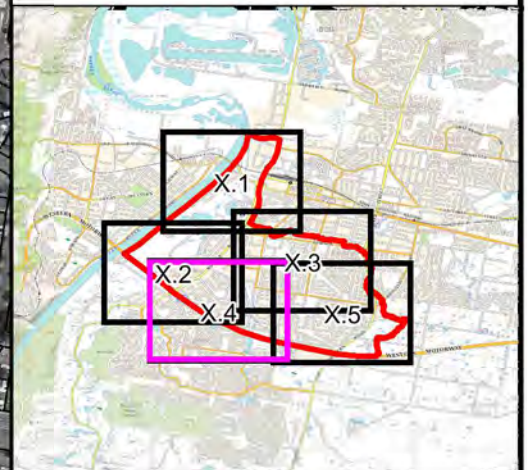


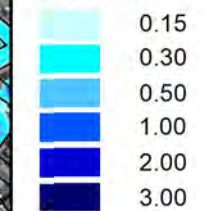
Figure 20.3:
Peak Water Depths
for the 1% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig20.3 - Depths for 1% AEP
Flood.wor



LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

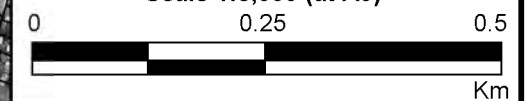
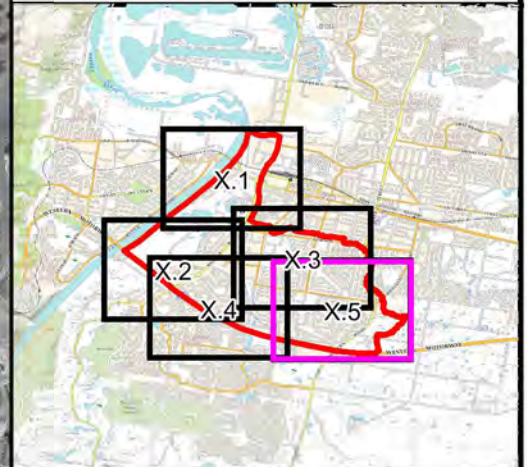


Figure 20.4:
Peak Water Depths
for the 1% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig20.4 - Depths for 1% AEP
Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



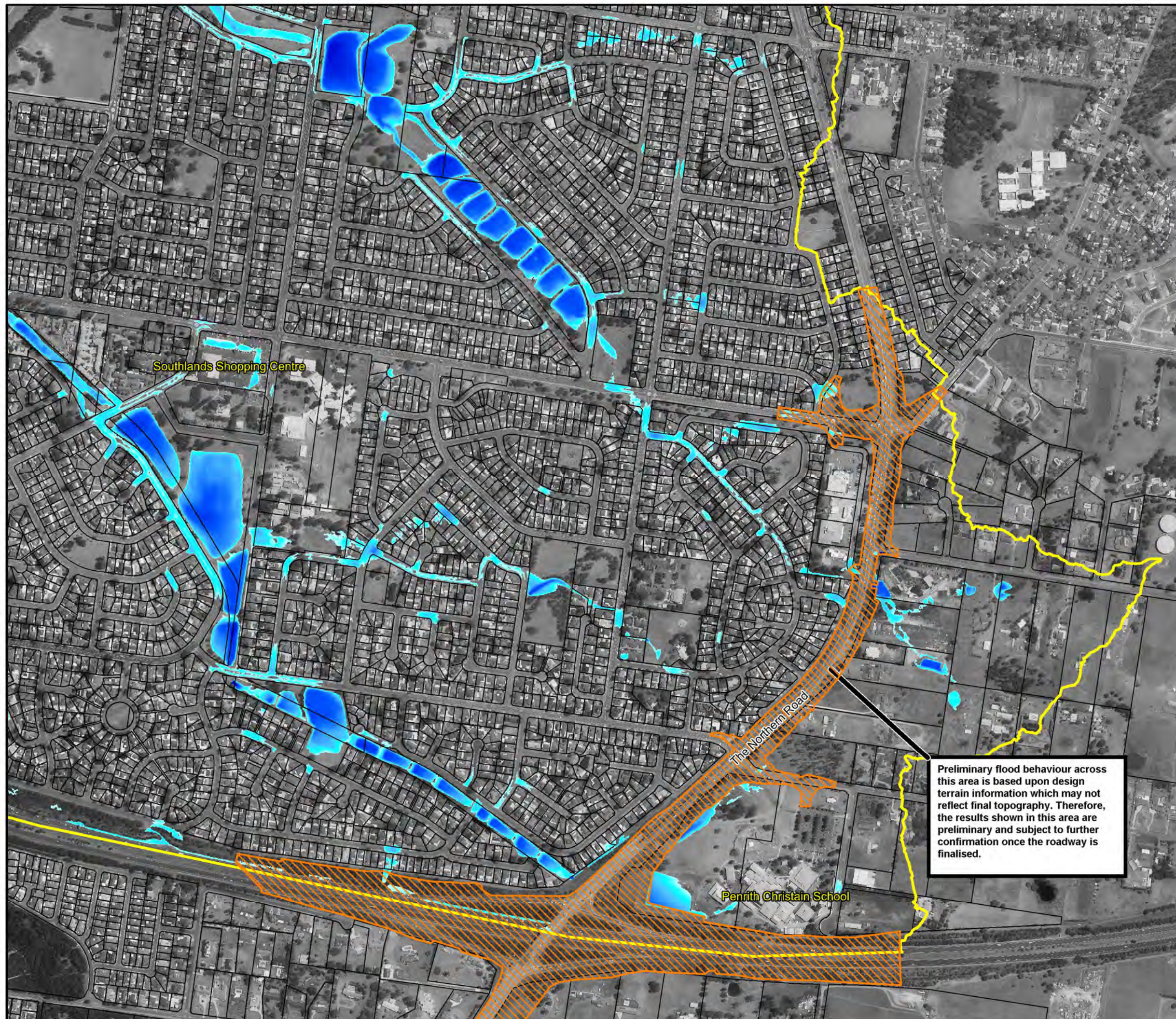
Scale 1:8,000 (at A3)

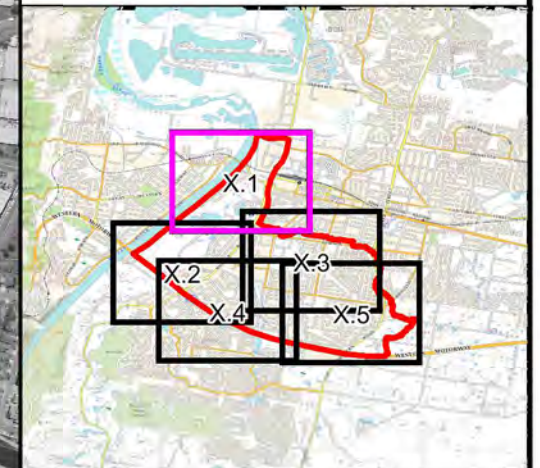


Figure 20.5:
Peak Water Depths
for the 1% AEP Local
Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

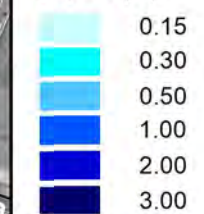
File Name: Fig20.5 - Depths for 1% AEP
Flood.wor





LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 21.1:
Peak Water Depths
for the 0.5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig21.1 - Depths for 0.5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

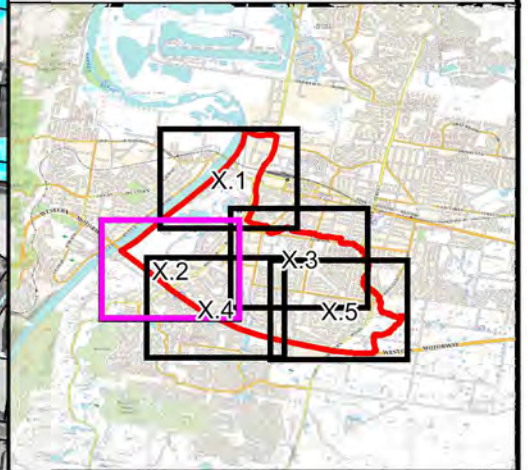
High Street

Westfield Penrith

Panthers World of Entertainment

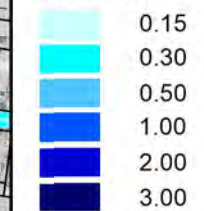
Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



Figure 21.2:
Peak Water Depths
for the 0.5% AEP Local
Catchment Flood

Prepared By:

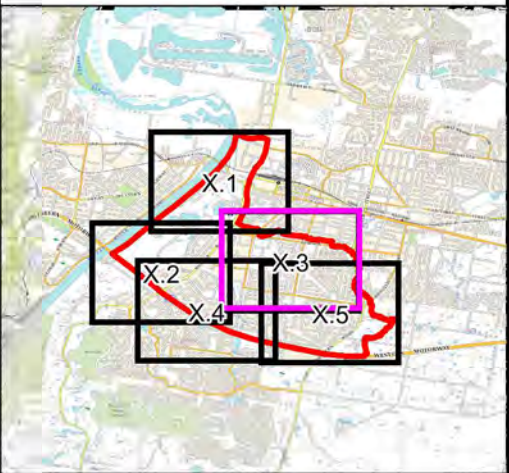
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig21.2 - Depths for 0.5% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

Depths (m)

0.15
0.30
0.50
1.00
2.00
3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

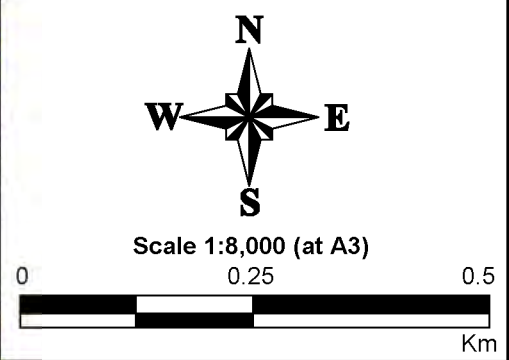
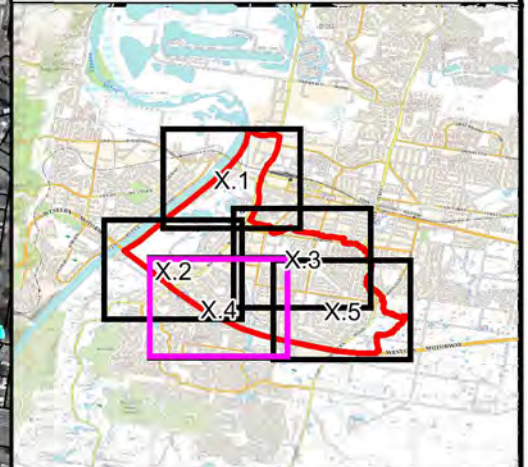


Figure 21.3:
Peak Water Depths
for the 0.5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig21.3 - Depths for 0.5% AEP Flood.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



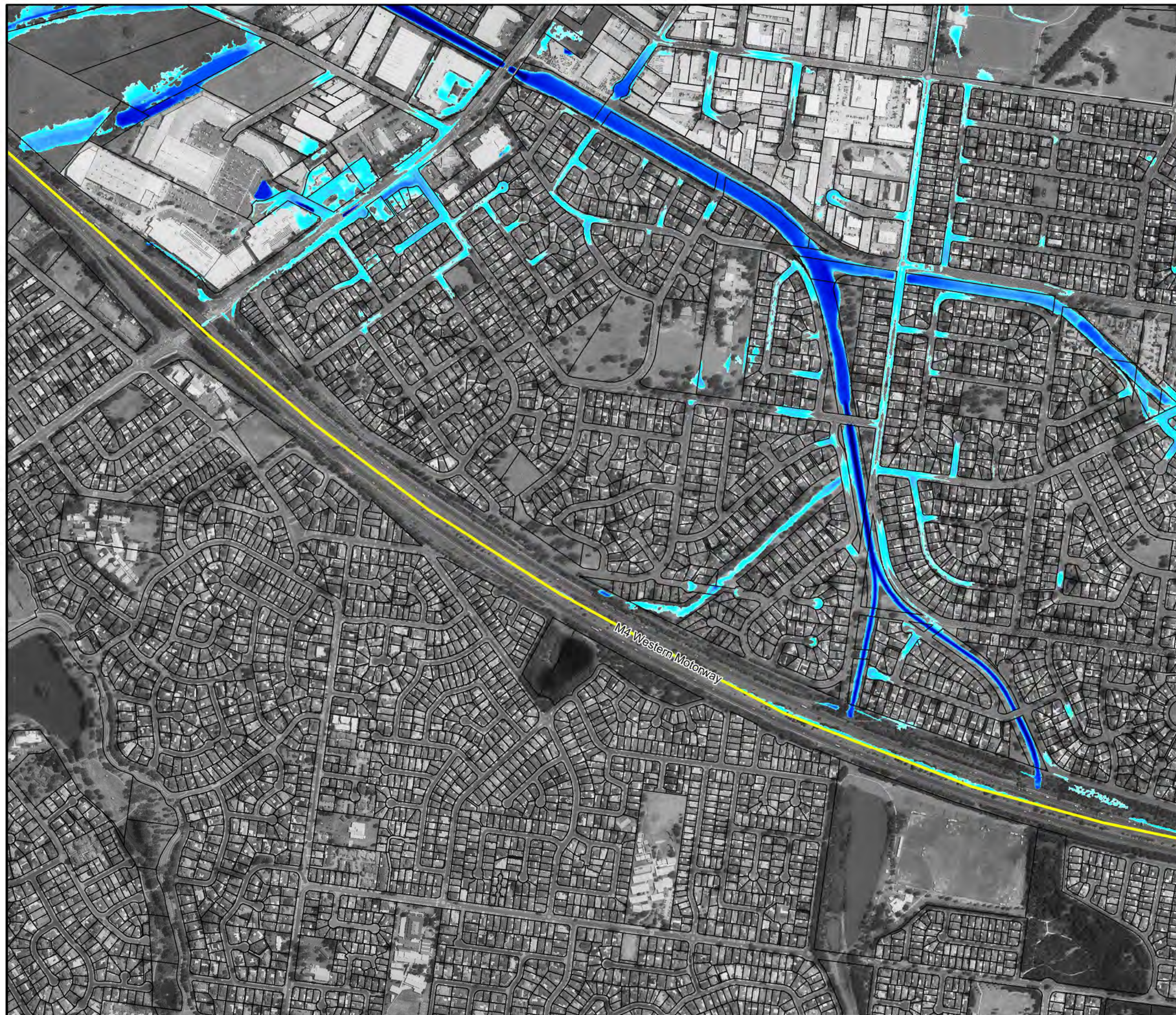
Scale 1:8,000 (at A3)

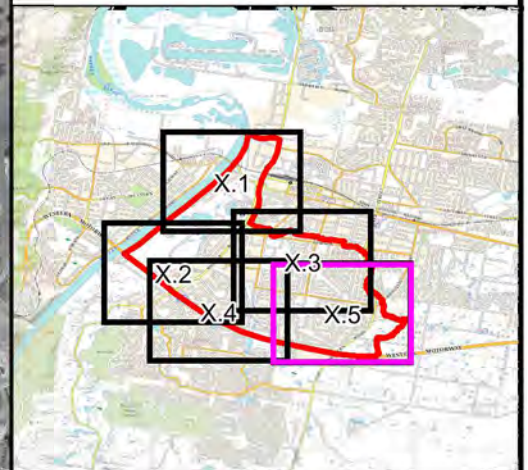


**Figure 21.4:
Peak Water Depths
for the 0.5% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig21.4 - Depths for 0.5% AEP
Flood.wor





LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



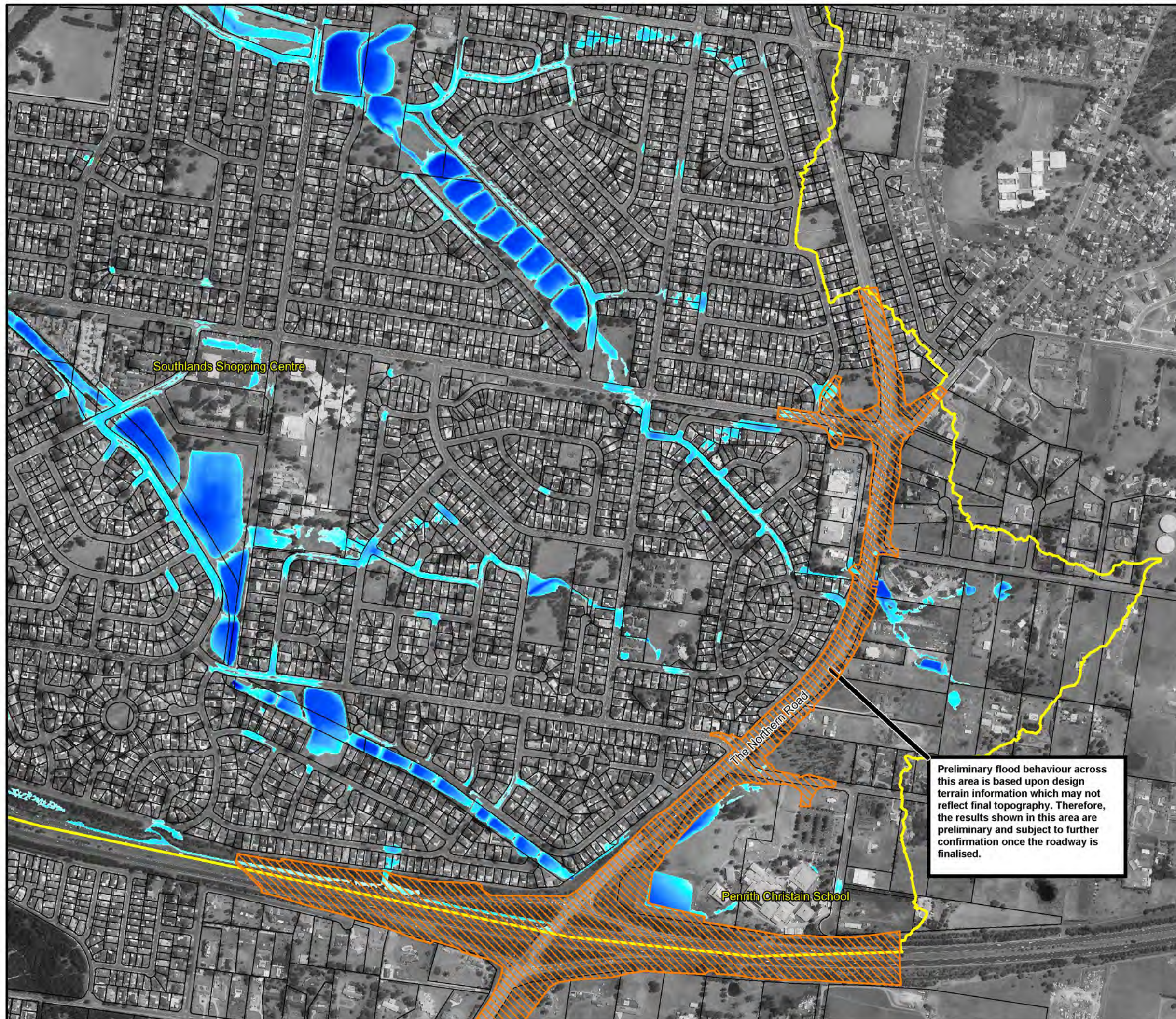
Scale 1:8,000 (at A3)

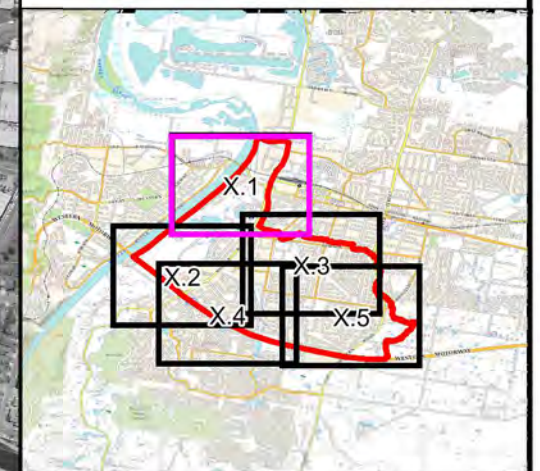


**Figure 21.5:
Peak Water Depths
for the 0.5% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

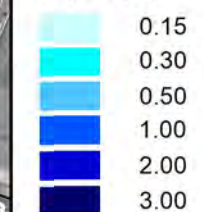
File Name: Fig21.5 - Depths for 0.5% AEP
Flood.wor





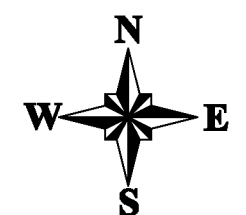
LEGEND

Depths (m)

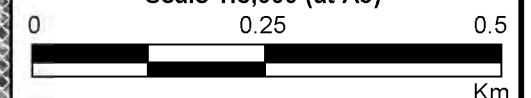


Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 22.1:
Peak Water Depths
for the 0.2% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig22.1 - Depths for 0.2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

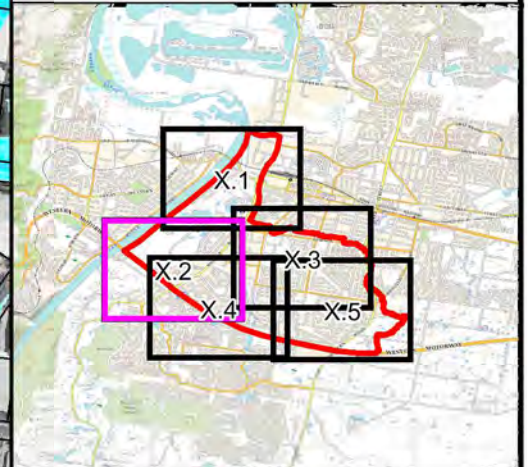
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



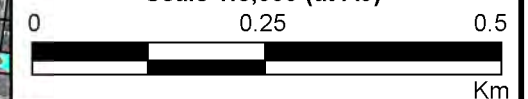
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 22.2:
Peak Water Depths
for the 0.2% AEP
Local Catchment Flood**

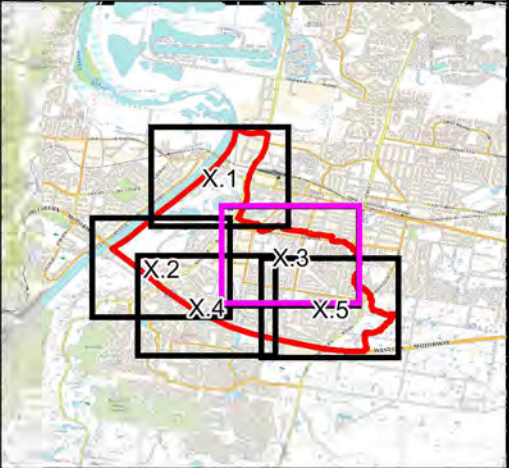
Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig22.2 - Depths for 0.2% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

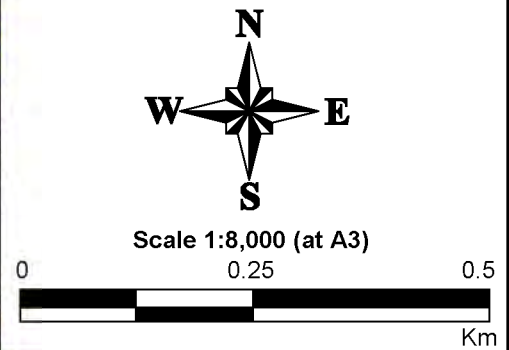
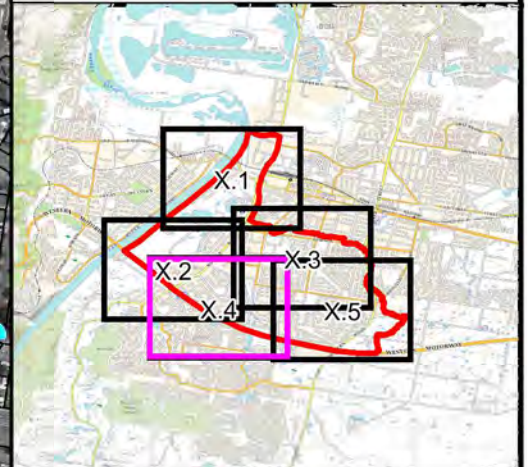


Figure 22.3:
Peak Water Depths
for the 0.2% AEP
Local Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig22.3 - Depths for 0.2% AEP
Flood.wor



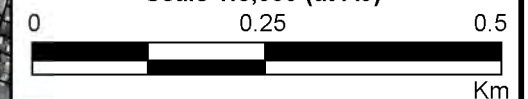
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

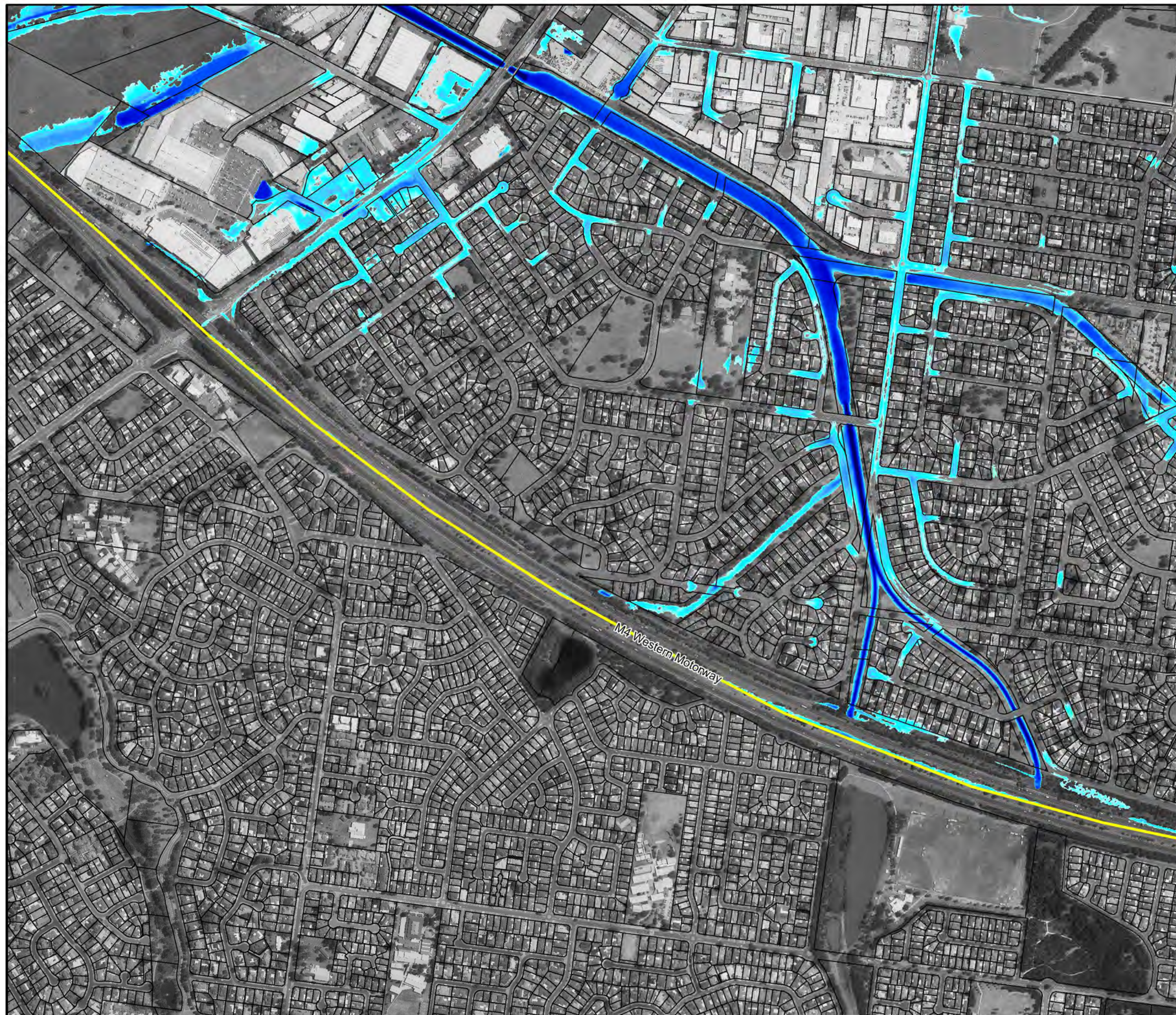


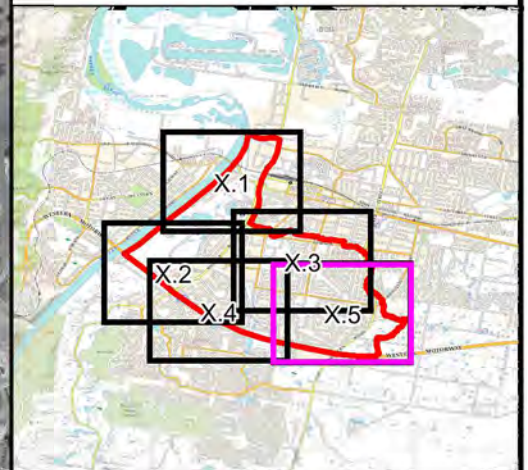
**Figure 22.4:
Peak Water Depths
for the 0.2% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig22.4 - Depths for 0.2% AEP
Flood.wor





LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

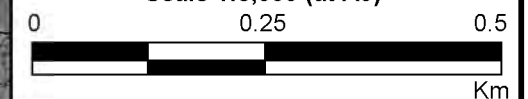
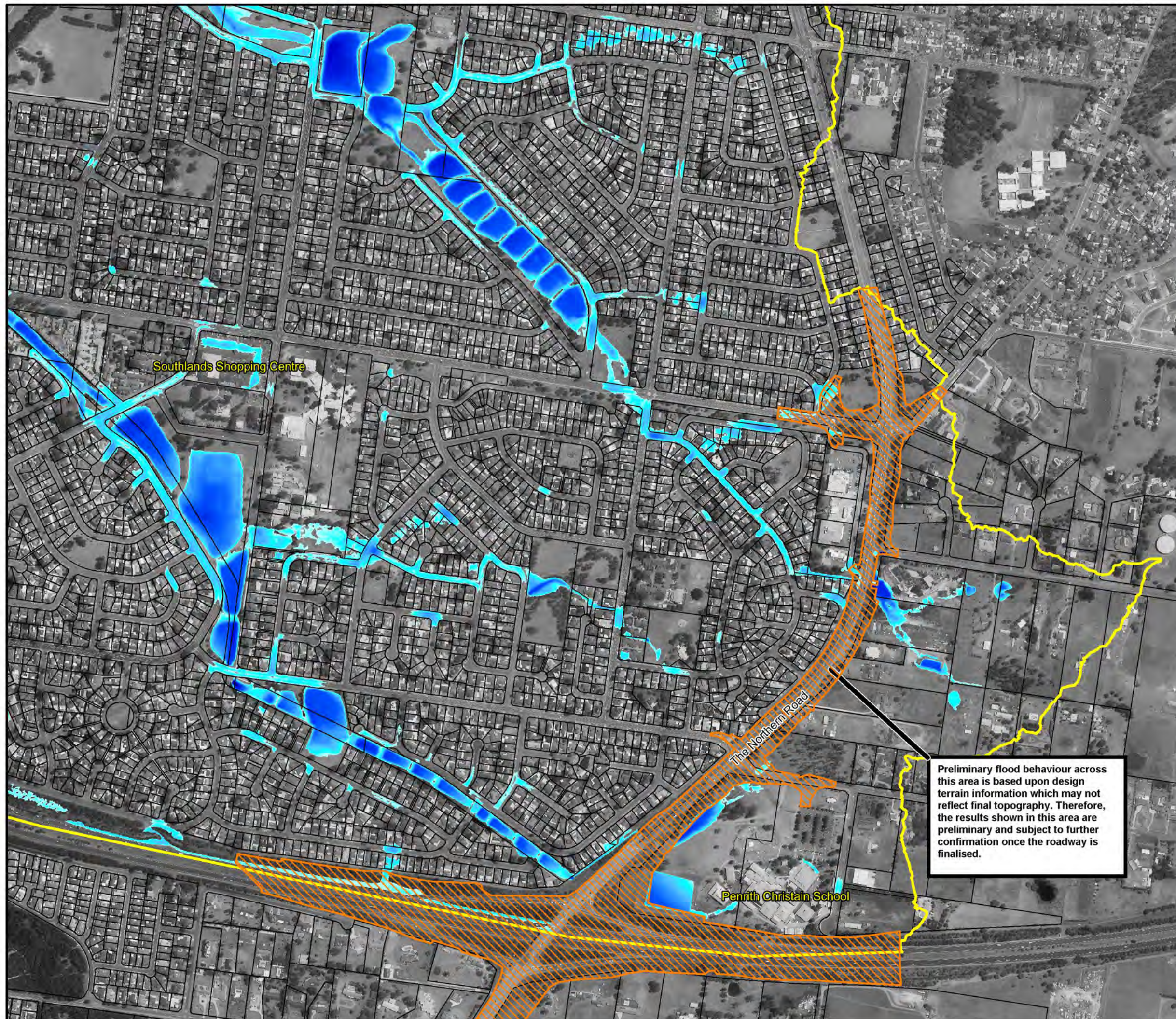
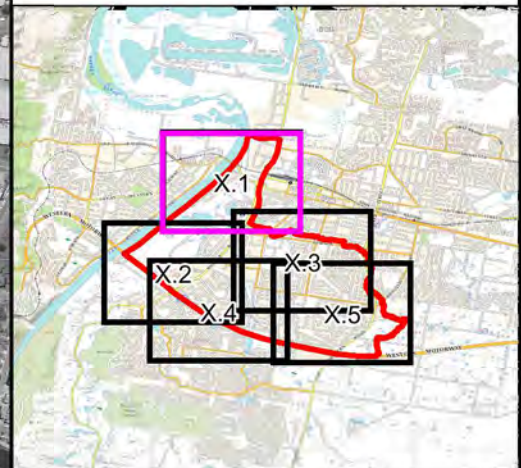


Figure 22.5:
Peak Water Depths
for the 0.2% AEP
Local Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

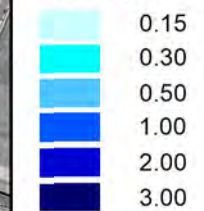
File Name: Fig22.5 - Depths for 0.2% AEP
Flood.wor





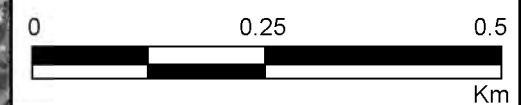
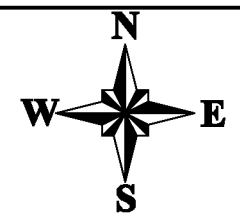
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 23.1:
Peak Water Depths
for the Local
Catchment PMF**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig23.1 - Peak water Depths
for the PMF.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

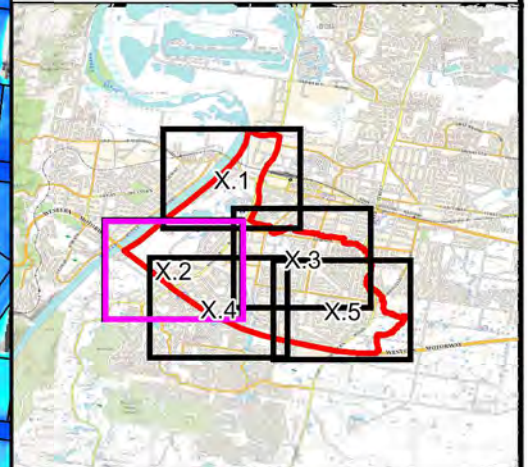
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

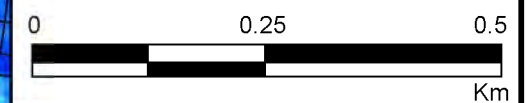
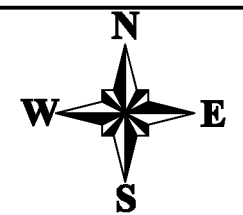
PENRITH CITY COUNCIL



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

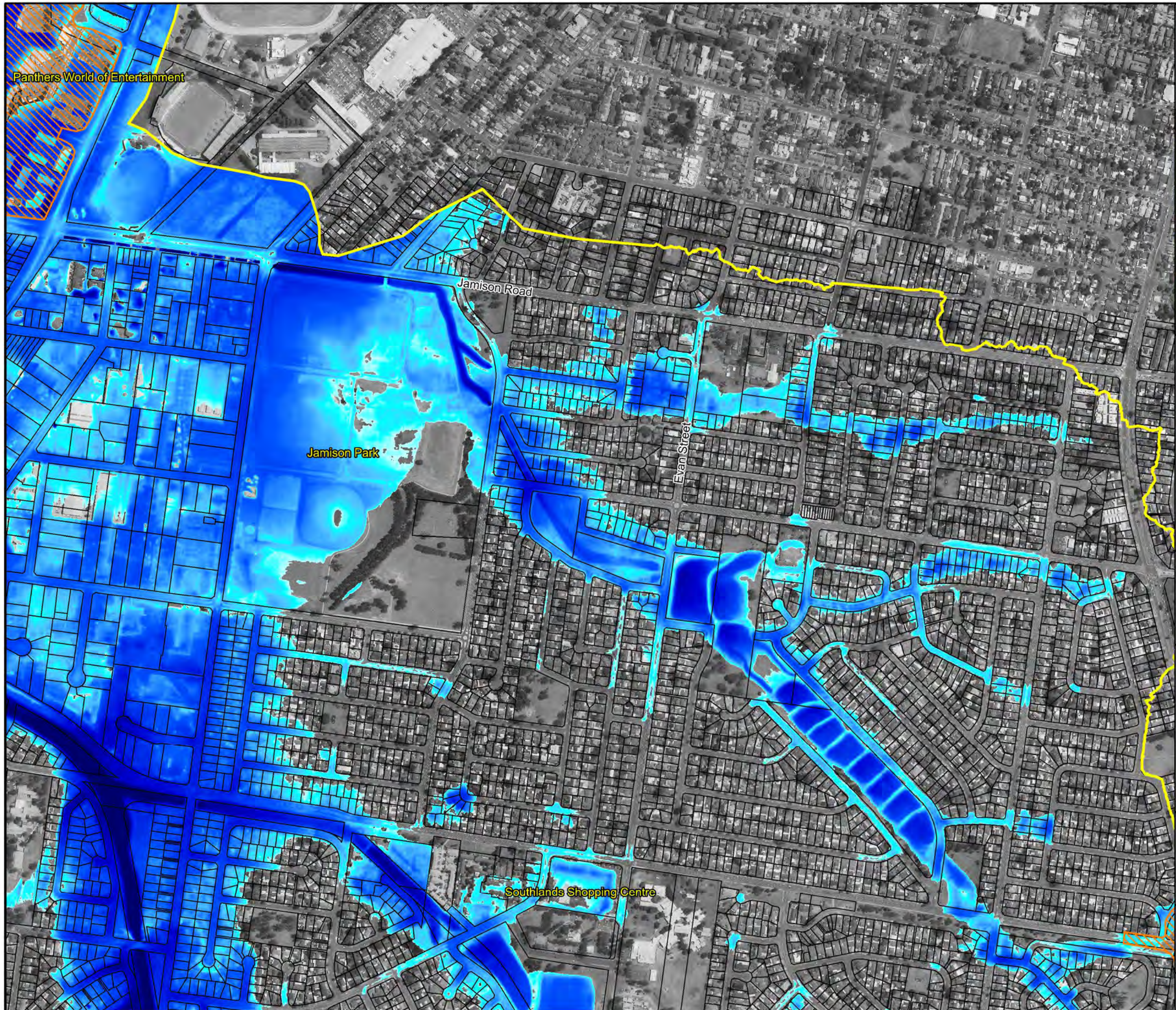
Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



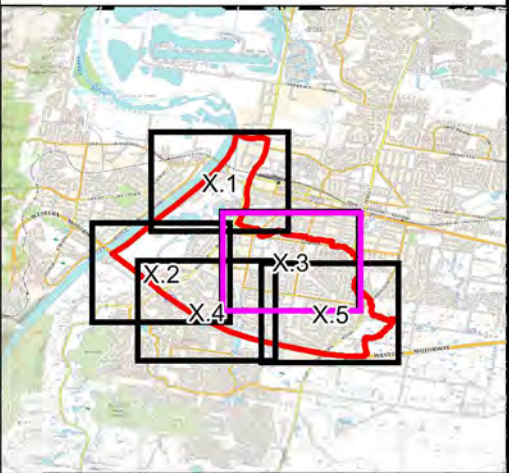
**Figure 23.2:
Peak Water Depths
for the Local
Catchment PMF**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig23.2 - Peak water Depths
for the PMF.wor



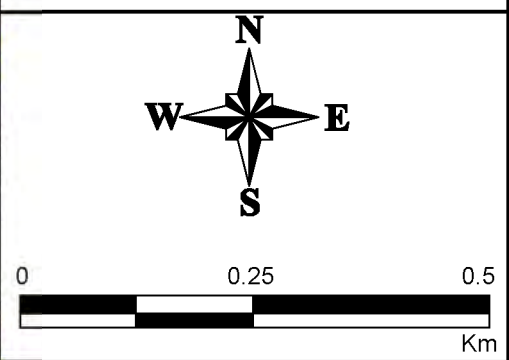
PENRITH CITY COUNCIL



LEGEND

Depths (m)	
0.15	
0.30	
0.50	
1.00	
2.00	
3.00	

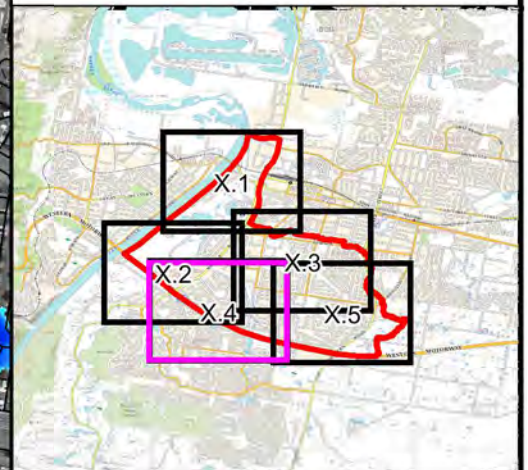
Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 23.3:
Peak Water Depths
for the Local
Catchment PMF**

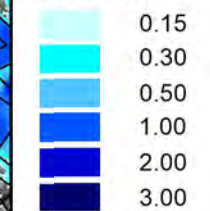
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig23.3 - Peak water Depths
for the PMF.wor



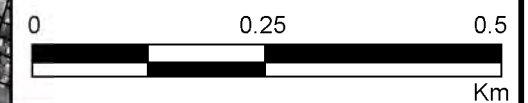
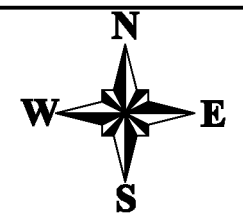
LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

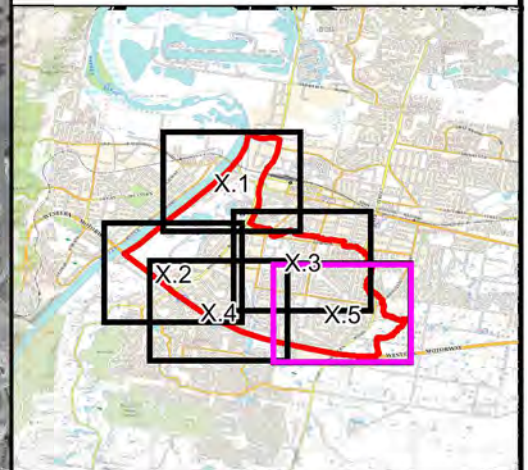


**Figure 23.4:
Peak Water Depths
for the Local
Catchment PMF**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

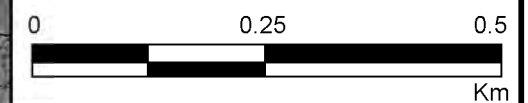
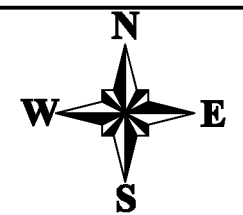
File Name: Fig23.4 - Peak water Depths
for the PMF.wor



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

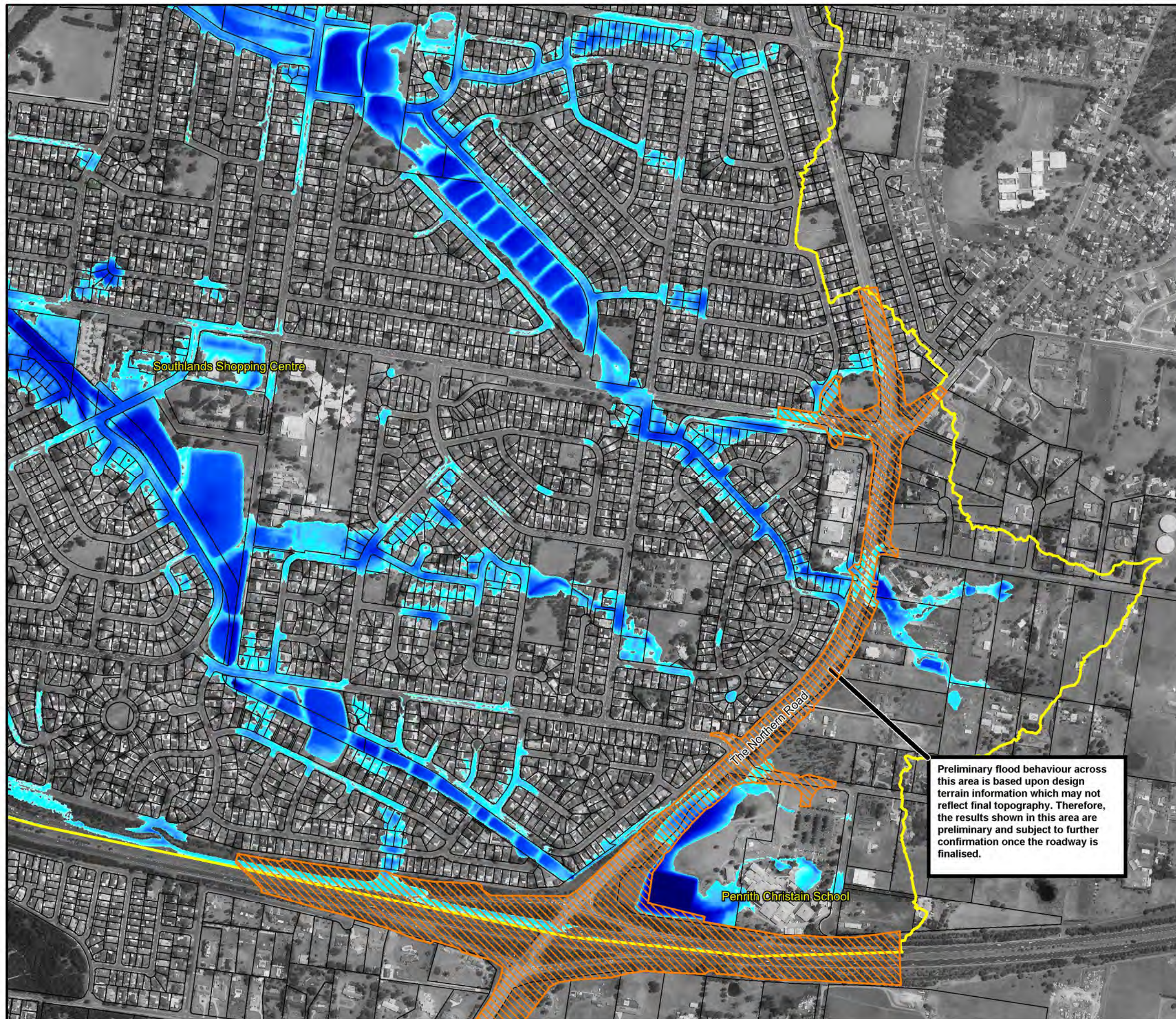
Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 23.5:
Peak Water Depths
for the Local
Catchment PMF**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig23.5 - Peak water Depths
for the PMF.wor

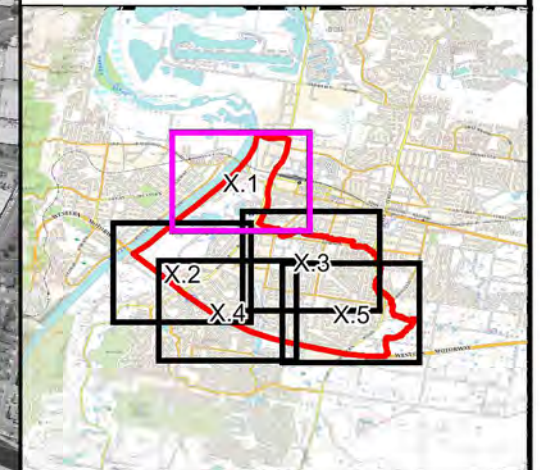




DESIGN FLOOD LEVEL MAPS



PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

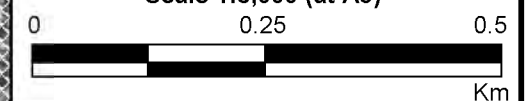
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 24.1:
Peak Water Levels
for the 50% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig24.1 - Levels for 50% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

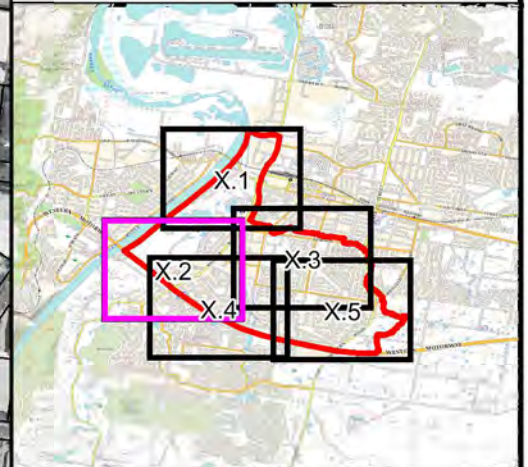
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

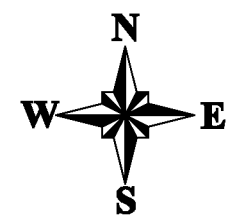
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

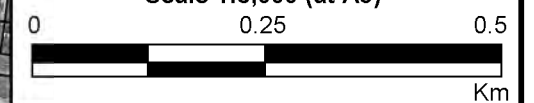


Figure 24.2:
Peak Water Levels
for the 50% AEP
Local Catchment Flood

Prepared By:

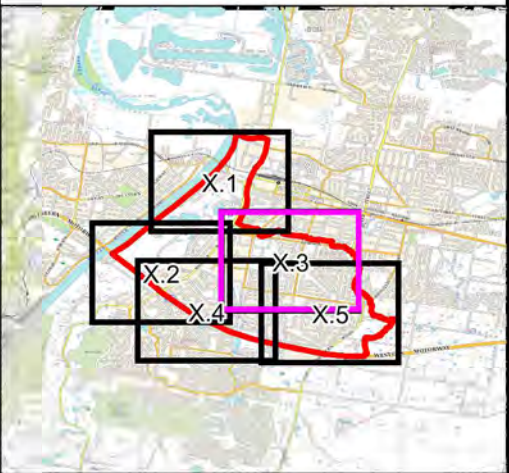
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig24.2 - Levels for 50% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

Blue	<= 20	Yellow	50
Light Blue	25	Orange	55
Light Cyan	30	Light Pink	60
Cyan	35	Red	65
Green	40	Magenta	70
Light Green	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

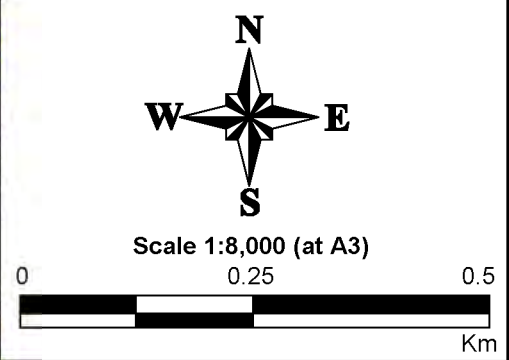
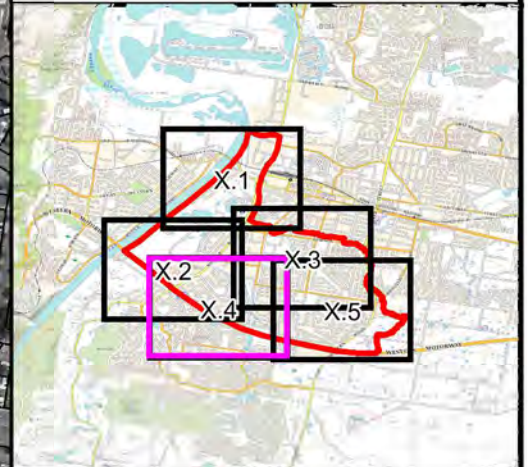


Figure 24.3:
Peak Water Levels
for the 50% AEP
Local Catchment Flood



LEGEND

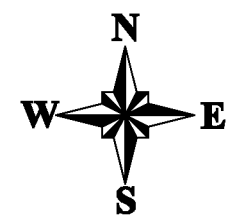
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

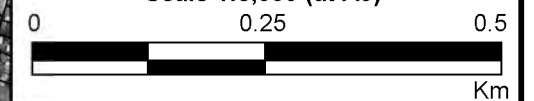
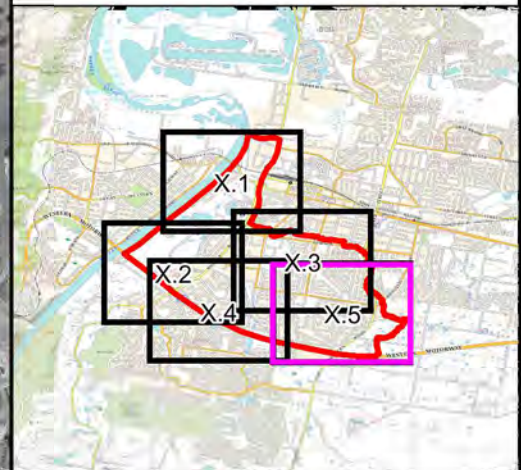


Figure 24.4:
Peak Water Levels
for the 50% AEP
Local Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig24.4 - Levels for 50% AEP
Flood.wor



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

≤ 20	50
25	55
30	60
35	65
40	70
45	

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

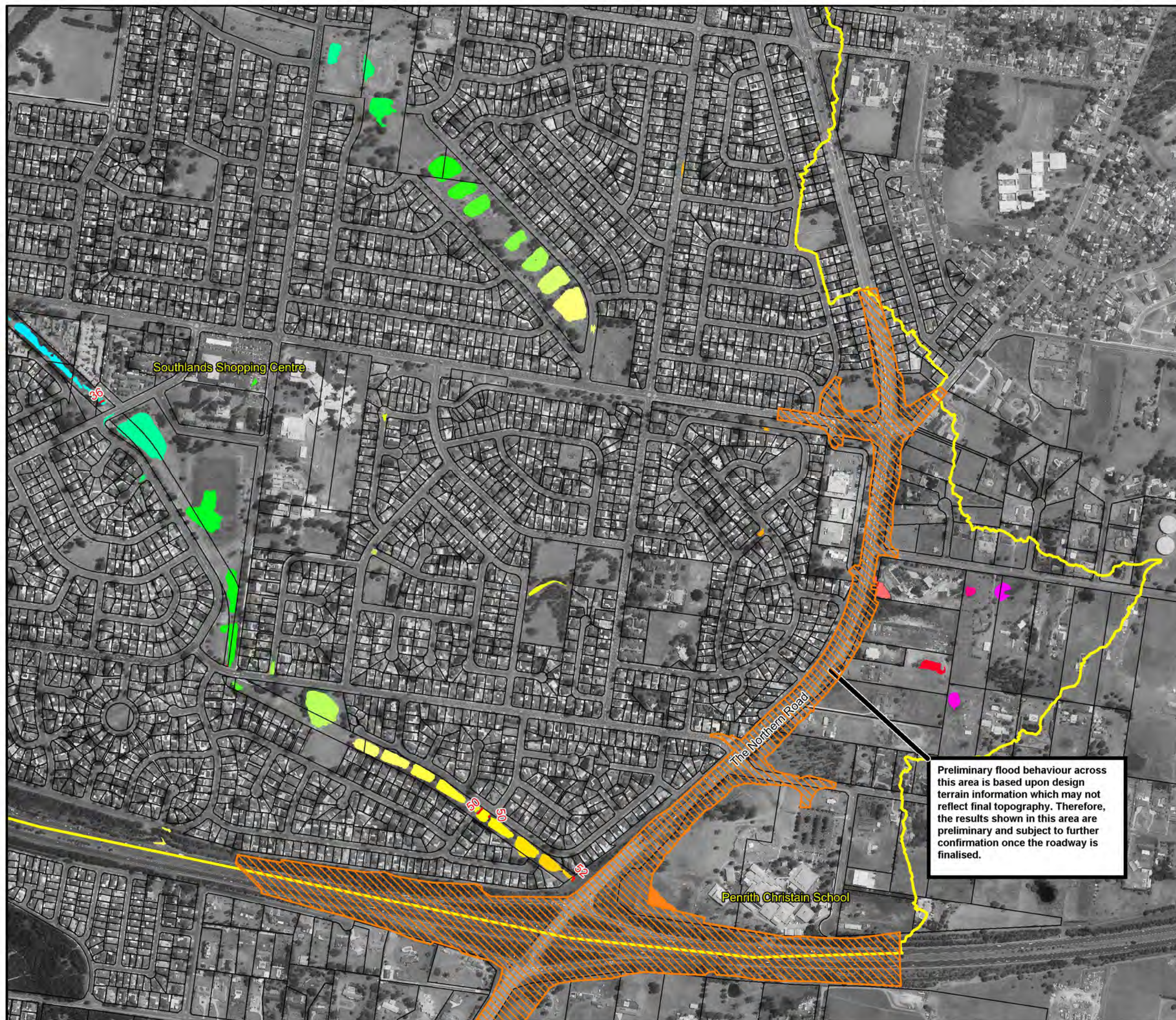


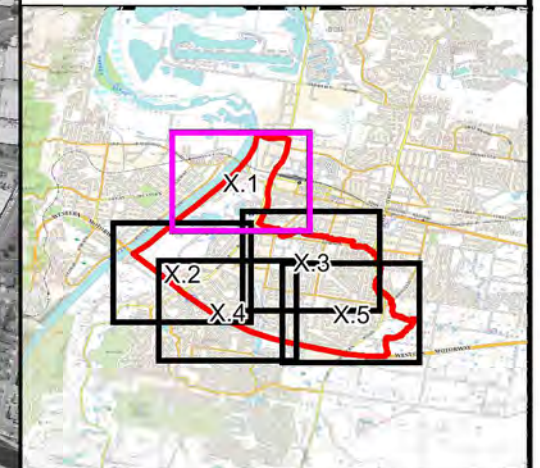
Figure 24.5:
Peak Water Levels
for the 50% AEP
Local Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig24.5 - Levels for 50% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 25.1:
Peak Water Levels
for the 20% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig25.1 - Levels for 20% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

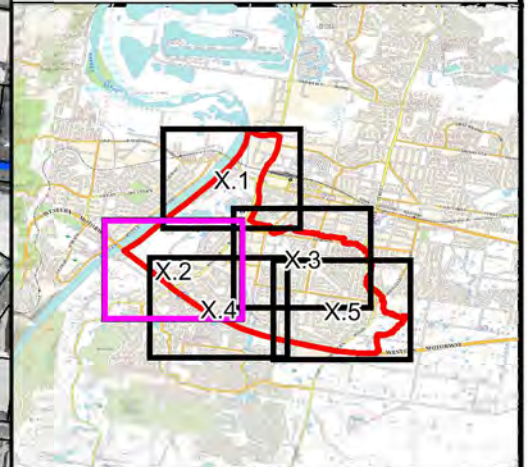
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

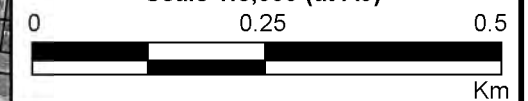
Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 25.2:
Peak Water Levels
for the 20% AEP Local
Catchment Flood**

Prepared By:

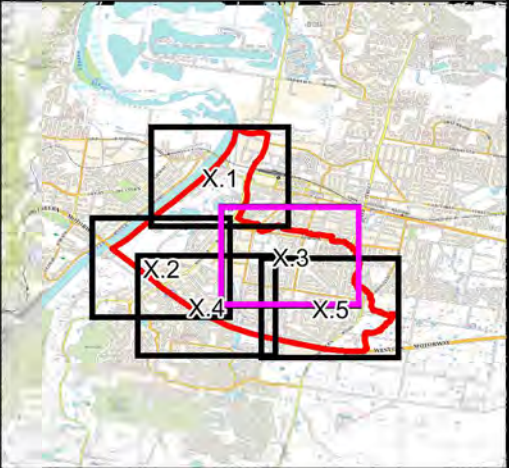
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig25.2 - Levels for 20% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

Dark Blue	<= 20	Yellow	50
Blue	25	Orange	55
Light Blue	30	Pink	60
Cyan	35	Red	65
Green	40	Magenta	70
Light Green	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

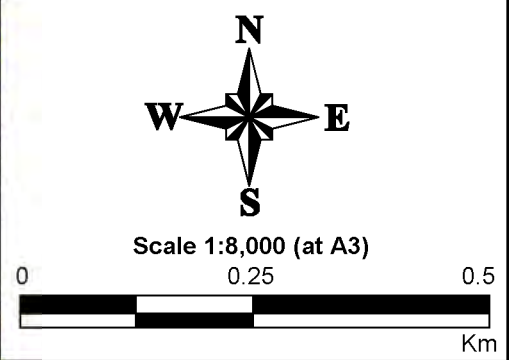
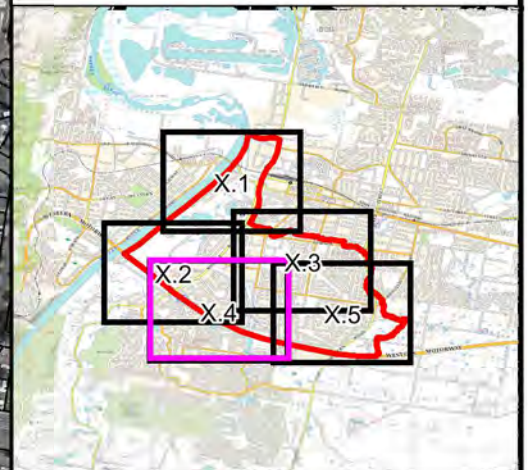


Figure 25.3:
Peak Water Levels
for the 20% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig25.3 - Levels for 20% AEP Flood.wor



LEGEND

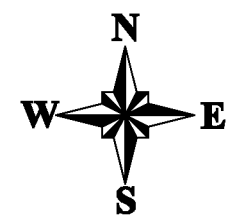
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

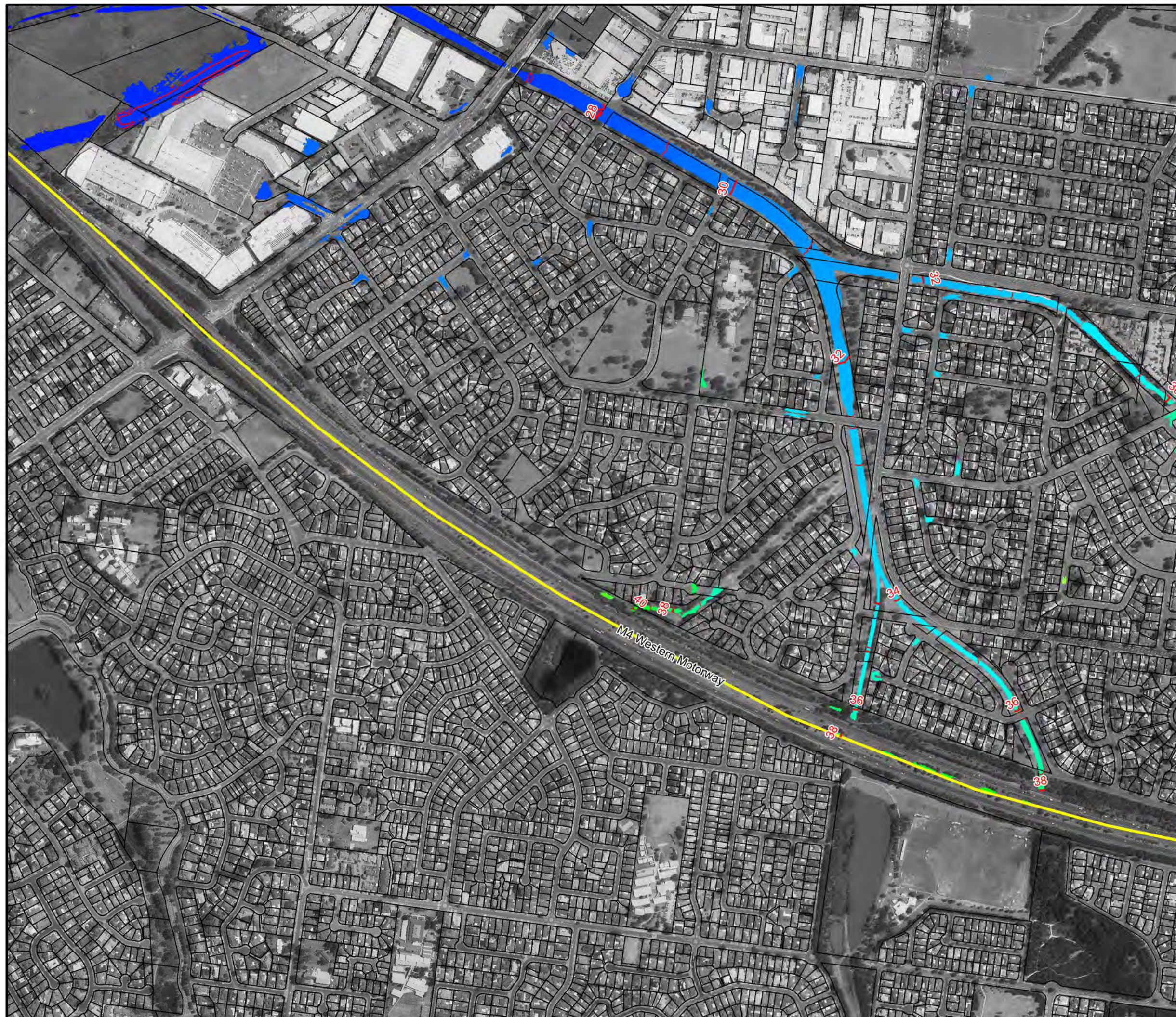


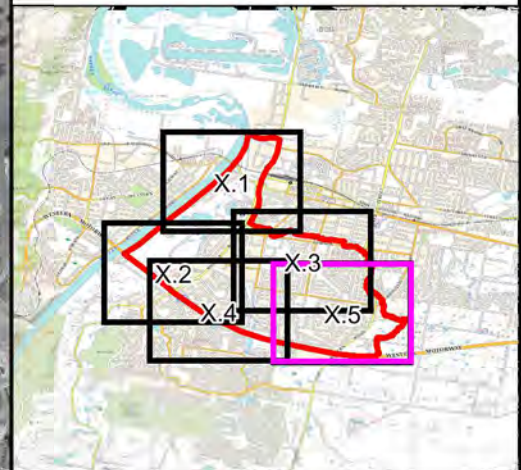
**Figure 25.4:
Peak Water Levels
for the 20% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig25.4 - Levels for 20% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

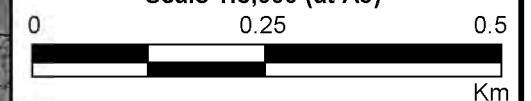
≤ 20	50
25	55
30	60
35	65
40	70
45	

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

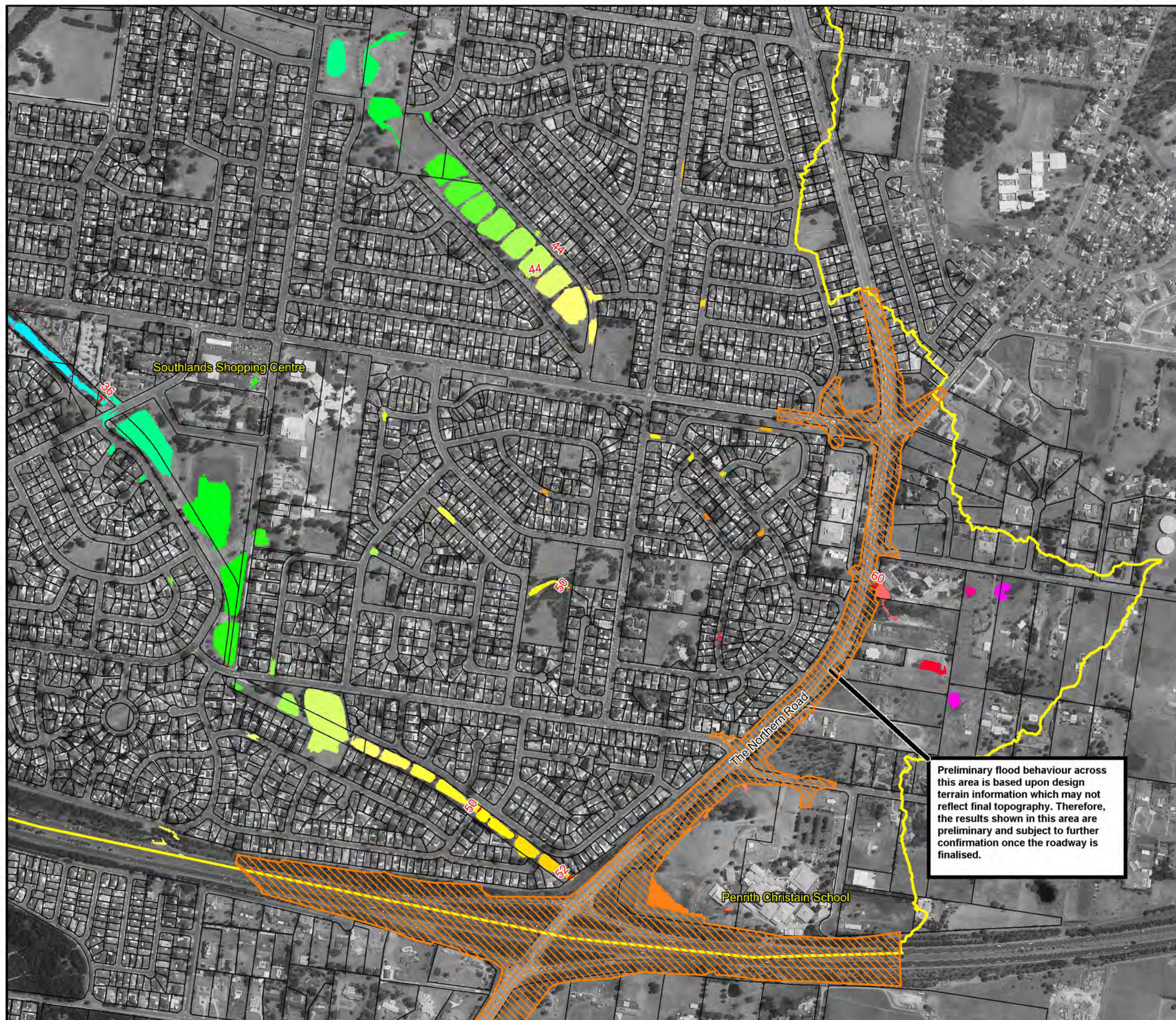


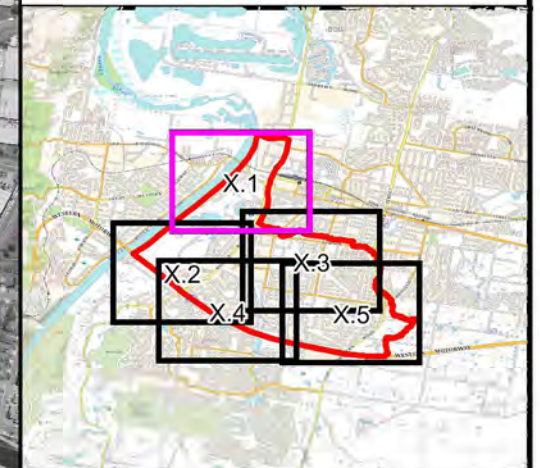
**Figure 25.5:
Peak Water Levels
for the 20% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig25.5 - Levels for 20% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

█	<= 20	█	50
█	25	█	55
█	30	█	60
█	35	█	65
█	40	█	70
█	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 26.1:
Peak Water Levels
for the 10% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig26.1 - Levels for 10% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

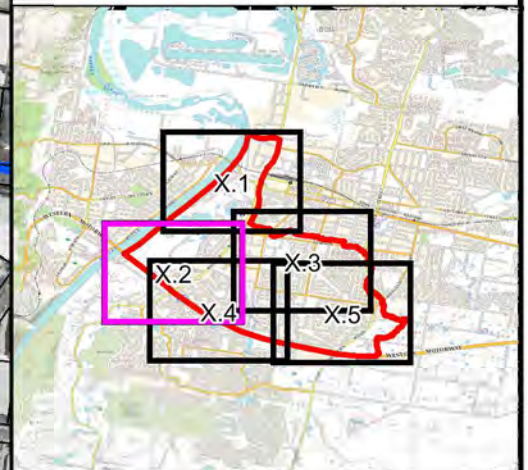
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

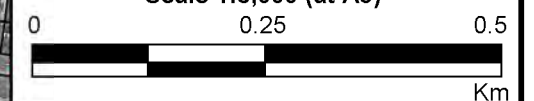


Figure 26.2:
Peak Water Levels
for the 10% AEP Local
Catchment Flood

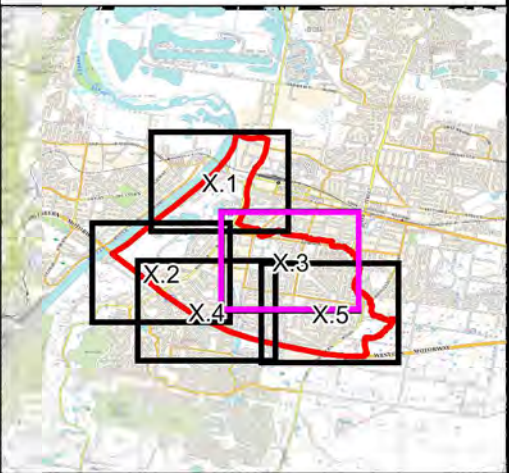
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig26.2 - Levels for 10% AEP
Flood.wor



PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

Blue	<= 20	Yellow	50
Light Blue	25	Orange	55
Cyan	30	Pink	60
Light Green	35	Red	65
Green	40	Purple	70
Light Yellow	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

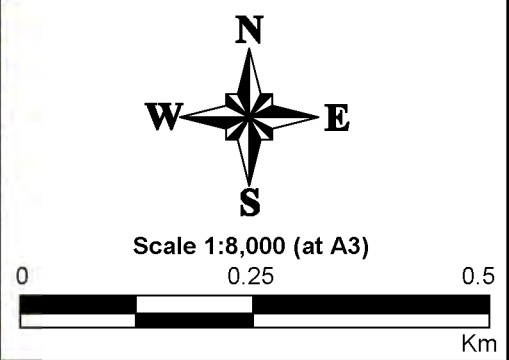
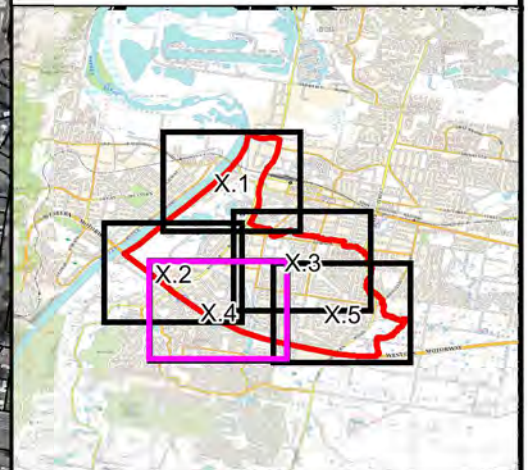


Figure 26.3:
Peak Water Levels
for the 10% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig26.3 - Levels for 10% AEP
Flood.wor



LEGEND

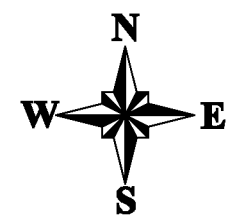
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

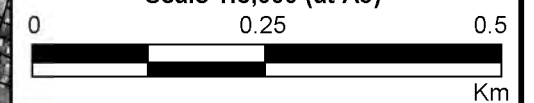
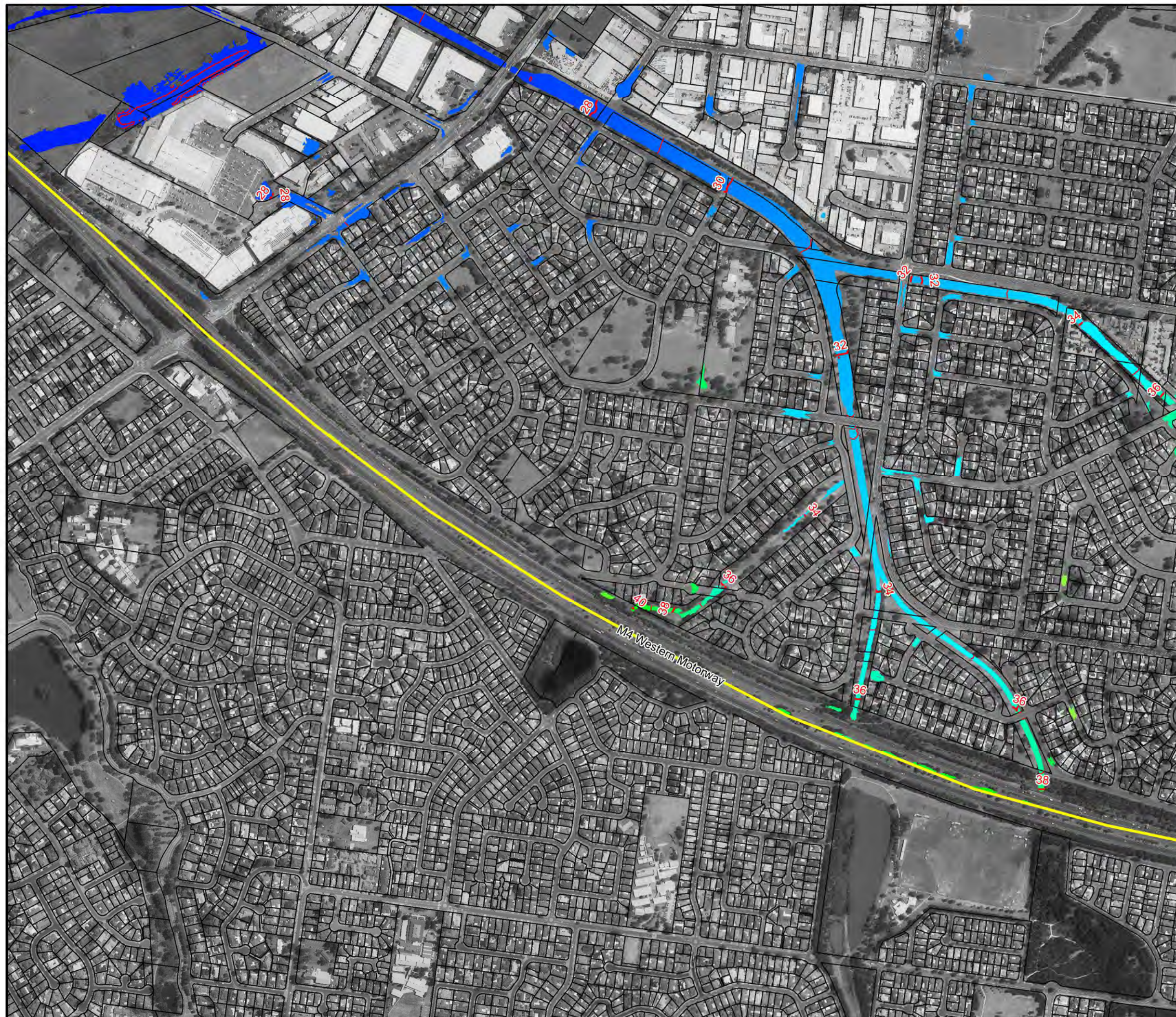


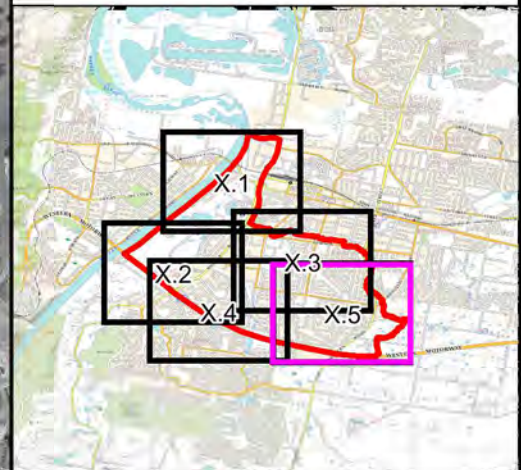
Figure 26.4:
Peak Water Levels
for the 10% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig26.4 - Levels for 10% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

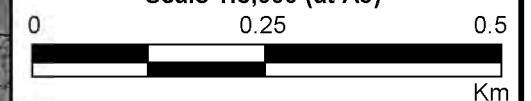
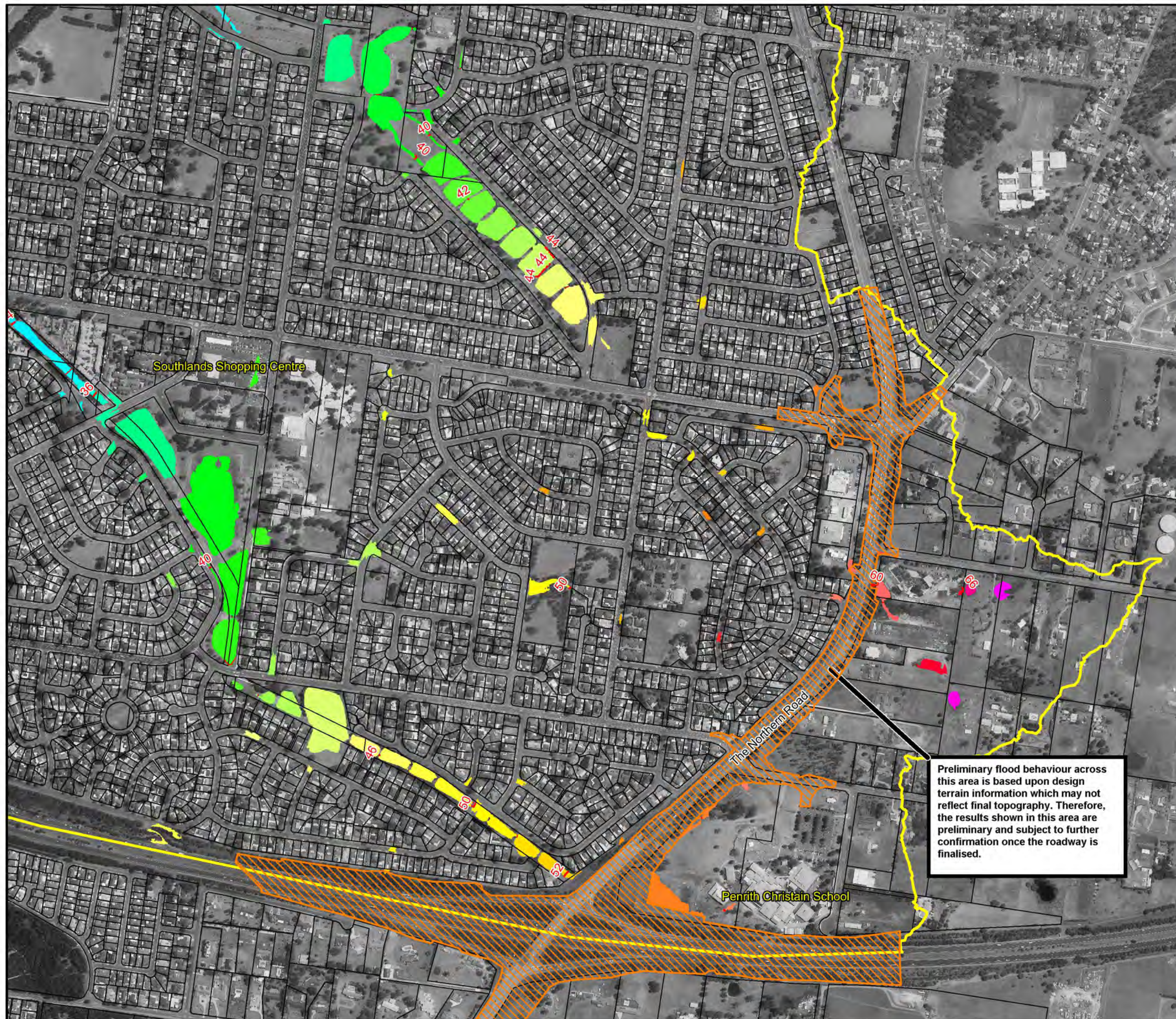


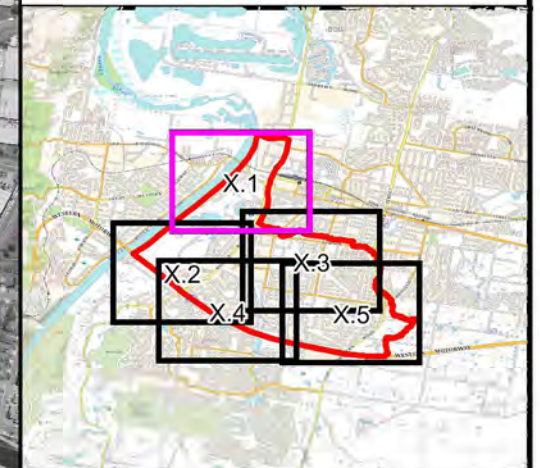
Figure 26.5:
Peak Water Levels
for the 10% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig26.5 - Levels for 10% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 27.1:
Peak Water Levels
for the 5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig27.1 - Levels for 5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

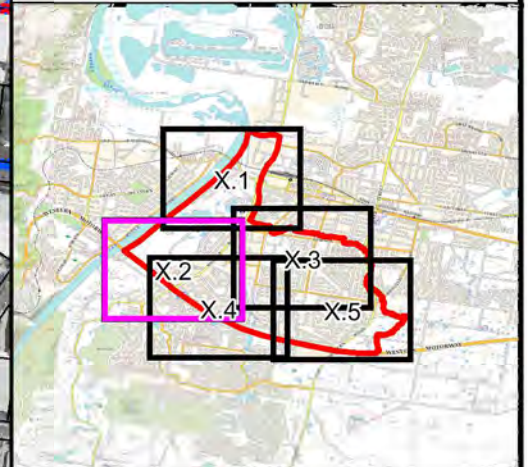
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River



LEGEND

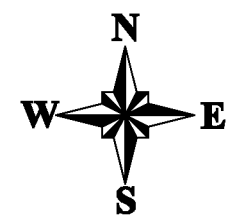
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

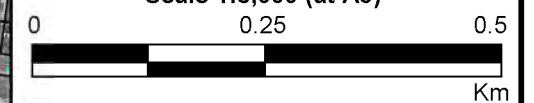
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 27.2:
Peak Water Levels
for the 5% AEP Local
Catchment Flood**

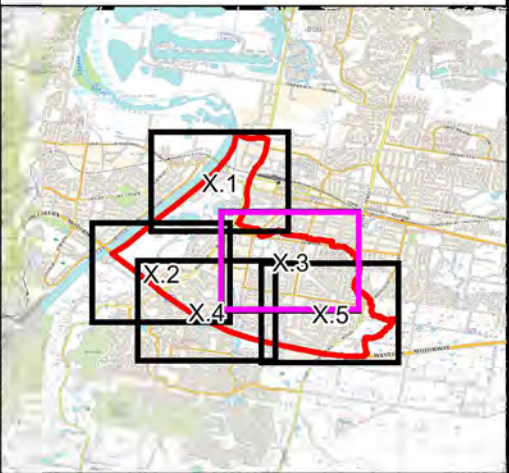
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig27.2 - Levels for 5% AEP
Flood.wor



PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

Blue	<= 20	Yellow	50
Light Blue	25	Orange	55
Light Cyan	30	Light Pink	60
Cyan	35	Red	65
Green	40	Magenta	70
Light Green	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

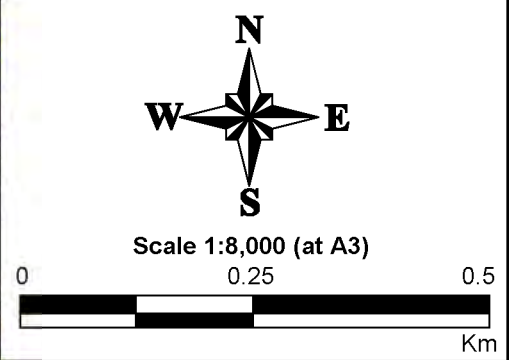
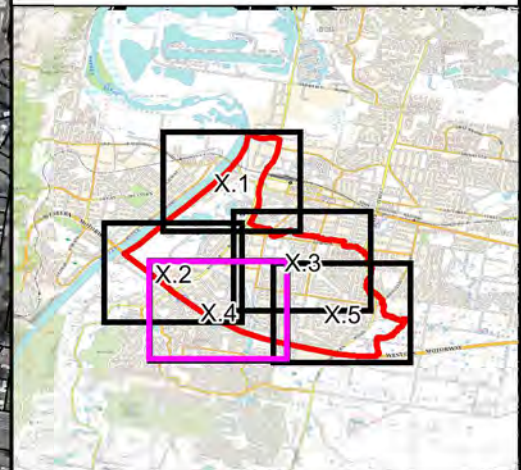


Figure 27.3:
Peak Water Levels
for the 5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig27.3 - Levels for 5% AEP
Flood.wor



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

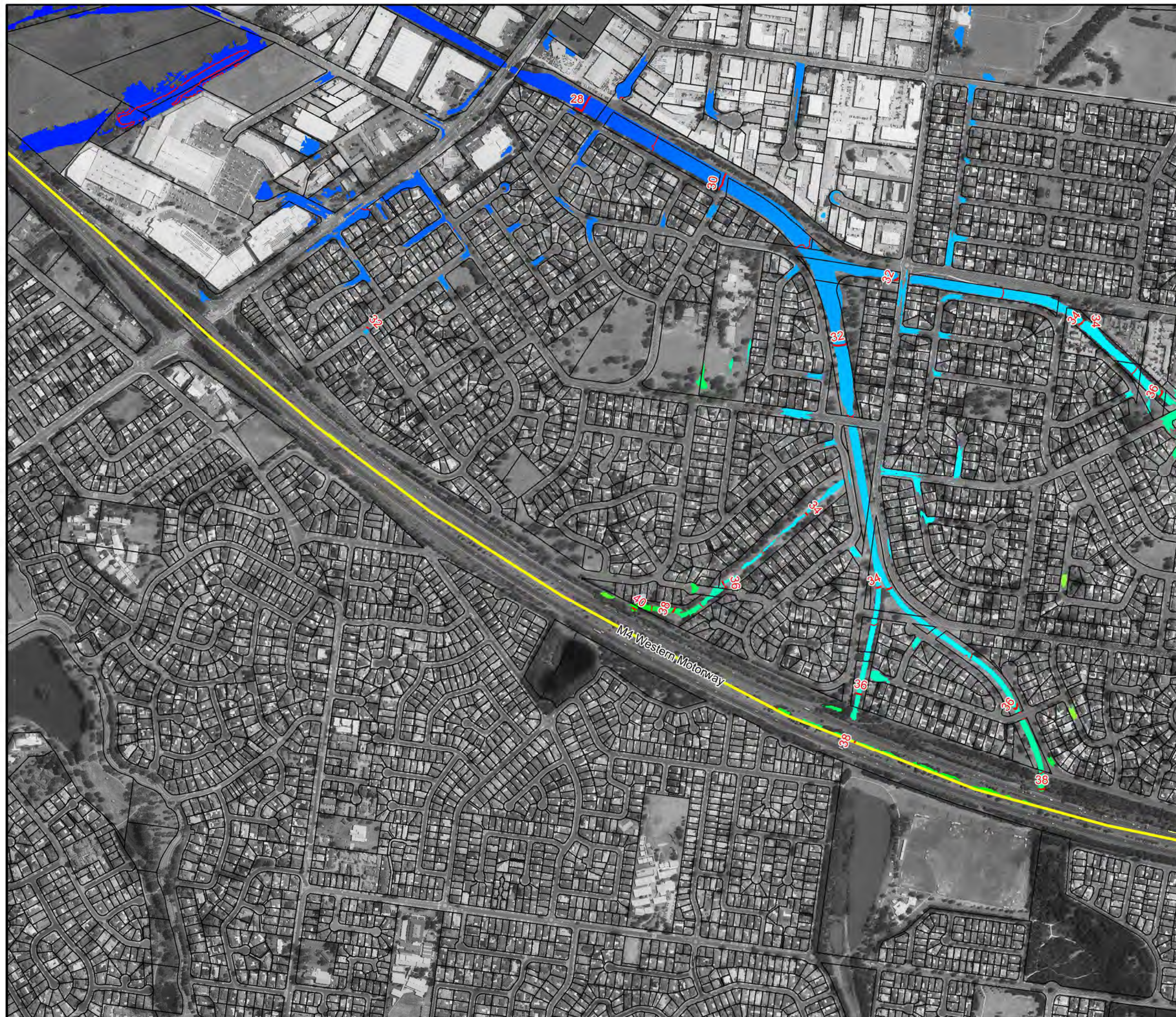


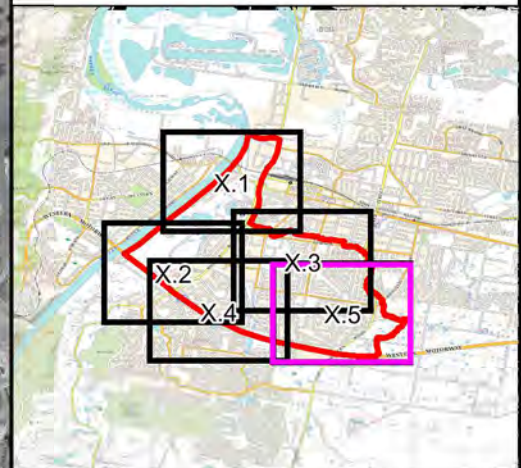
**Figure 27.4:
Peak Water Levels
for the 5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig27.4 - Levels for 5% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

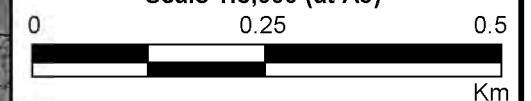
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

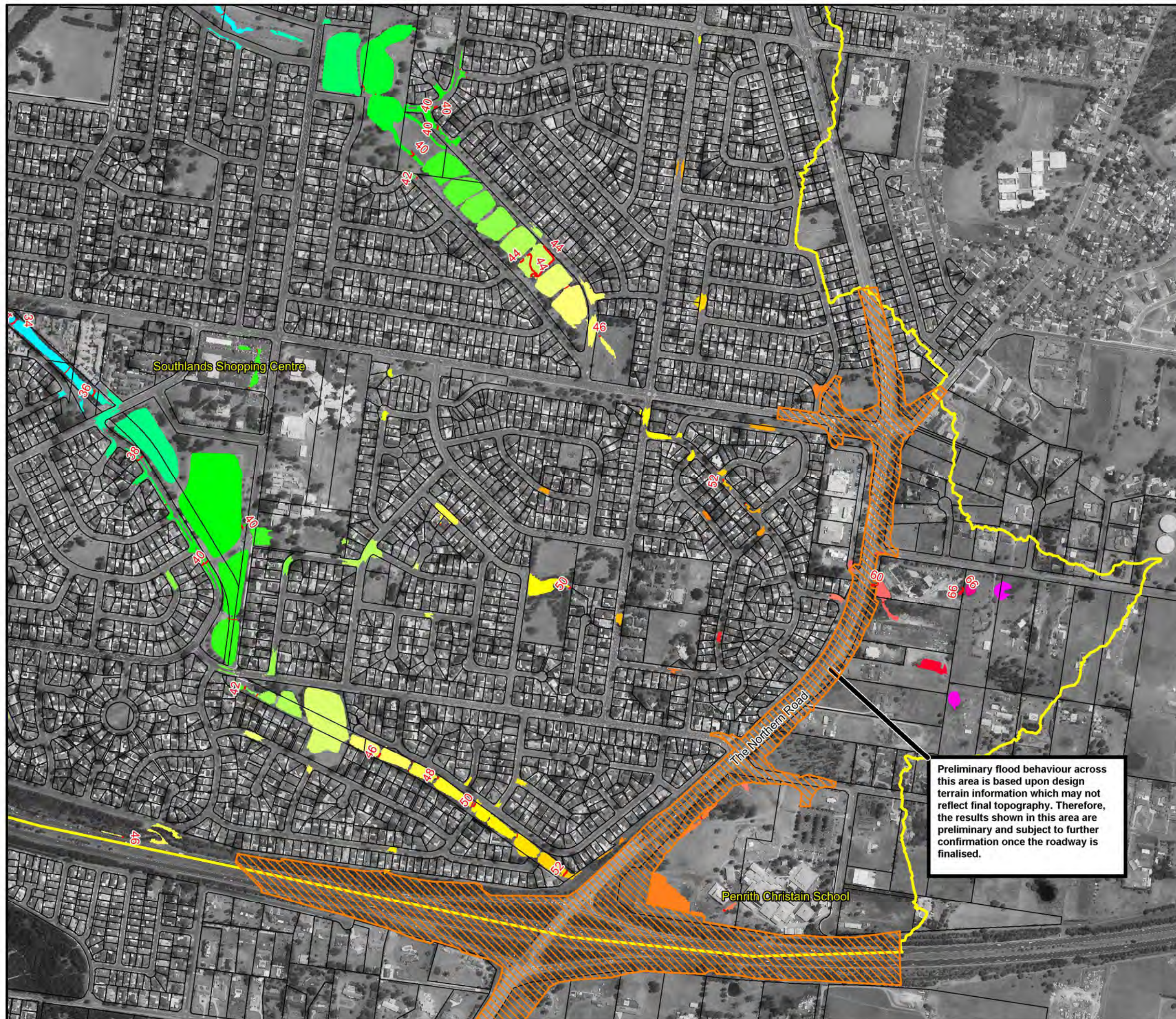


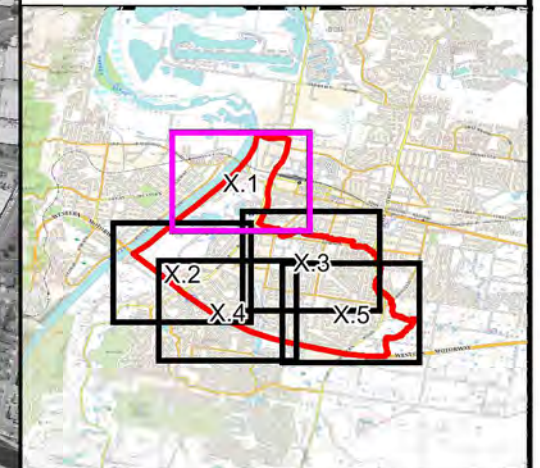
**Figure 27.5:
Peak Water Levels
for the 5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig27.5 - Levels for 5% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 28.1:
Peak Water Levels
for the 2% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig28.1 - Levels for 2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

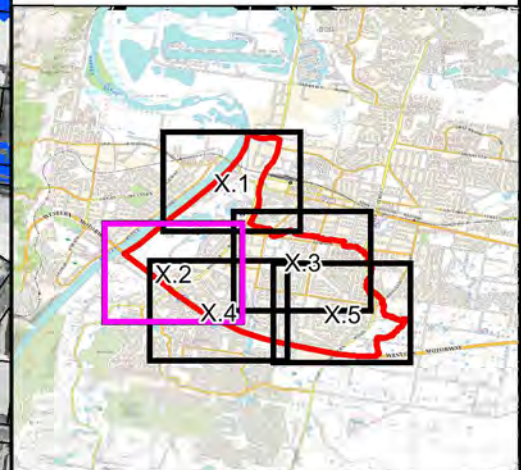
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

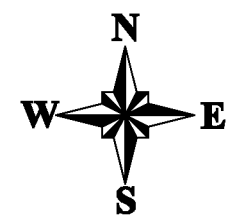
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 28.2:
Peak Water Levels
for the 2% AEP Local
Catchment Flood

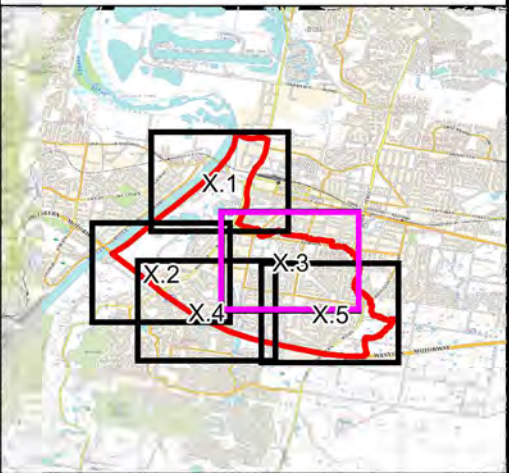
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig28.2 - Levels for 2% AEP
Flood.wor



PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAH)

Peak Flood level (mAH)

Blue	<= 20	Yellow	50
Light Blue	25	Orange	55
Cyan	30	Red	60
Green	35	Pink	65
Light Green	40	Purple	70
Yellow	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

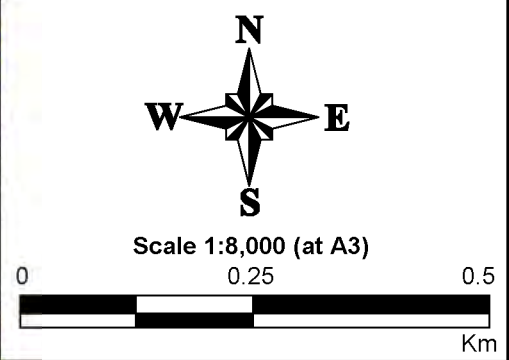
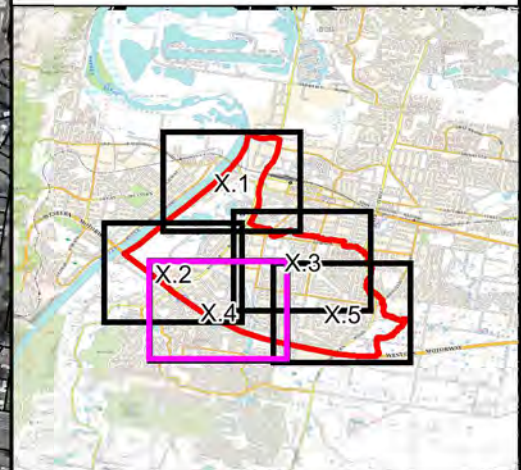


Figure 28.3:
Peak Water Levels
for the 2% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig28.3 - Levels for 2% AEP
Flood.wor



LEGEND

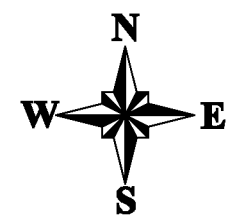
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

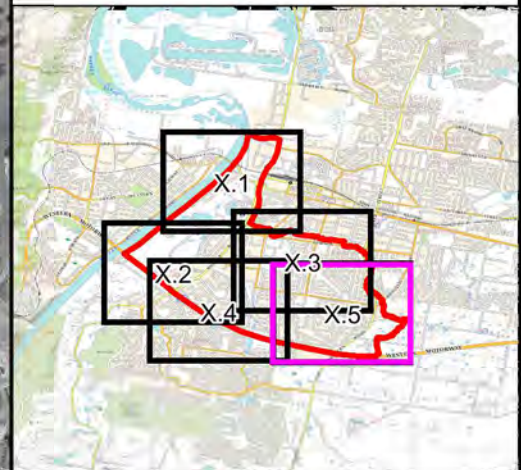


Figure 28.4:
Peak Water Levels
for the 2% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig28.4 - Levels for 2% AEP
Flood.wor



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

<= 20	50
25	55
30	60
35	65
40	70
45	

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

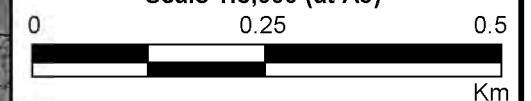
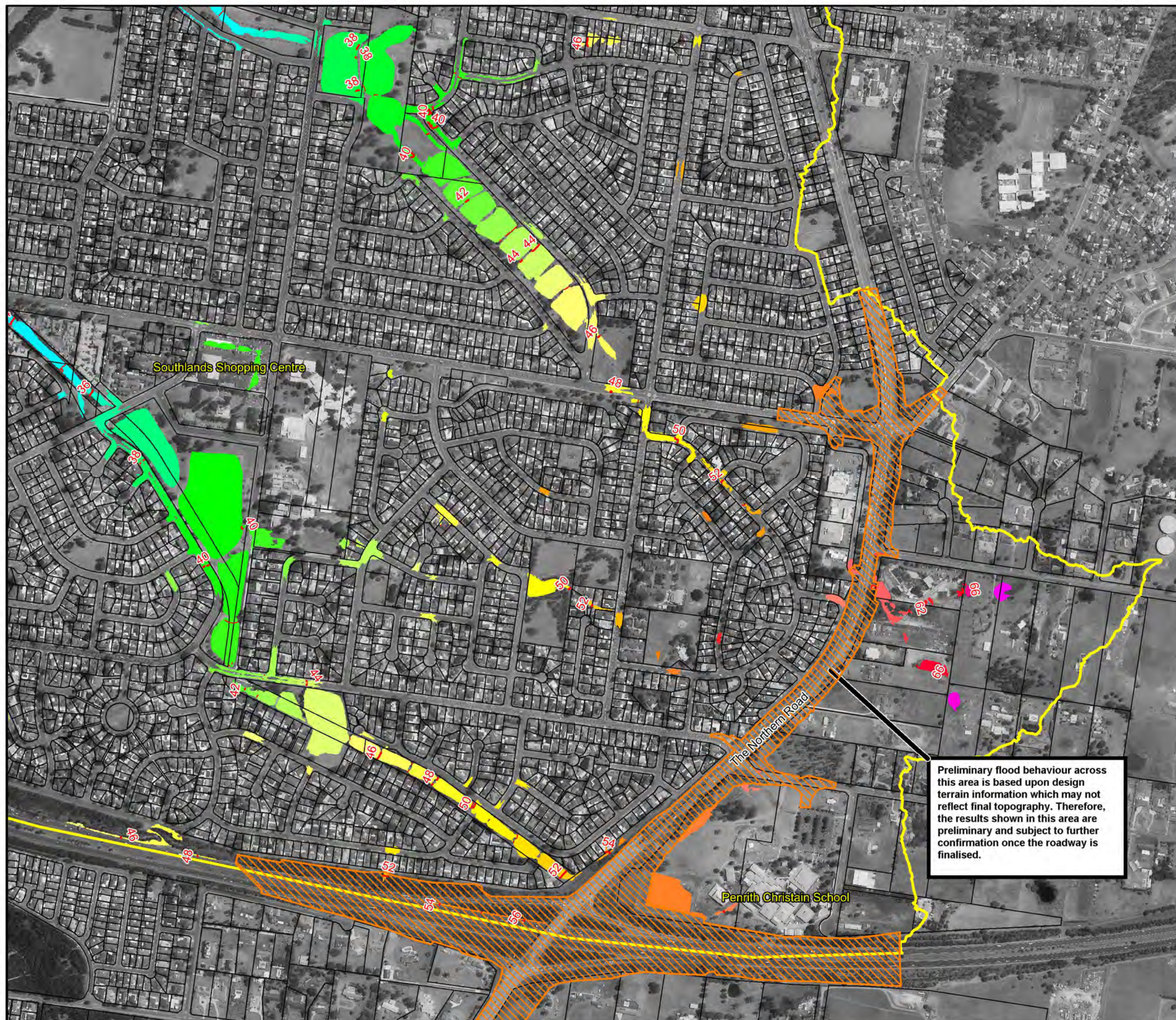


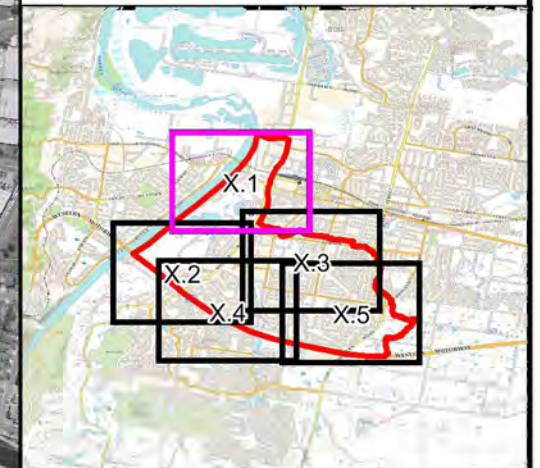
Figure 28.5:
Peak Water Levels
for the 2% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig28.5 - Levels for 2% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 29.1:
Peak Water Levels
for the 1% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig29.1 - Levels for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

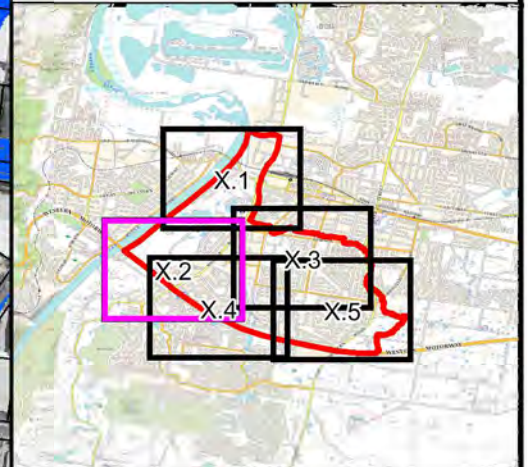
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

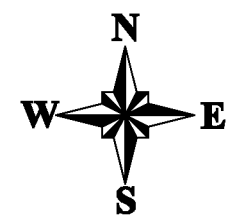
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

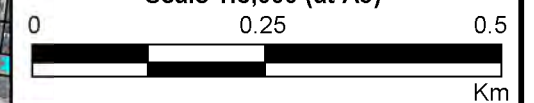
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 29.2:
Peak Water Levels
for the 1% AEP Local
Catchment Flood**

Prepared By:

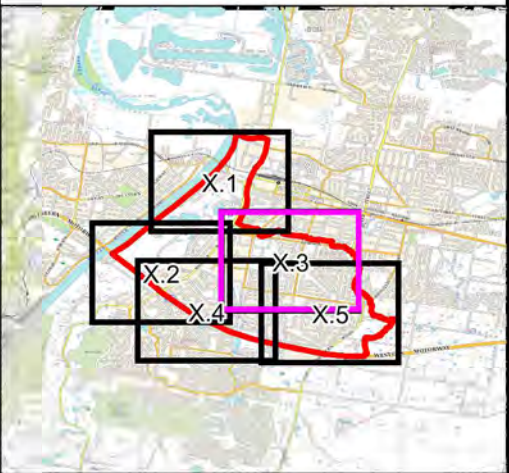
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig29.2 - Levels for 1% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

≤ 20	50
25	55
30	60
35	65
40	70
45	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

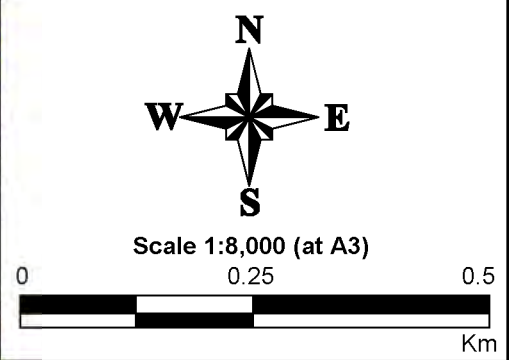
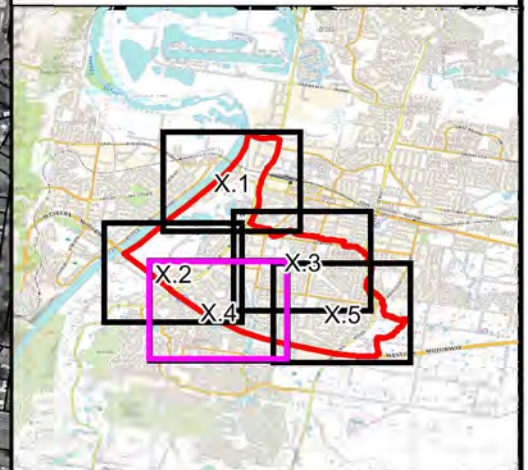


Figure 29.3:
Peak Water Levels
for the 1% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig29.3 - Levels for 1% AEP
Flood.wor



LEGEND

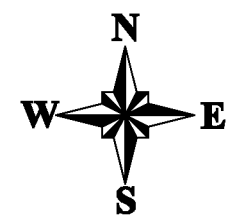
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

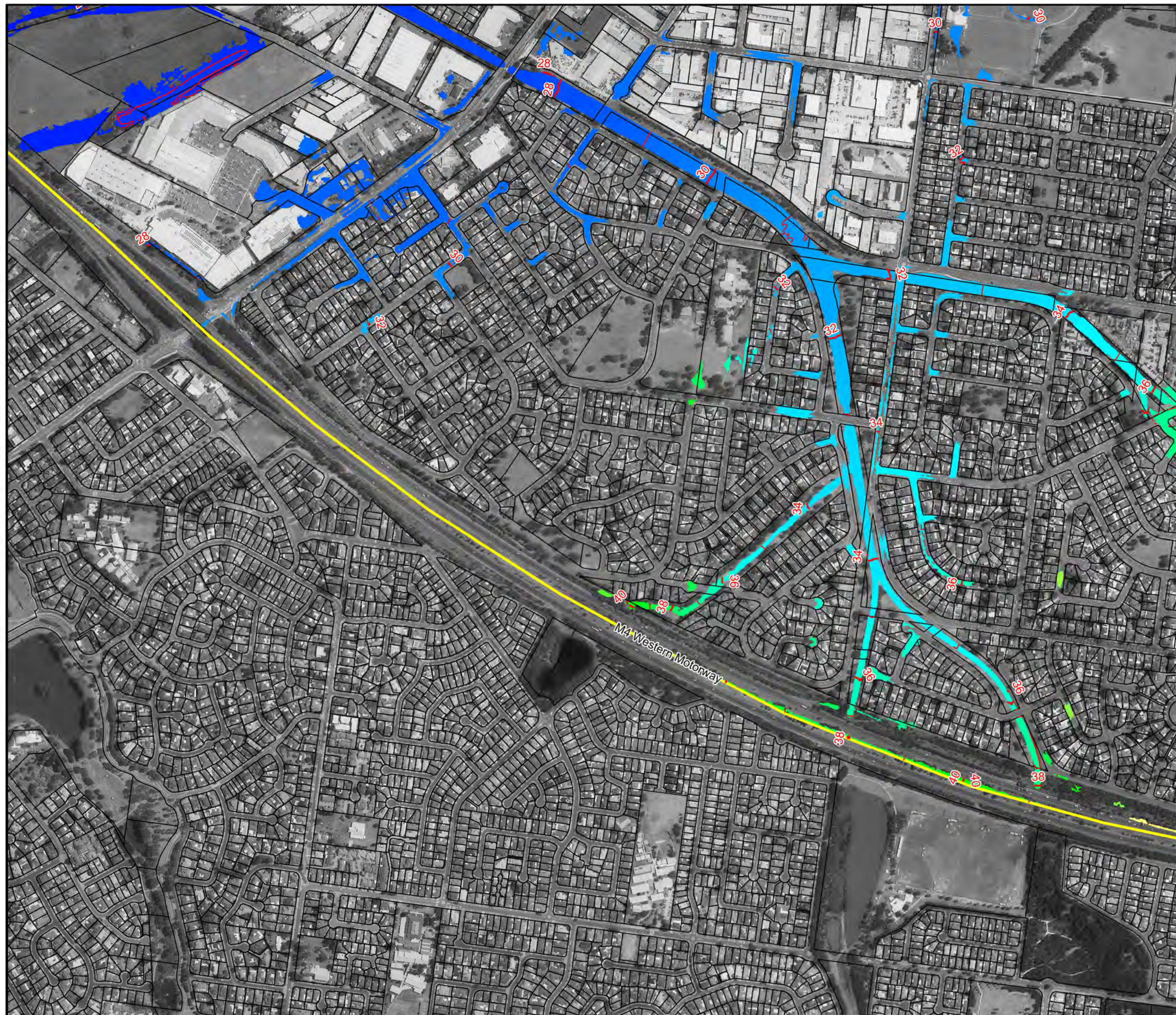


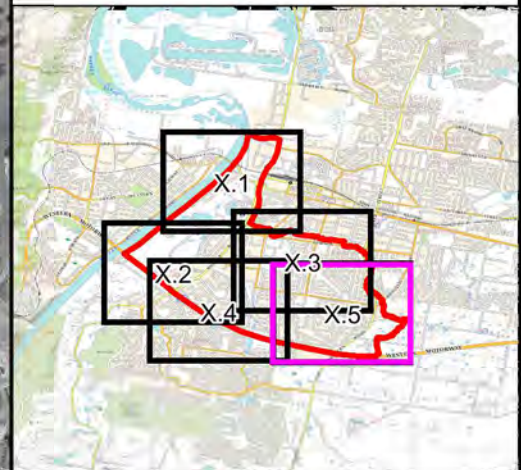
**Figure 29.4:
Peak Water Levels
for the 1% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig29.4 - Levels for 1% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

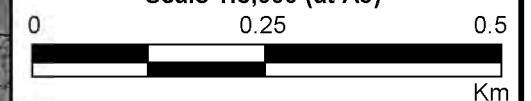
█	<= 20	█	50
█	25	█	55
█	30	█	60
█	35	█	65
█	40	█	70
█	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

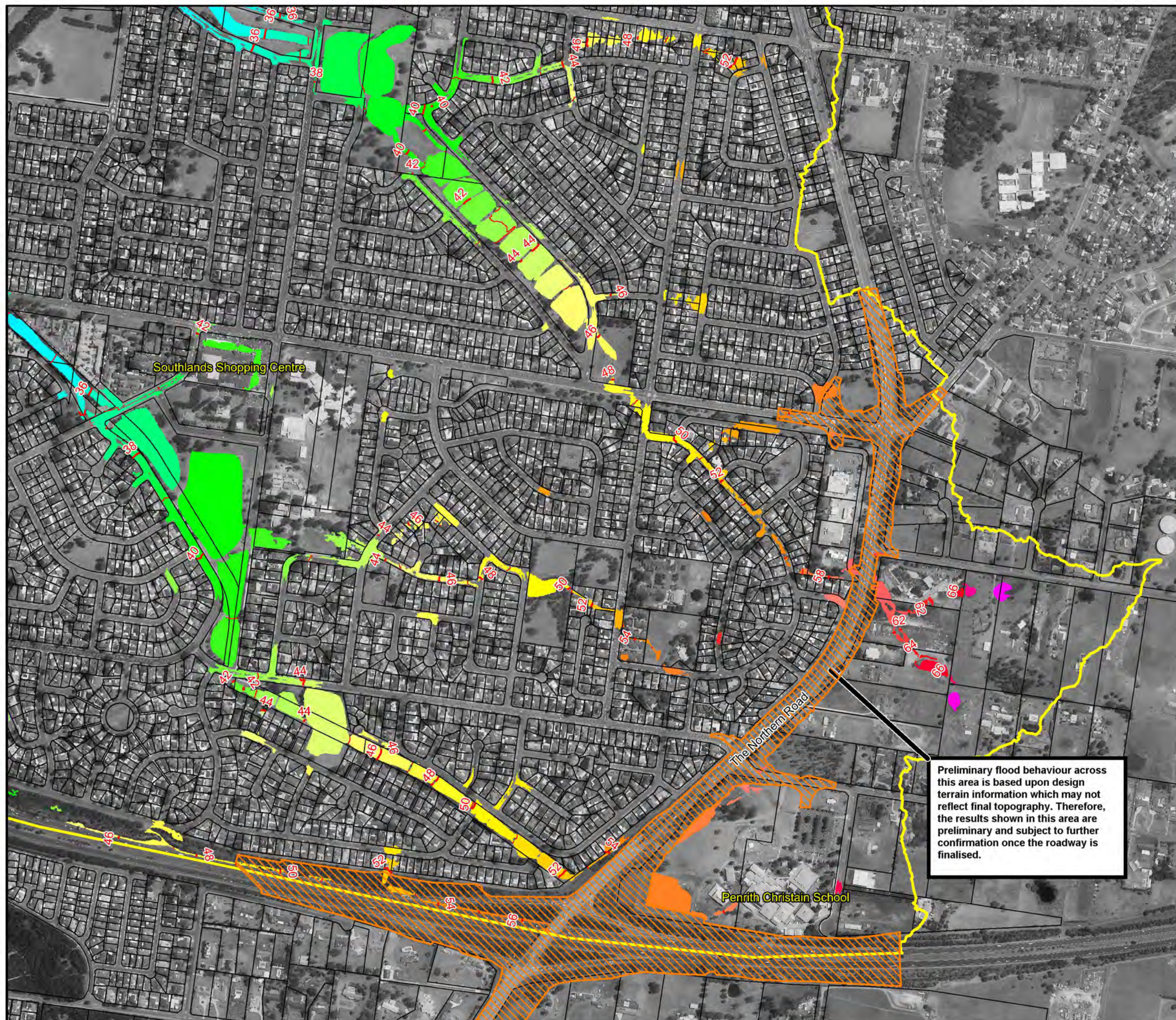


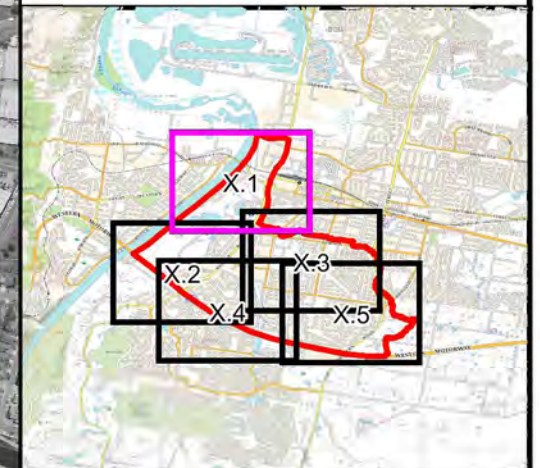
**Figure 29.5:
Peak Water Levels
for the 1% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig29.5 - Levels for 1% AEP
Flood.wor





LEGEND

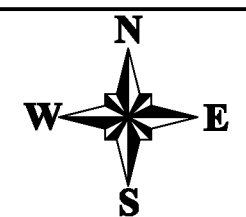
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 30.1:
Peak Water Levels
for the 0.5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig30.1 - Levels for 0.5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

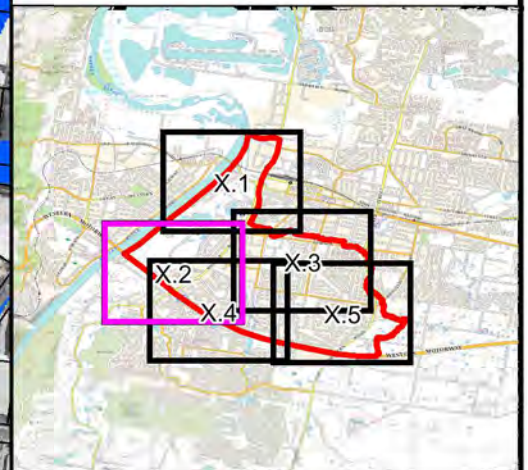
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

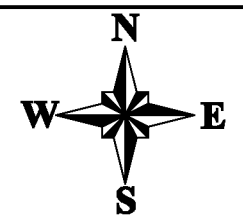
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

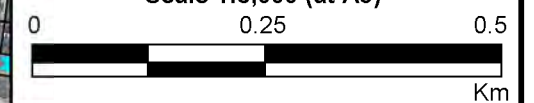
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 30.2:
Peak Water Levels
for the 0.5% AEP Local
Catchment Flood**

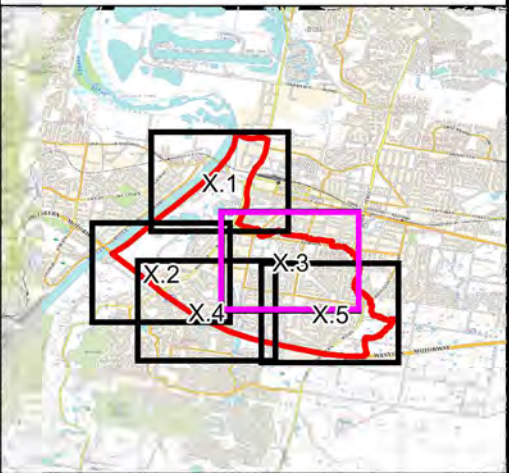
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig30.2 - Levels for 0.5% AEP
Flood.wor



PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

Blue	<= 20	Yellow	50
Light Blue	25	Orange	55
Light Cyan	30	Light Pink	60
Cyan	35	Red	65
Green	40	Magenta	70
Light Green	45		

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

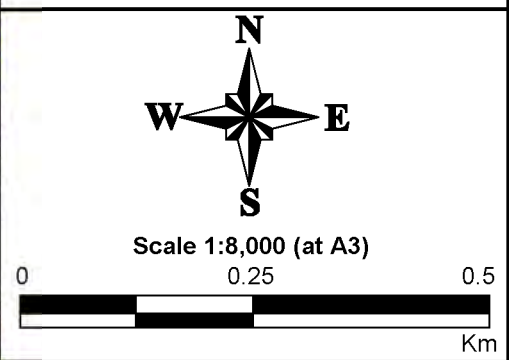
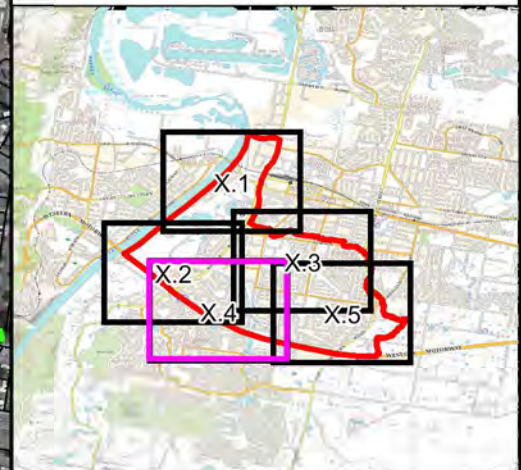


Figure 30.3:
Peak Water Levels
for the 0.5% AEP Local
Catchment Flood

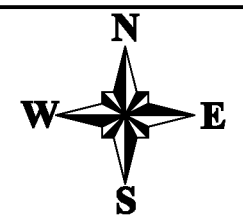
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig30.3 - Levels for 0.5% AEP
Flood.wor



LEGEND

26	Peak Flood level Contour (mAHD)
Peak Flood level (mAHD)	
■	<= 20
■	25
■	30
■	35
■	40
■	45
■	50
■	55
■	60
■	65
■	70

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

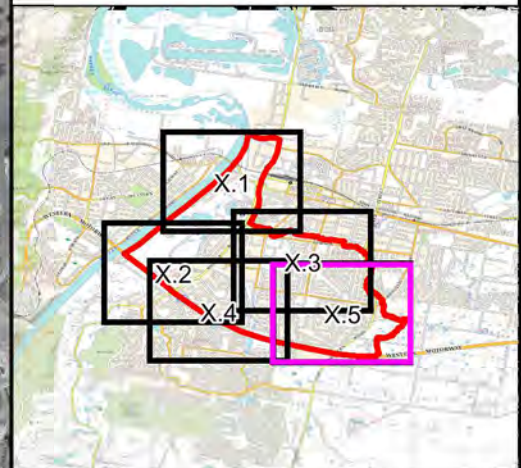


**Figure 30.4:
Peak Water Levels
for the 0.5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig30.4 - Levels for 0.5% AEP
Flood.wor



LEGEND

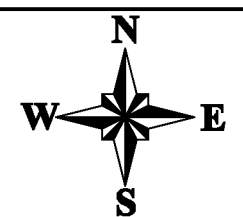
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

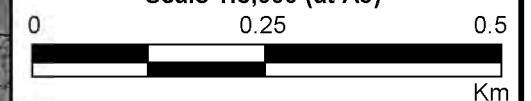
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

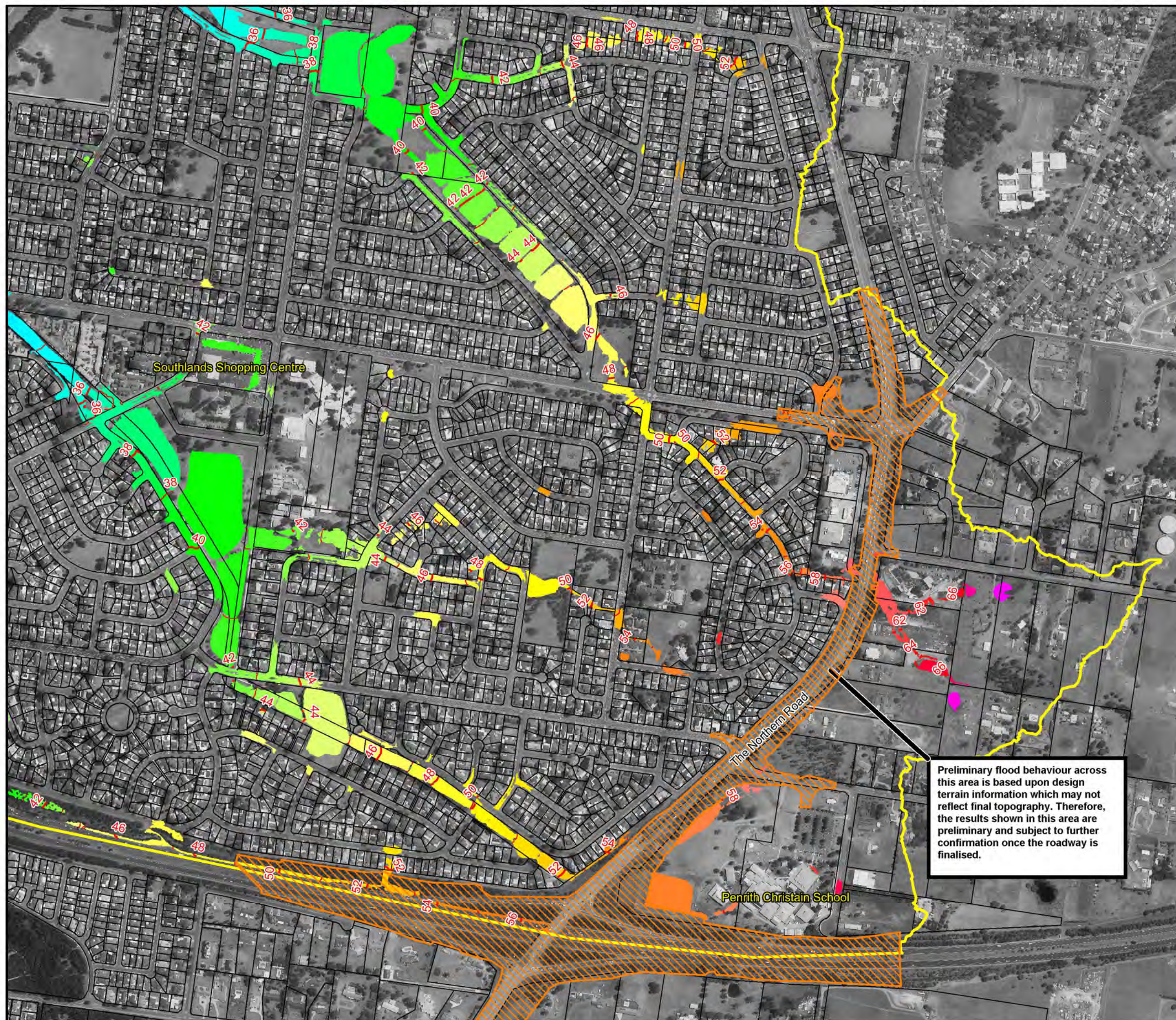


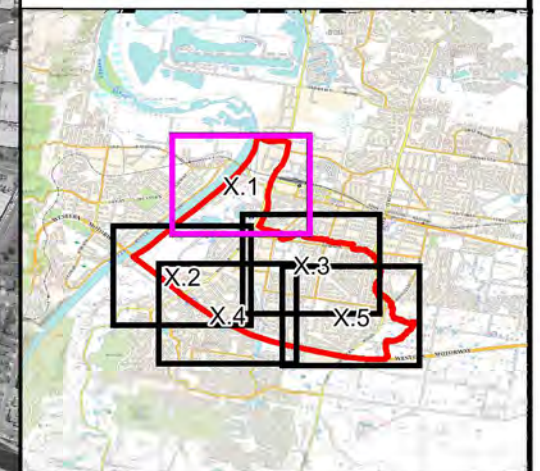
**Figure 30.5:
Peak Water Levels
for the 0.5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig30.5 - Levels for 0.5% AEP
Flood.wor





LEGEND

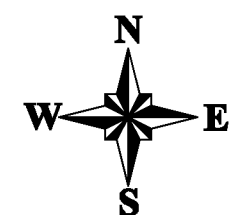
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 31.1:
Peak Water Levels
for the 0.2% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig31.1 - Levels for 0.2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

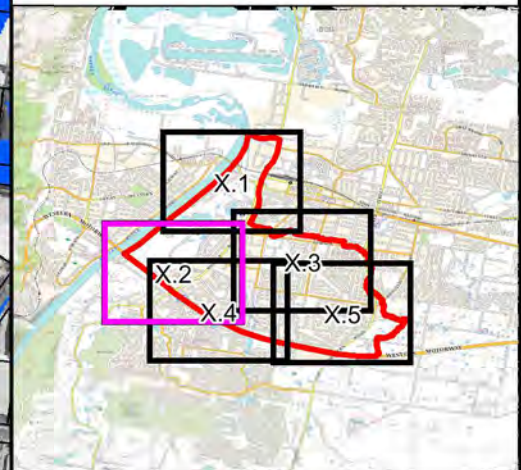
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



LEGEND

26	Peak Flood level Contour (mAHD)
Peak Flood level (mAHD)	
	<= 20
	25
	30
	35
	40
	45
	50
	55
	60
	65
	70

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 31.2:
Peak Water Levels
for the 0.2% AEP Local
Catchment Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig31.2 - Levels for 0.2% AEP
Flood.wor



Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

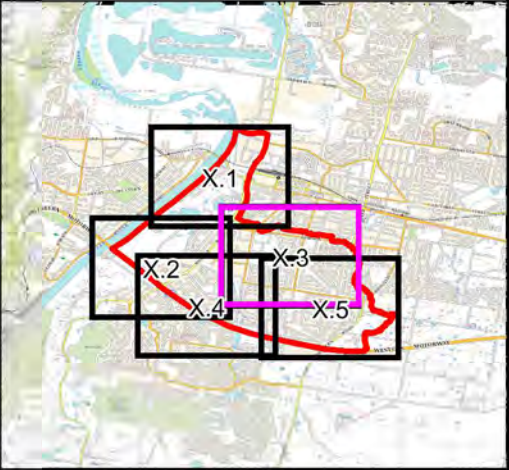
Jamison Park

Jamison Road

Evan Street

Southlands Shopping Centre

PENRITH CITY COUNCIL



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

≤ 20	50
25	55
30	60
35	65
40	70
45	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

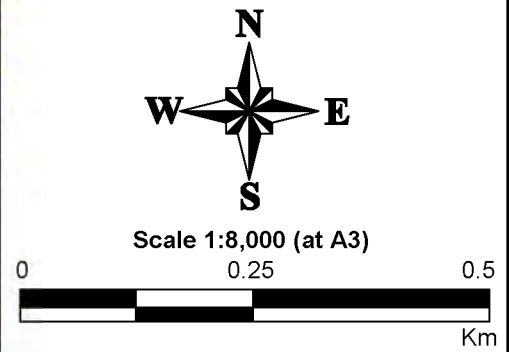
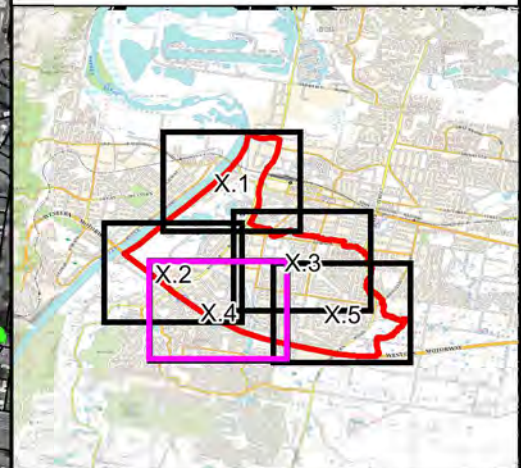


Figure 31.3:
Peak Water Levels
for the 0.2% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig31.3 - Levels for 0.2% AEP Flood.wor



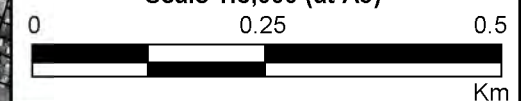
LEGEND

26	Peak Flood level Contour (mAHD)
Peak Flood level (mAHD)	
■	<= 20
■	25
■	30
■	35
■	40
■	45
■	50
■	55
■	60
■	65
■	70


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



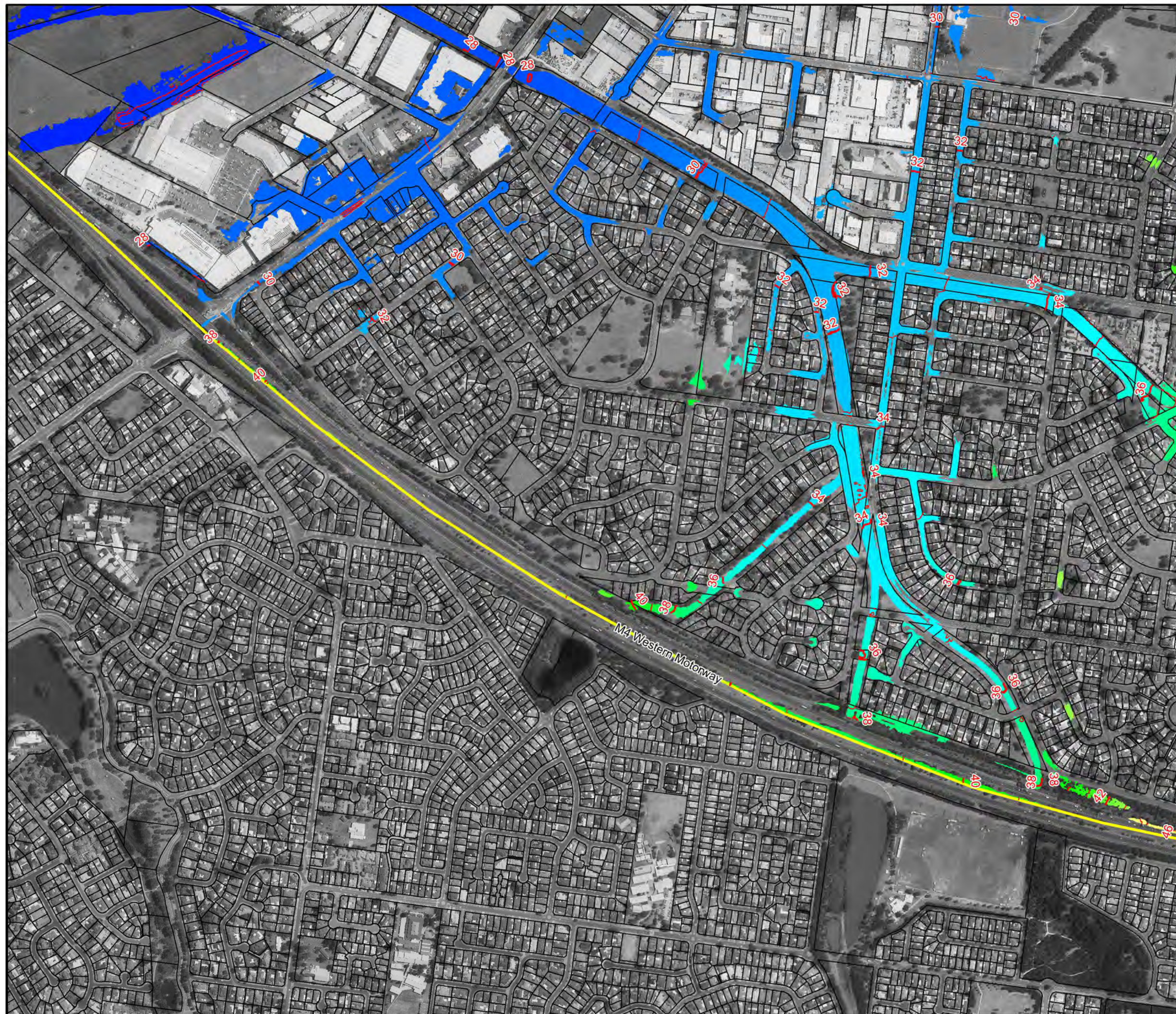
Scale 1:8,000 (at A3)

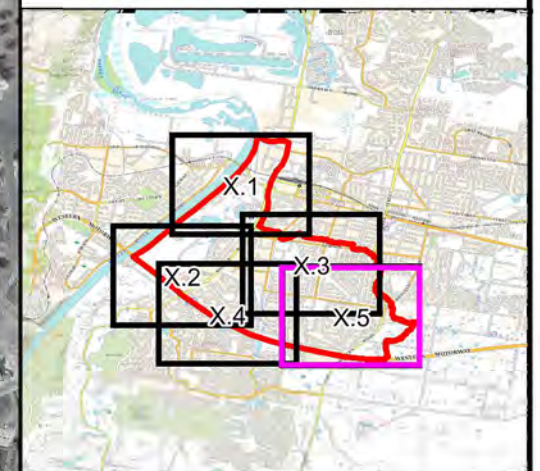


**Figure 31.4:
Peak Water Levels
for the 0.2% AEP Local
Catchment Flood**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig31.4 - Levels for 0.2% AEP
Flood.wor





LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

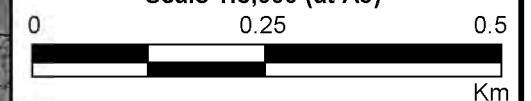
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

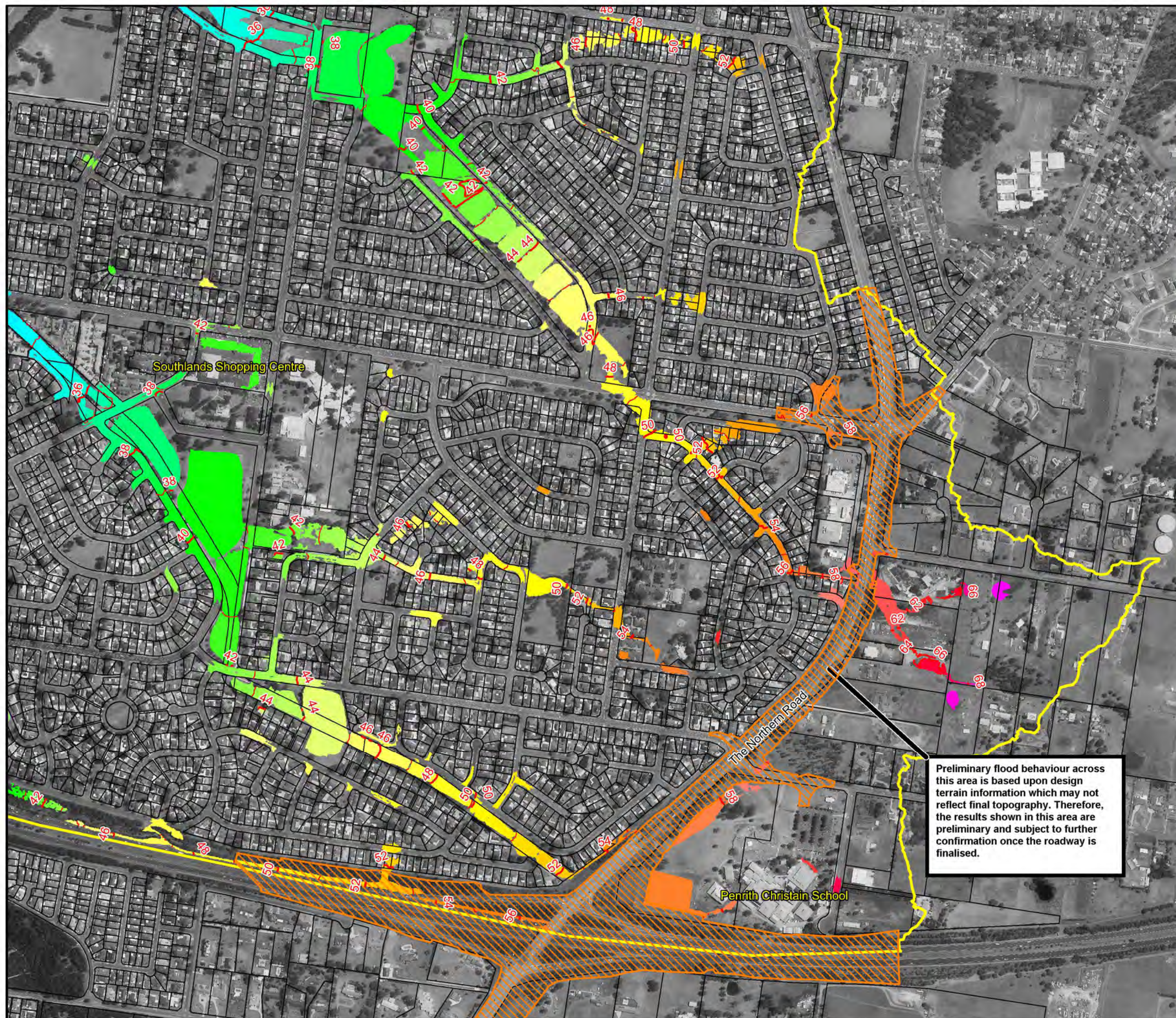


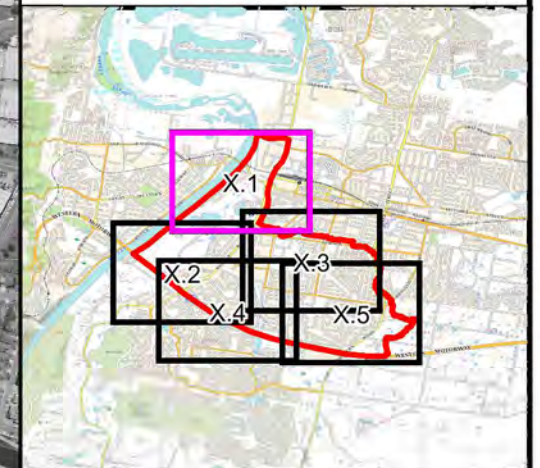
**Figure 31.5:
Peak Water Levels
for the 0.2% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig31.5 - Levels for 0.2% AEP
Flood.wor





LEGEND

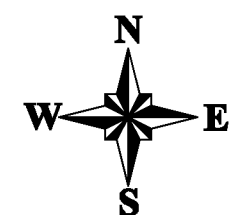
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 32.1:
Peak Water Levels
for the Local
Catchment PMF**

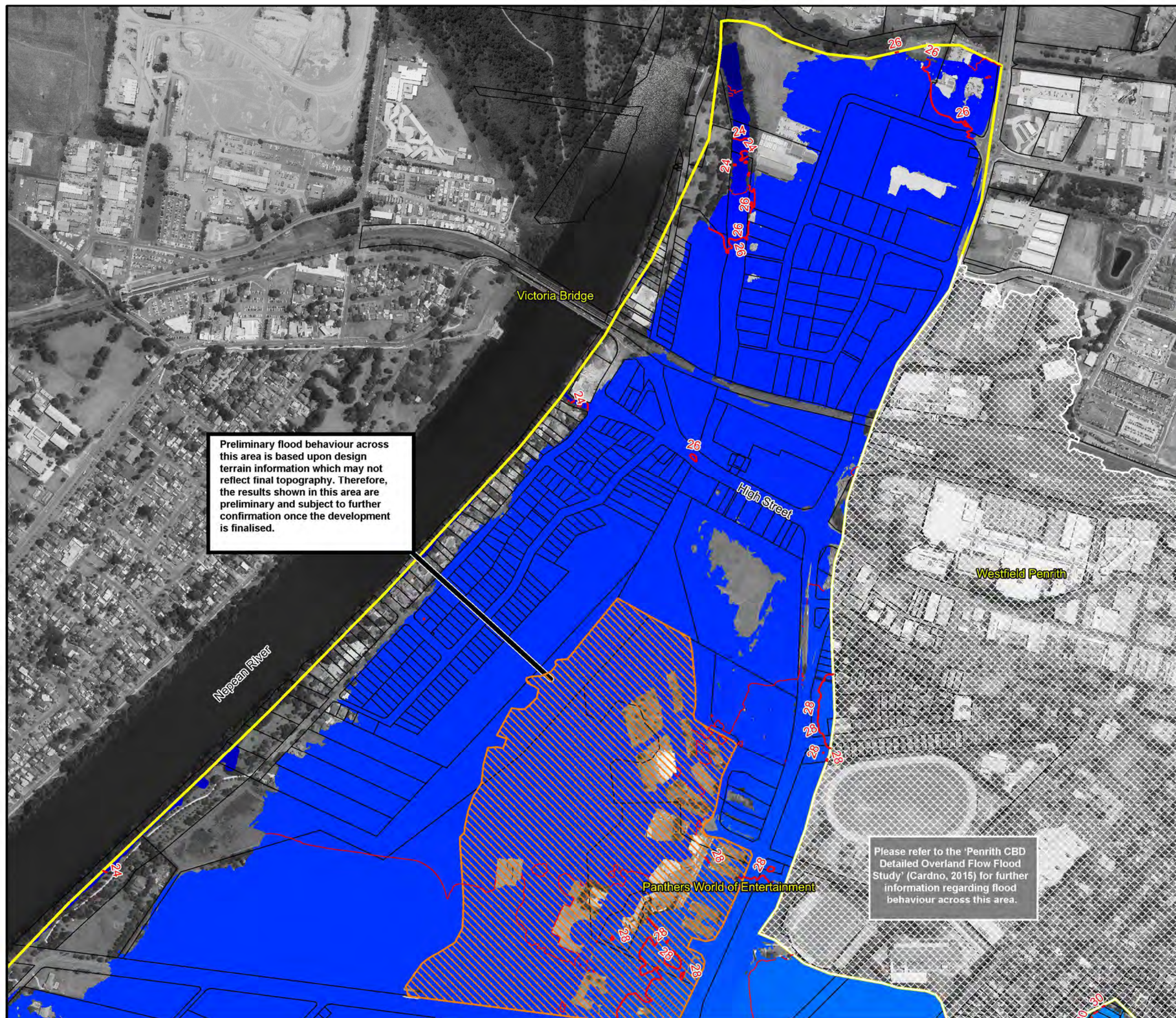
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

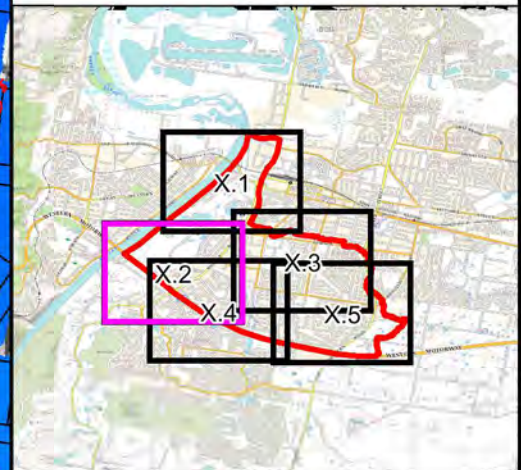
File Name: Fig32.1 - Levels for PMF
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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LEGEND

	Peak Flood level Contour (mAHD)
	Peak Flood level (mAHD)
	<= 20
	25
	30
	35
	40
	45
	50
	55
	60
	65
	70

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

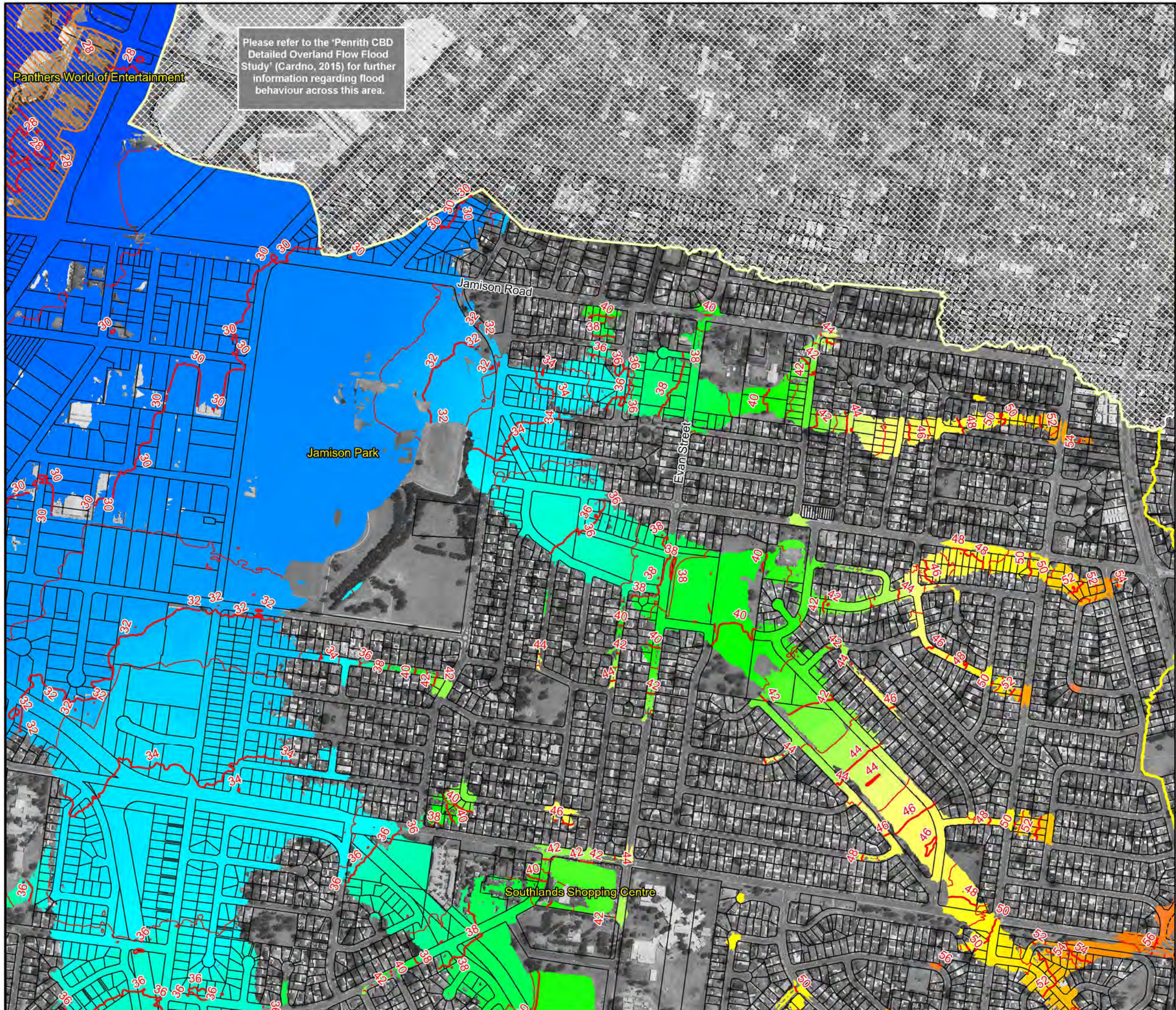


**Figure 32.2:
Peak Water Levels
for the Local
Catchment PMF**

Prepared By:

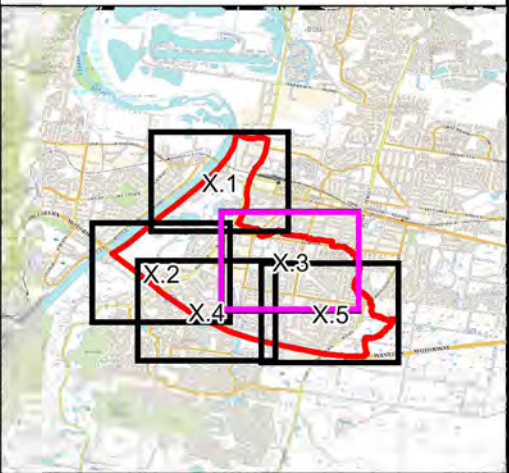
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig32.2 - Levels for PMF
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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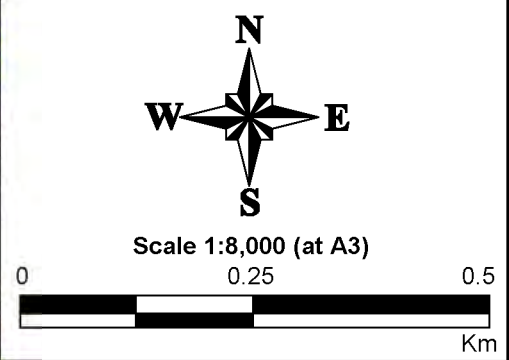
LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

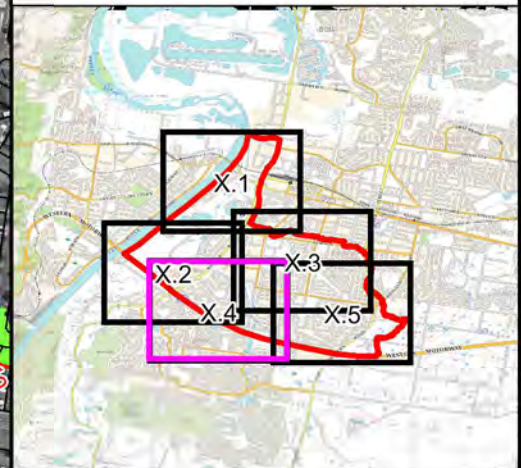
≤ 20	50
25	55
30	60
35	65
40	70
45	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 32.3:
Peak Water Levels
for the Local
Catchment PMF**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig32.3 - Levels for PMF
Flood.wor



LEGEND

26	Peak Flood level Contour (mAHD)
Peak Flood level (mAHD)	
<= 20	50
25	55
30	60
35	65
40	70
45	

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

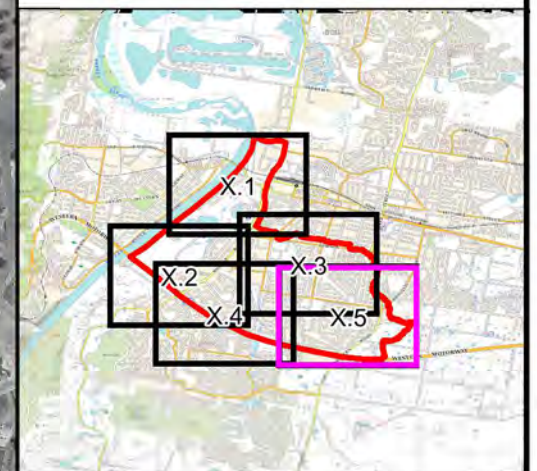


**Figure 32.4:
Peak Water Levels
for the Local
Catchment PMF**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig32.4 - Levels for PMF
Flood.wor



LEGEND

26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

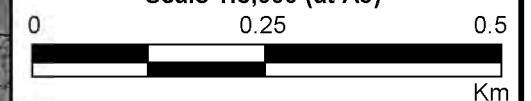
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



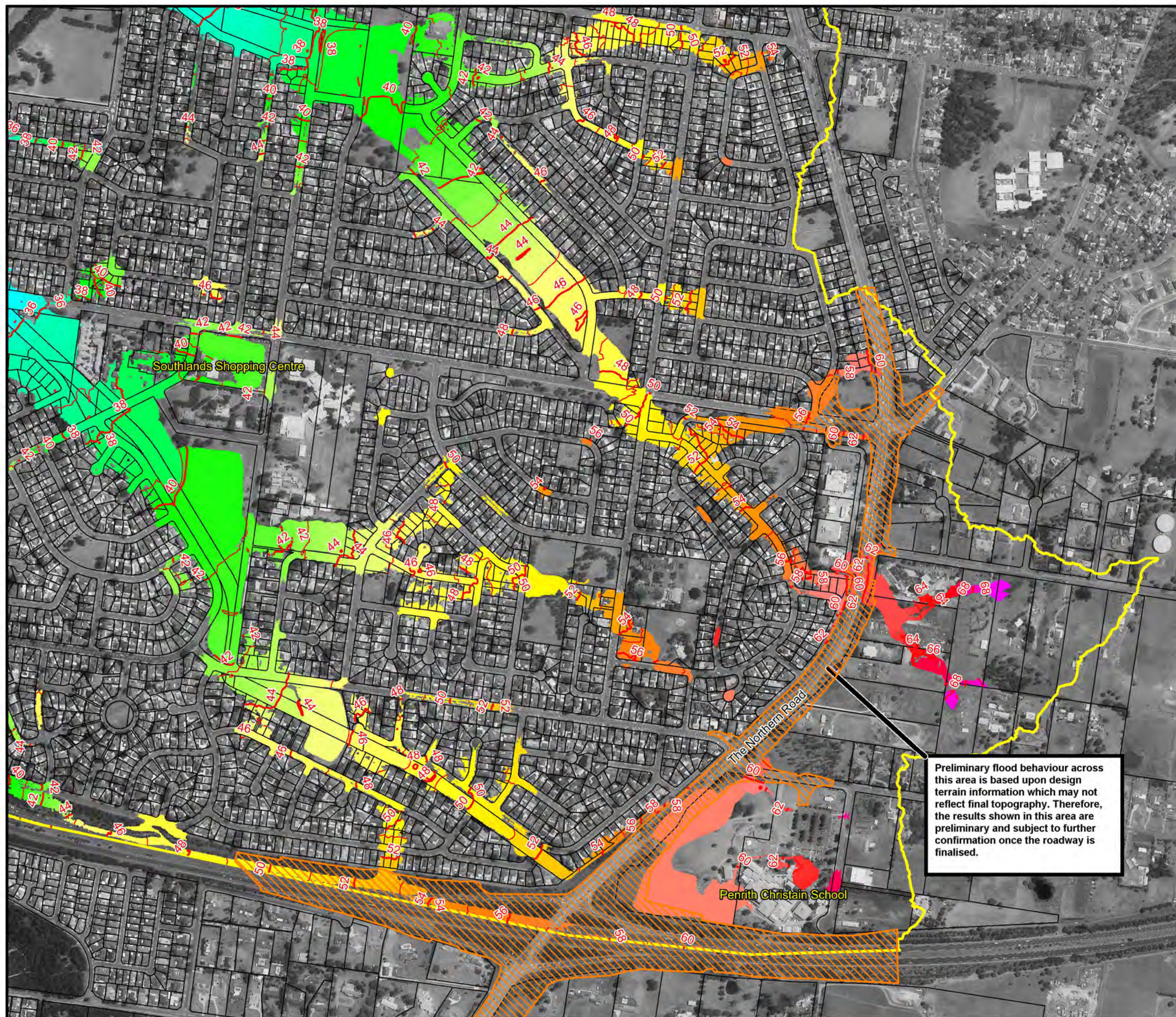
**Figure 32.5:
Peak Water Levels
for the Local
Catchment PMF**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig32.5 - Levels for PMF
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the roadway is finalised.



LEGEND

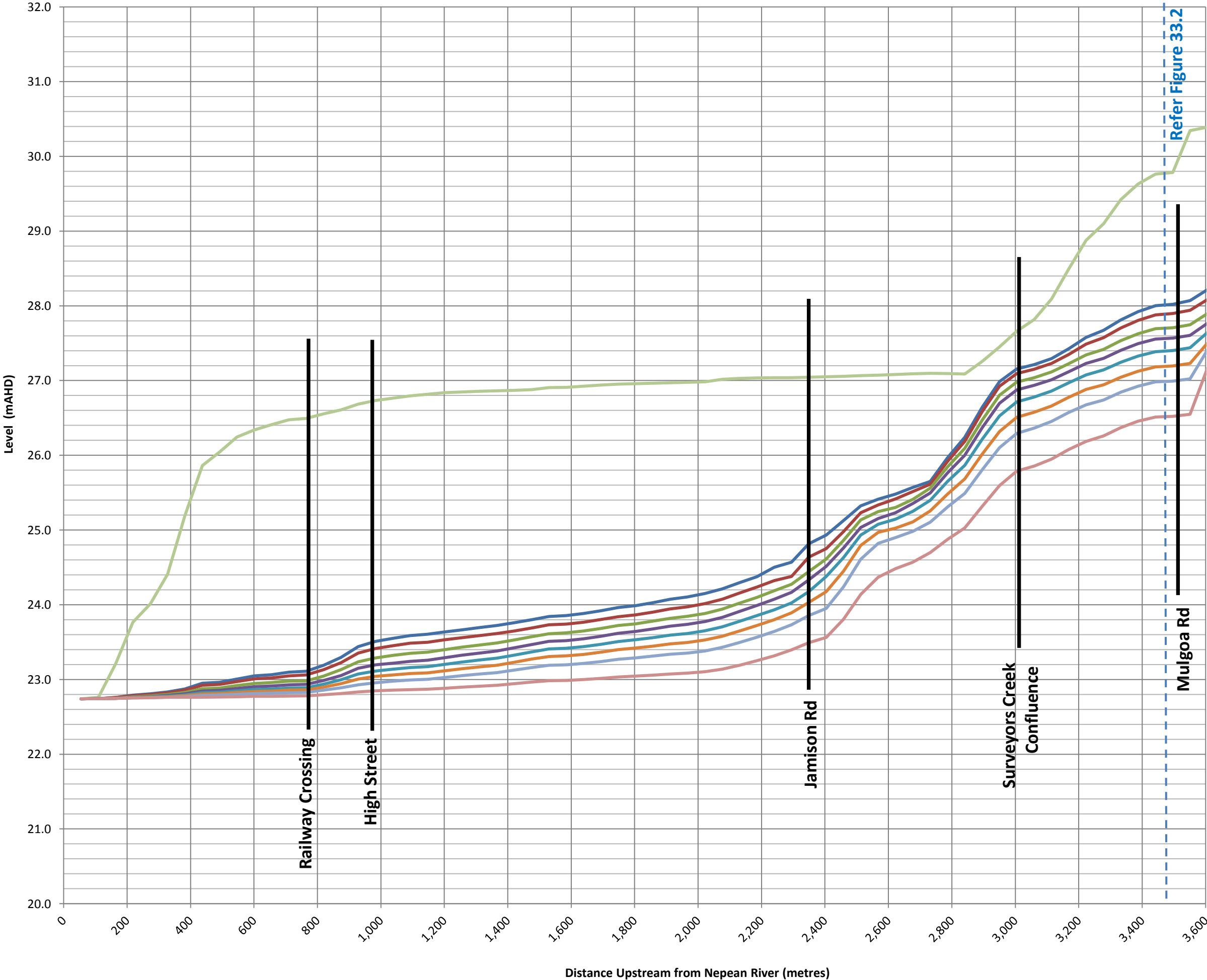
- PMF Local Catchment Flood
- 0.2%AEP Local Catchment Flood
- 0.5%AEP Local Catchment Flood
- 1%AEP Local Catchment Flood
- 2%AEP Local Catchment Flood
- 5%AEP Local Catchment Flood
- 10%AEP Local Catchment Flood
- 20%AEP Local Catchment Flood
- 50%AEP Local Catchment Flood

Notes:
Results presented in this figure
assume a flood from the local
catchment occurs at the same time as
a 5% AEP Nepean River flood

Figure 33.1:
Peak Floodwater
Surface Profiles

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George Street
Sydney, NSW, 2000

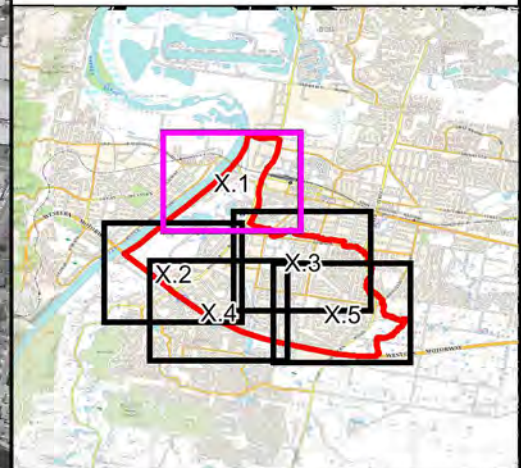
File Name: Peach Tree Water Surface
.xls





DESIGN FLOW VELOCITY MAPS





LEGEND

Velocities (m/s)	
 	< 0.25
 	0.25 to 0.5
 	0.5 to 1.0
 	1.0 to 2.0
 	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



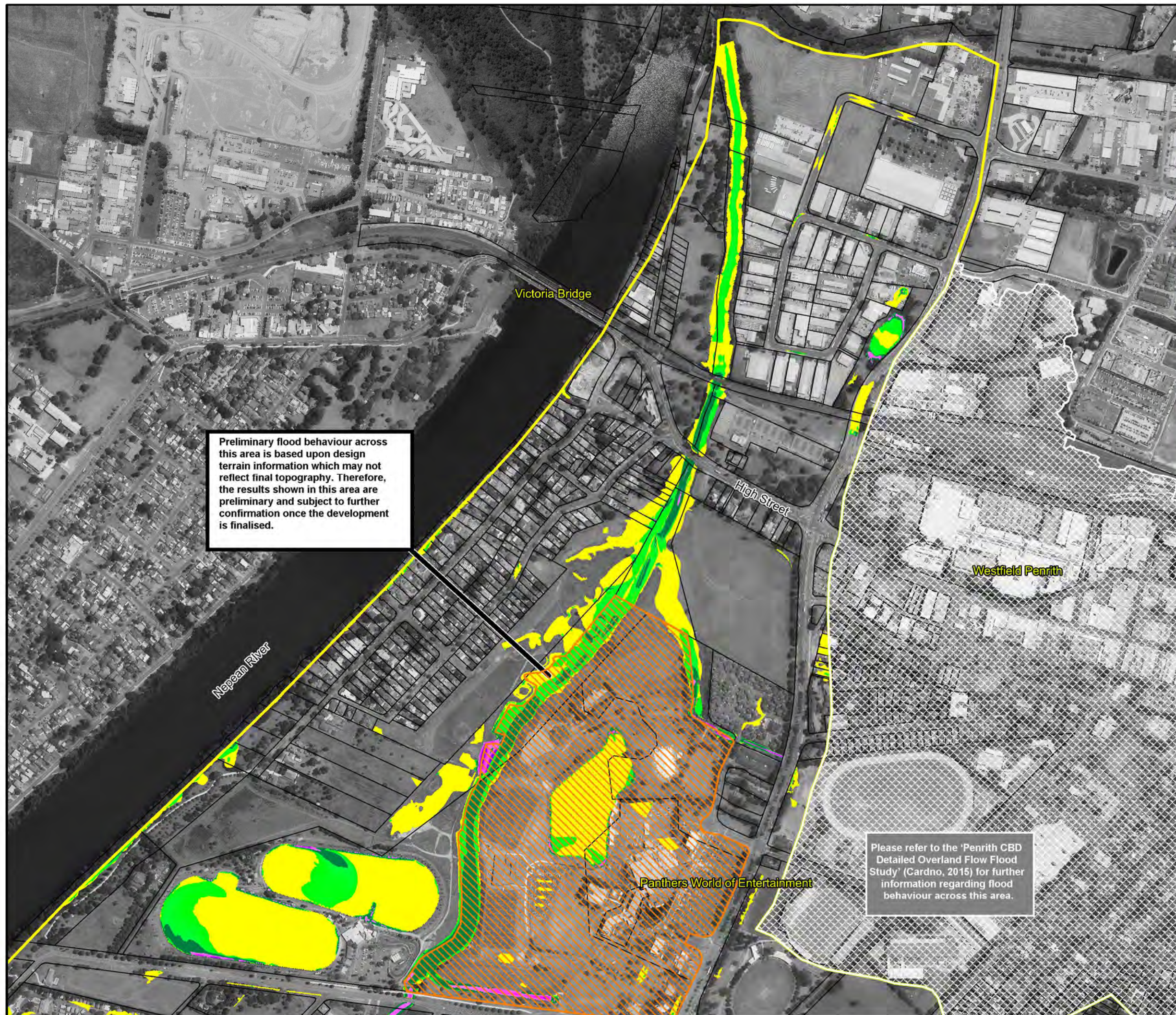
**Figure 34.1:
Peak Flow Velocities
for the 50% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

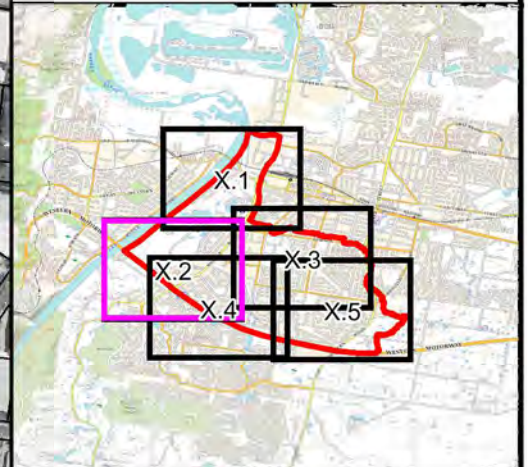
File Name: Fig34.1 - Velocity for 50% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 34.2:
Peak Flow Velocities
for the 50% AEP Local
Catchment Flood

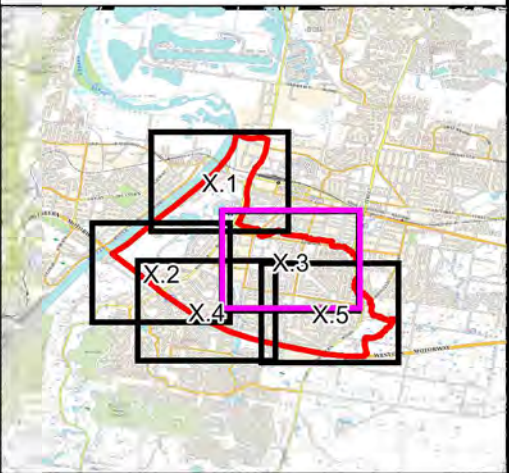
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig34.2 - Velocity for 50% AEP
Flood.wor



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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

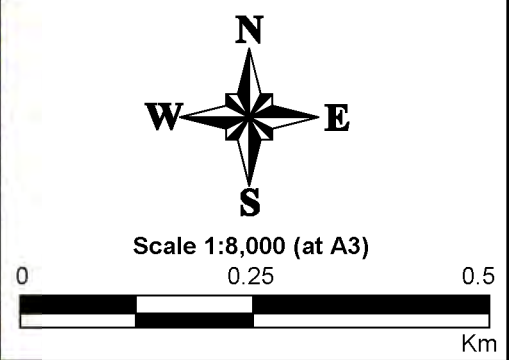
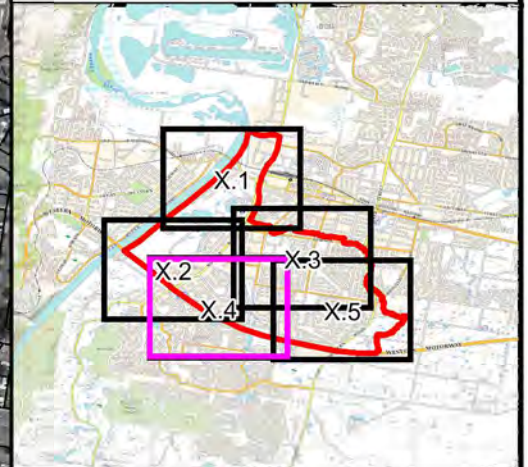


Figure 34.3:
Peak Flow Velocities
for the 50% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig34.3 - Velocity for 50% AEP Flood.wor



LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

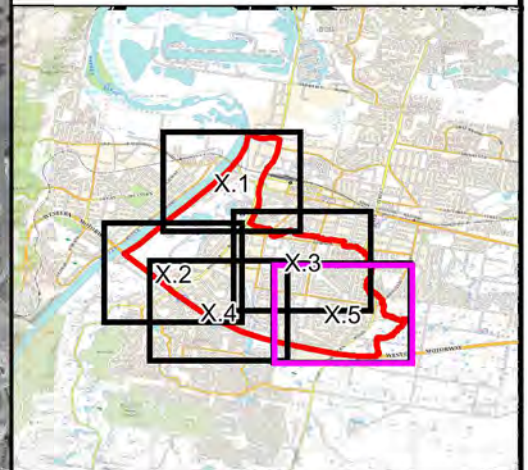


Figure 34.4:
Peak Flow Velocities
for the 50% AEP Local
Catchment Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig34.4 - Velocity for 50% AEP
Flood.wor



LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



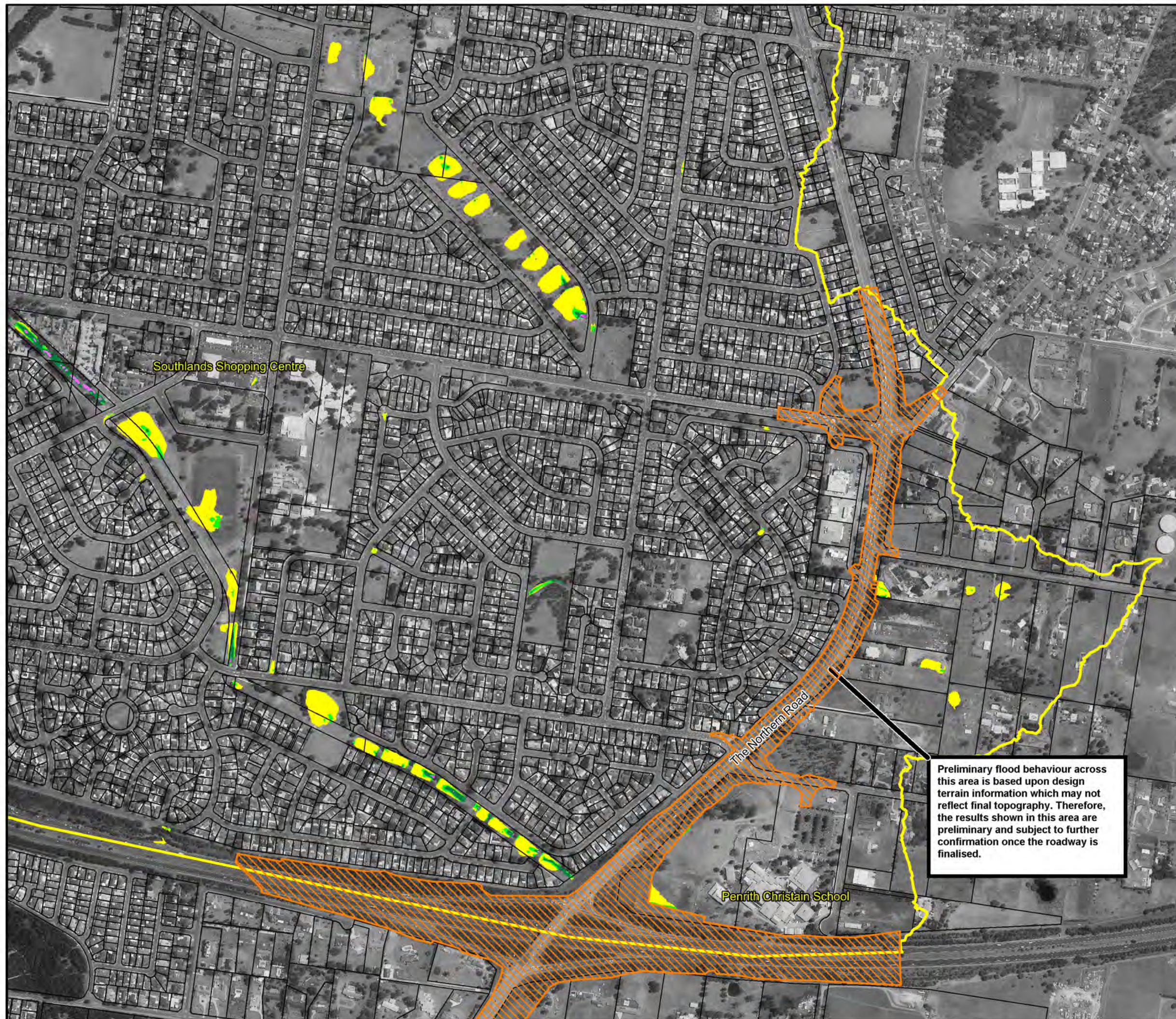
Scale 1:8,000 (at A3)

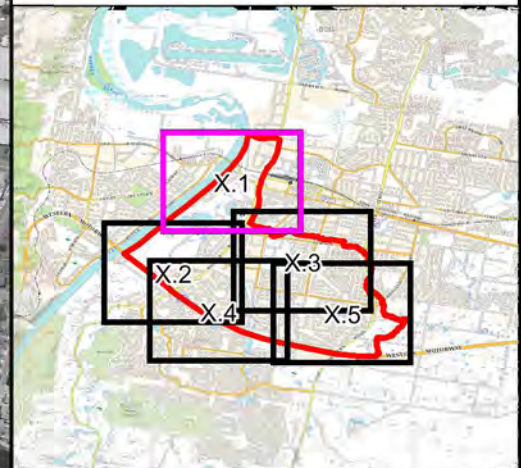


Figure 34.5:
Peak Flow Velocities
for the 50% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig34.5 - Velocity for 50% AEP
Flood.wor



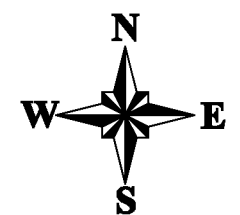


LEGEND

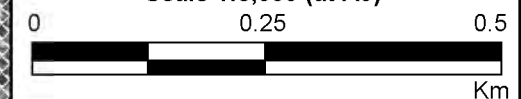
Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

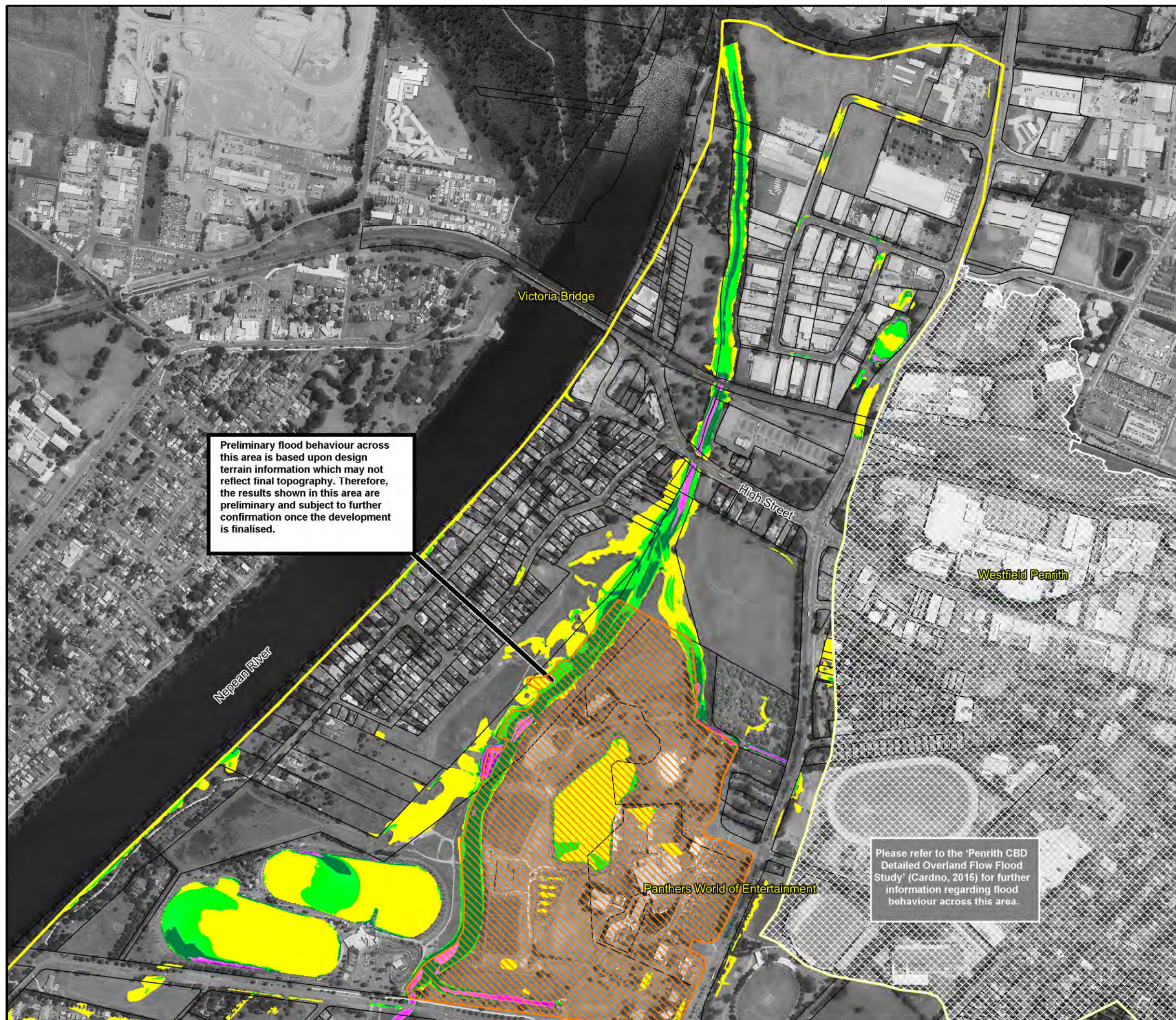


**Figure 35.1:
Peak Flow Velocities
for the 20% AEP Local
Catchment Flood**

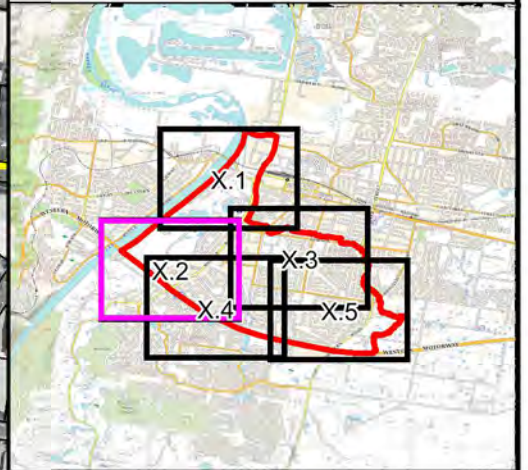
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig35.1 - Velocity for 20% AEP
Flood.wor



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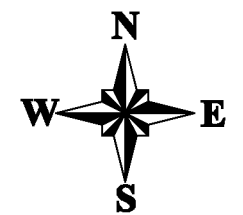
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 35.2:
Peak Flow Velocities
for the 20% AEP Local
Catchment Flood

Prepared By:

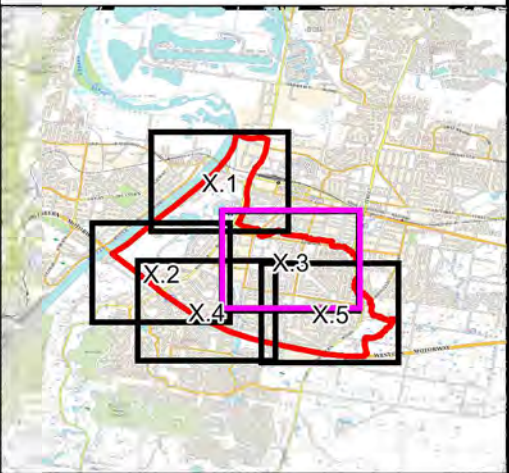
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig35.2 - Velocity for 20% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

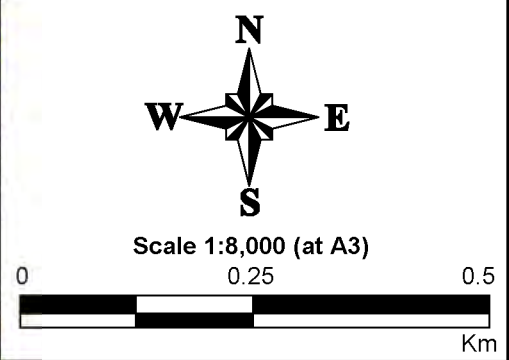
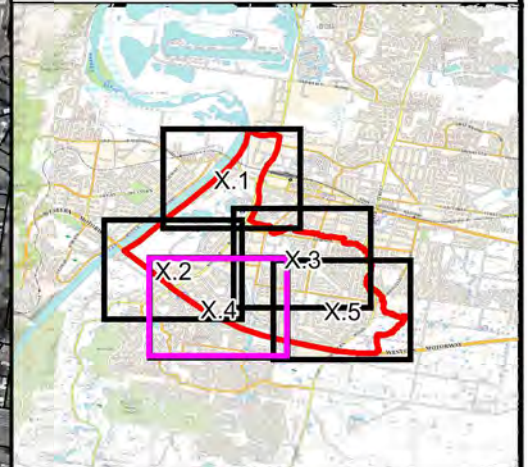


Figure 35.3:
Peak Flow Velocities
for the 20% AEP Local
Catchment Flood



LEGEND

Velocities (m/s)	
	< 0.25
	0.25 to 0.5
	0.5 to 1.0
	1.0 to 2.0
	> 2.0


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



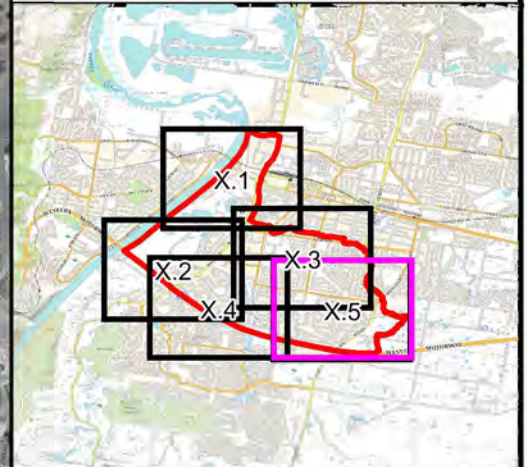
Scale 1:8,000 (at A3)



Figure 35.4:
Peak Flow Velocities
for the 20% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig35.4 - Velocity for 20% AEP
Flood.wor



LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



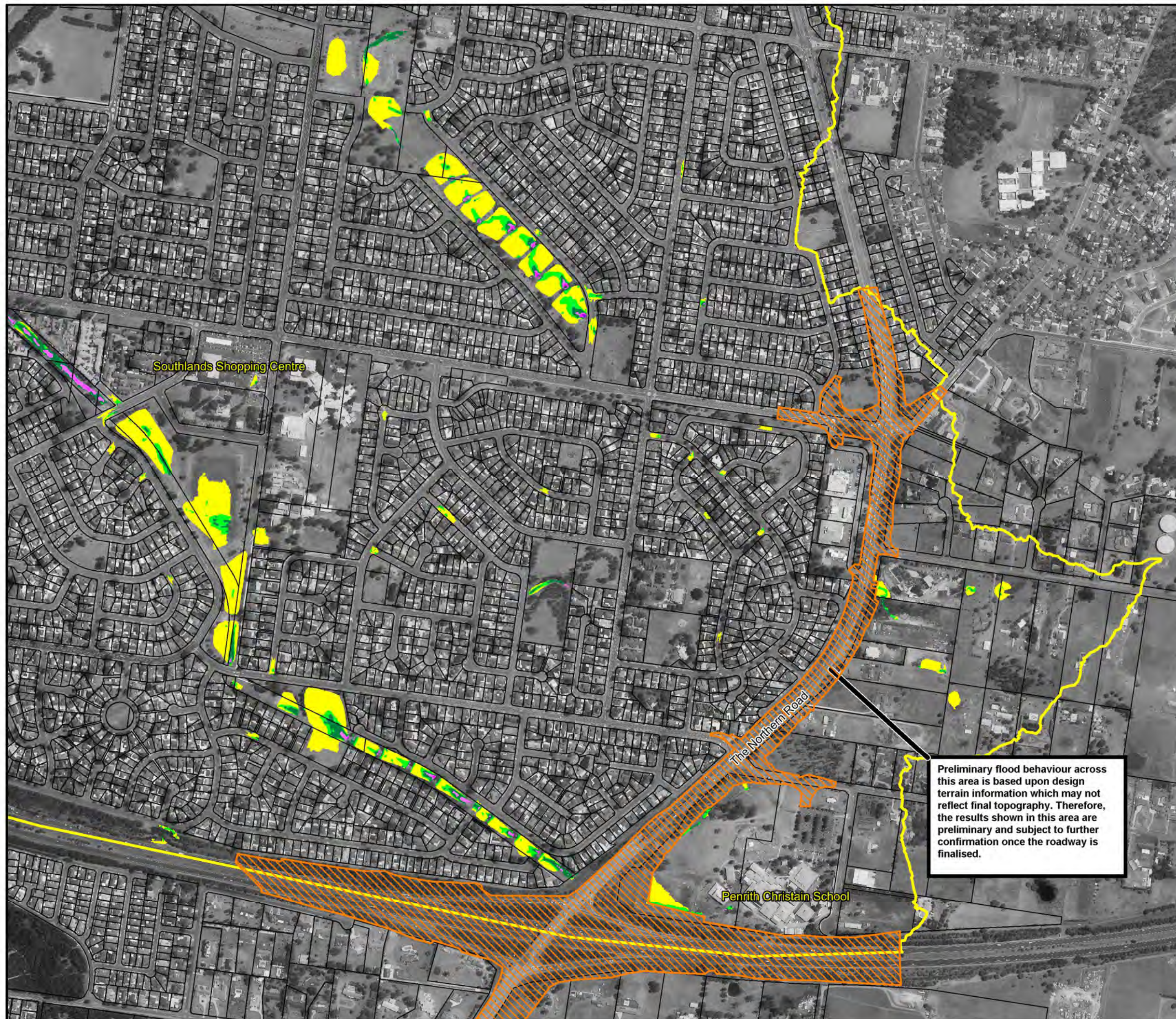
Scale 1:8,000 (at A3)

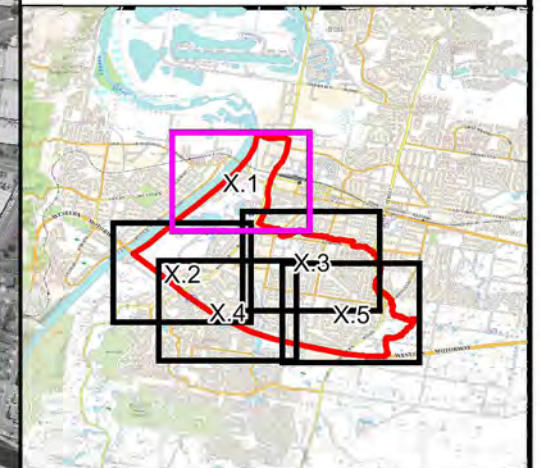


**Figure 35.5:
Peak Flow Velocities
for the 20% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig35.5 - Velocity for 20% AEP
Flood.wor





LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 36.1:
Peak Flow Velocities
for the 10% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig36.1 - Velocity for 10% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

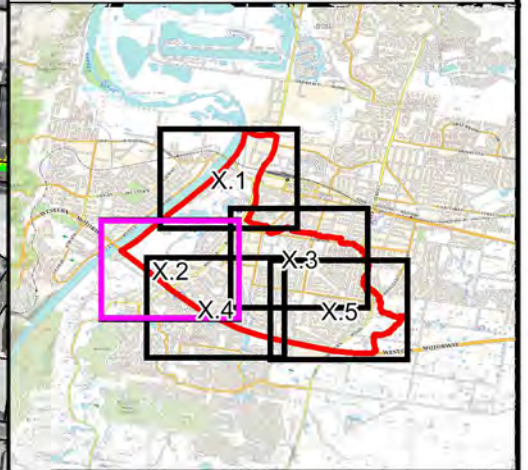
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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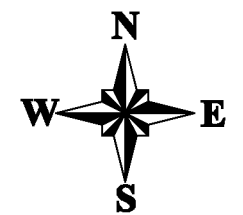
LEGEND

Velocities (m/s)

	< 0.25
	0.25 to 0.5
	0.5 to 1.0
	1.0 to 2.0
	> 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



Figure 36.2:
Peak Flow Velocities
for the 10% AEP Local
Catchment Flood

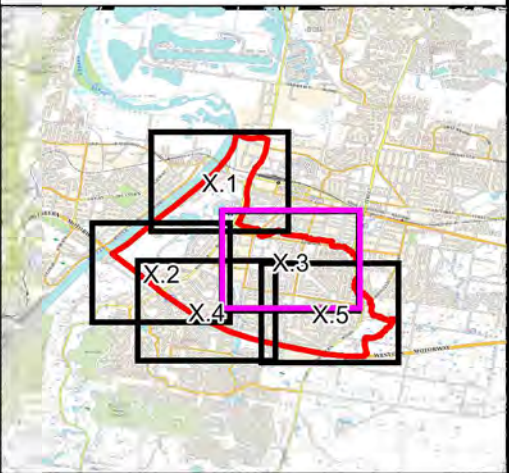
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig36.2 - Velocity for 10% AEP
Flood.wor



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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

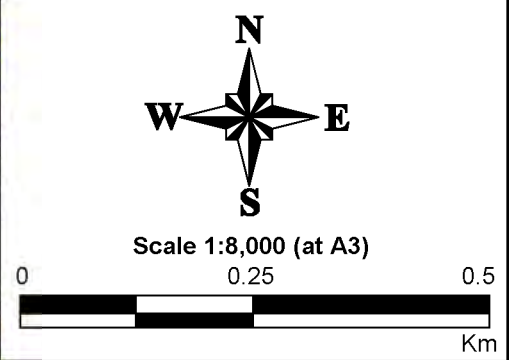
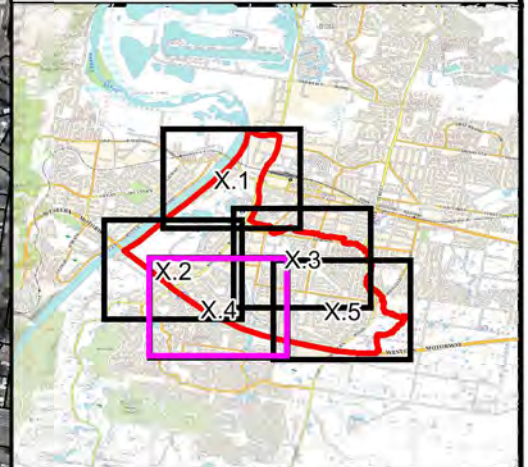


Figure 36.3:
Peak Flow Velocities
for the 10% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig36.3 - Velocity for 10% AEP Flood.wor



LEGEND

Velocities (m/s)

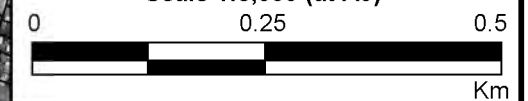
- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

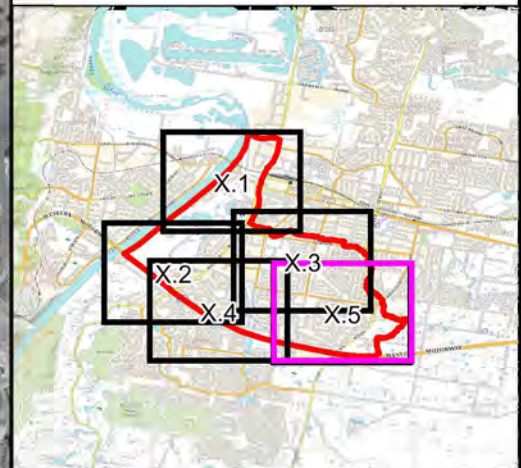


**Figure 36.4:
Peak Flow Velocities
for the 10% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig36.4 - Velocity for 10% AEP
Flood.wor



LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



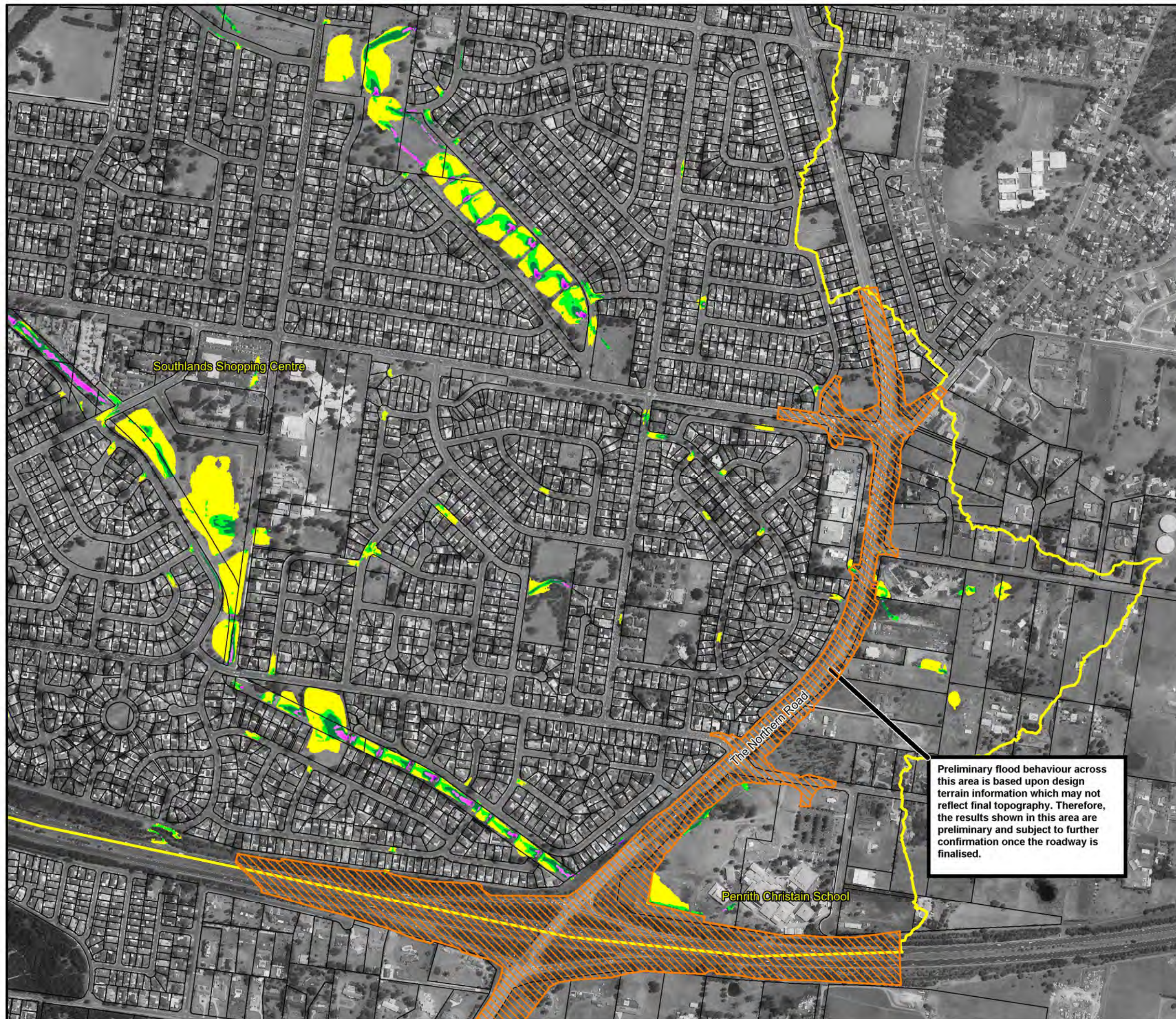
Scale 1:8,000 (at A3)

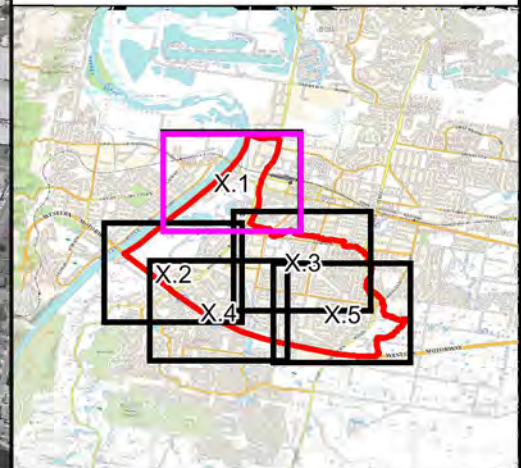


Figure 36.5:
Peak Flow Velocities
for the 10% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig36.5 - Velocity for 10% AEP
Flood.wor





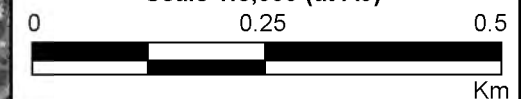
LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 37.1:
Peak Flow Velocities
for the 5% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig37.1 - Velocity for 5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

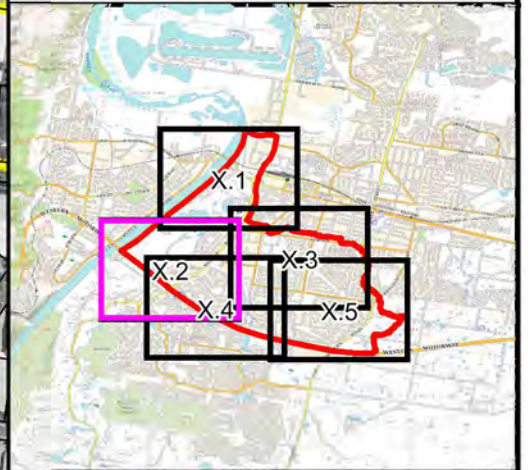
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



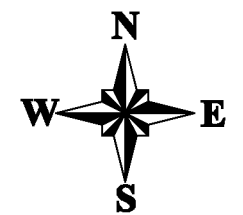
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 37.2:
Peak Flow Velocities
for the 5% AEP Local
Catchment Flood

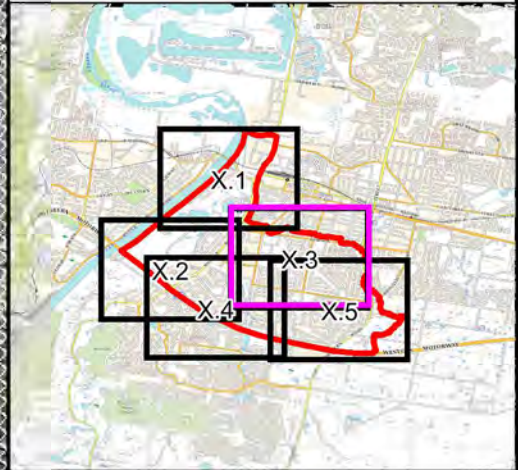
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig37.2 - Velocity for 5% AEP
Flood.wor



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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

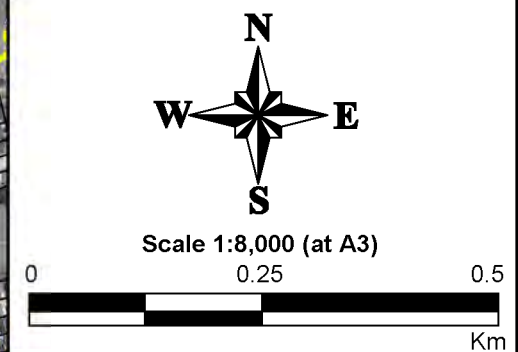
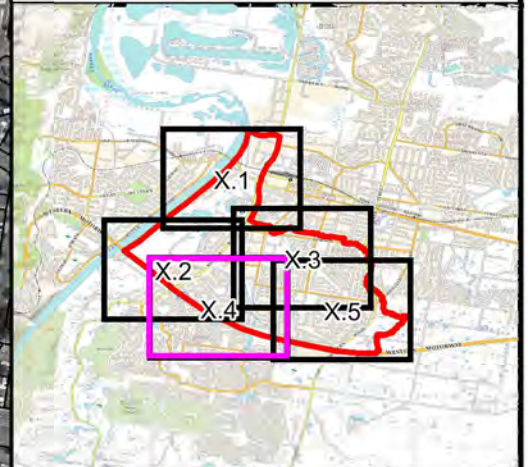


Figure 37.3:
Peak Flow Velocities
for the 5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig37.3 - Velocity for 5% AEP
Flood.wor



LEGEND

Velocities (m/s)

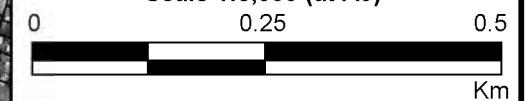
- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

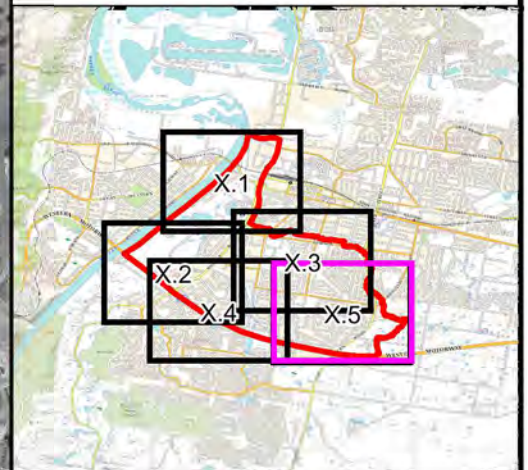


**Figure 37.4:
Peak Flow Velocities
for the 5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig37.4 - Velocity for 5% AEP
Flood.wor



LEGEND

Velocities (m/s)	
 	< 0.25
 	0.25 to 0.5
 	0.5 to 1.0
 	1.0 to 2.0
 	> 2.0


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



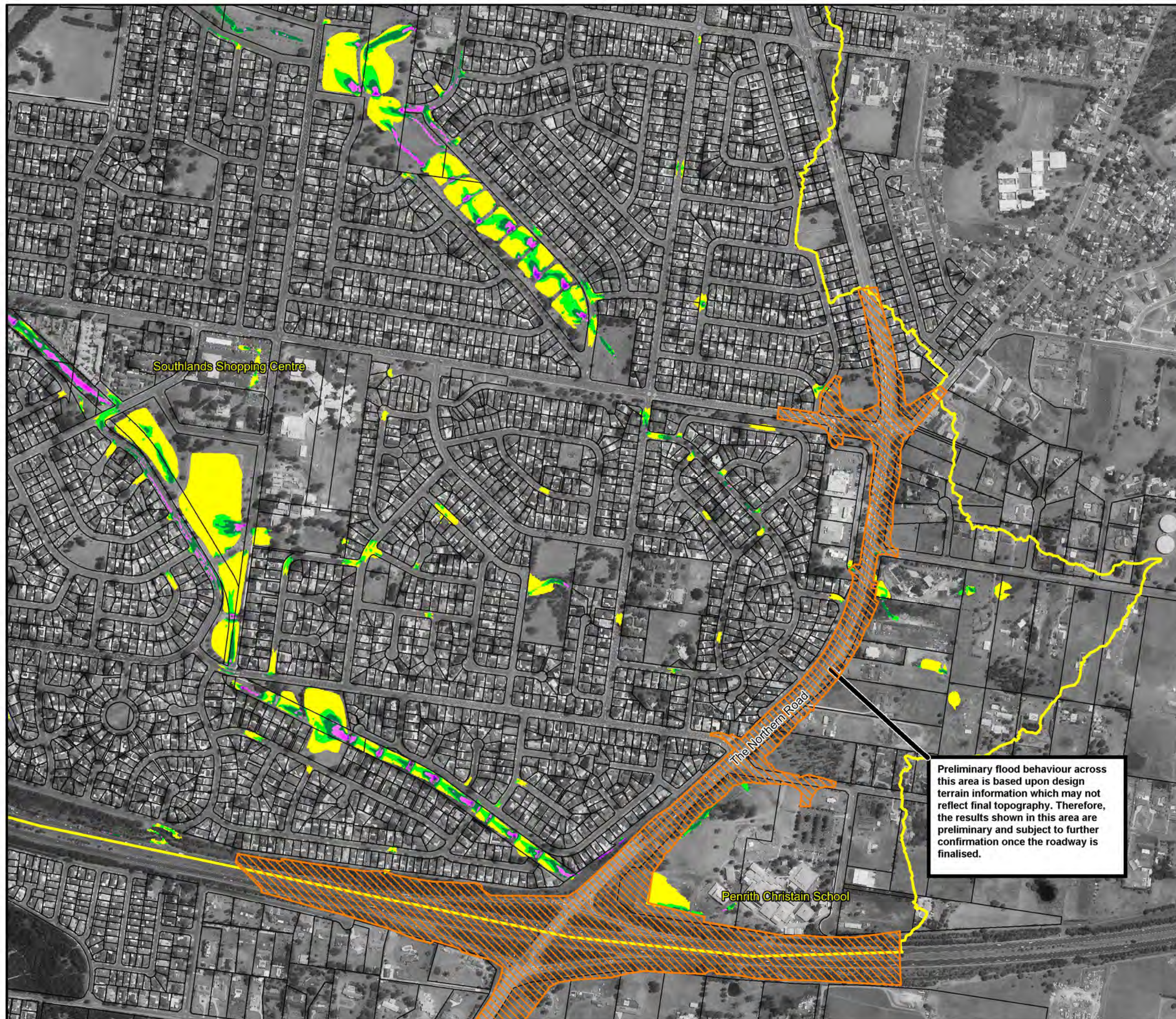
Scale 1:8,000 (at A3)

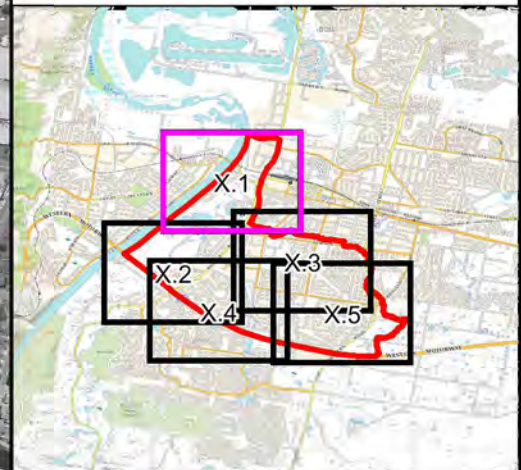


Figure 37.5:
Peak Flow Velocities
for the 5% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig37.5 - Velocity for 5% AEP
Flood.wor



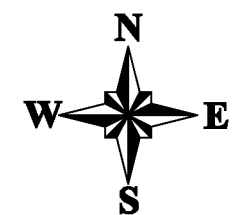


LEGEND

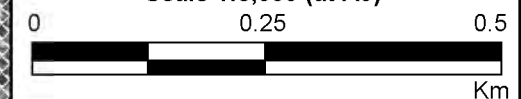
Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 38.1:
Peak Flow Velocities
for the 2% AEP Local
Catchment Flood**

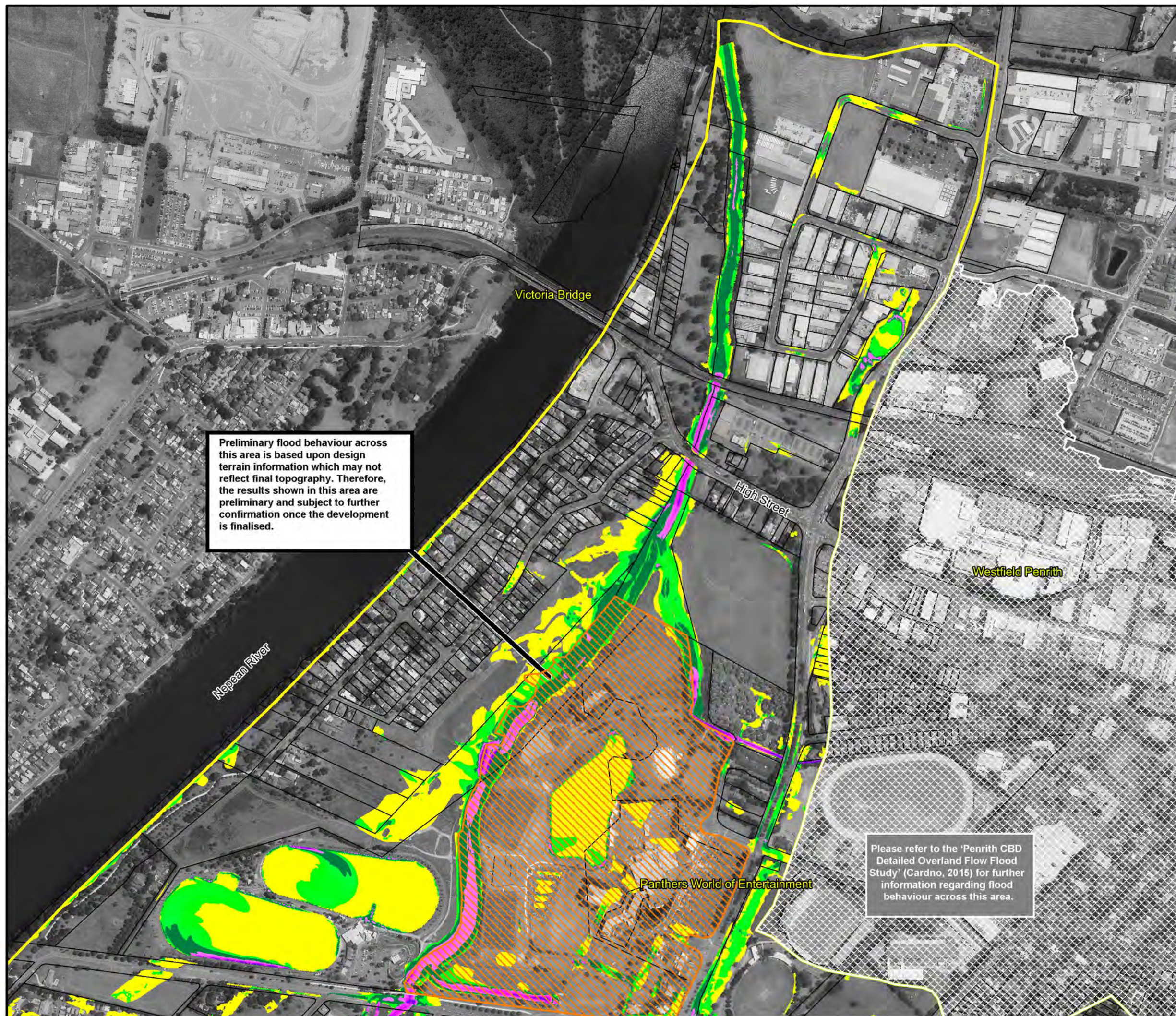
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

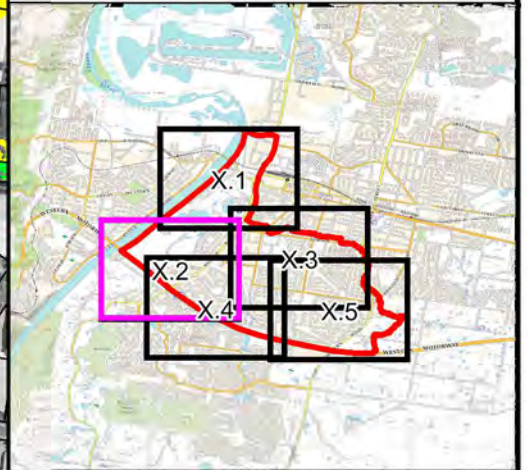
File Name: Fig38.1 - Velocity for 2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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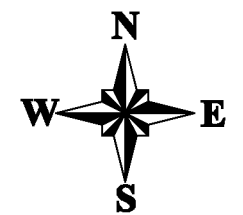
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 38.2:
Peak Flow Velocities
for the 2% AEP Local
Catchment Flood

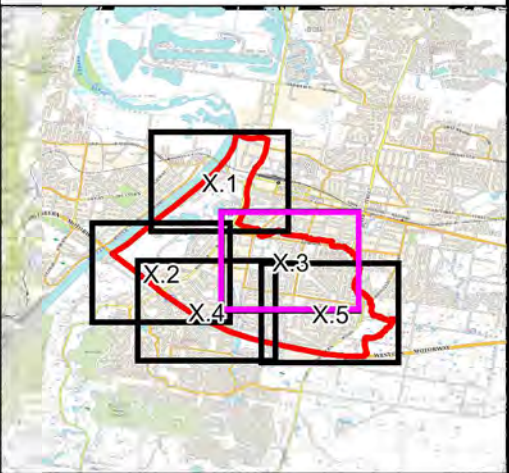
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig38.2 - Velocity for 2% AEP
Flood.wor



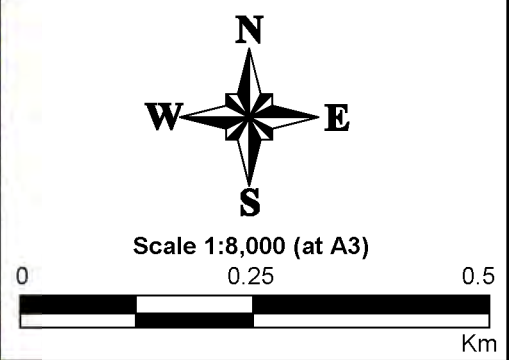
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LEGEND

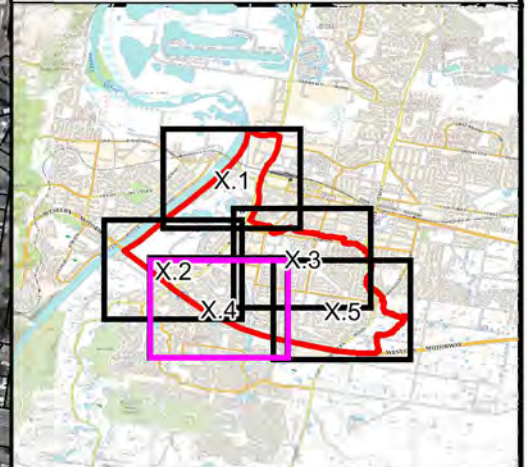
Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 38.3:
Peak Flow Velocities
for the 2% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig38.3 - Velocity for 2% AEP
Flood.wor



LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

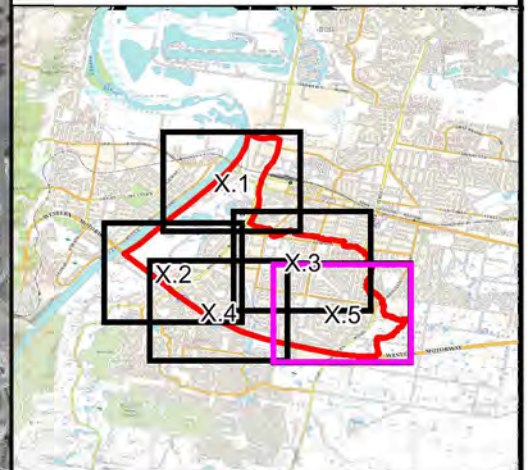


**Figure 38.4:
Peak Flow Velocities
for the 2% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig38.4 - Velocity for 2% AEP
Flood.wor



LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



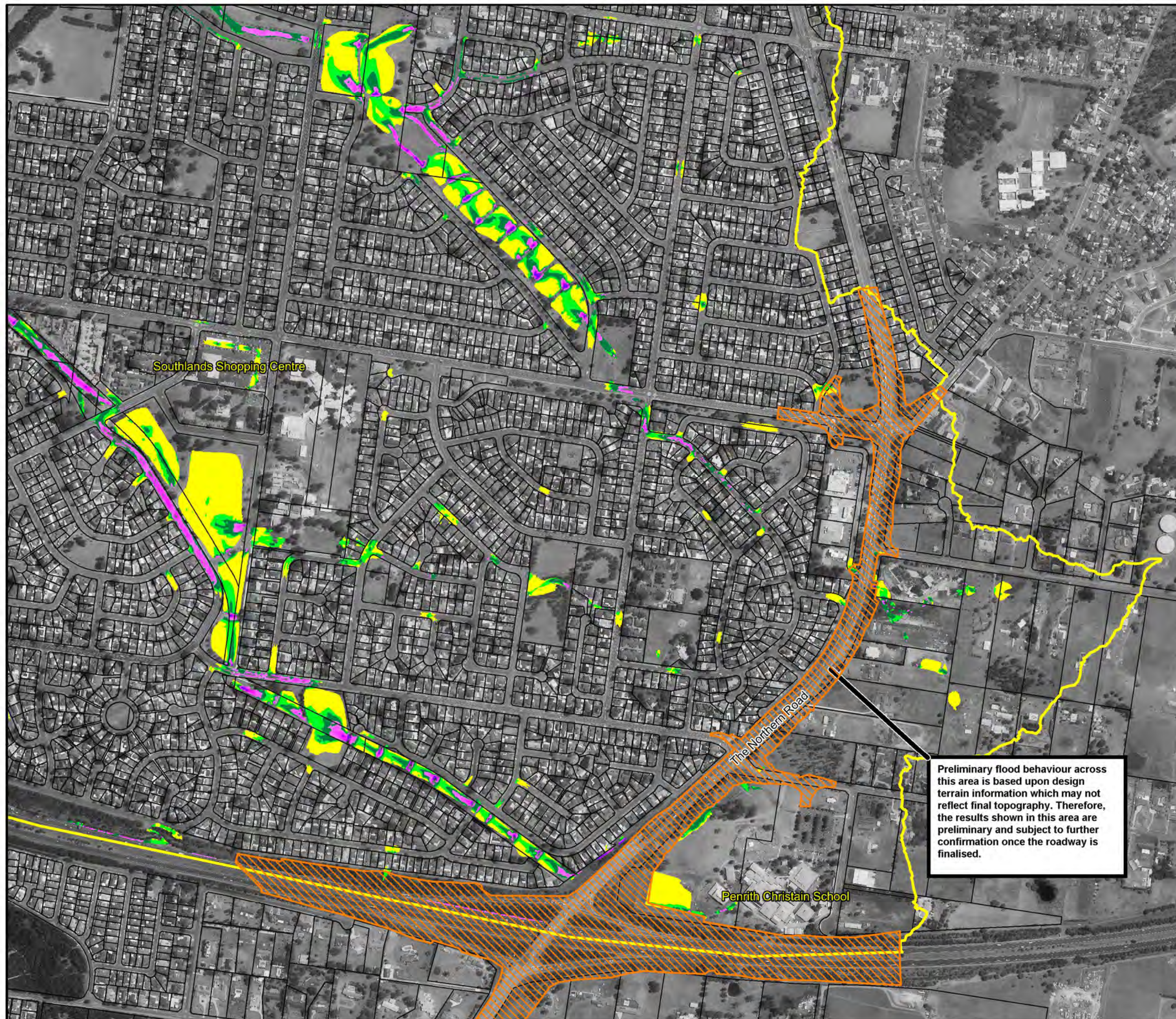
Scale 1:8,000 (at A3)

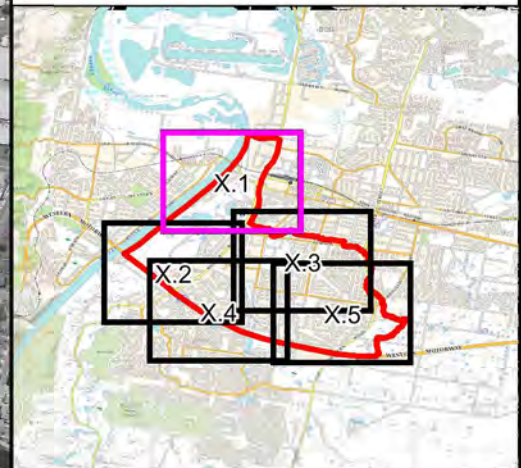


**Figure 38.5:
Peak Flow Velocities
for the 2% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig38.5 - Velocity for 2% AEP
Flood.wor





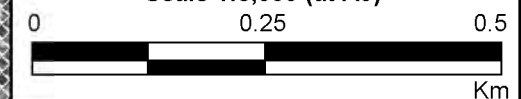
LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



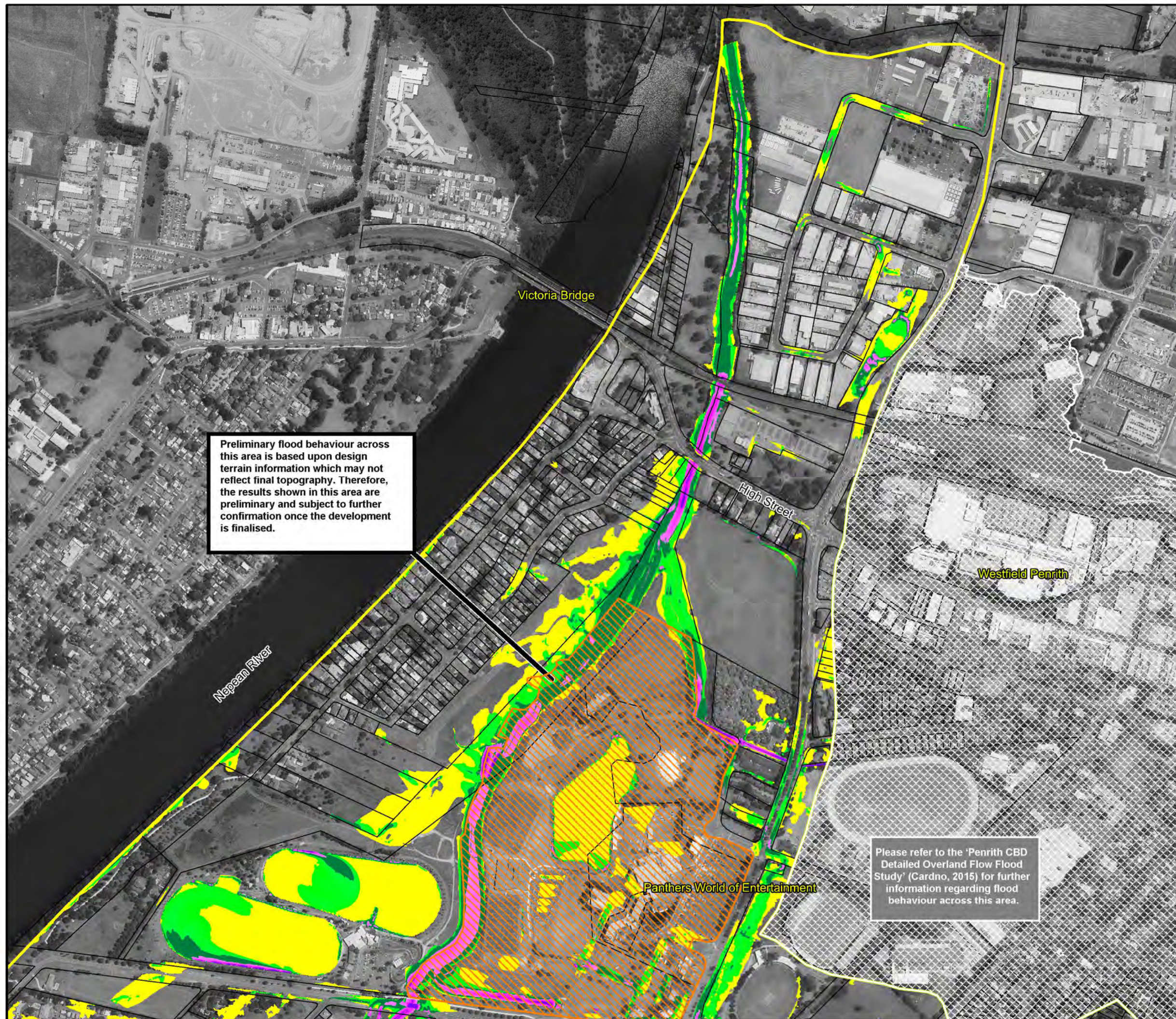
**Figure 39.1:
Peak Flow Velocities
for the 1% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

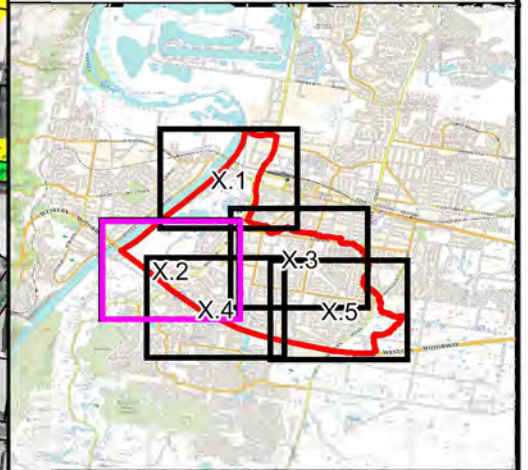
File Name: Fig39.1 - Velocity for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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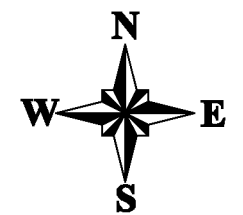
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 39.2:
Peak Flow Velocities
for the 1% AEP Local
Catchment Flood**

Prepared By:

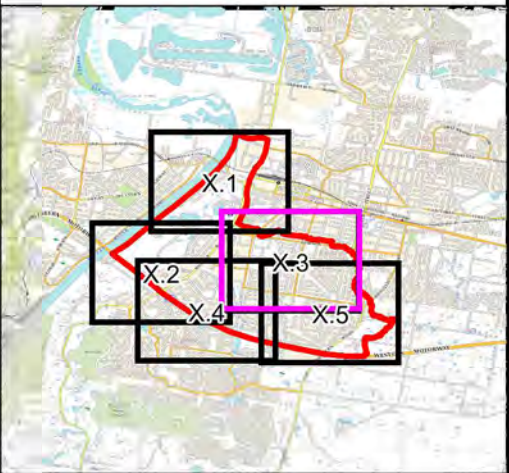
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig39.2 - Velocity for 1% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

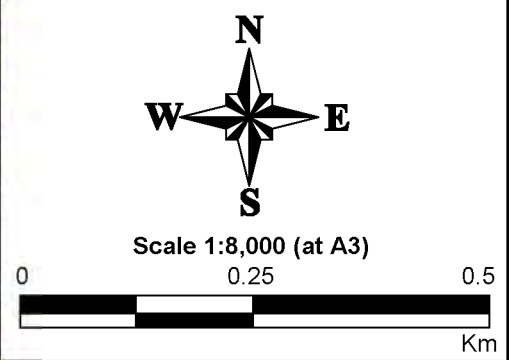

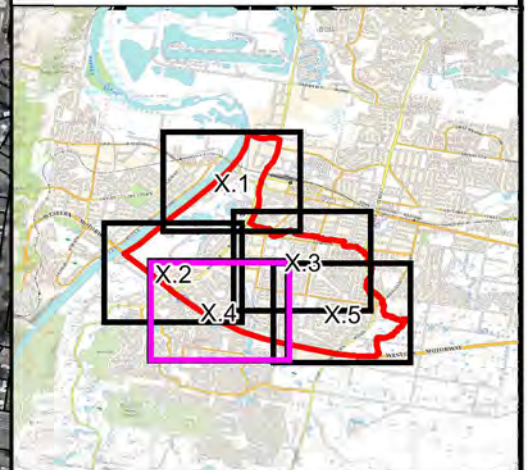


Figure 39.3:
Peak Flow Velocities
for the 1% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig39.3 - Velocity for 1% AEP Flood.wor



LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

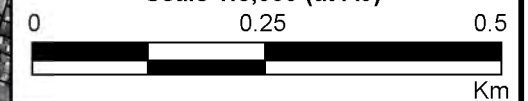
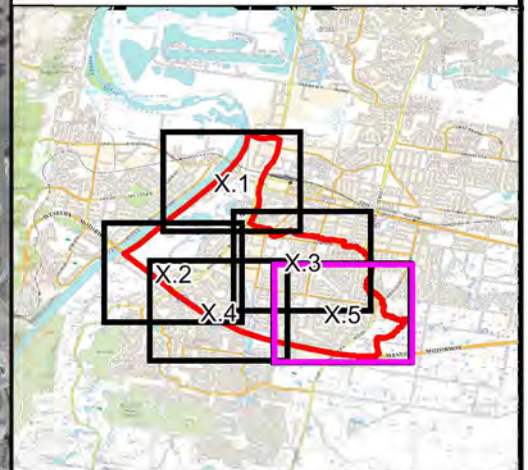


Figure 39.4:
Peak Flow Velocities
for the 1% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig39.4 - Velocity for 1% AEP
Flood.wor



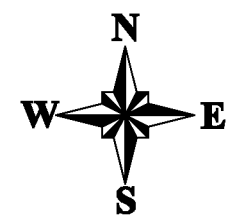
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

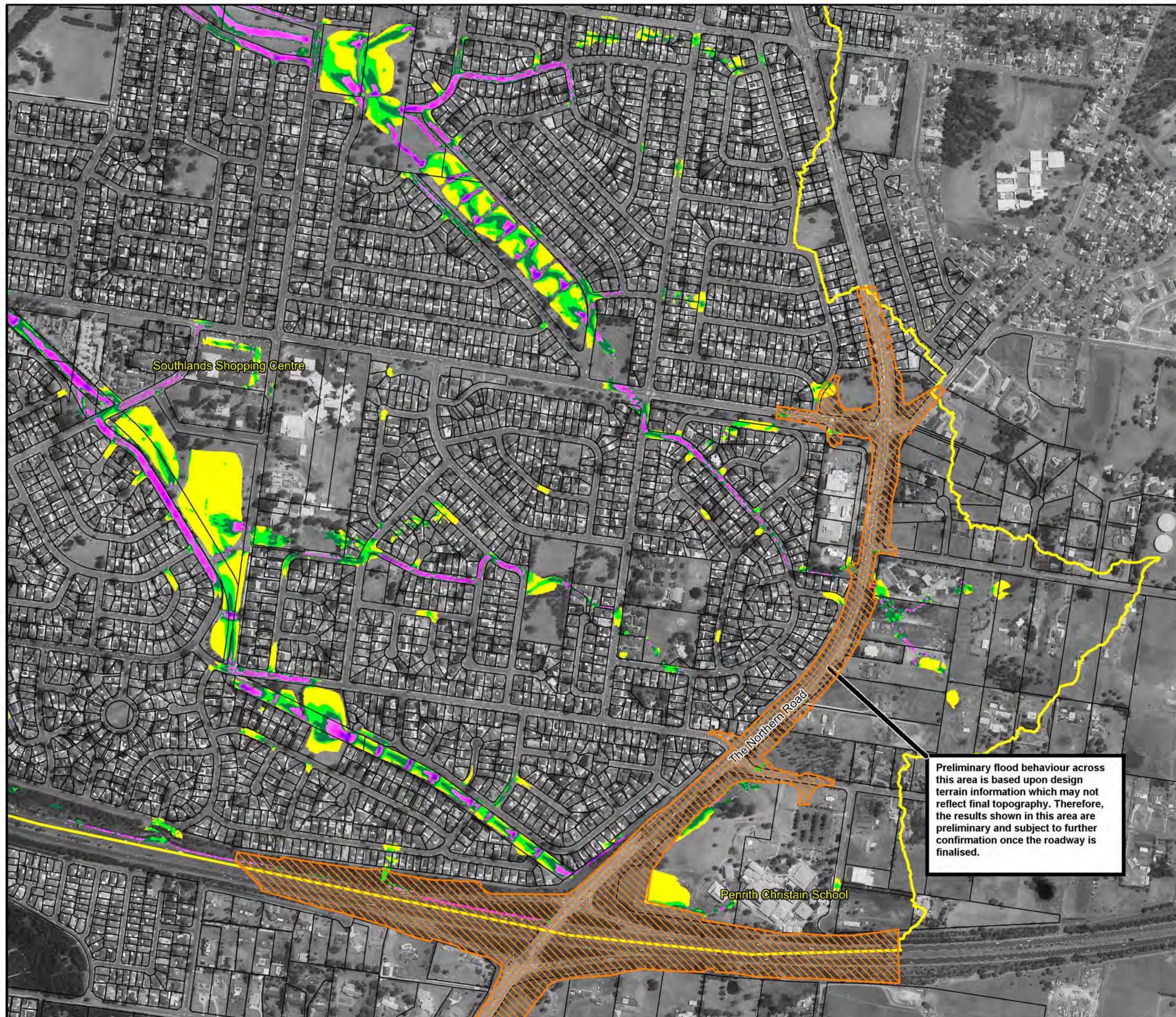


Figure 39.5:
Peak Flow Velocities
for the 1% AEP Local
Catchment Flood

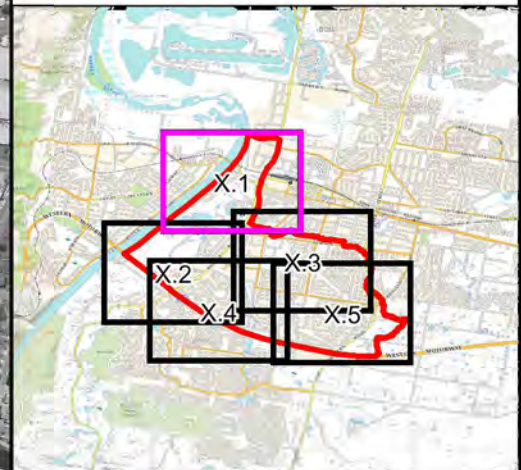
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig39.5 - Velocity for 1% AEP
Flood.wor



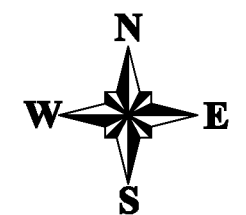
Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the roadway is finalised.



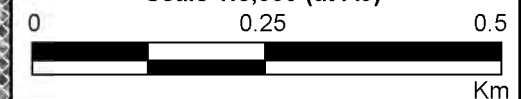
LEGEND

Velocities (m/s)	
 	< 0.25
 	0.25 to 0.5
 	0.5 to 1.0
 	1.0 to 2.0
 	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 40.1:
Peak Flow Velocities
for the 0.5% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig40.1 - Velocity for 0.5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

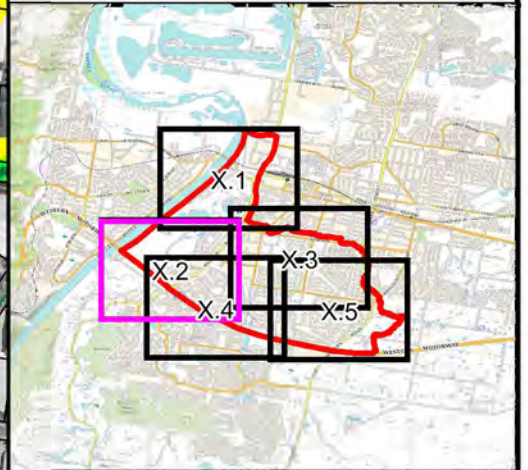
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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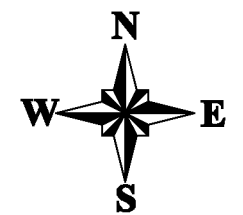
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 40.2:
Peak Flow Velocities
for the 0.5% AEP Local
Catchment Flood

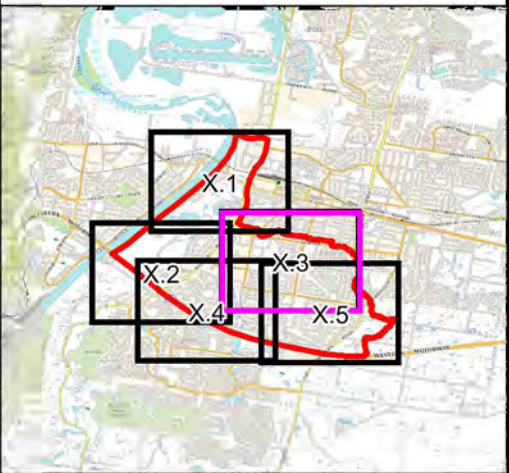
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig40.2 - Velocity for 0.5% AEP
Flood.wor



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LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

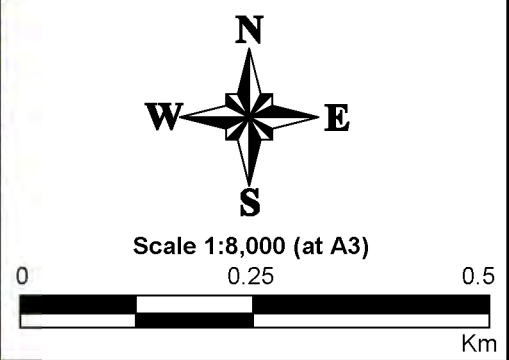

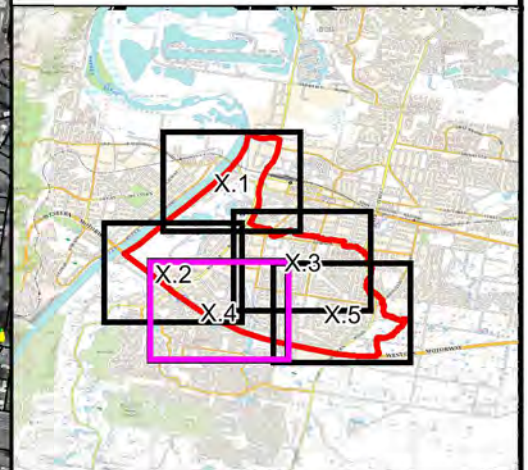


Figure 40.3:
Peak Flow Velocities
for the 0.5% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig40.3 - Velocity for 0.5% AEP Flood.wor



LEGEND

Velocities (m/s)

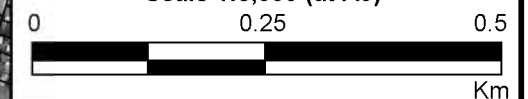
- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

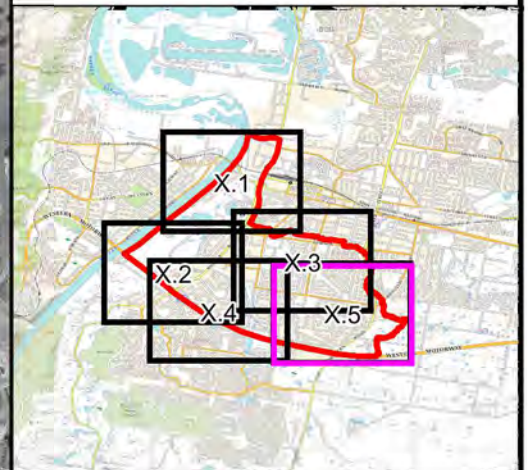


**Figure 40.4:
Peak Flow Velocities
for the 0.5% AEP Local
Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig40.4 - Velocity for 0.5% AEP
Flood.wor



LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

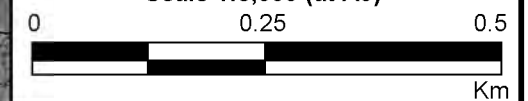
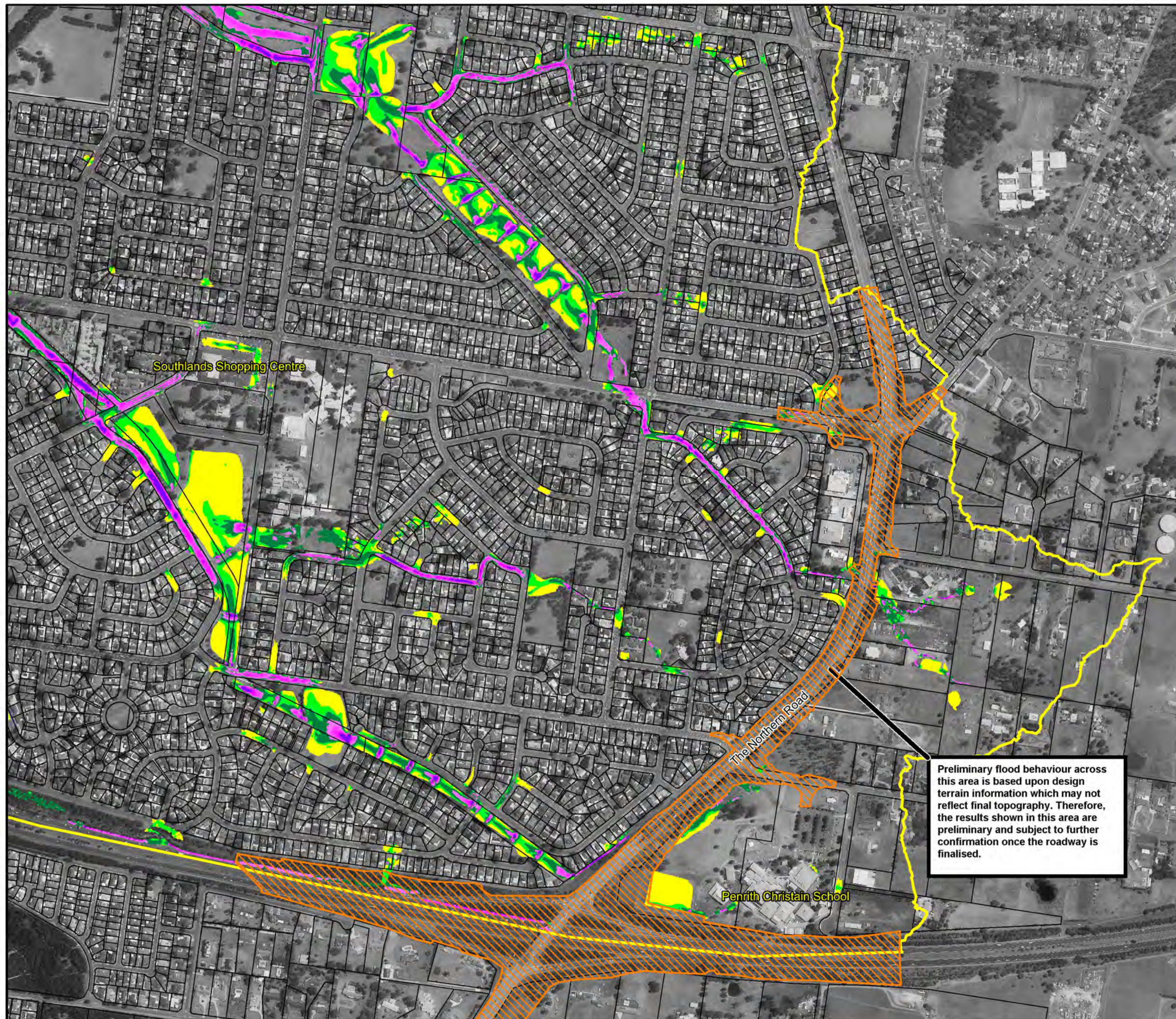
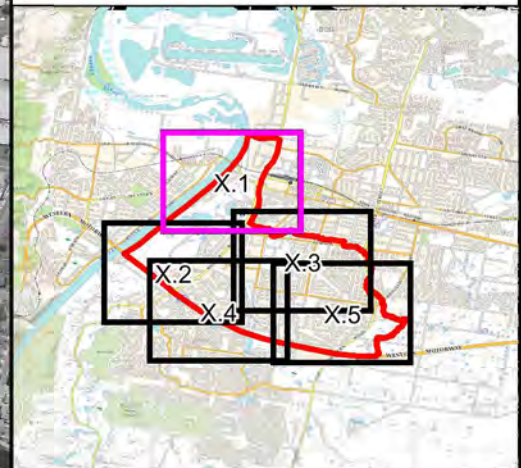


Figure 40.5:
Peak Flow Velocities
for the 0.5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig40.5 - Velocity for 0.5% AEP
Flood.wor





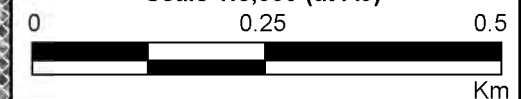
LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



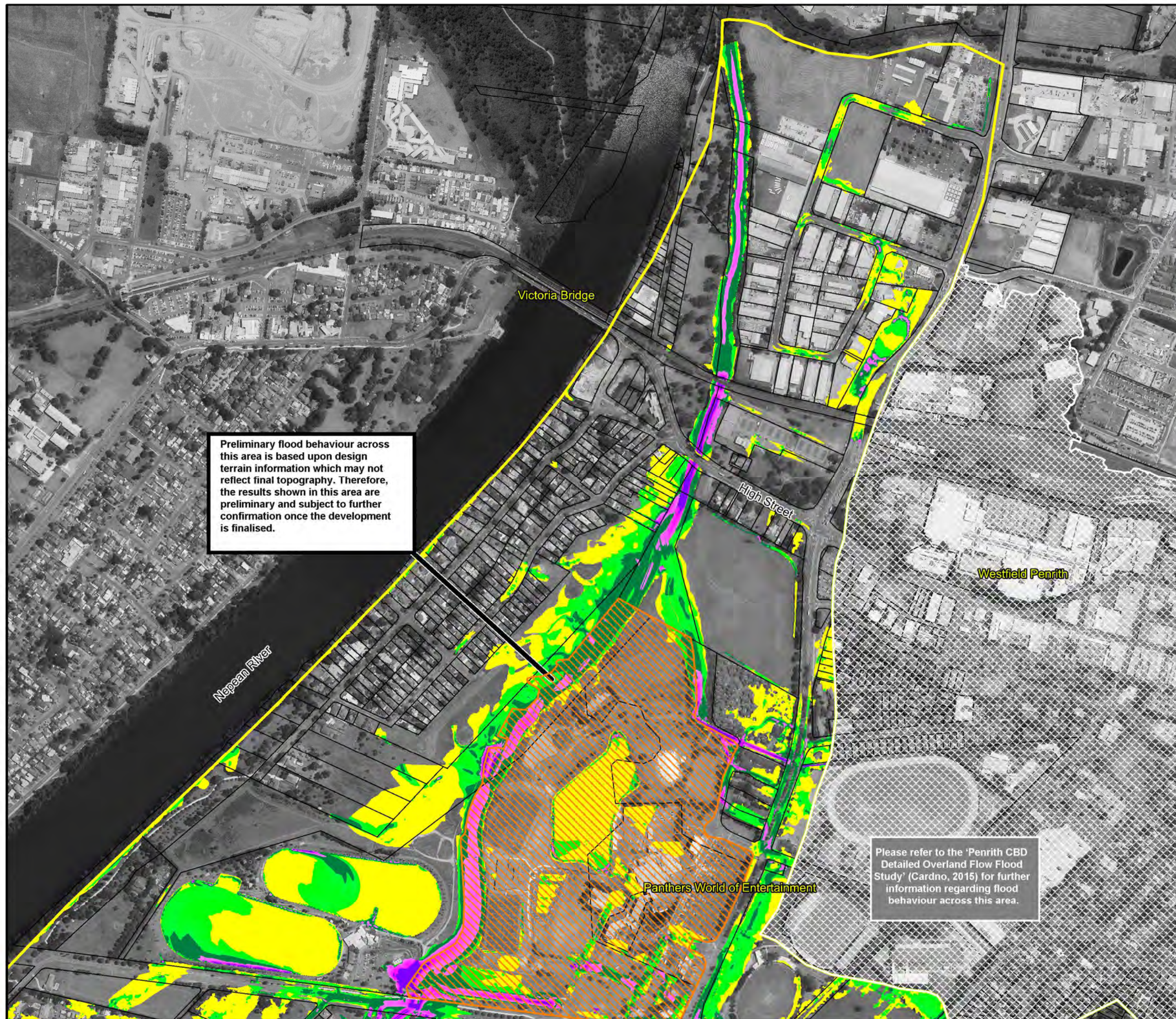
**Figure 41.1:
Peak Flow Velocities
for the 0.2% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

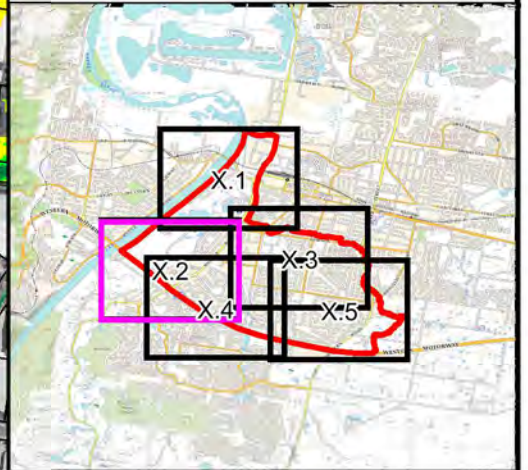
File Name: Fig41.1 - Velocity for 0.2% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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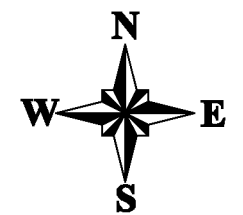
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 41.2:
Peak Flow Velocities
for the 0.2% AEP Local
Catchment Flood

Prepared By:

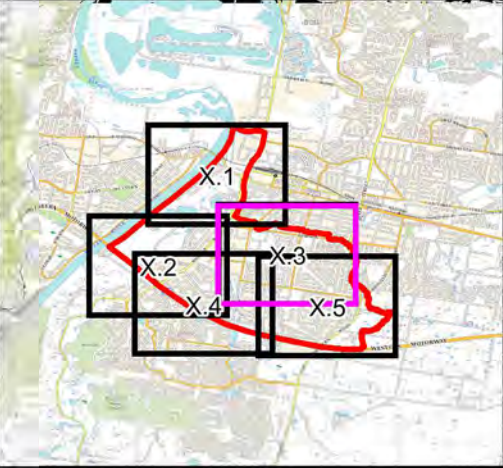
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig41.2 - Velocity for 0.2% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

- Velocities (m/s)
- < 0.25
 - 0.25 to 0.5
 - 0.5 to 1.0
 - 1.0 to 2.0
 - > 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

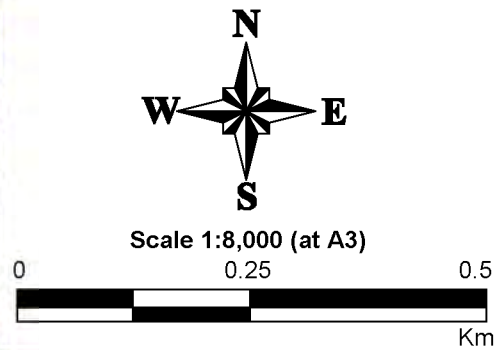
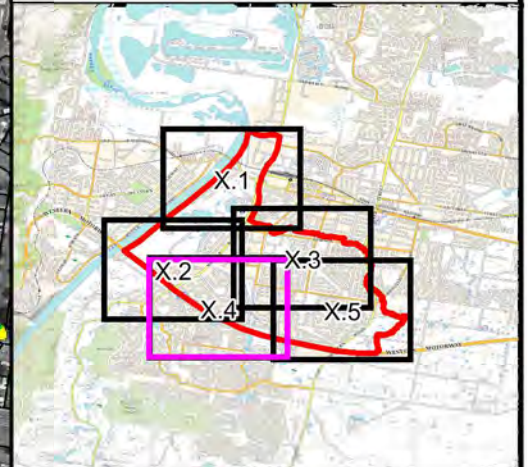


Figure 41.3:
Peak Flow Velocities
for the 0.2% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig41.3 - Velocity for 0.2% AEP Flood.wor



LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

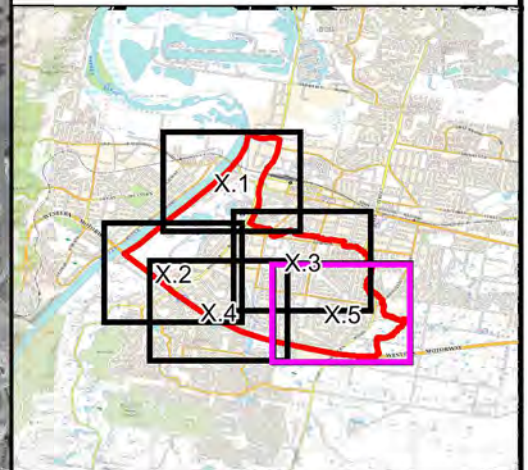


Figure 41.4:
Peak Flow Velocities
for the 0.2% AEP Local
Catchment Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig41.4 - Velocity for 0.2% AEP
Flood.wor



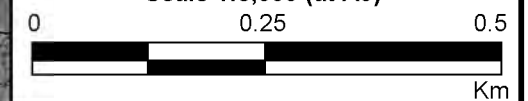
LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

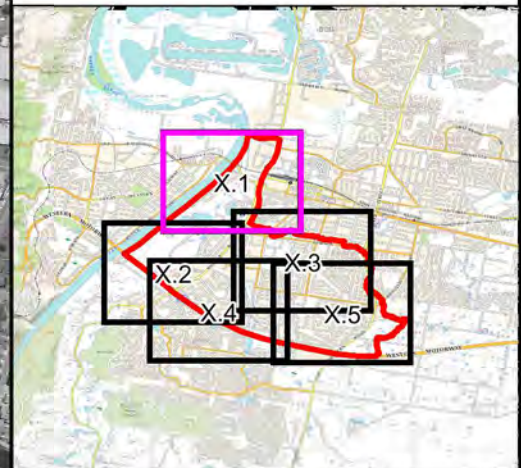


**Figure 41.5:
Peak Flow Velocities
for the 0.2% AEP Local
Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig41.5 - Velocity for 0.2% AEP
Flood.wor





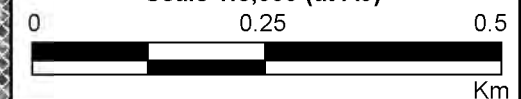
LEGEND

Velocities (m/s)	
 	< 0.25
 	0.25 to 0.5
 	0.5 to 1.0
 	1.0 to 2.0
 	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



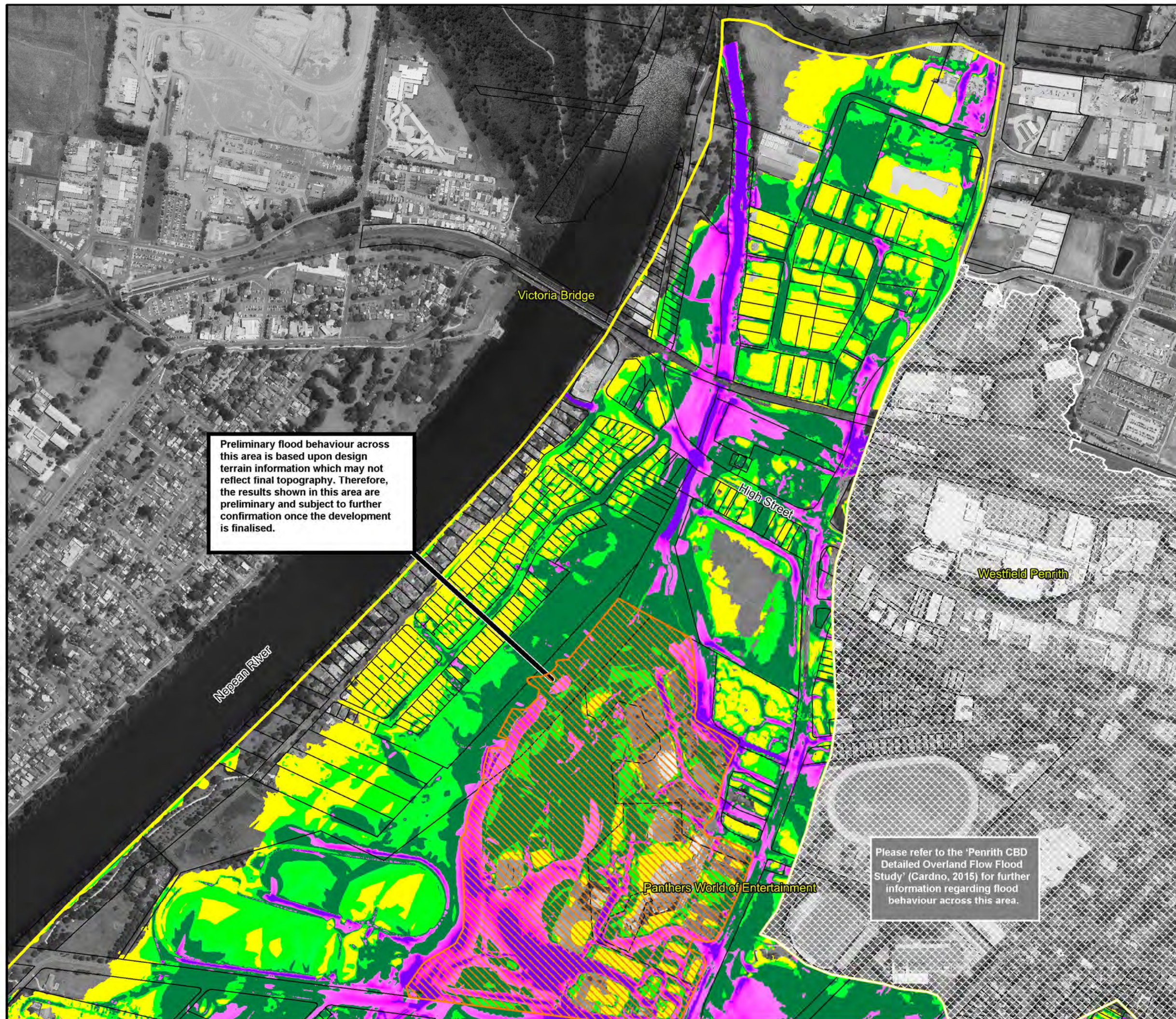
**Figure 42.1:
Peak Flow Velocities
for the Local
Catchment PMF**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

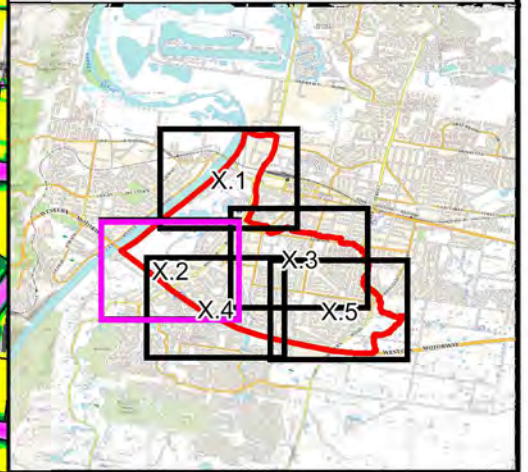
File Name: Fig42.1 - Velocity for PMF
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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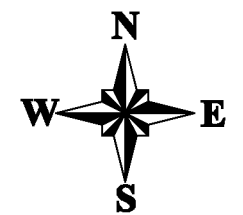
LEGEND

Velocities (m/s)

Yellow	< 0.25
Green	0.25 to 0.5
Dark Green	0.5 to 1.0
Purple	1.0 to 2.0
Dark Purple	> 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



**Figure 42.2:
Peak Flow Velocities
for the Local
Catchment PMF**

Prepared By:

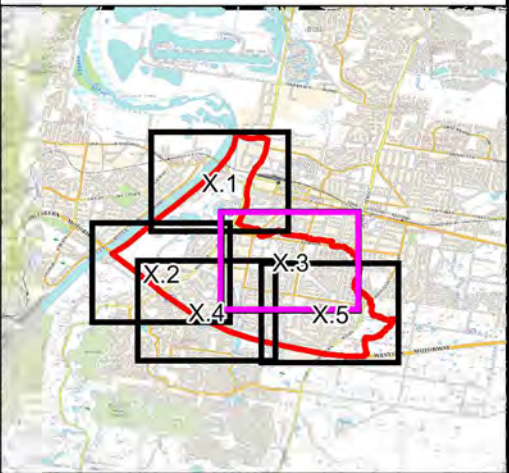
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig42.2 - Velocity for PMF
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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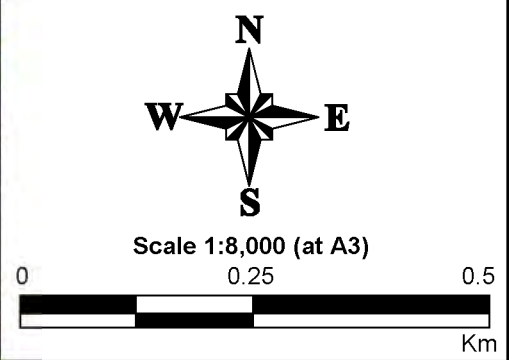


LEGEND

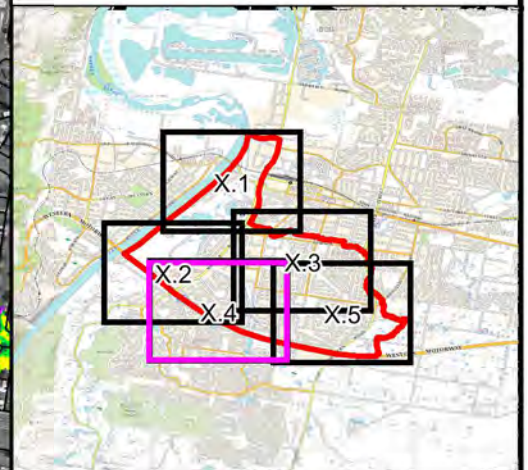
Velocities (m/s)

Yellow	< 0.25
Green	0.25 to 0.5
Dark Green	0.5 to 1.0
Magenta	1.0 to 2.0
Purple	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 42.3:
Peak Flow Velocities
for the Local
Catchment PMF**



LEGEND

Velocities (m/s)

■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

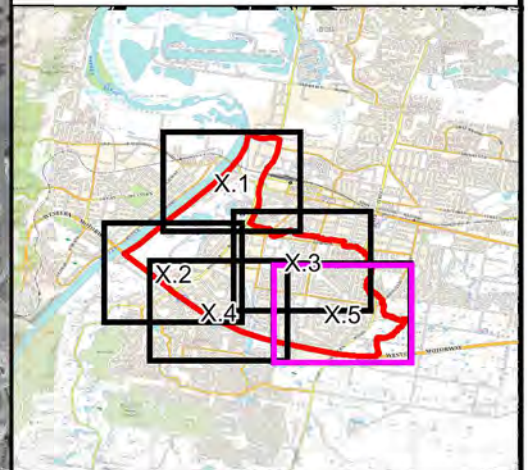


**Figure 42.4:
Peak Flow Velocities
for the Local
Catchment PMF**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig42.4 - Velocity for PMF
Flood.wor



LEGEND

Velocities (m/s)	
	< 0.25
	0.25 to 0.5
	0.5 to 1.0
	1.0 to 2.0
	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



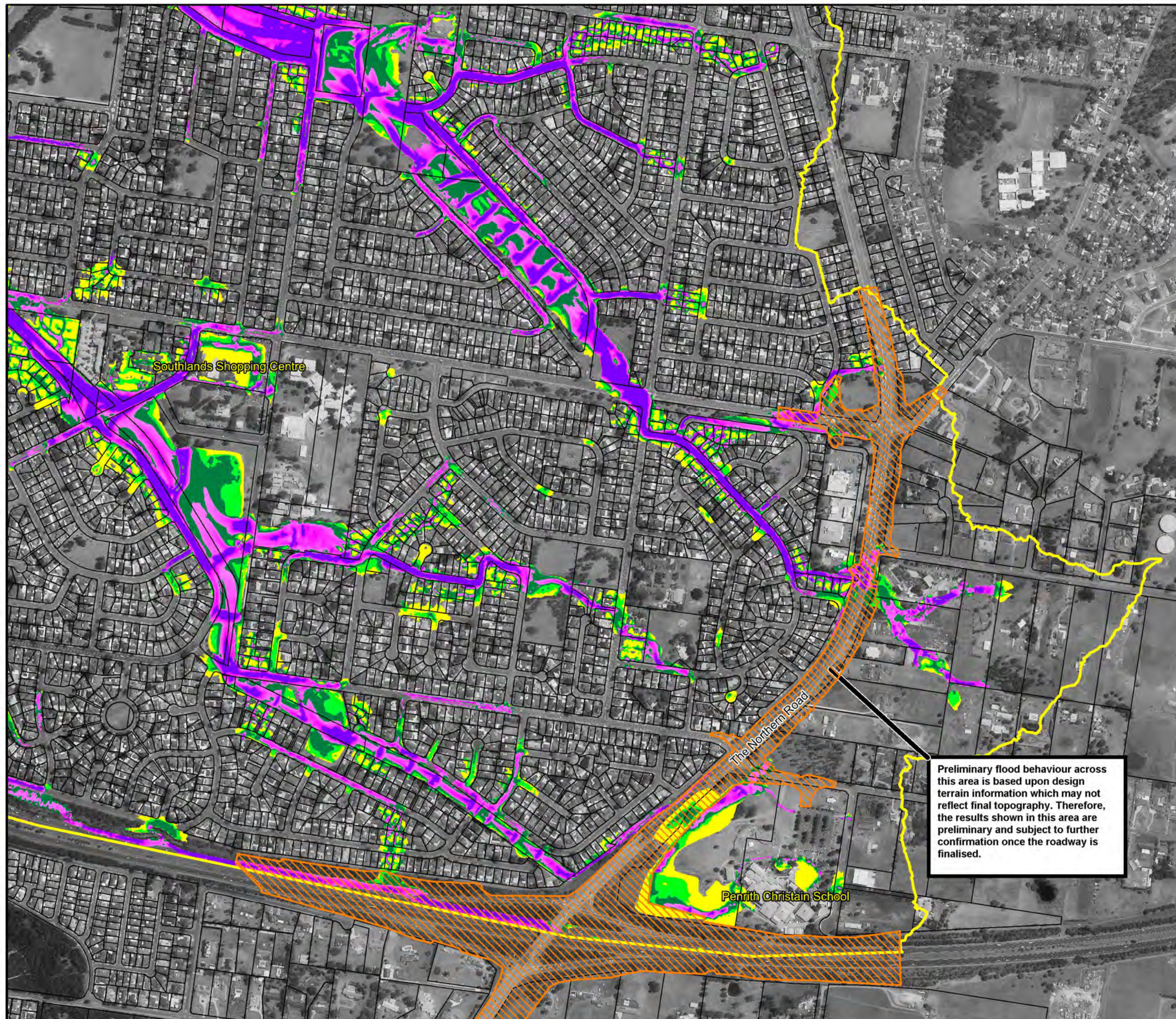
Scale 1:8,000 (at A3)



**Figure 42.5:
Peak Flow Velocities
for the Local
Catchment PMF**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig42.5 - Velocity for PMF
Flood.wor

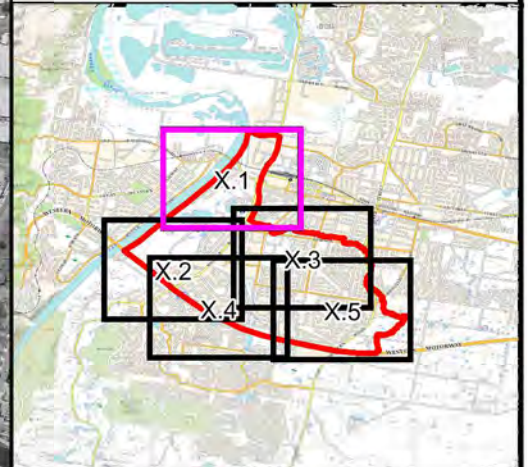




STORMWATER CAPACITY MAP



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LEGEND

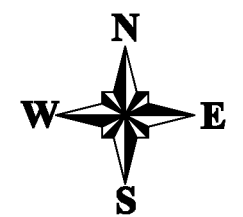
Failure AEP

- 50%AEP or worse
- 20%AEP
- 10%AEP
- 5%AEP
- 2%AEP
- 1%AEP or better

Pit Failure Type

- No Failure
- Surcharge
- Ponding

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



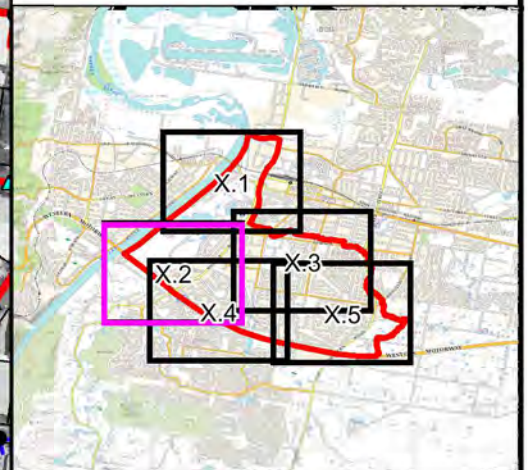
**Figure 43.1:
Stormwater Capacity**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig43.1 - Stormwater Capacity.wor

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LEGEND

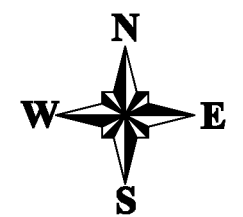
Failure AEP

- 50%AEP or worse
- 20%AEP
- 10%AEP
- 5%AEP
- 2%AEP
- 1%AEP or better

Pit Failure Type

- No Failure
- Surcharge
- Ponding

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

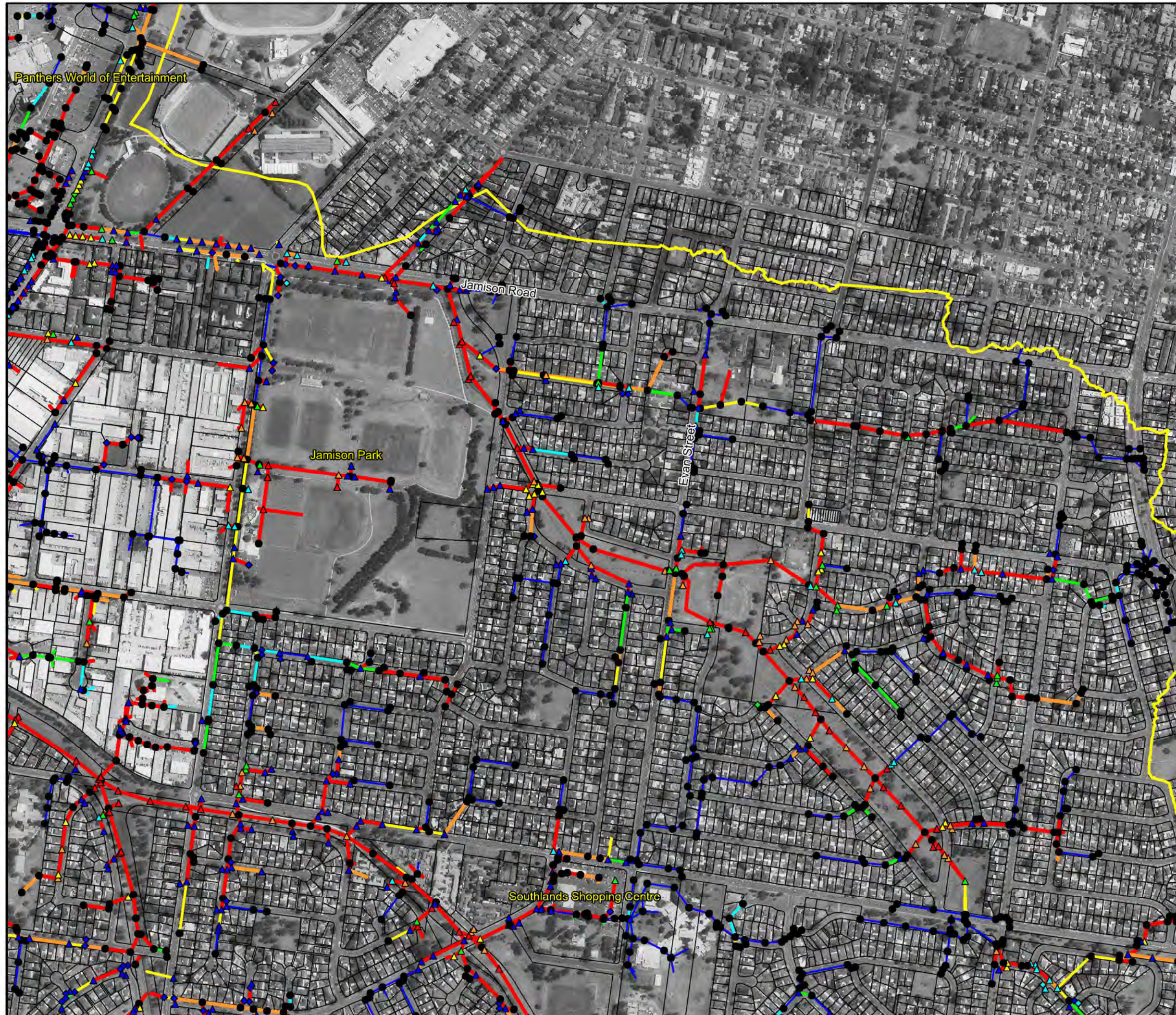


**Figure 43.2:
Stormwater Capacity**

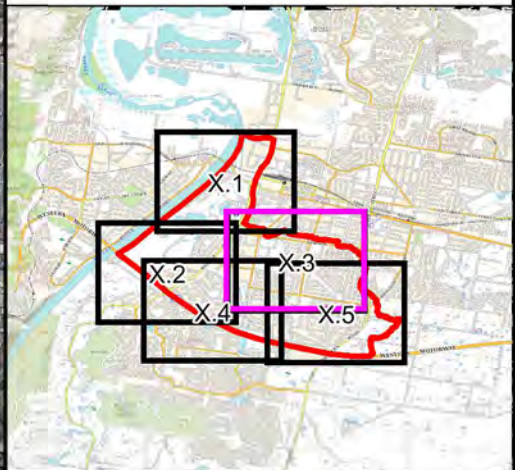
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig43.2 - Stormwater Capacity.wor



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LEGEND

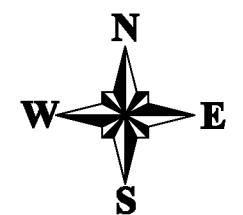
Failure AEP

- 50%AEP or worse
- 20%AEP
- 10%AEP
- 5%AEP
- 2%AEP
- 1%AEP or better

Pit Failure Type

- No Failure
- Surcharge
- Ponding

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



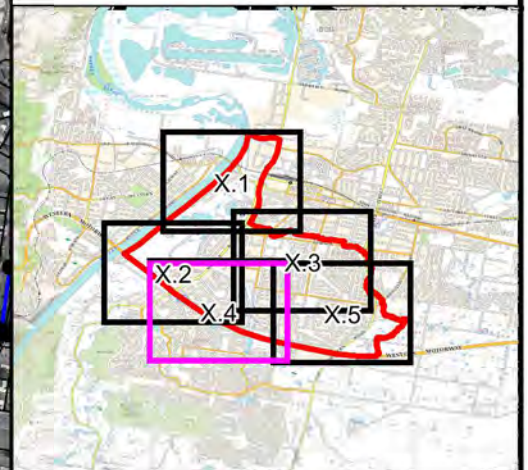
**Figure 43.3:
Stormwater Capacity**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig43.3 - Stormwater Capacity.wor

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LEGEND

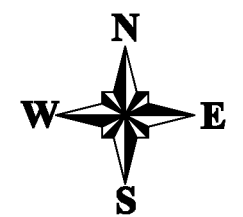
Failure AEP

- 50%AEP or worse
- 20%AEP
- 10%AEP
- 5%AEP
- 2%AEP
- 1%AEP or better

Pit Failure Type

- No Failure
- Surcharge
- Ponding

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



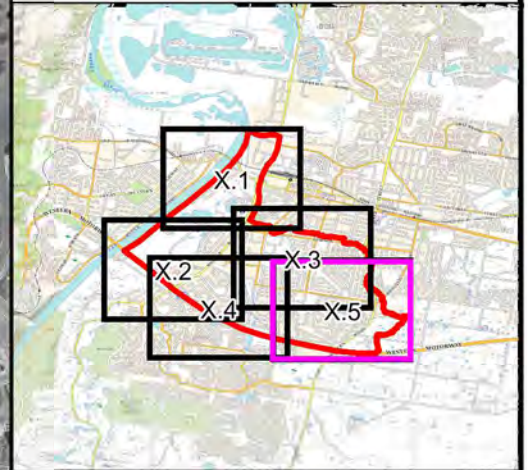
Figure 43.4:
Stormwater Capacity

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig43.4 - Stormwater Capacity.wor

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LEGEND

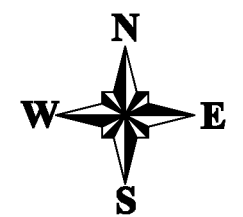
Failure AEP

- 50%AEP or worse
- 20%AEP
- 10%AEP
- 5%AEP
- 2%AEP
- 1%AEP or better

Pit Failure Type

- No Failure
- Surcharge
- Ponding

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 43.5:
Stormwater Capacity**

Prepared By:

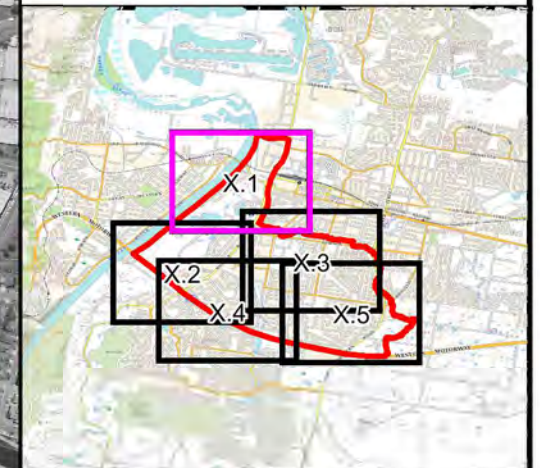
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig43.5 - Stormwater Capacity.wor



FLOOD HAZARD MAPS





LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 44.1:
Flood Hazard
for the 5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig44.1 - Flood Hazard
5% AEP Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

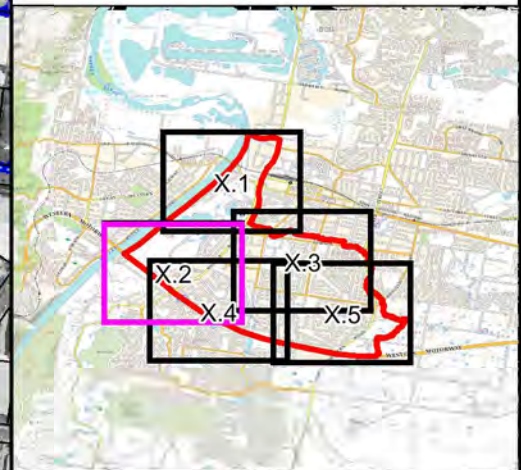
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 44.2:
Flood Hazard
for the 5% AEP
Local Catchment Flood**

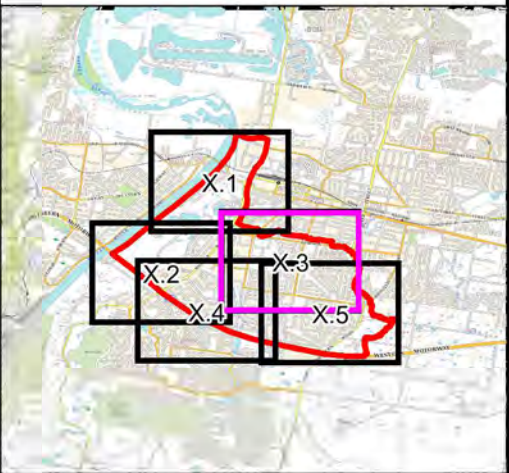
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig44.2 - Flood Hazard
5% AEP Flood.wor



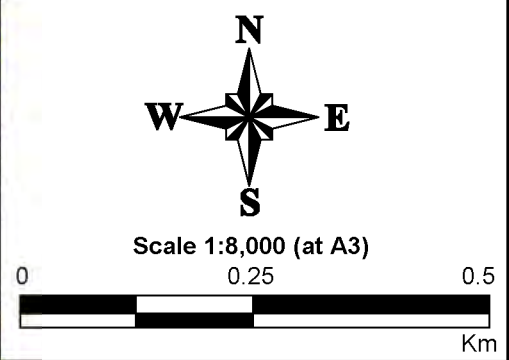
PENRITH CITY COUNCIL



LEGEND

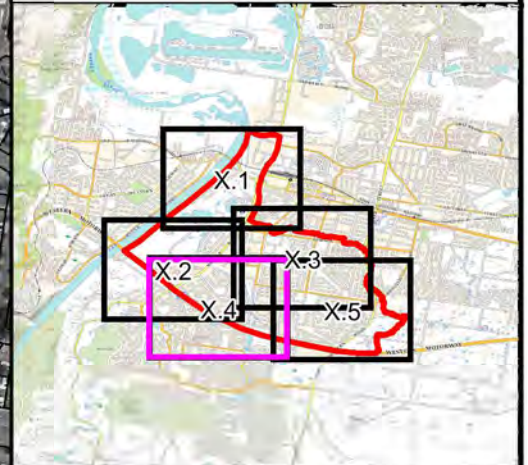
- Hazard Categories**
- H1 - generally safe for people, vehicles and buildings
 - H2 - unsafe for small vehicles
 - H3 - unsafe for vehicles, children and elderly
 - H4 - unsafe for people and vehicles
 - H5 - unsafe for people or vehicles. Buildings require special design
 - H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 44.3:
Flood Hazard
for the 5% AEP
Local Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig44.3 - Flood Hazard
5% AEP Flood.wor



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

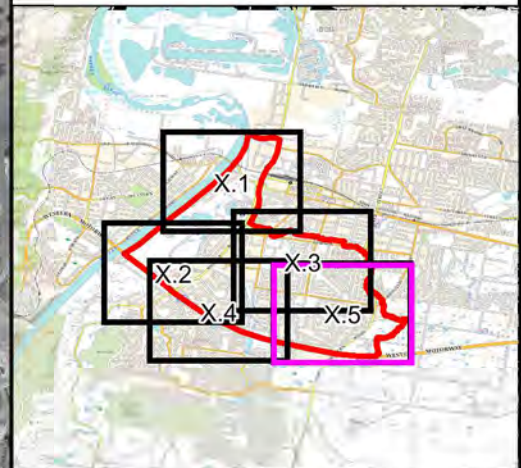


**Figure 44.4:
Flood Hazard
for the 5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig44.4 - Flood Hazard
5% AEP Flood.wor



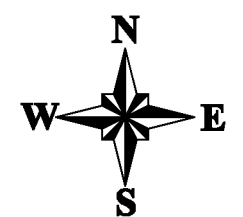
LEGEND

Hazard Categories

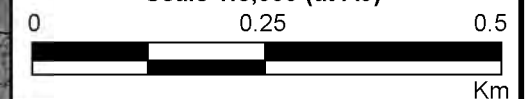
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

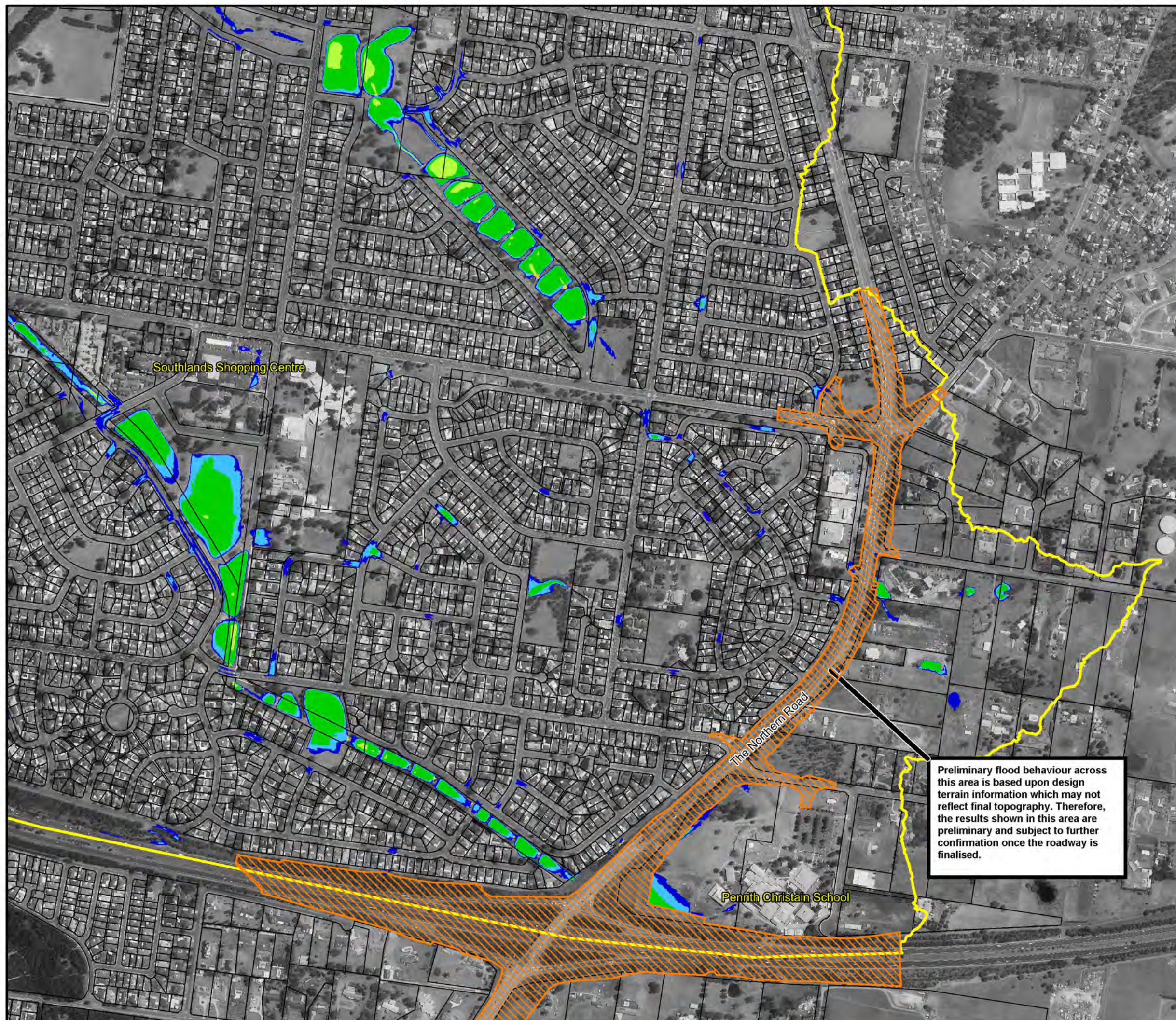


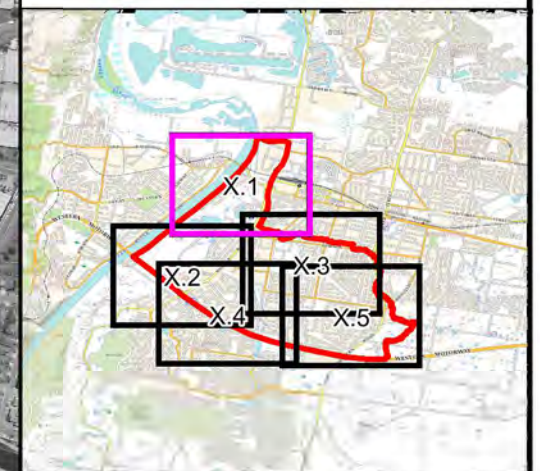
**Figure 44.5:
Flood Hazard
for the 5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig44.5 - Flood Hazard
5% AEP Flood.wor





LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 45.1:
Flood Hazard
for the 1% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig45.1 - Flood Hazard
1% AEP Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

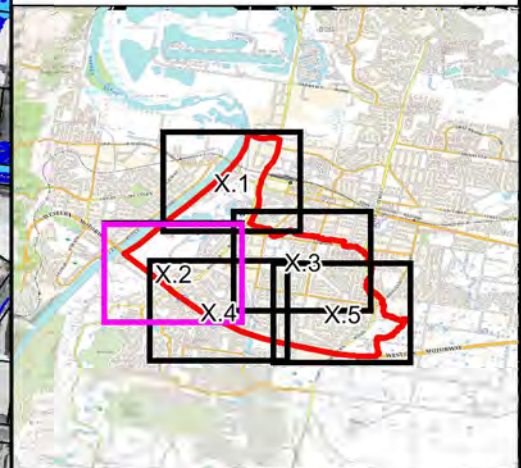
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

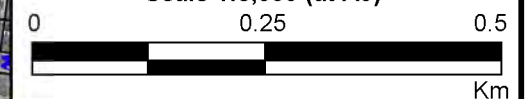


Figure 45.2:
Flood Hazard
for the 1% AEP
Local Catchment Flood

Prepared By:

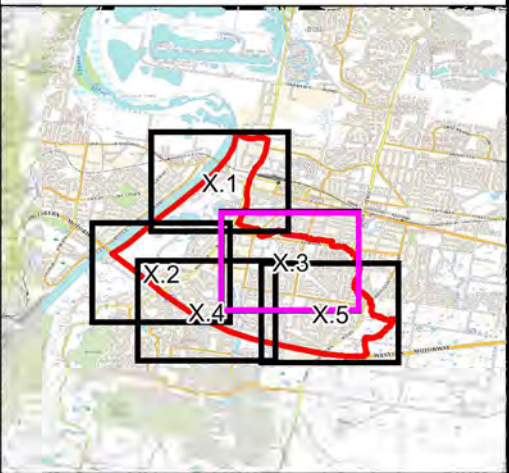
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig45.2 - Flood Hazard
1% AEP Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

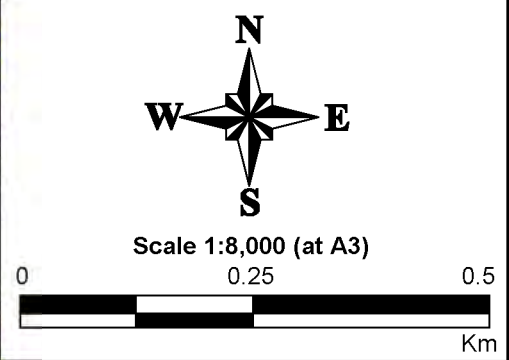
PENRITH CITY COUNCIL



LEGEND

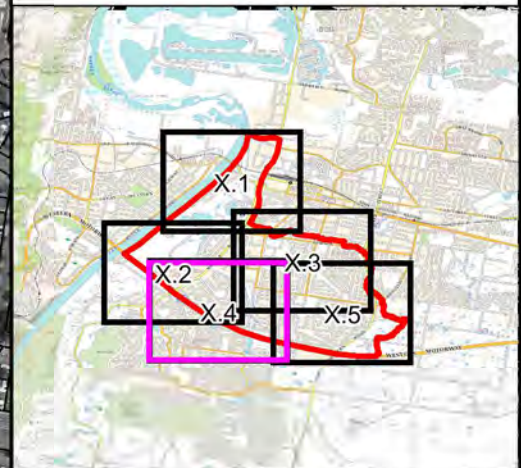
- Hazard Categories**
- H1 - generally safe for people, vehicles and buildings
 - H2 - unsafe for small vehicles
 - H3 - unsafe for vehicles, children and elderly
 - H4 - unsafe for people and vehicles
 - H5 - unsafe for people or vehicles. Buildings require special design
 - H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 45.3:
Flood Hazard
for the 1% AEP
Local Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig45.3 - Flood Hazard
1% AEP Flood.wor



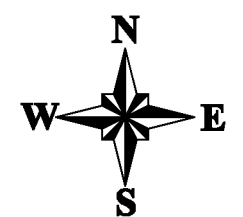
LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

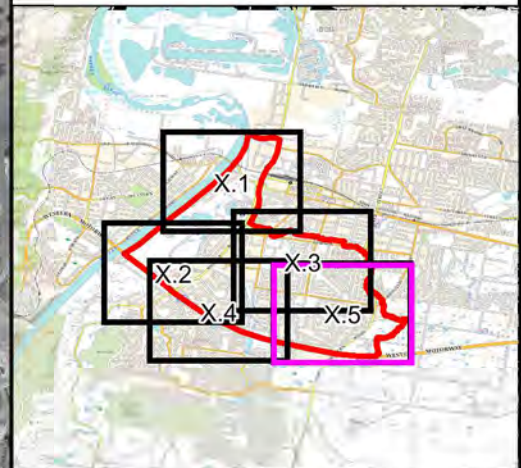


Figure 45.4:
Flood Hazard
for the 1% AEP
Local Catchment Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig45.4 - Flood Hazard
1% AEP Flood.wor



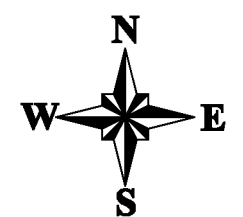
LEGEND

Hazard Categories

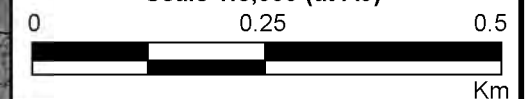
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

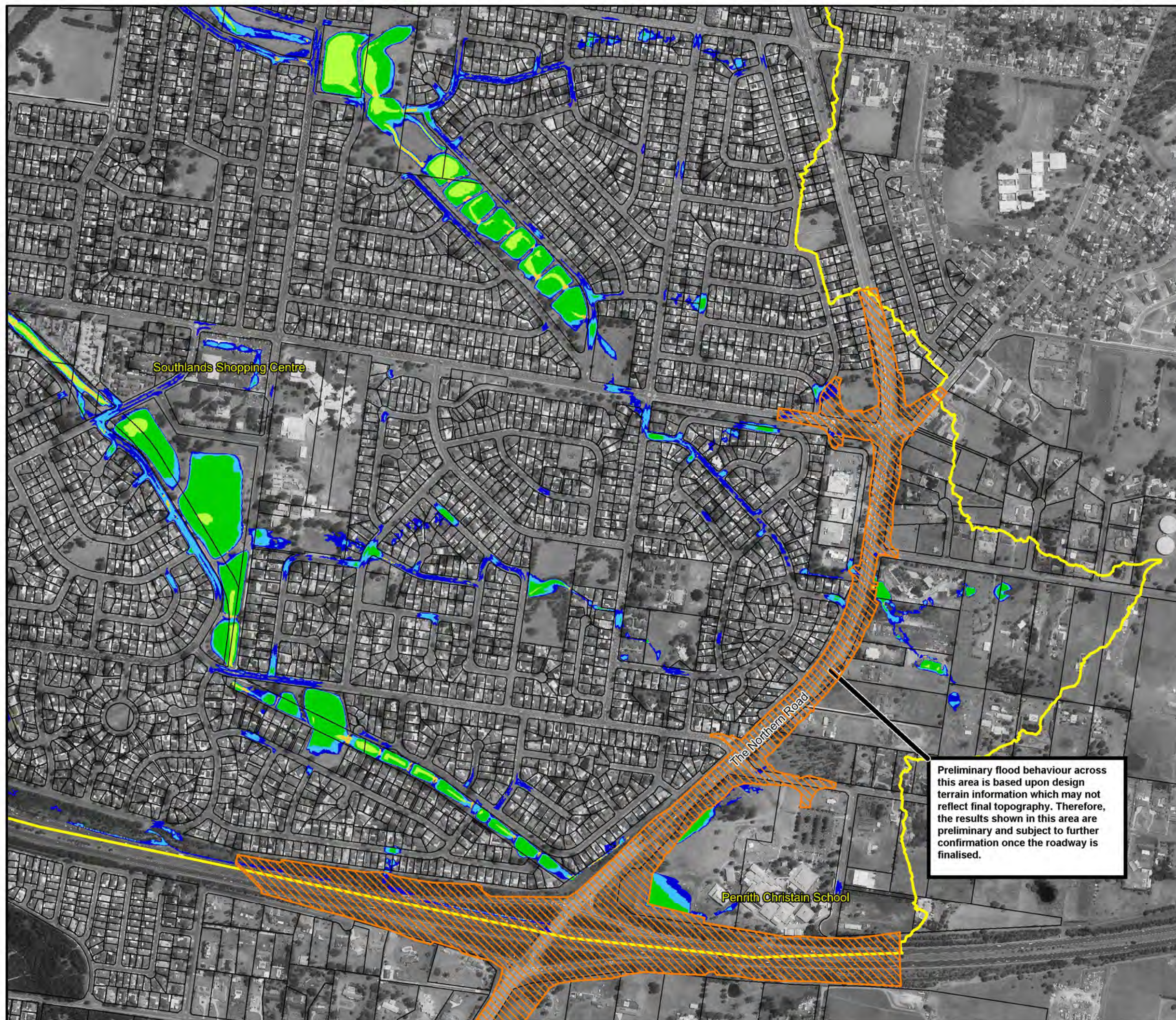


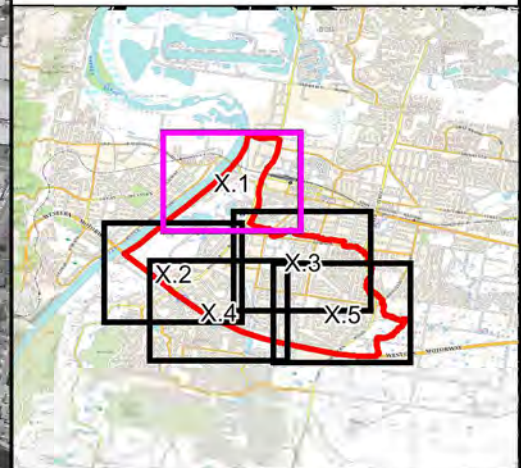
**Figure 45.5:
Flood Hazard
for the 1% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig45.5 - Flood Hazard
1% AEP Flood.wor





LEGEND

Hazard Categories

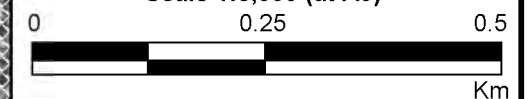
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

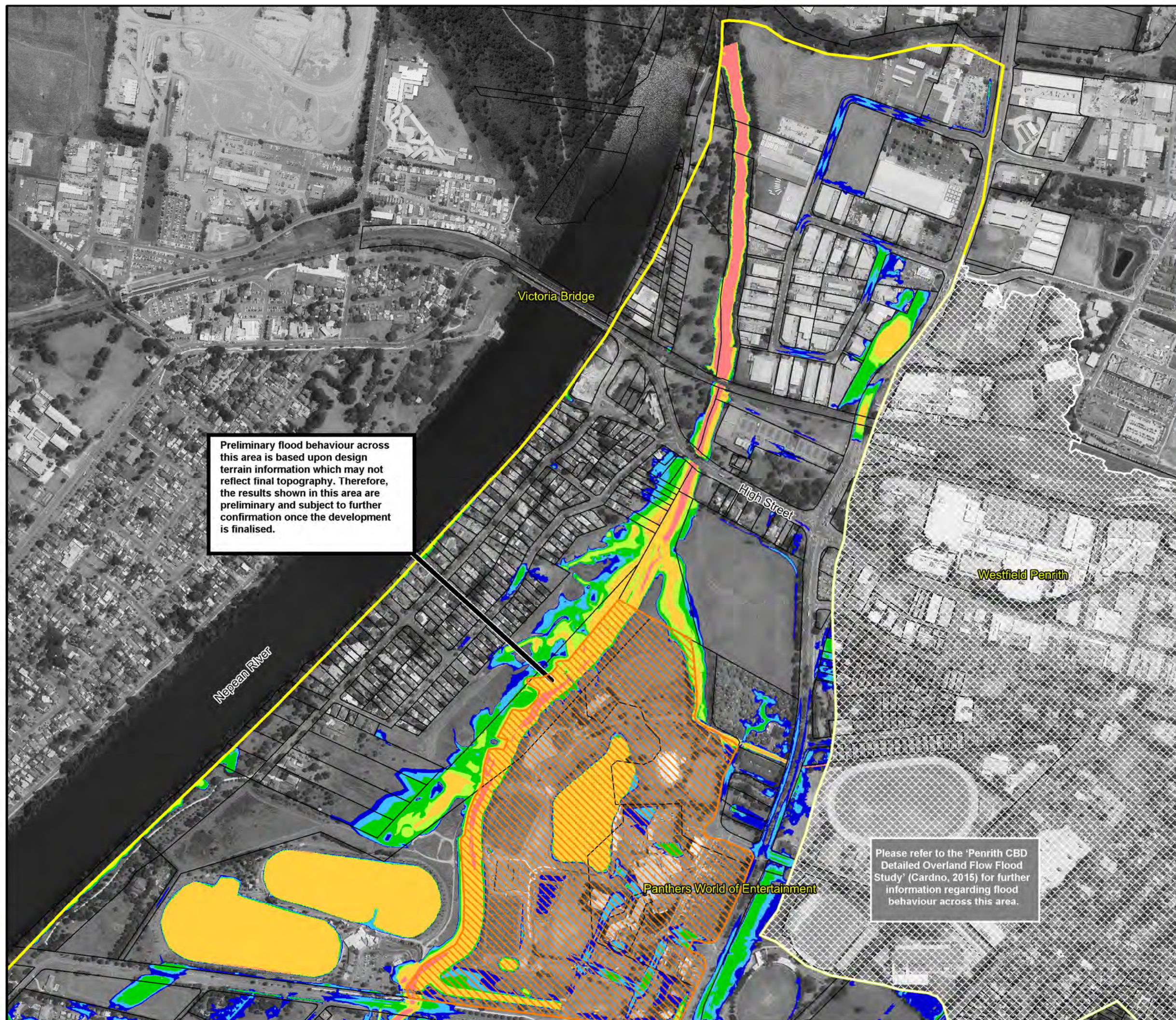


**Figure 46.1:
Flood Hazard
for the 0.5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

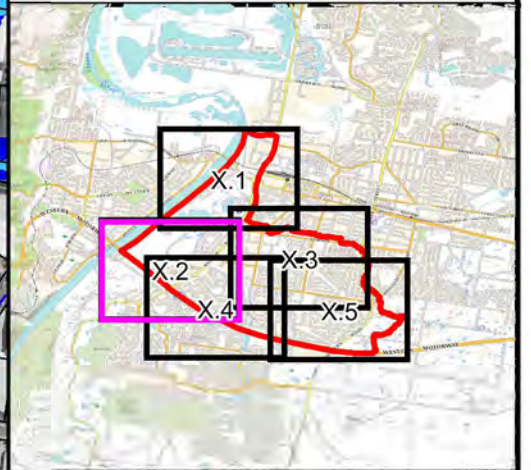
File Name: Fig46.1 - Flood Hazard
0.5% AEP Flood.wor



Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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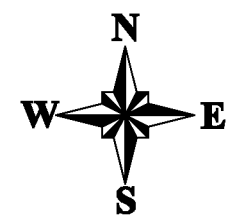
LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 46.2:
Flood Hazard
for the 0.5% AEP
Local Catchment Flood

Prepared By:

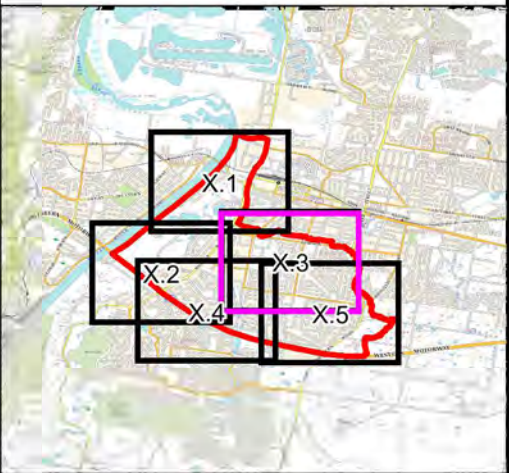
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig46.2 - Flood Hazard
0.5% AEP Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

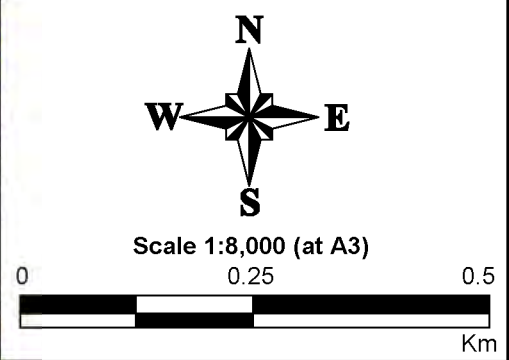
PENRITH CITY COUNCIL



LEGEND

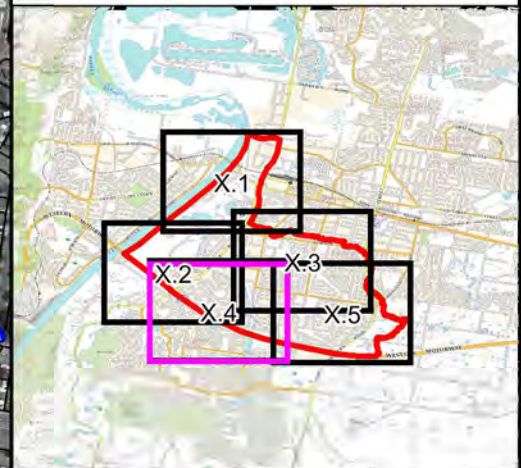
- Hazard Categories**
- H1 - generally safe for people, vehicles and buildings
 - H2 - unsafe for small vehicles
 - H3 - unsafe for vehicles, children and elderly
 - H4 - unsafe for people and vehicles
 - H5 - unsafe for people or vehicles. Buildings require special design
 - H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 46.3:
Flood Hazard
for the 0.5% AEP
Local Catchment Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig46.3 - Flood Hazard
0.5% AEP Flood.wor



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

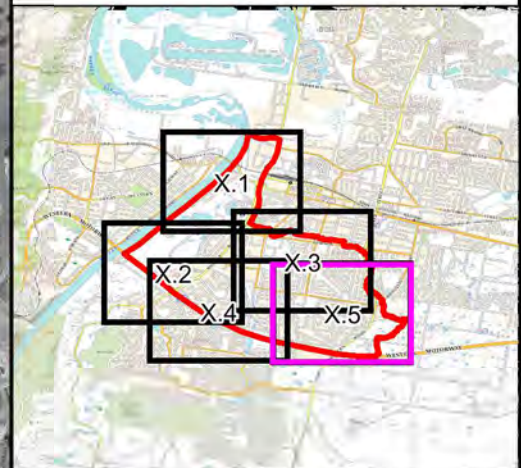


**Figure 46.4:
Flood Hazard
for the 0.5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig46.4 - Flood Hazard
0.5% AEP Flood.wor



LEGEND

Hazard Categories

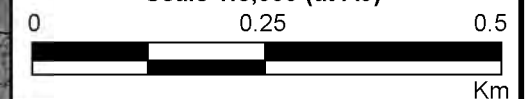
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

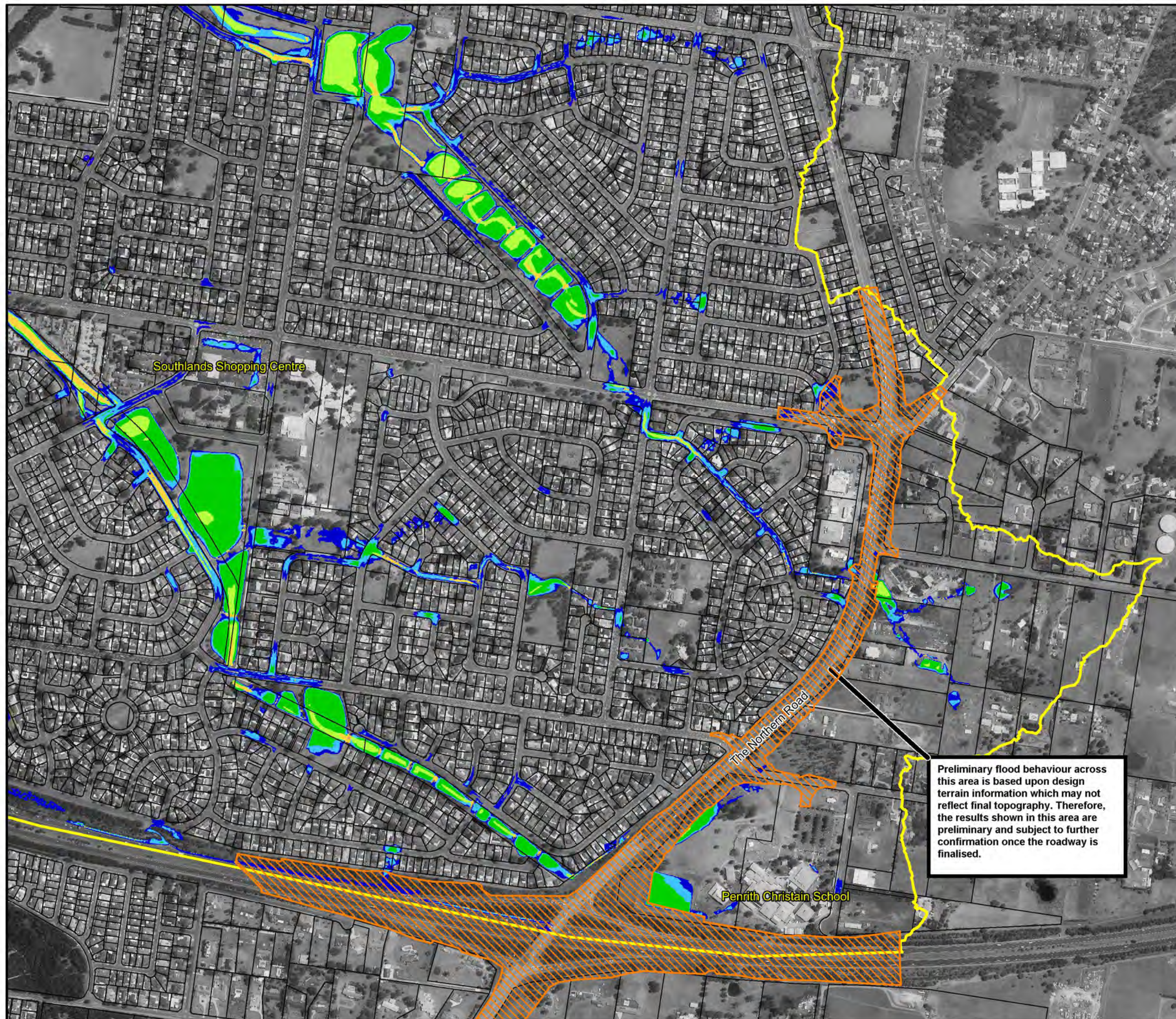


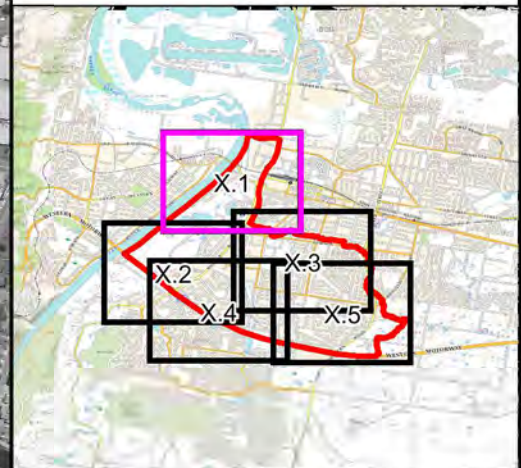
**Figure 46.5:
Flood Hazard
for the 0.5% AEP
Local Catchment Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig46.5 - Flood Hazard
0.5% AEP Flood.wor





LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

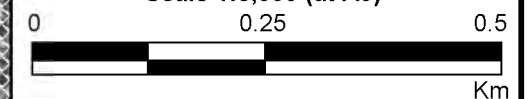
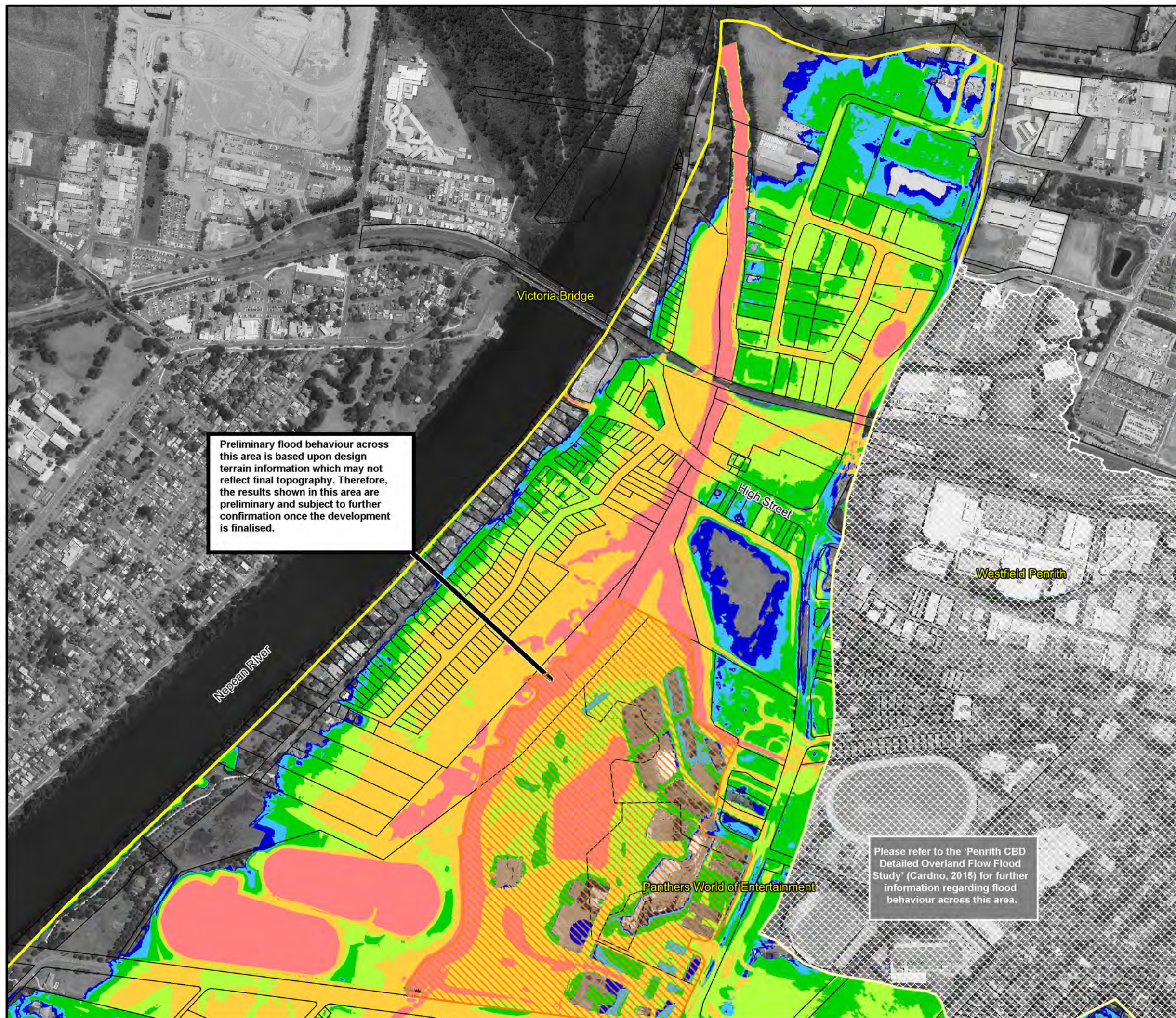


Figure 47.1:
Flood Hazard for
the local Catchment
PMF

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

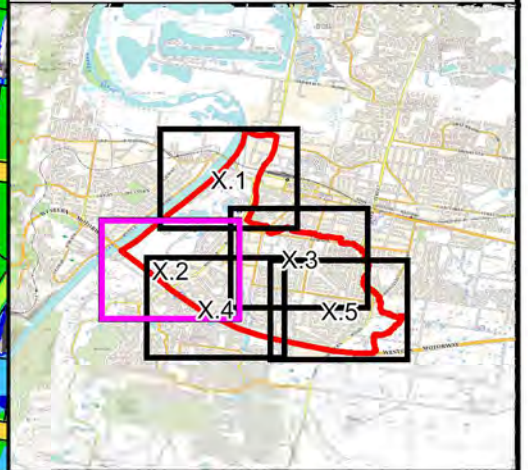
File Name: Fig47.1 - Flood Hazard
PMF.wor



Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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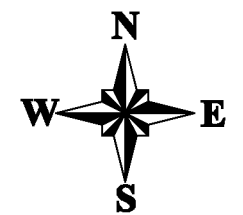
LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 47.2:
Flood Hazard for
the local Catchment
PMF

Prepared By:

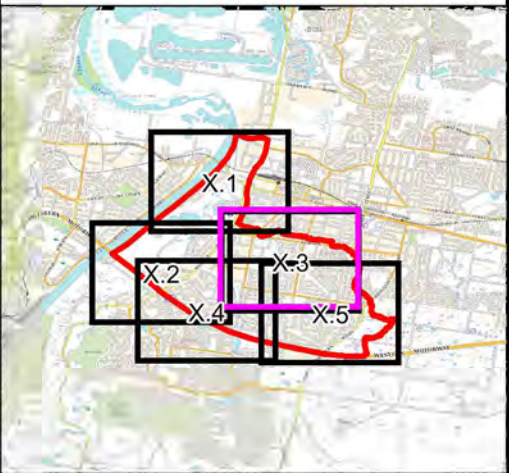
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig47.2 - Flood Hazard
PMF.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

- Hazard Categories**
- H1 - generally safe for people, vehicles and buildings
 - H2 - unsafe for small vehicles
 - H3 - unsafe for vehicles, children and elderly
 - H4 - unsafe for people and vehicles
 - H5 - unsafe for people or vehicles. Buildings require special design
 - H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

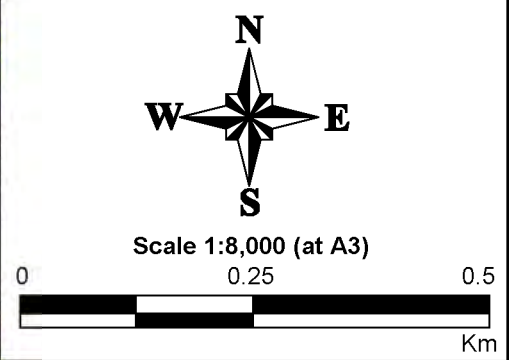
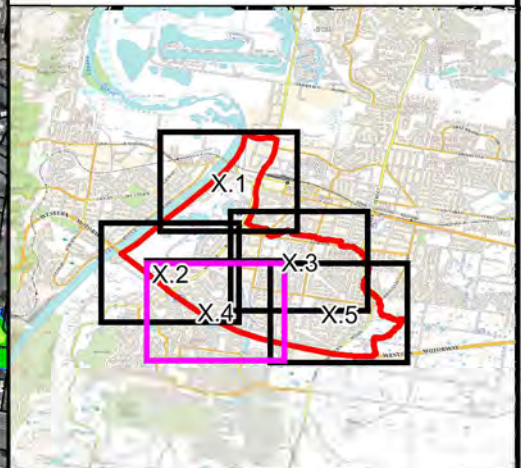


Figure 47.3:
Flood Hazard for
the local Catchment
PMF

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig47.3 - Flood Hazard PMF.wor

PENRITH CITY COUNCIL



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

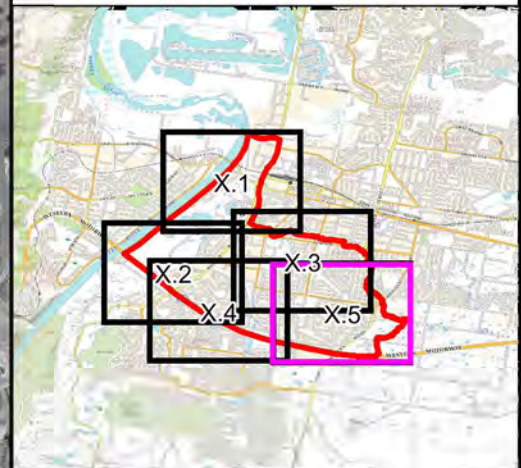


Figure 47.4:
Flood Hazard for
the local Catchment
PMF

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig47.4 - Flood Hazard
PMF.wor



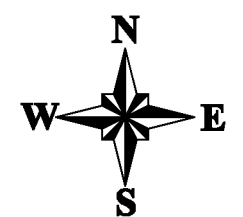
LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

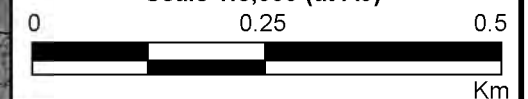
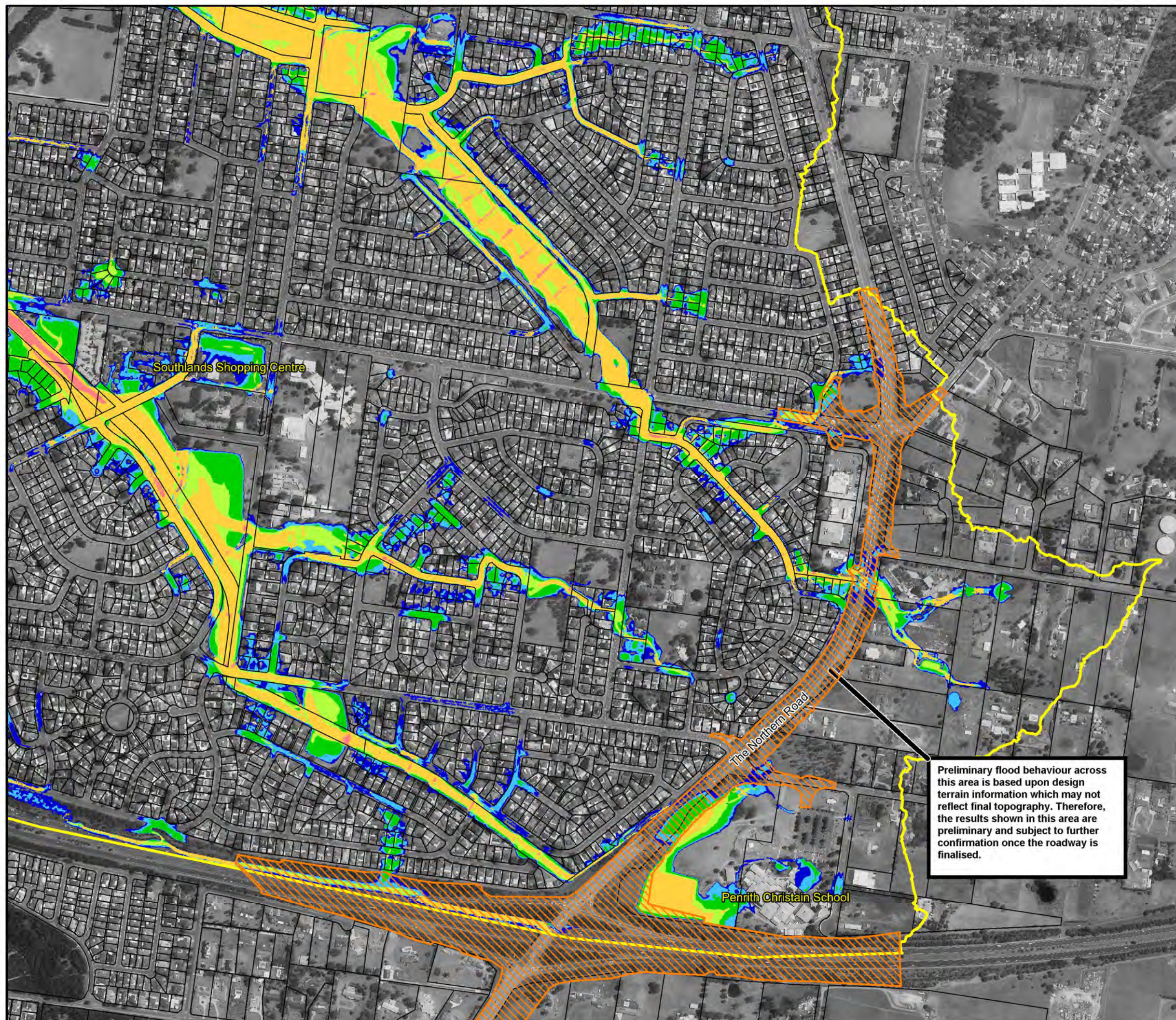


Figure 47.5:
Flood Hazard for
the local Catchment
PMF

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig47.5 - Flood Hazard
PMF.wor

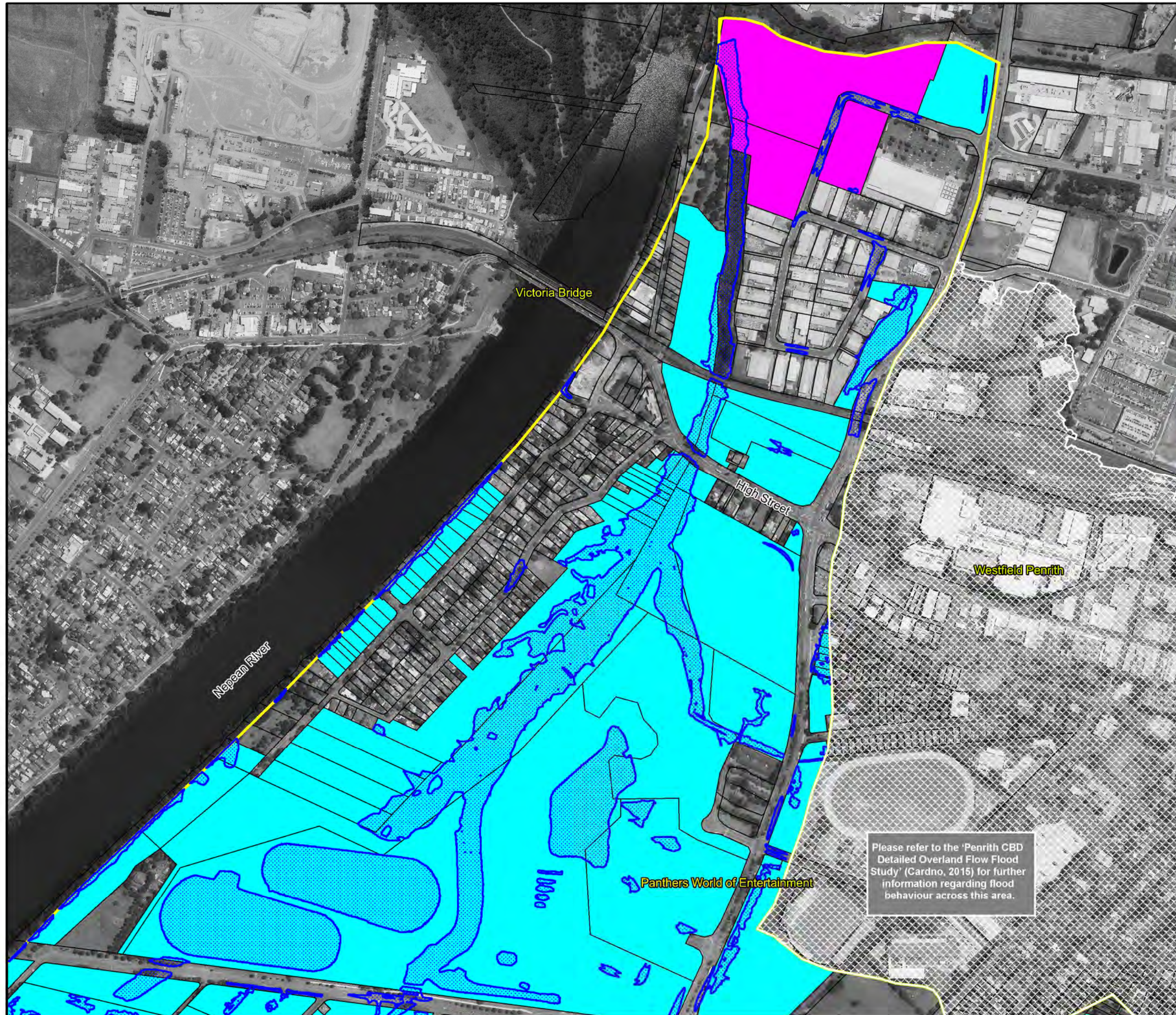


Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the roadway is finalised.



FLOOD EMERGENCY RESPONSE CLASSIFICATION MAPS





PENRITH CITY COUNCIL

LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

Scale 1:8,000 (at A3)

0 0.25 0.5 Km

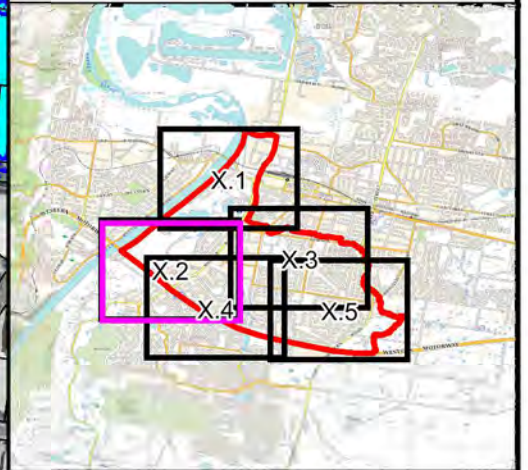
Figure 48.1:
Flood Emergency Response Classifications for the 5% AEP Local Catchment Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig48.1 - ERC 5%AEP Flood.wor

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL

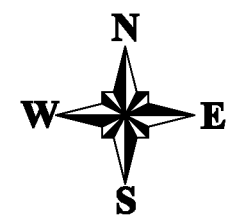


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

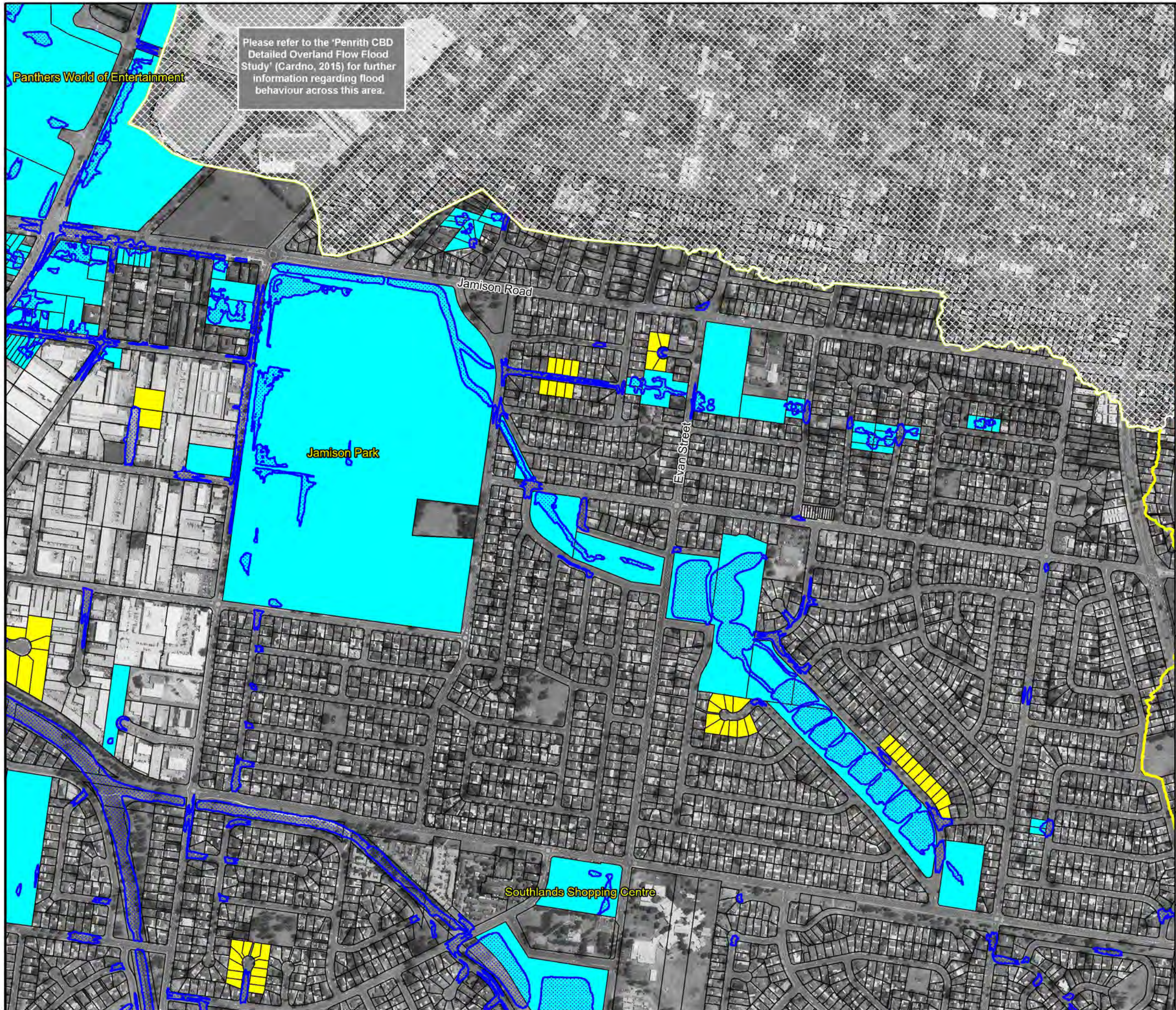


Figure 48.2:
Flood Emergency Response
Classifications for the 5%
AEP Local Catchment Flood

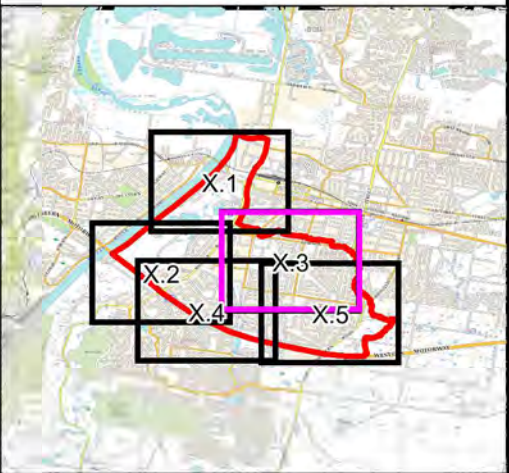
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig48.2 - ERC 5%AEP Flood.wor



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LEGEND	
■	Low Flood Island
■	Low Trapped Perimeter Area
■	High Trapped Perimeter Area
■	Rising Road Access Area
■	Indirectly Affected Area
 	Not Flood Affected
 	Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

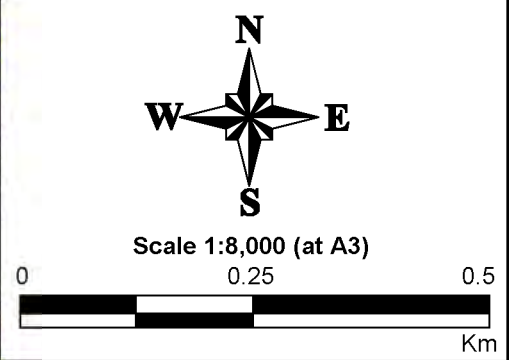
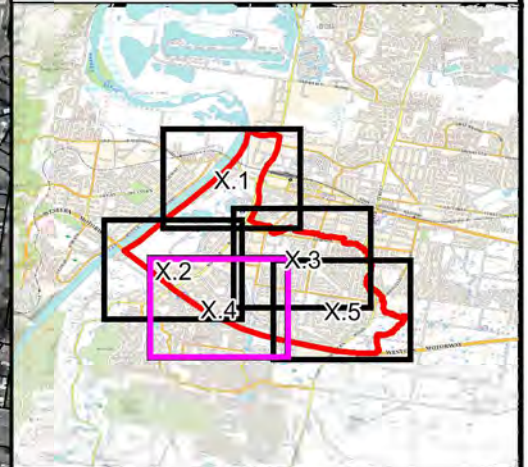


Figure 48.3:
Flood Emergency Response
Classifications for the 5%
AEP Local Catchment Flood

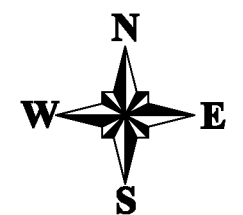


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

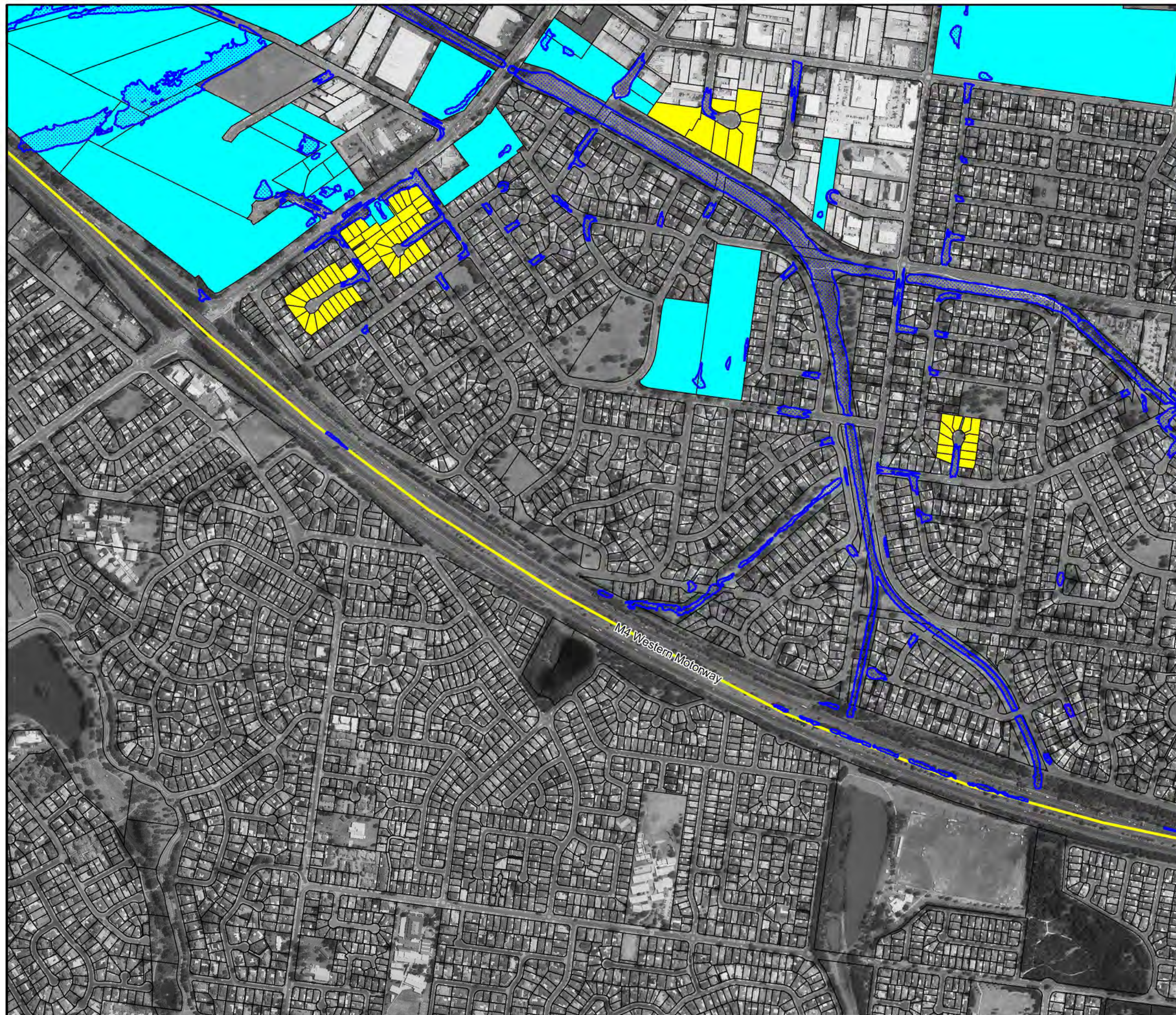


Figure 48.4:
Flood Emergency Response
Classifications for the 5%
AEP Local Catchment Flood

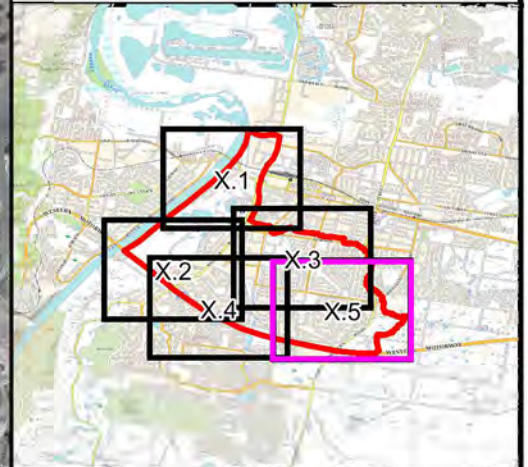
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig48.4 - ERC 5%AEP Flood.wor



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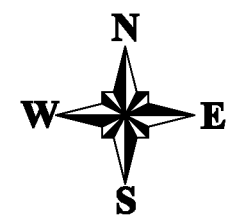


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

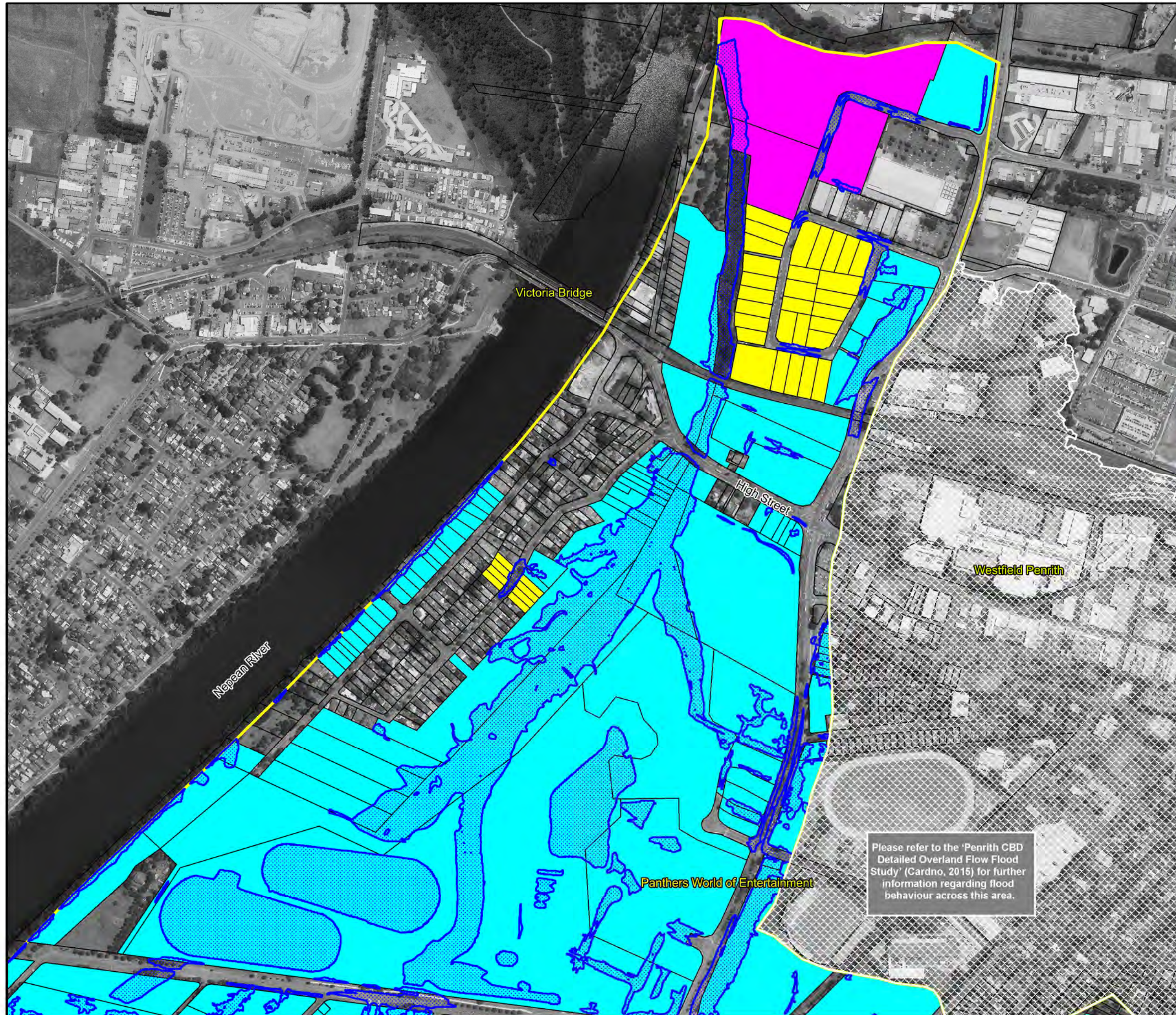


Figure 48.5:
Flood Emergency Response
Classifications for the 5%
AEP Local Catchment Flood

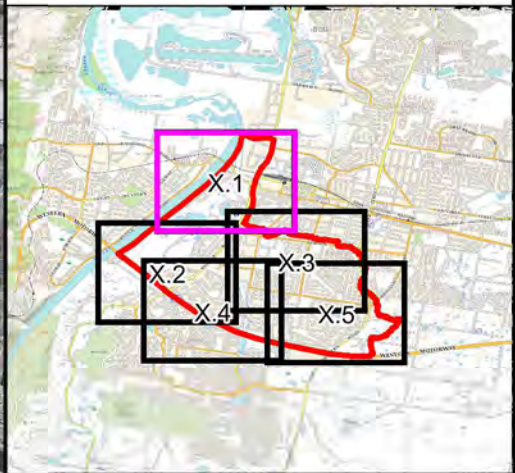
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig48.5 - ERC 5%AEP Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

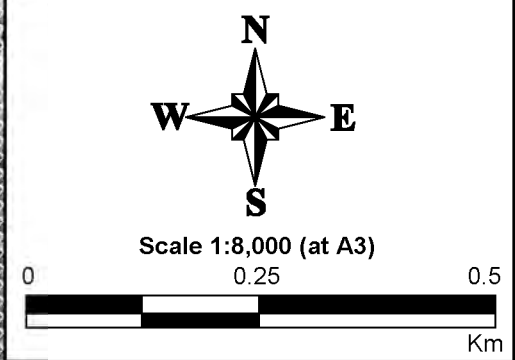


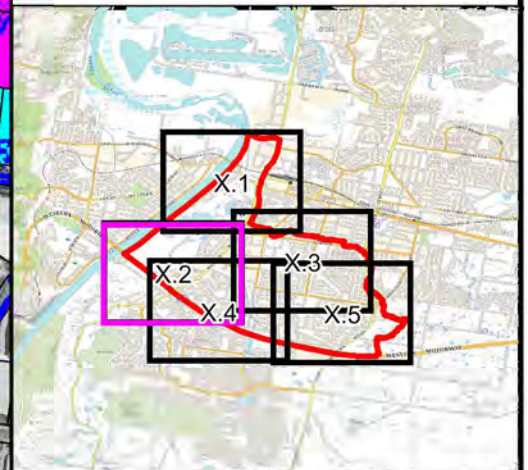
Figure 49.1:
Flood Emergency Response
Classifications for the 1% AEP Local Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig49.1 - ERC 1%AEP Flood.wor

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

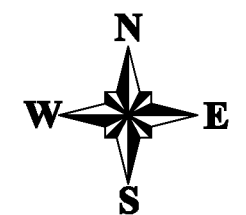
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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

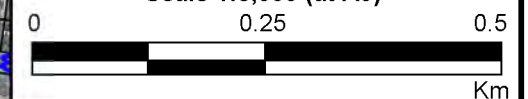


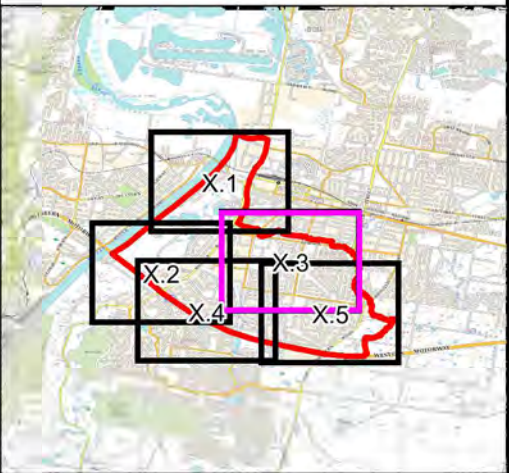
Figure 49.2:
Flood Emergency Response
Classifications for the 1%
AEP Local Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig49.2 - ERC 1%AEP Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

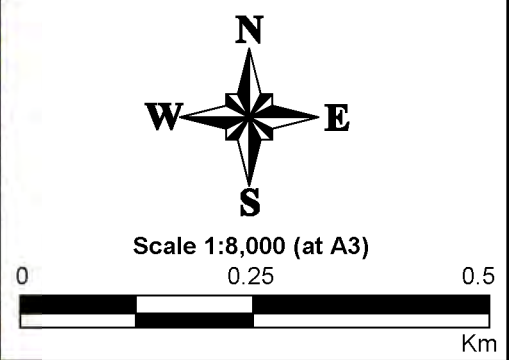
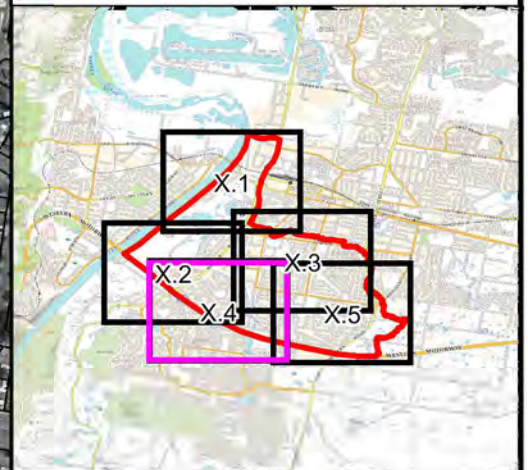


Figure 49.3:
Flood Emergency Response
Classifications for the 1%
AEP Local Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig49.3 - ERC 1%AEP Flood.wor

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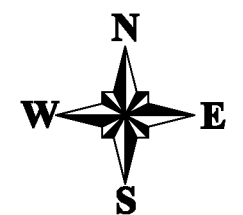


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



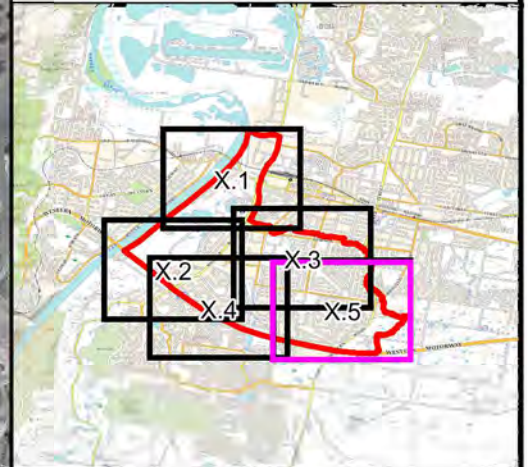
Figure 49.4:
Flood Emergency Response
Classifications for the 1%
AEP Local Catchment Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig49.4 - ERC 1%AEP Flood.wor

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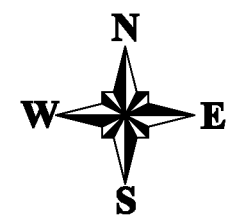


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

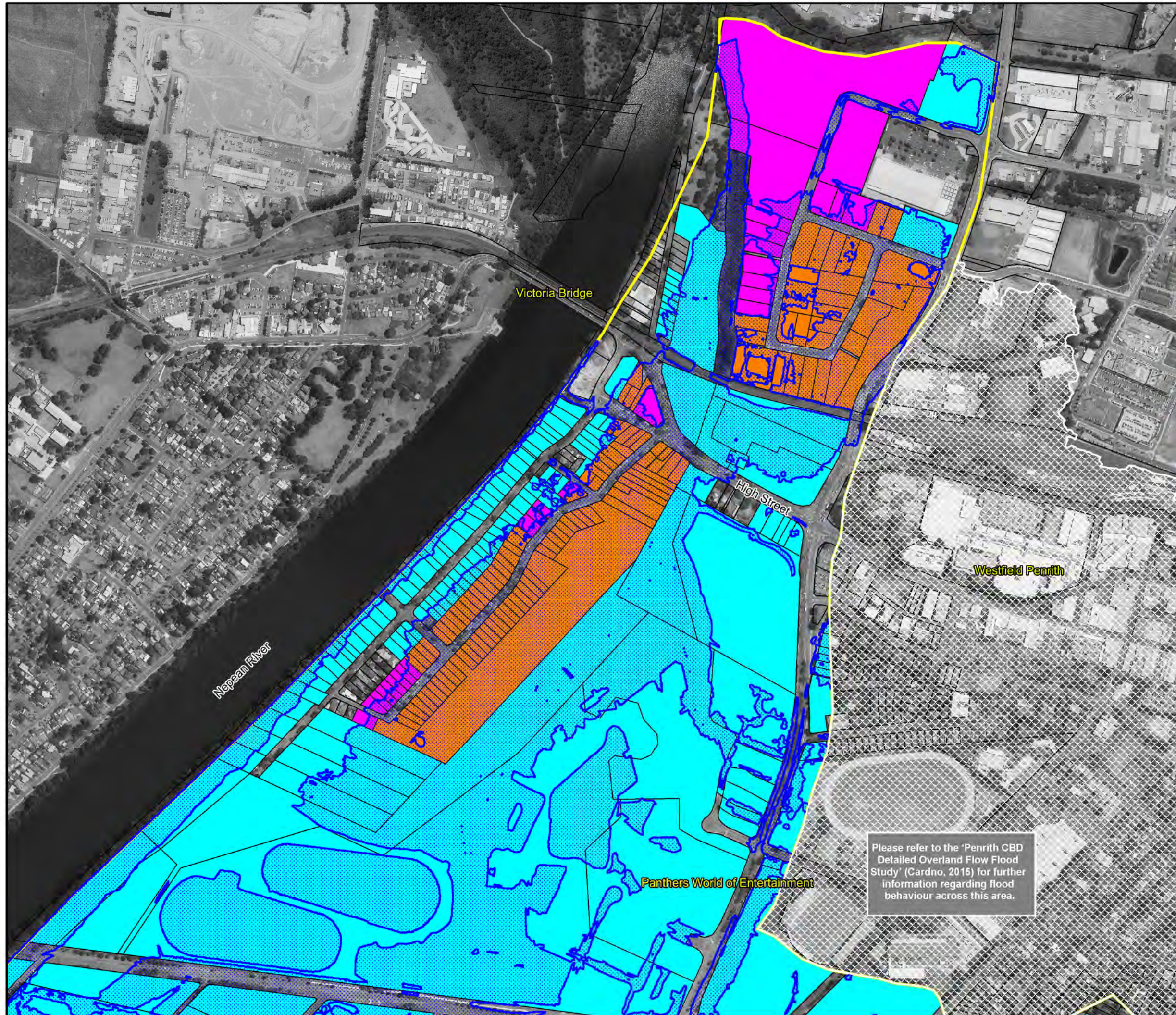


Figure 49.5:
Flood Emergency Response
Classifications for the 1%
AEP Local Catchment Flood

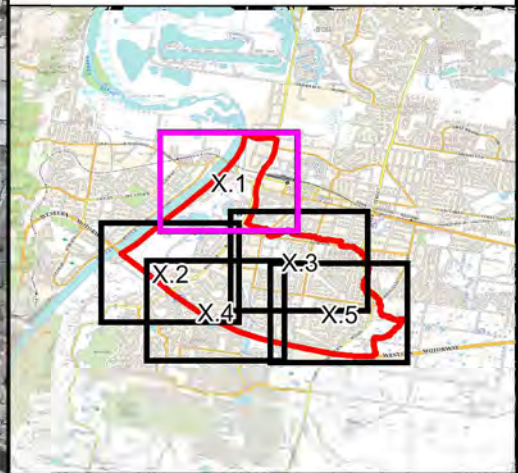
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig49.5 - ERC 1%AEP Flood.wor



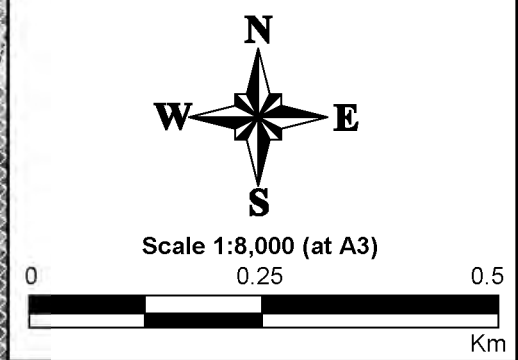
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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



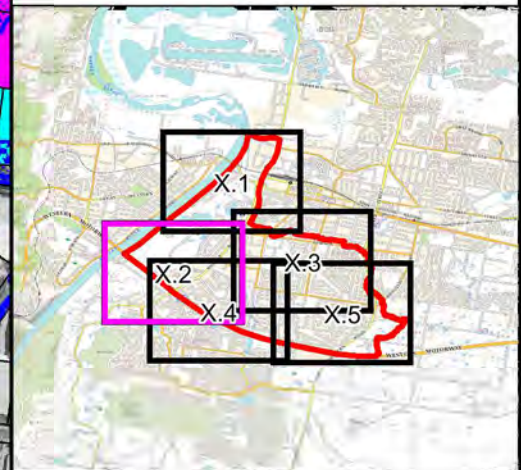
**Figure 50.1:
Flood Emergency Response
Classifications for the
1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig50.1 - ERC 1%AEP Flood.wor

Please refer to the 'Penrith CBD
Detailed Overland Flow Flood
Study' (Cardno, 2015) for further
information regarding flood
behaviour across this area.

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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 50.2:
Flood Emergency Response
Classifications for the
1% AEP Flood**

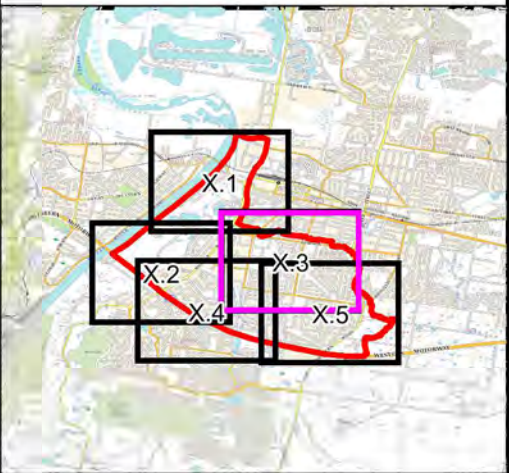
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig50.2 - ERC 1%AEP Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood

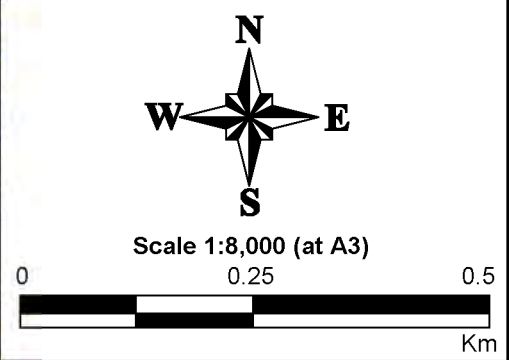
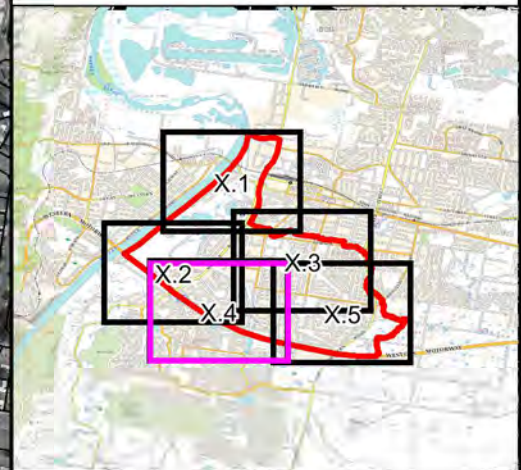


Figure 50.3:
Flood Emergency Response
Classifications for the
1% AEP Flood

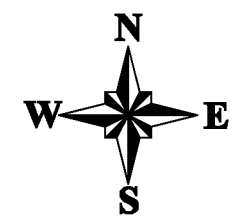
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig50.3 - ERC 1%AEP Flood.wor



LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



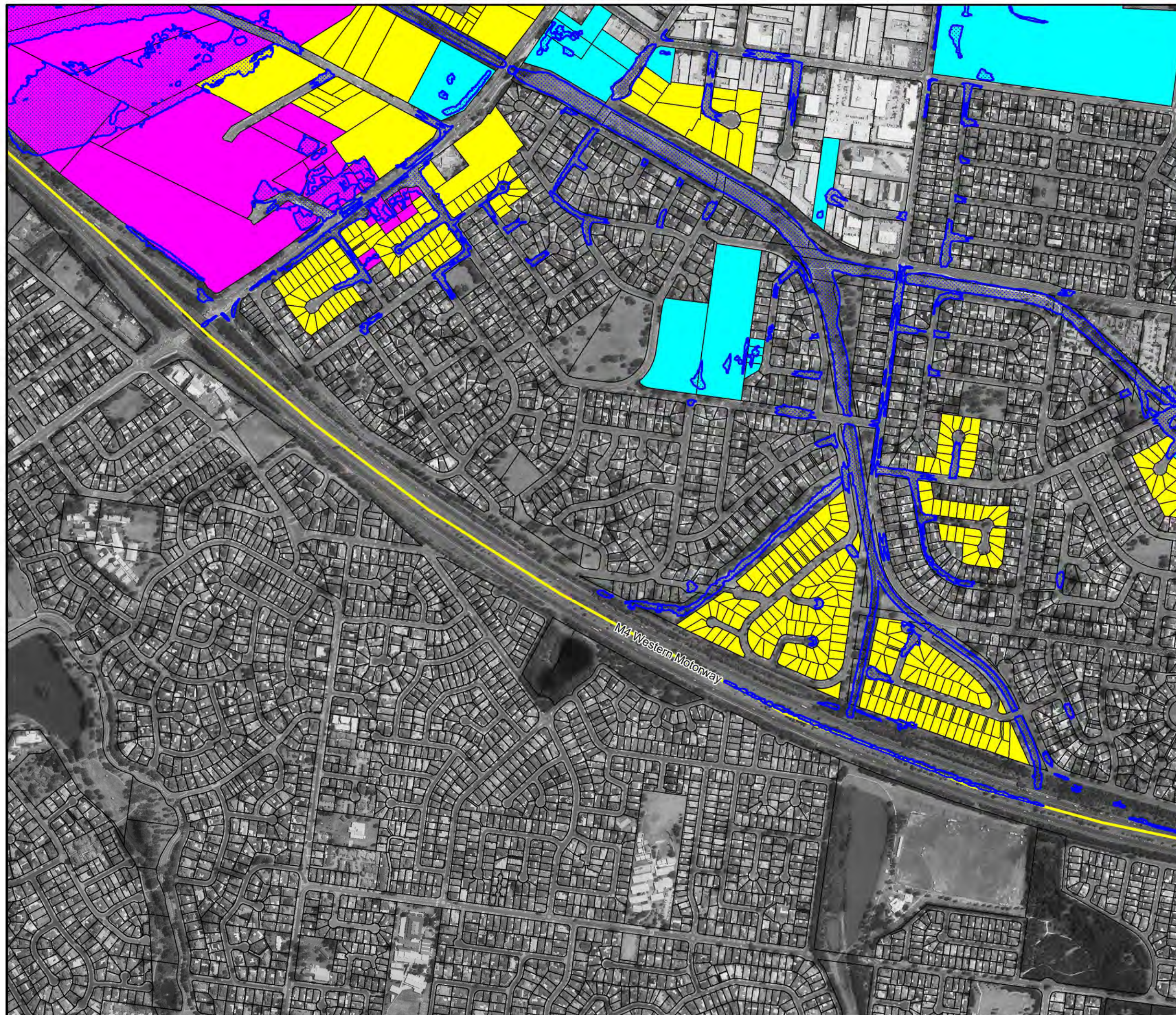
Scale 1:8,000 (at A3)



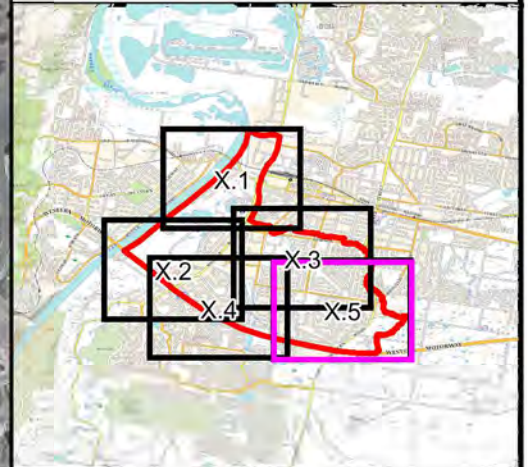
**Figure 50.4:
Flood Emergency Response
Classifications for the
1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig50.4 - ERC 1%AEP Flood.wor



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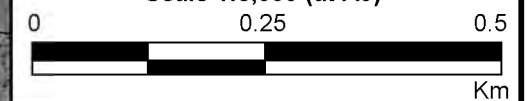
LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



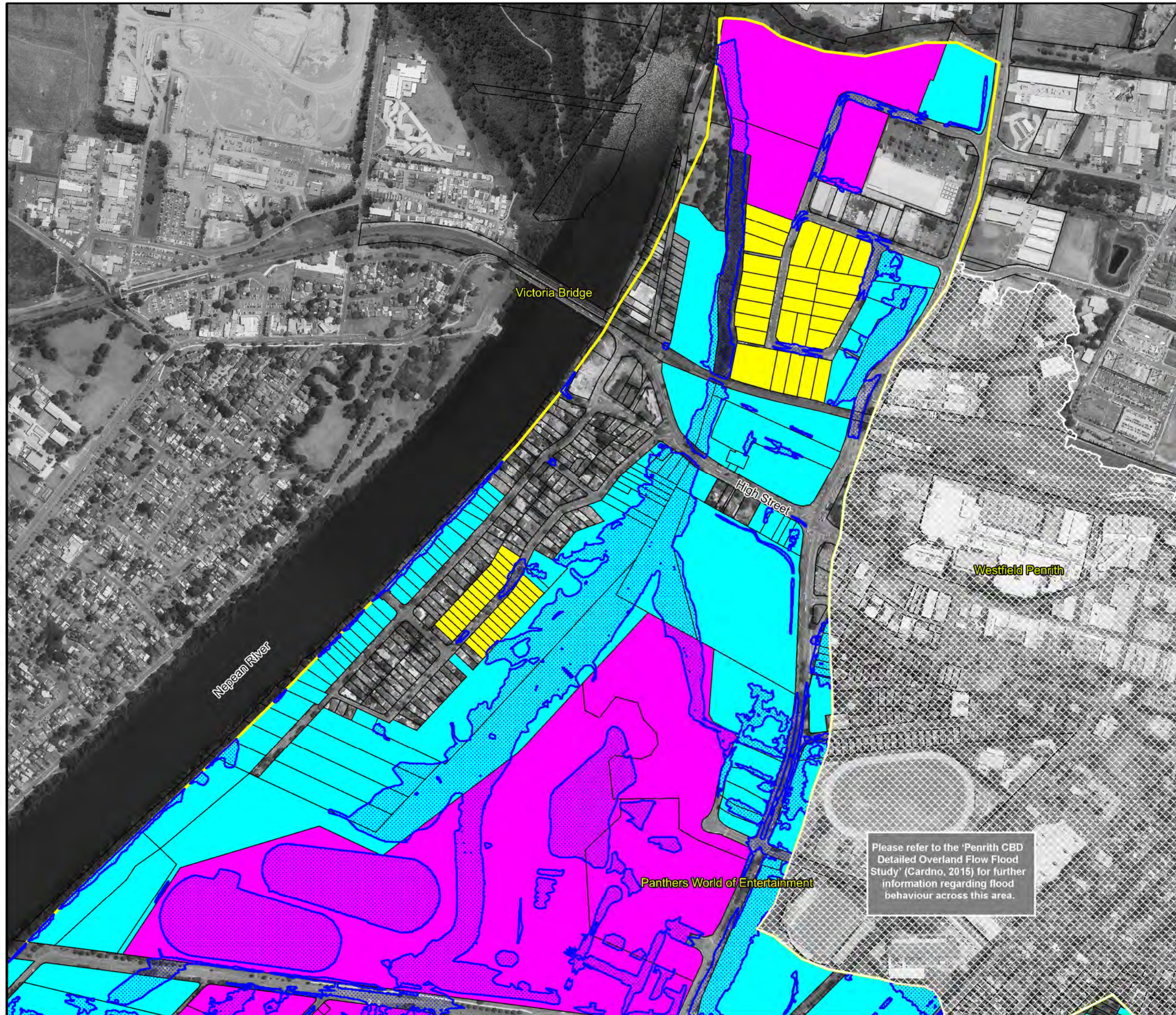
Scale 1:8,000 (at A3)



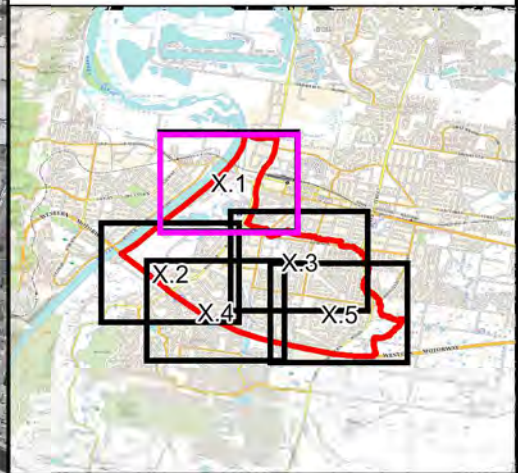
**Figure 50.5:
Flood Emergency Response
Classifications for the
1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig50.5 - ERC 1%AEP Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

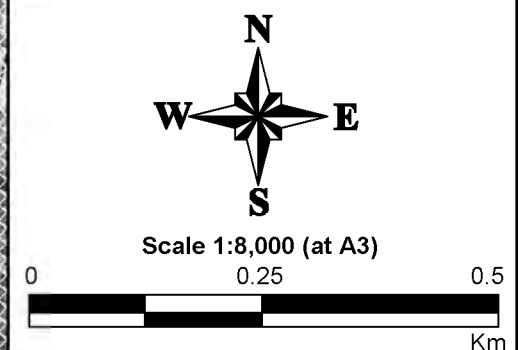


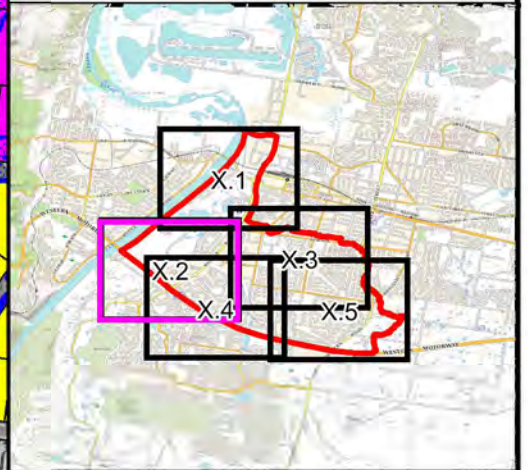
Figure 51.1:
Flood Emergency Response
Classifications for the
0.5%AEP Local Catchment
Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig51.1 - ERC 0.5%AEP Flood.wor

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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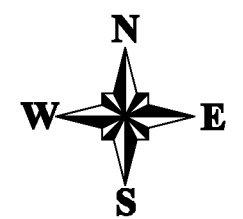


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

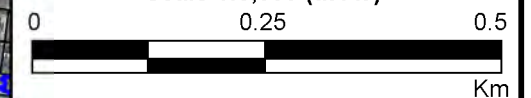


Figure 51.2:
Flood Emergency Response
Classifications for the
0.5%AEP Local Catchment
Flood

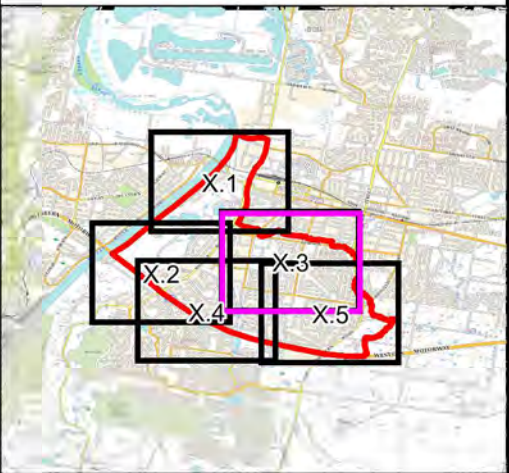
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig51.2 - ERC 0.5%AEP Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

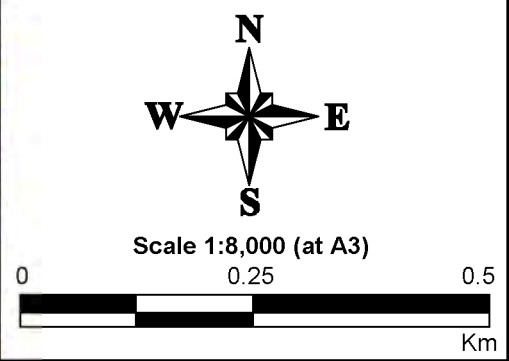
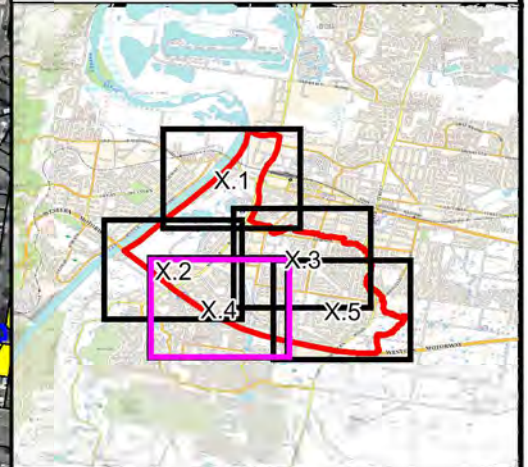


Figure 51.3:
Flood Emergency Response
Classifications for the
0.5%AEP Local Catchment
Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig51.3 - ERC 0.5%AEP Flood.wor

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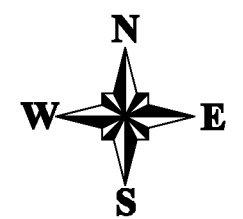


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

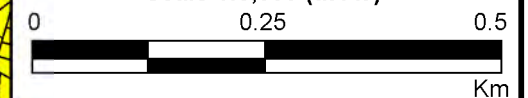

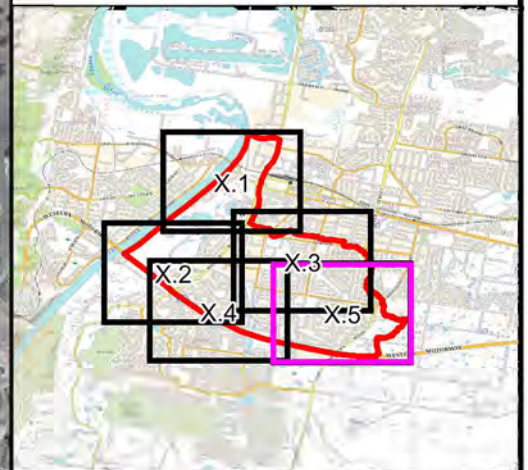


Figure 51.4:
Flood Emergency Response
Classifications for the
0.5%AEP Local Catchment
Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig51.4 - ERC 0.5%AEP Flood.wor



LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

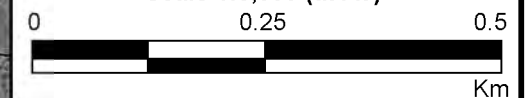
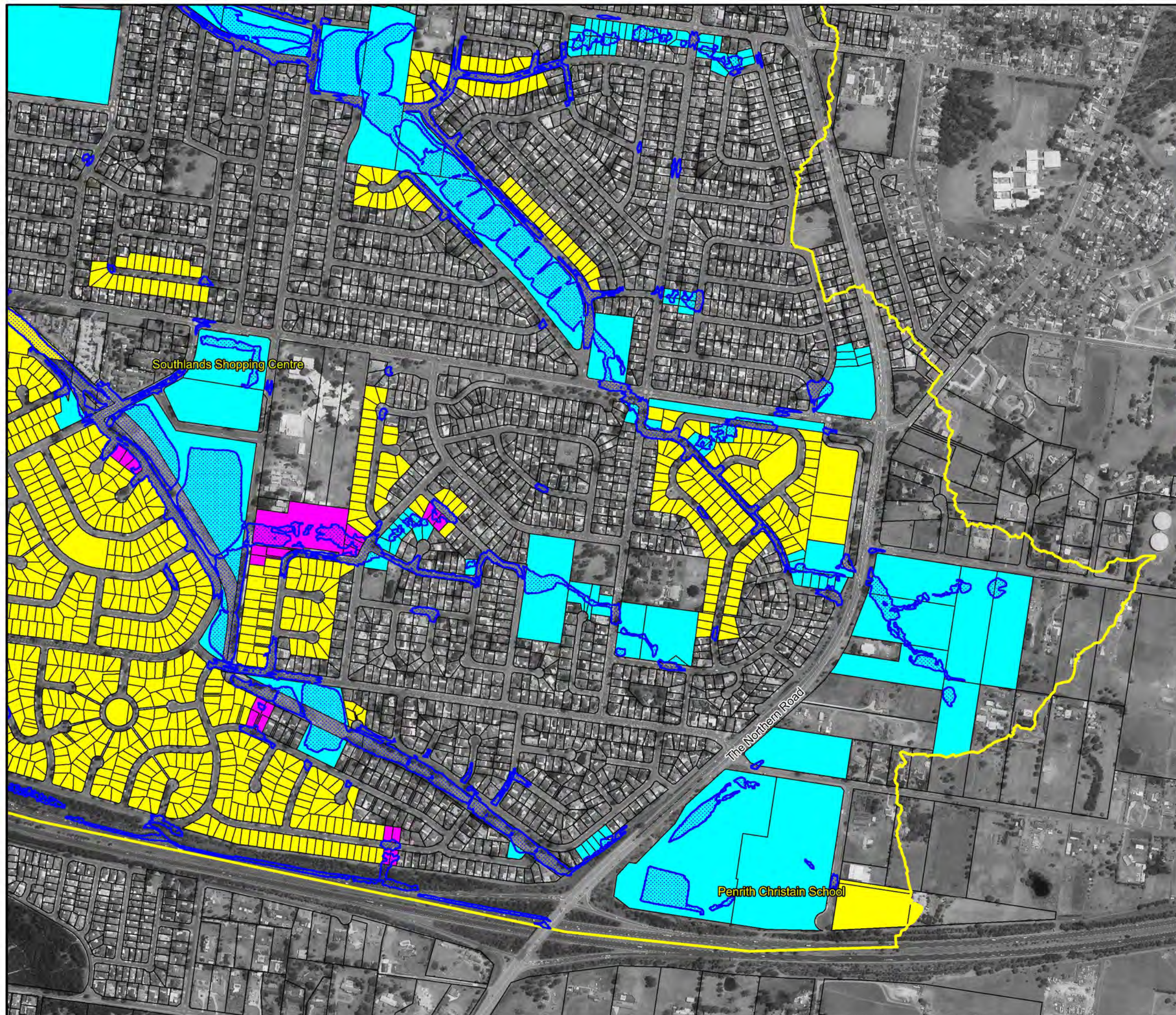


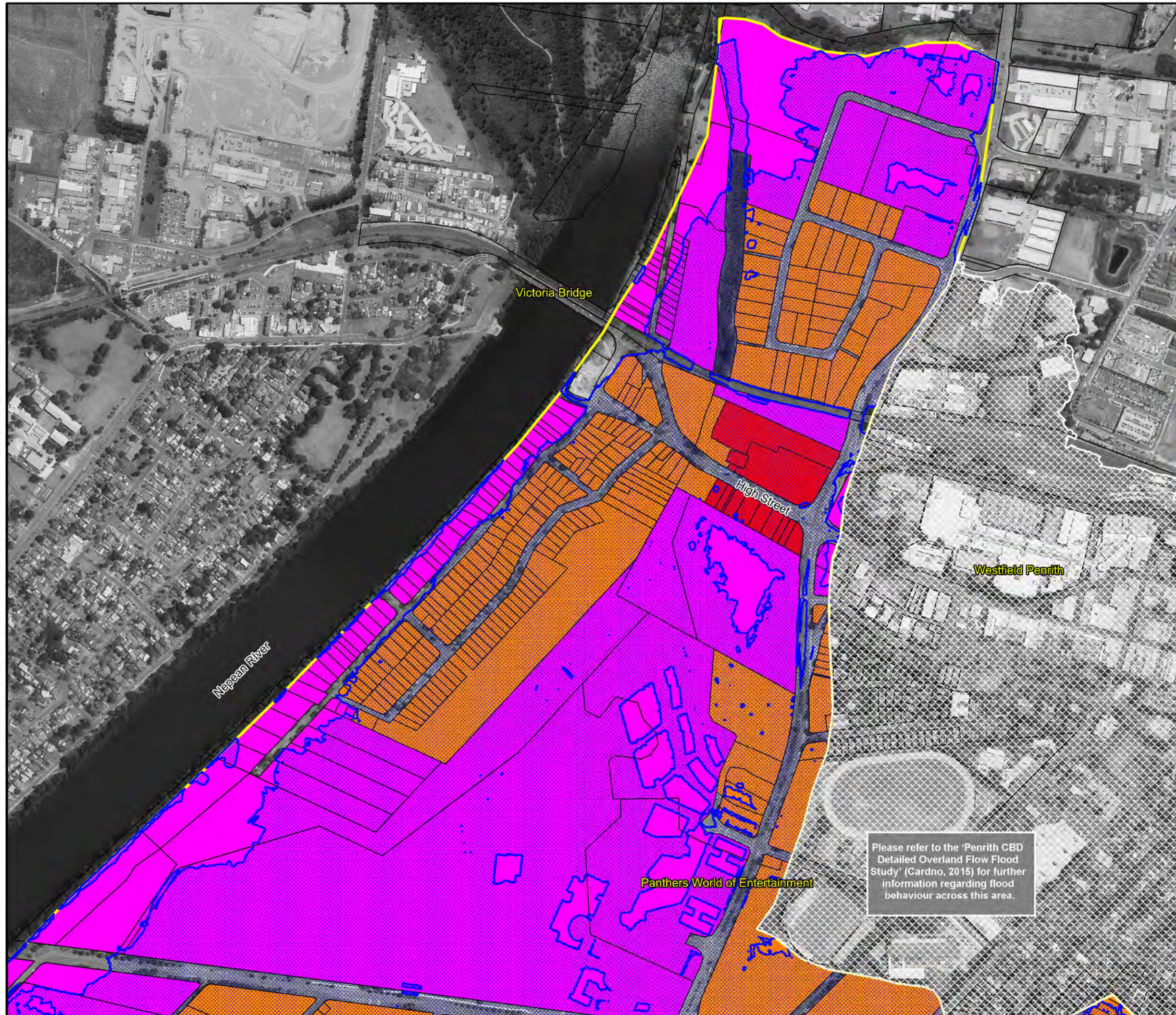
Figure 51.5:
Flood Emergency Response
Classifications for the
0.5%AEP Local Catchment
Flood

Prepared By:

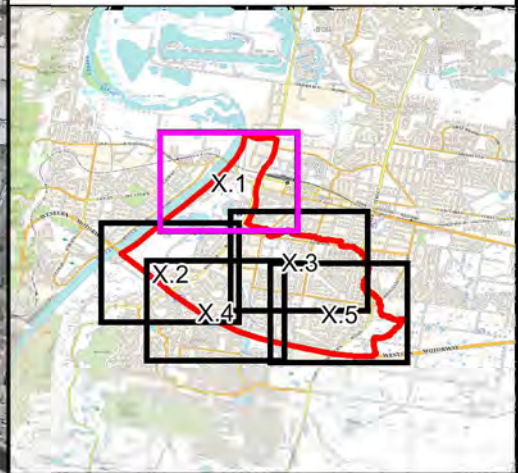
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig51.5 - ERC 0.5%AEP Flood.wor





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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

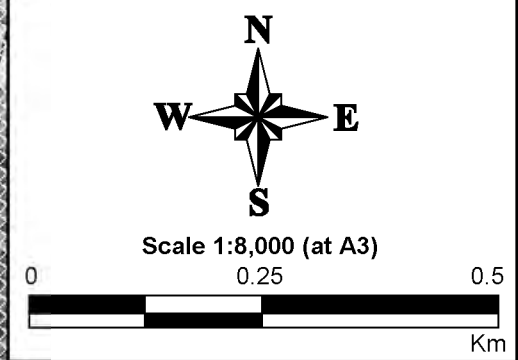


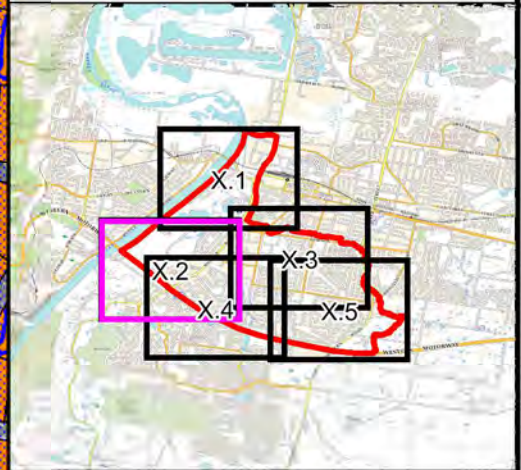
Figure 52.1:
Flood Emergency Response
Classifications for the
Local Catchment PMF

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig52.1 - ERC PMF Flood.wor

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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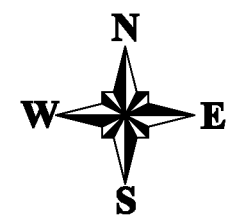


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

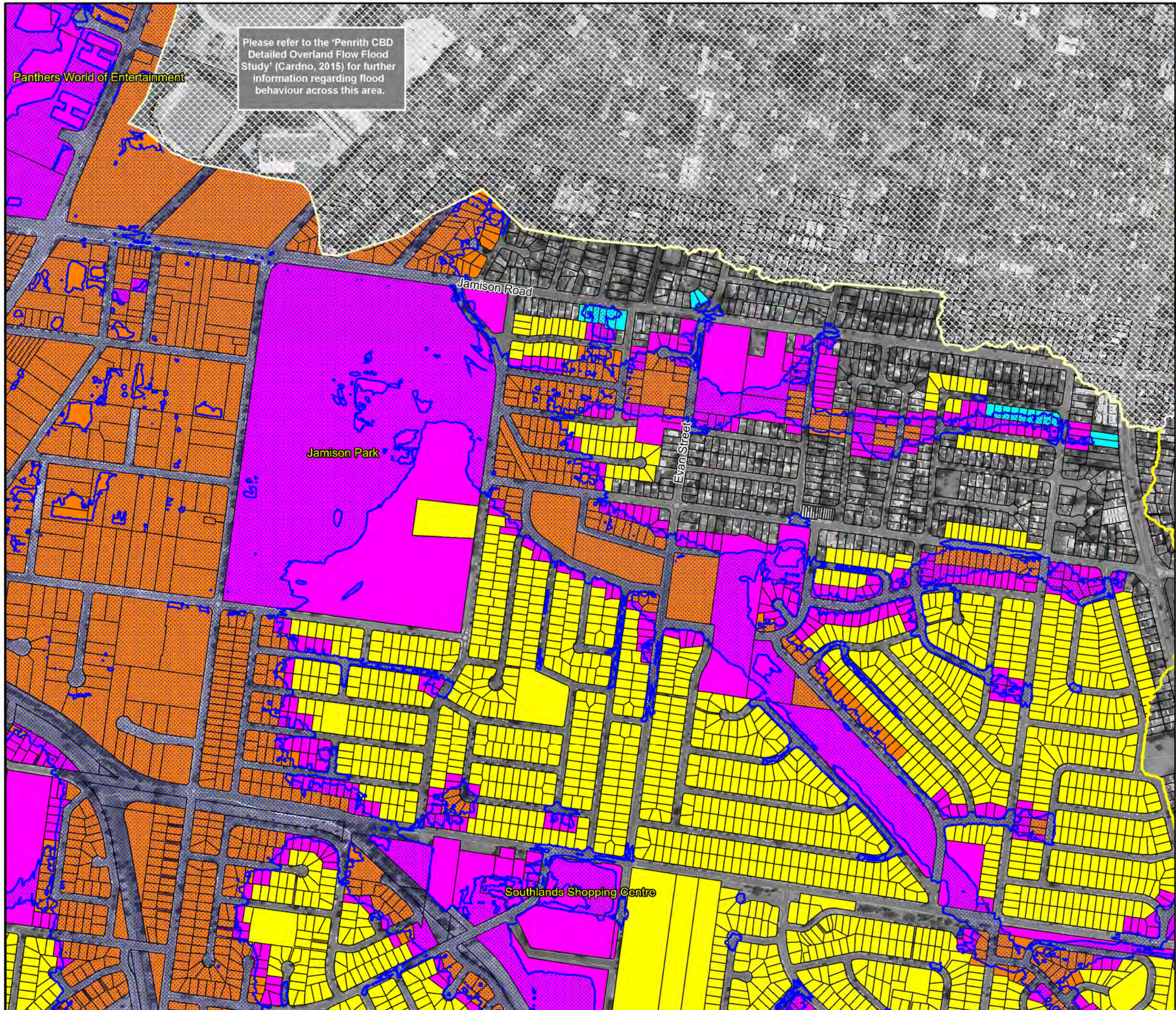


Figure 52.2:
Flood Emergency Response
Classifications for the
Local Catchment PMF

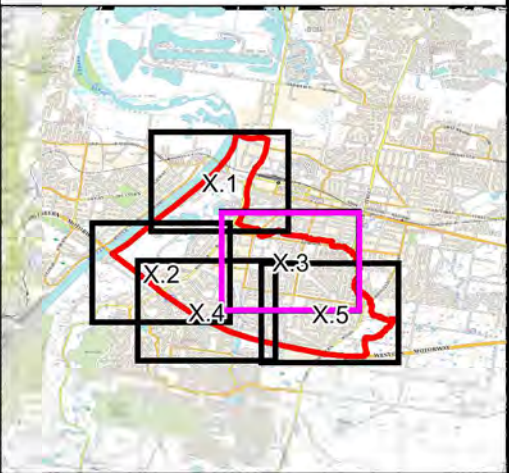
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig52.2 - ERC PMF Flood.wor



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LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

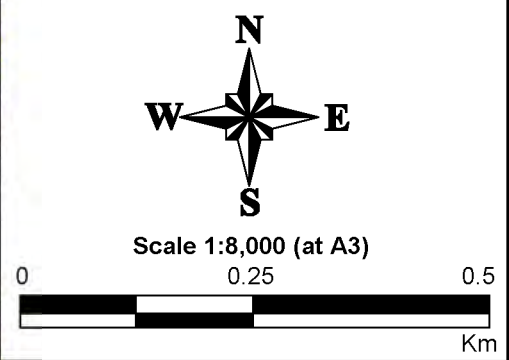
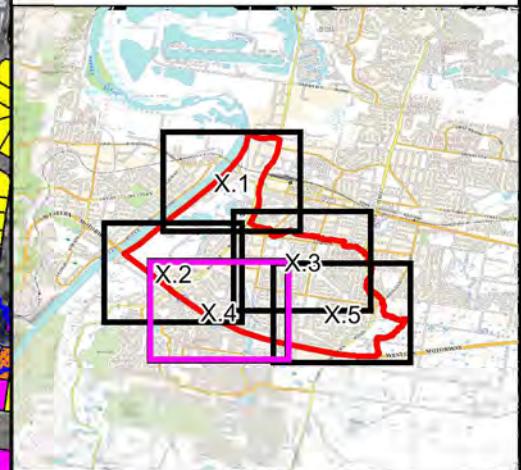


Figure 52.3:
Flood Emergency Response
Classifications for the
Local Catchment PMF

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig52.3 - ERC PMF Flood.wor

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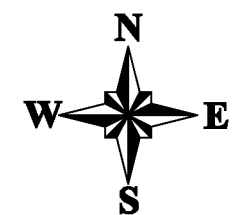


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)



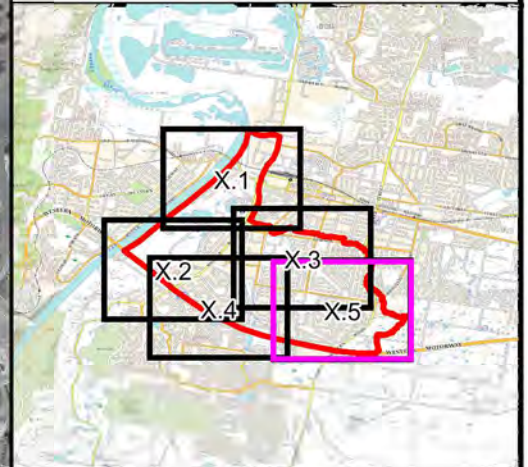
Figure 52.4:
Flood Emergency Response
Classifications for the
Local Catchment PMF

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig52.4 - ERC PMF Flood.wor

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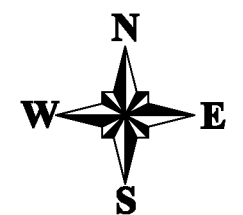


LEGEND

- Low Flood Island
- Low Trapped Perimeter Area
- High Trapped Perimeter Area
- Rising Road Access Area
- Indirectly Affected Area
- Not Flood Affected
- Inundation Extent

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

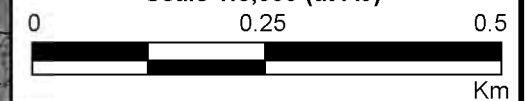
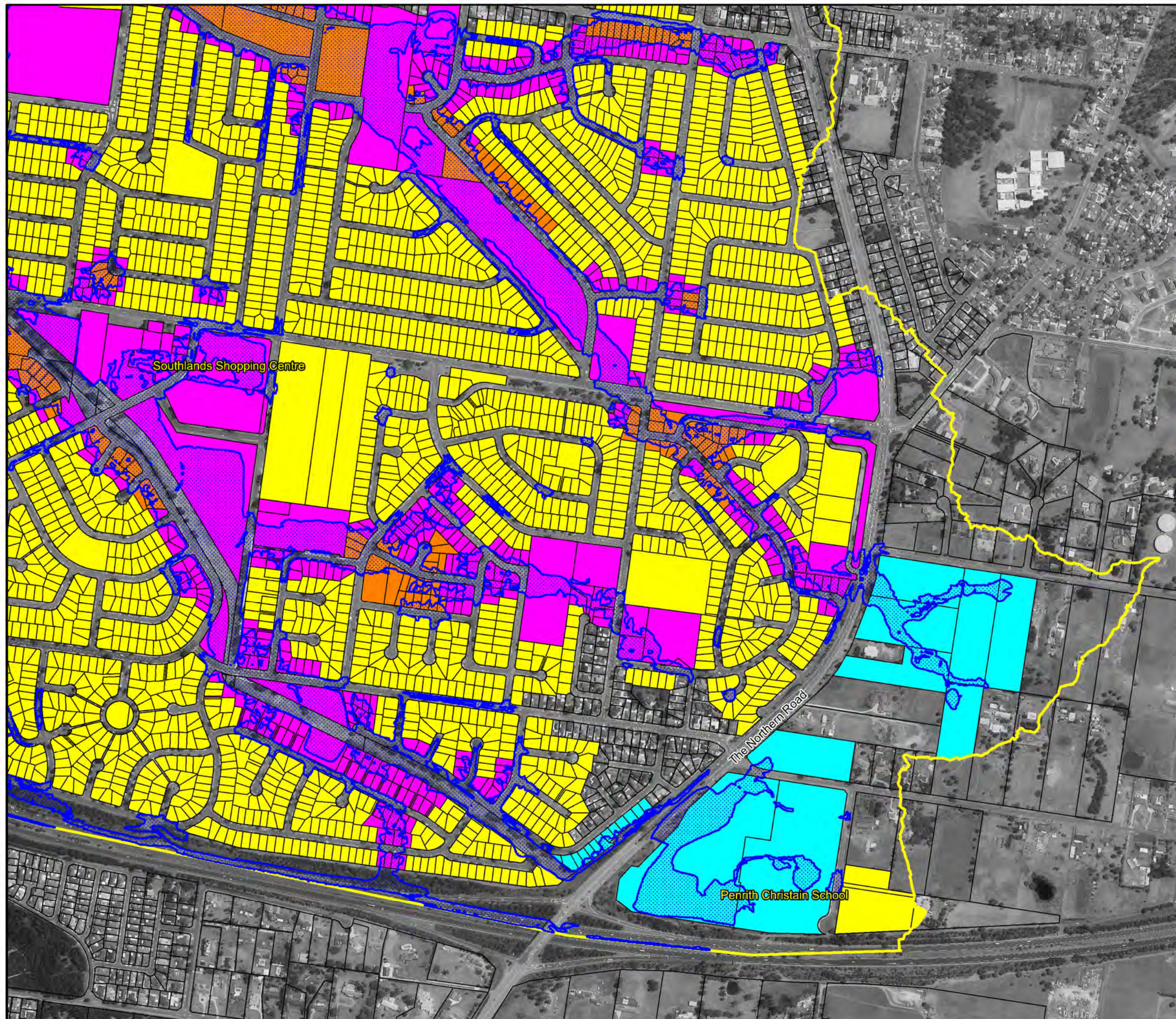


Figure 52.5:
Flood Emergency Response
Classifications for the
Local Catchment PMF

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

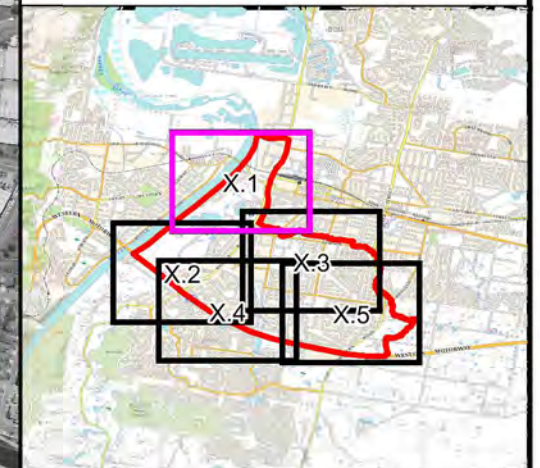
File Name: Fig52.5 - ERC PMF Flood.wor





HYDRAULIC CATEGORY MAPS





LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 53.1:
Hydraulic Categories
for the 5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig53.1 - HydCat for 5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

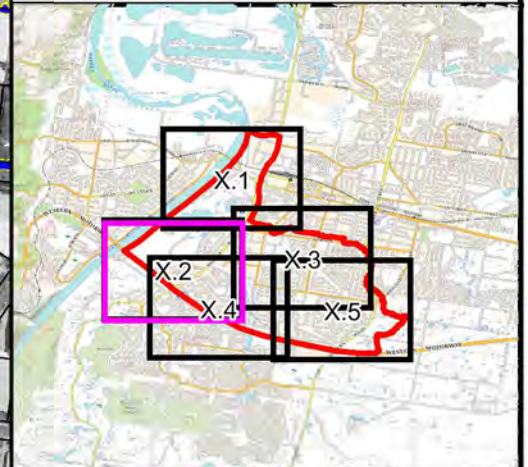
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



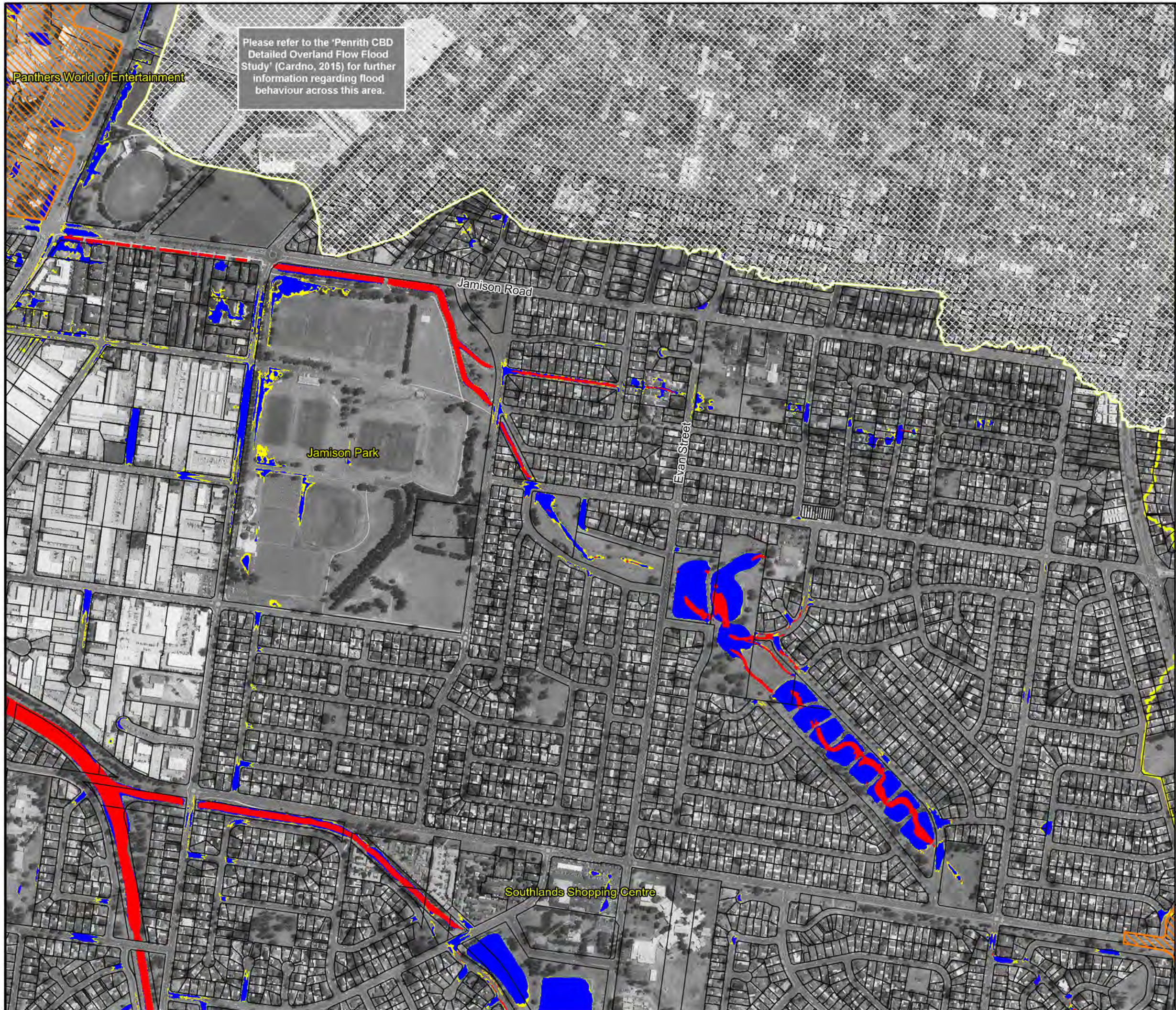
Scale 1:8,000 (at A3)



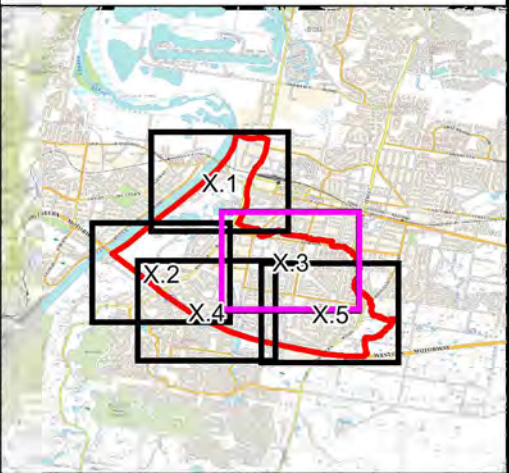
Figure 53.2:
Hydraulic Categories
for the 5% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig53.2 - HydCat for 5% AEP
Flood.wor



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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

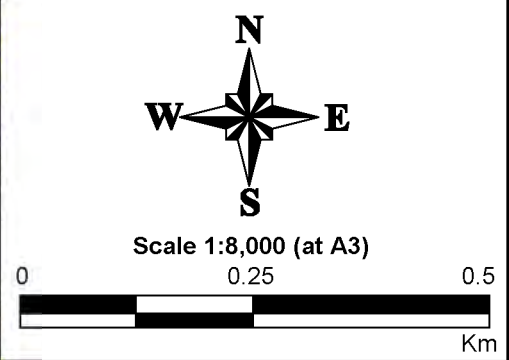
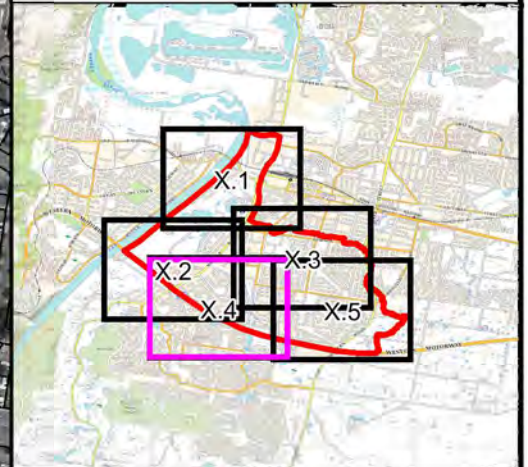


Figure 53.3:
Hydraulic Categories
for the 5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig53.3 - HydCat for 5% AEP
Flood.wor

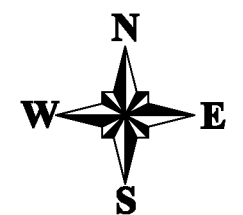


LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

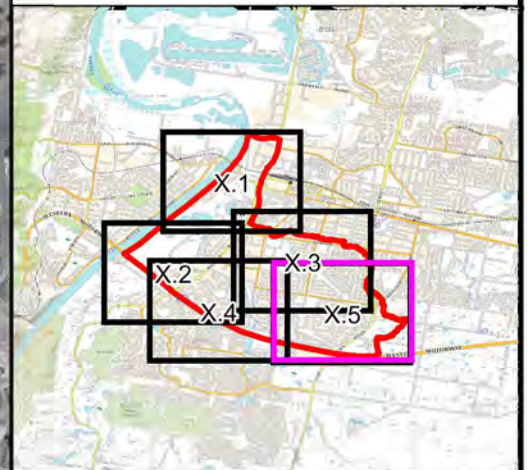


Figure 53.4:
Hydraulic Categories
for the 5% AEP Local
Catchment Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig53.4 - HydCat for 5% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

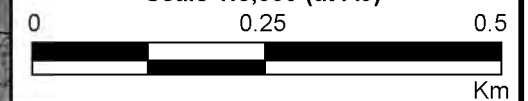

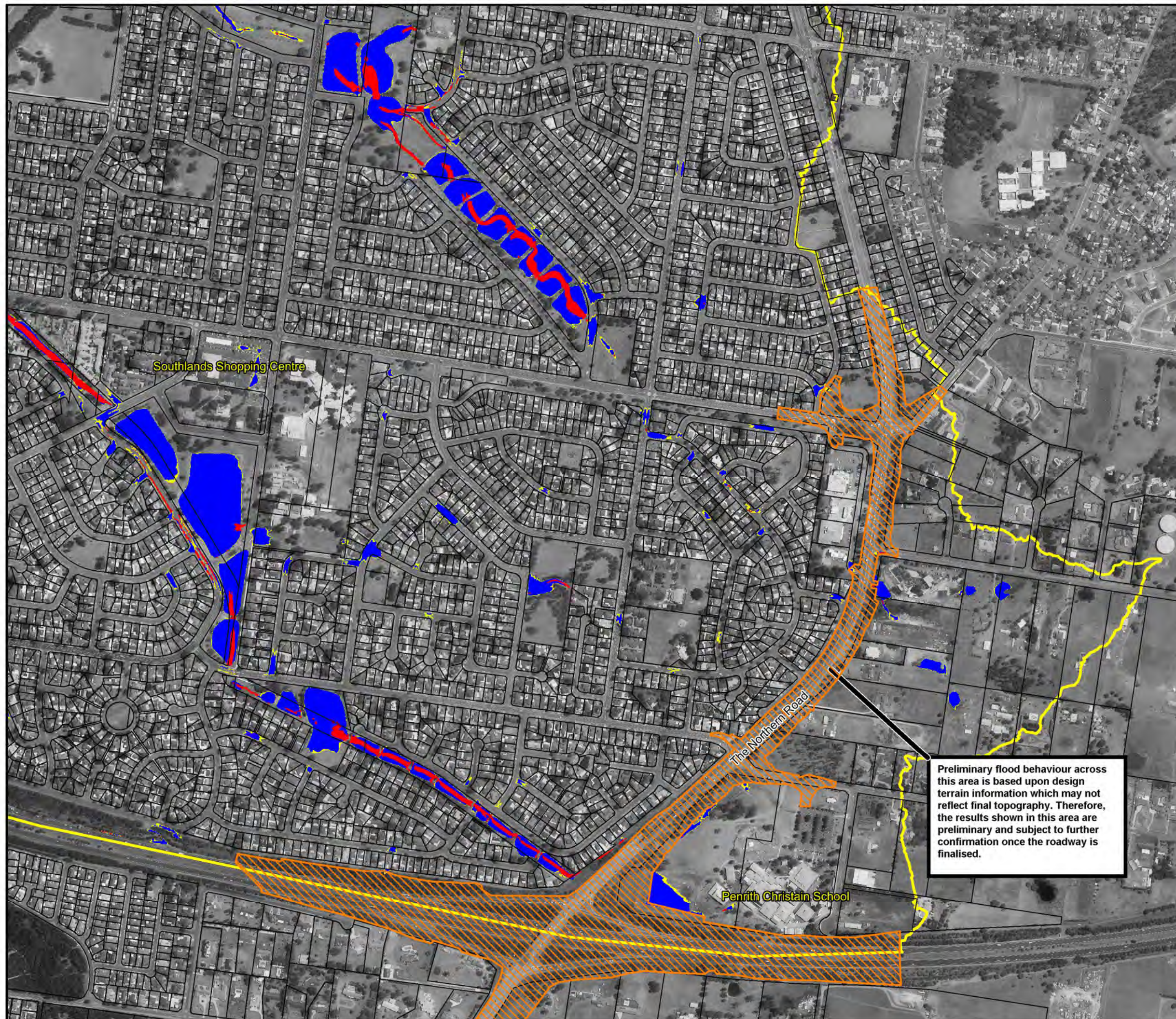
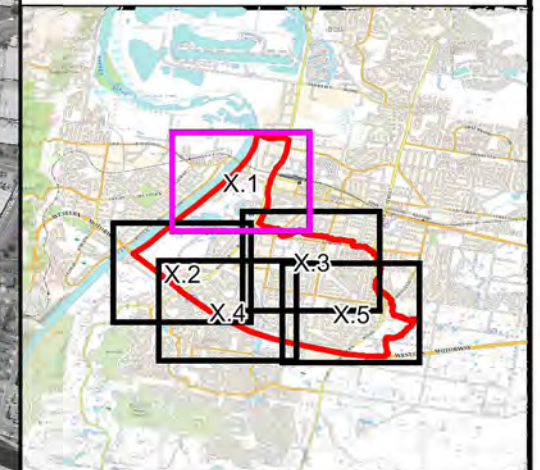


Figure 53.5:
Hydraulic Categories
for the 5% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig53.5 - HydCat for 5% AEP
Flood.wor

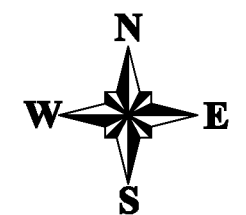




LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



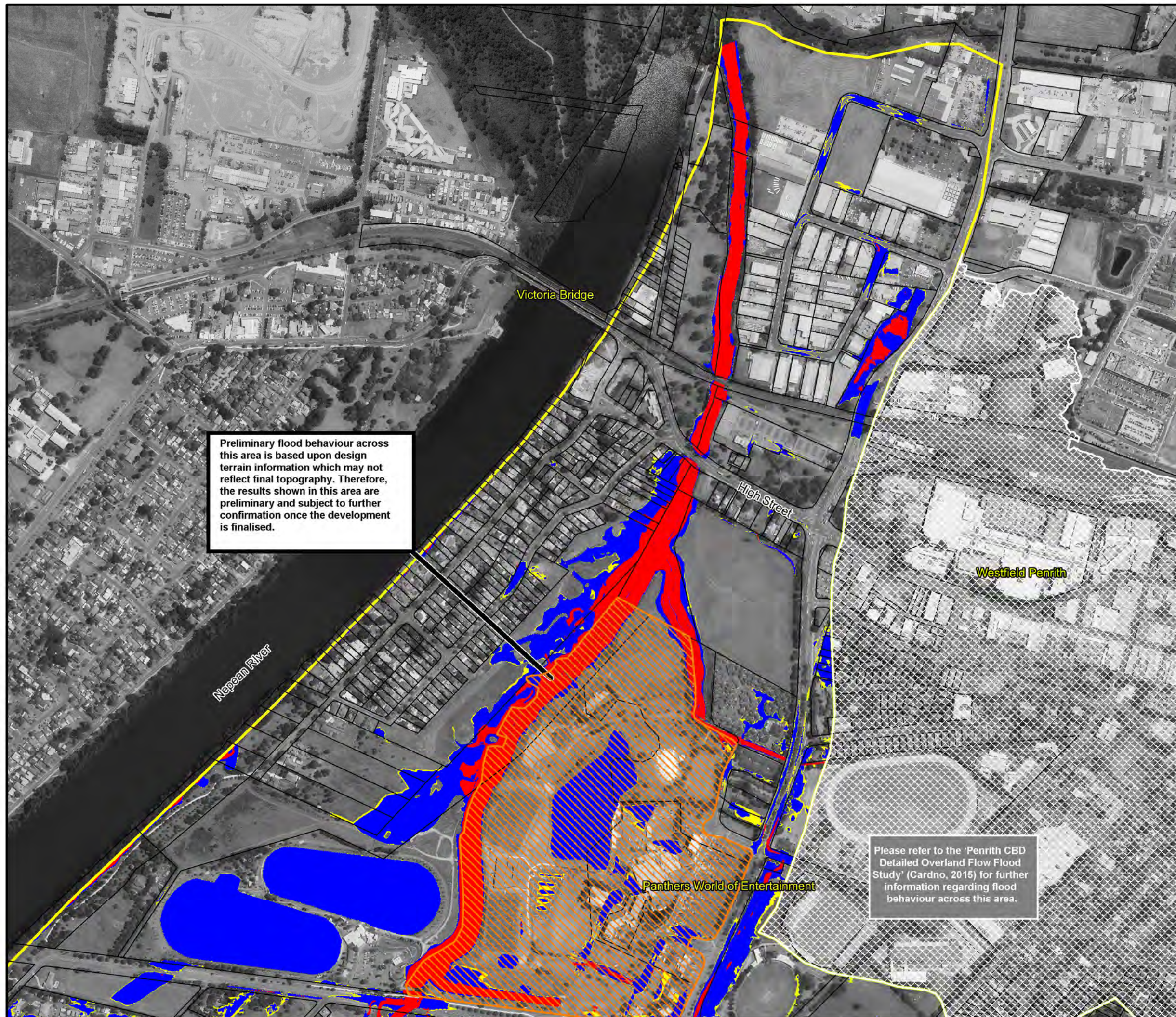
Figure 54.1:
Hydraulic Categories
for the 1% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

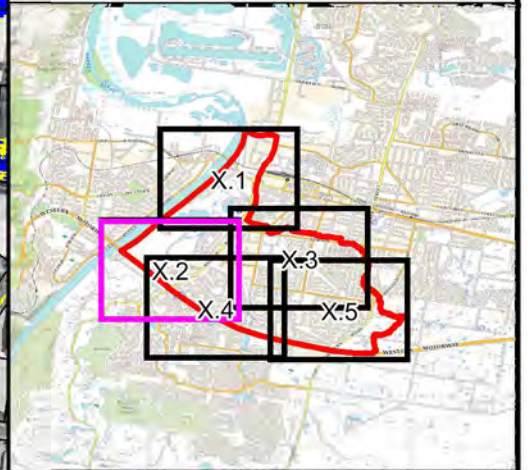
File Name: Fig54.1 - HydCat for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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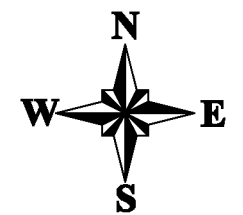


LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

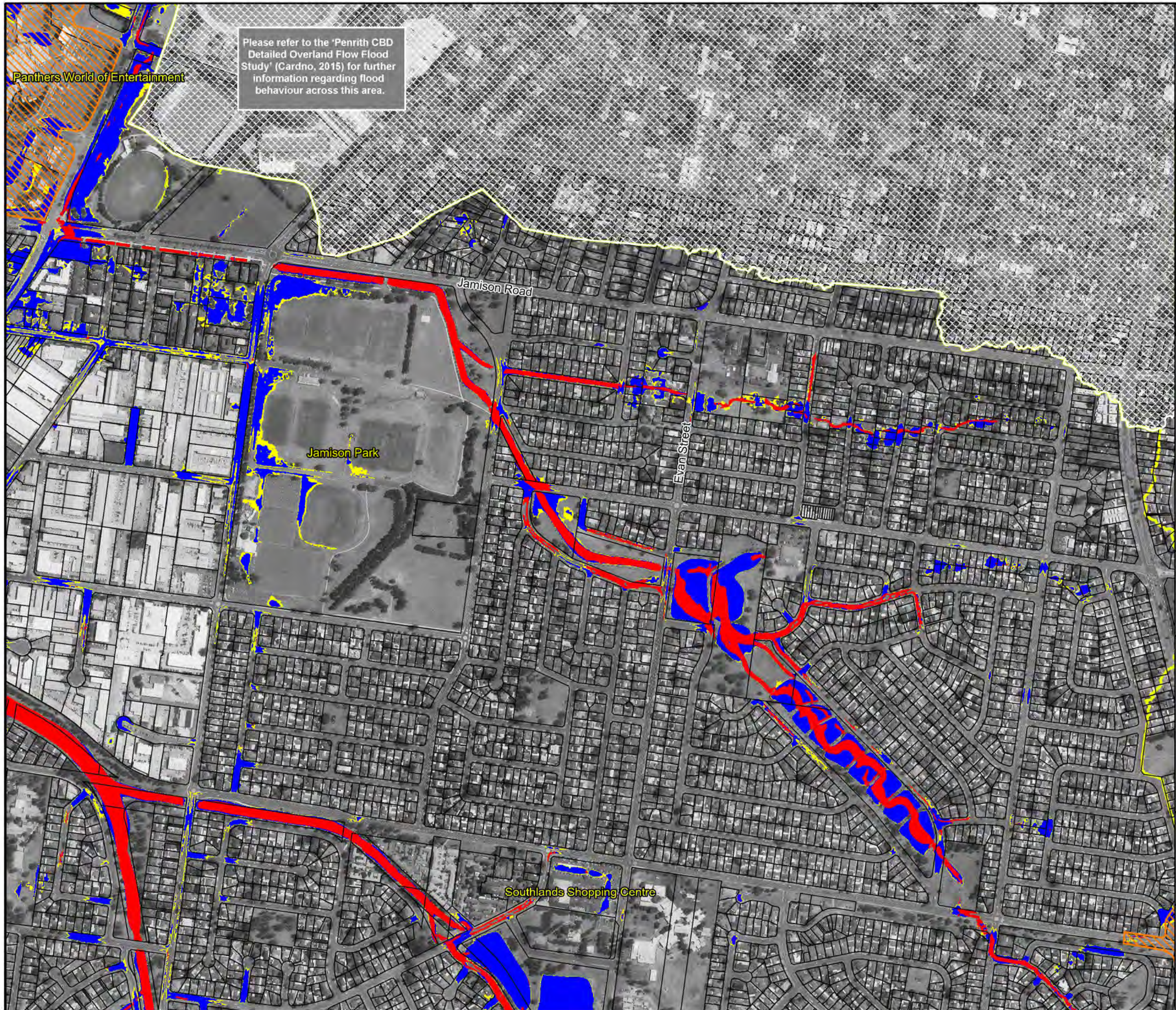


Figure 54.2:
Hydraulic Categories
for the 1% AEP Local
Catchment Flood

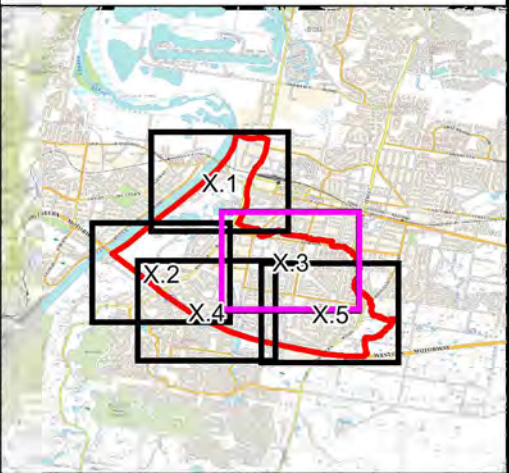
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig54.2 - HydCat for 1% AEP
Flood.wor



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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

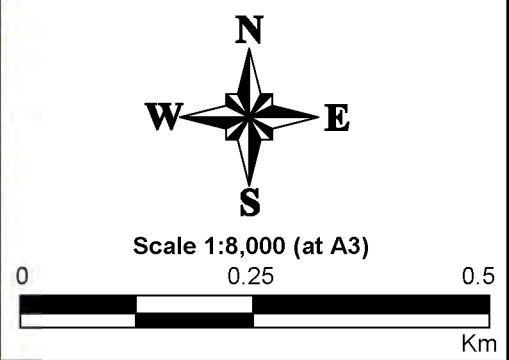
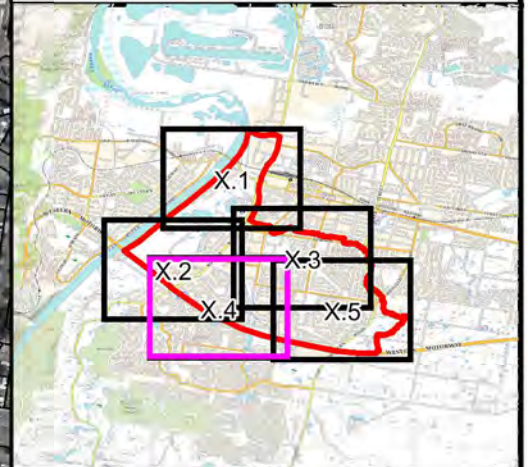


Figure 54.3:
Hydraulic Categories
for the 1% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig54.3 - HydCat for 1% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

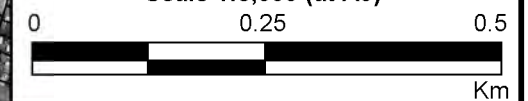

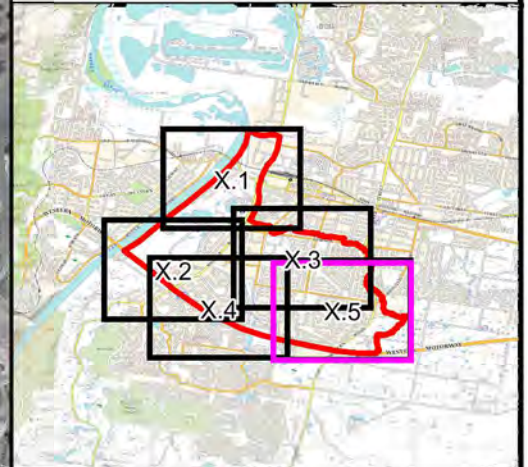


Figure 54.4:
Hydraulic Categories
for the 1% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig54.4 - HydCat for 1% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



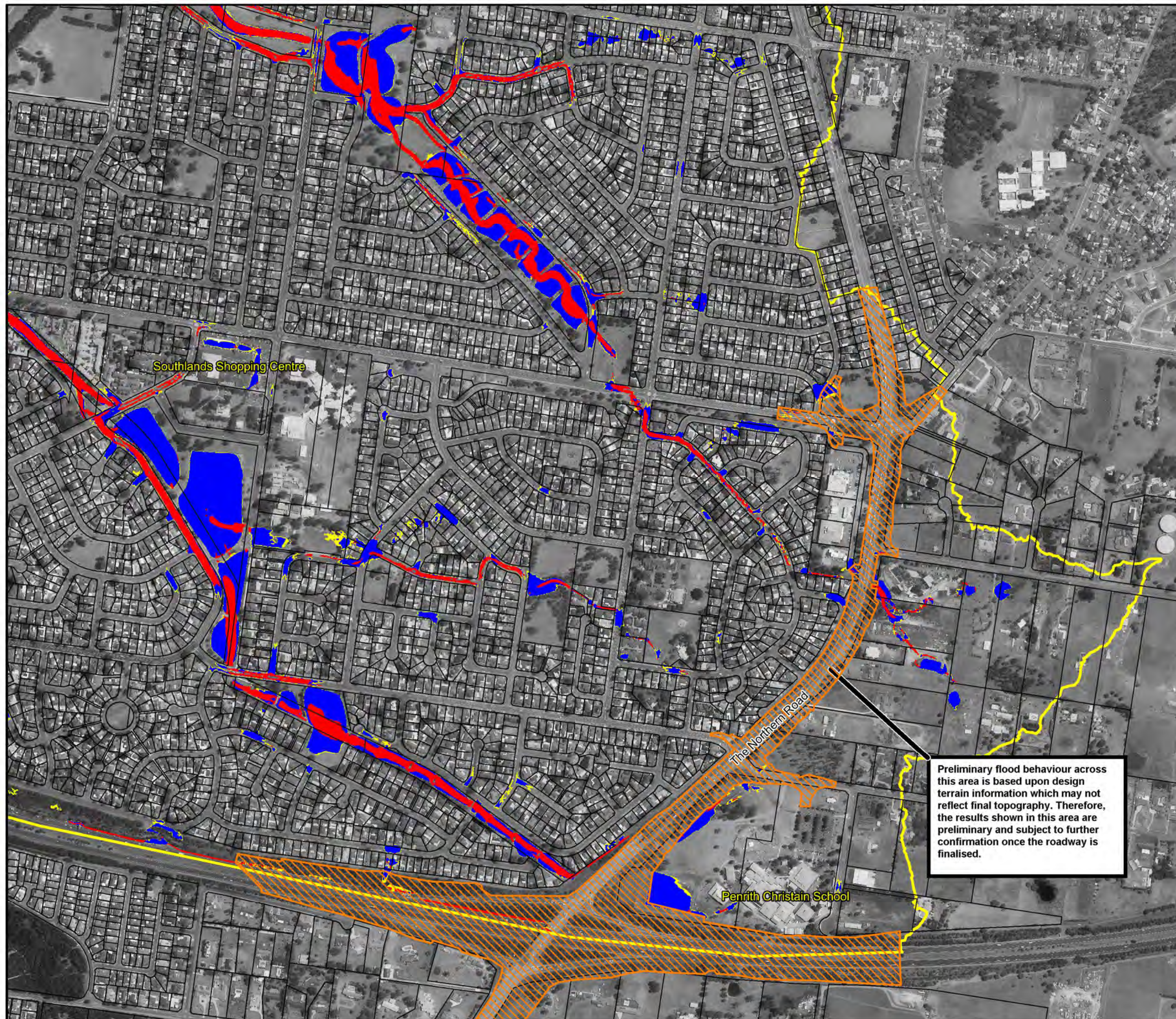
Scale 1:8,000 (at A3)

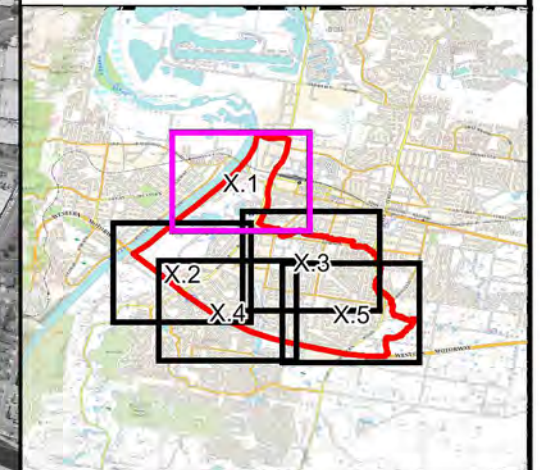


Figure 54.5:
Hydraulic Categories
for the 1% AEP Local
Catchment Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig54.5 - HydCat for 1% AEP
Flood.wor

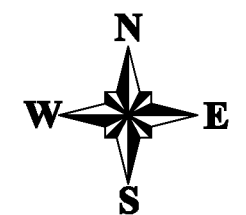




LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 55.1:
Hydraulic Categories
for the 0.5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig55.1 - HydCat for 0.5% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

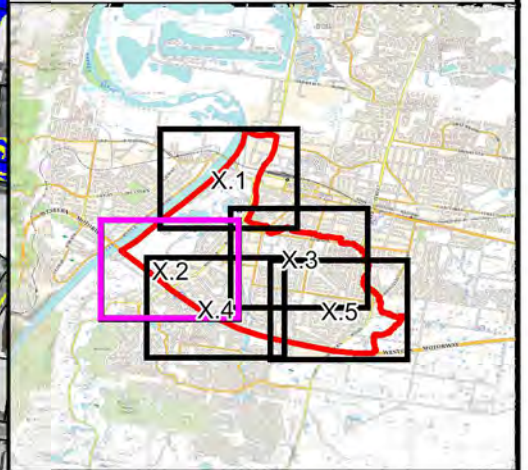
High Street

Westfield Penrith

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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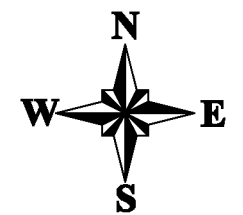


LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

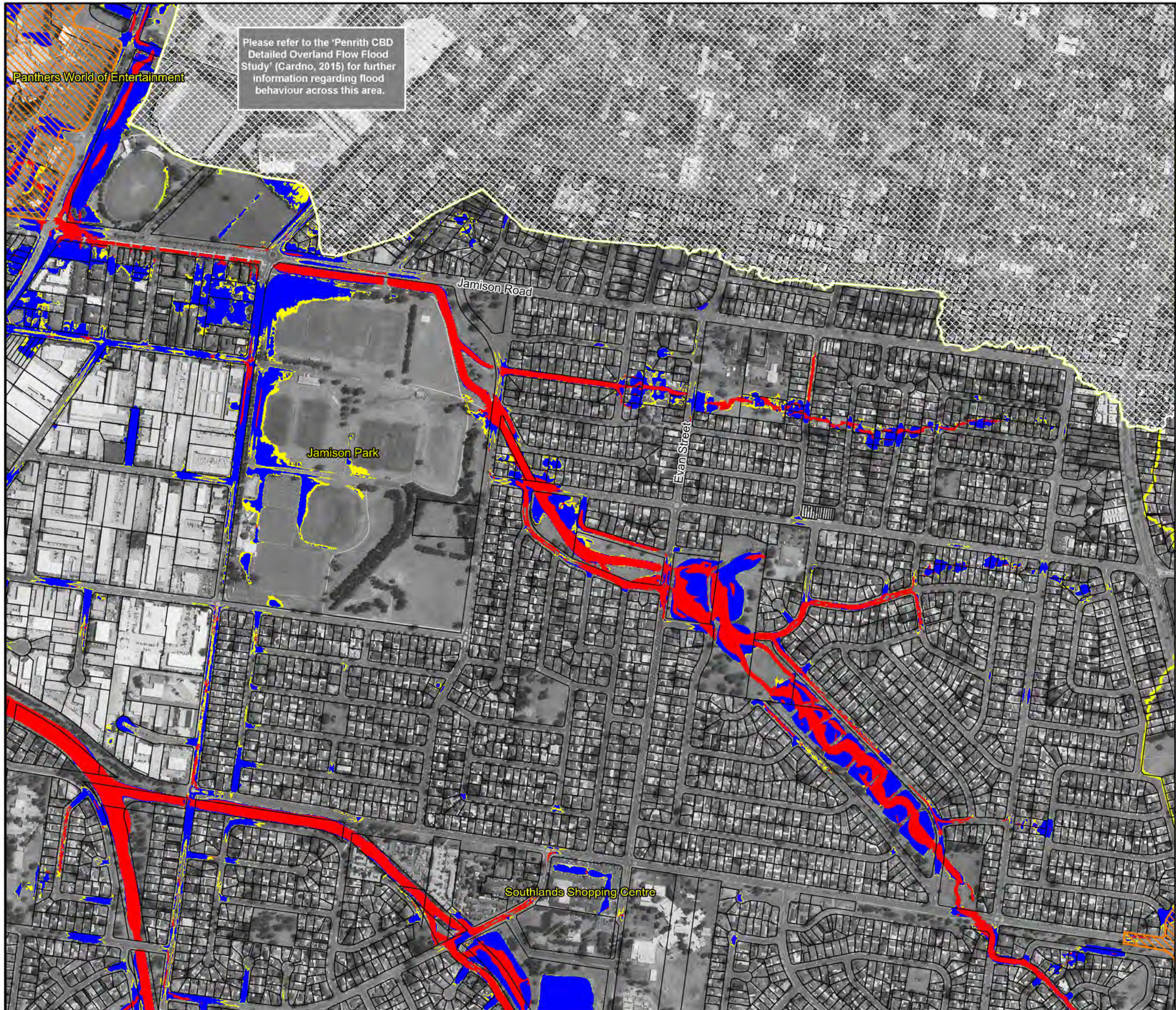


Figure 55.2:
Hydraulic Categories
for the 0.5% AEP Local
Catchment Flood

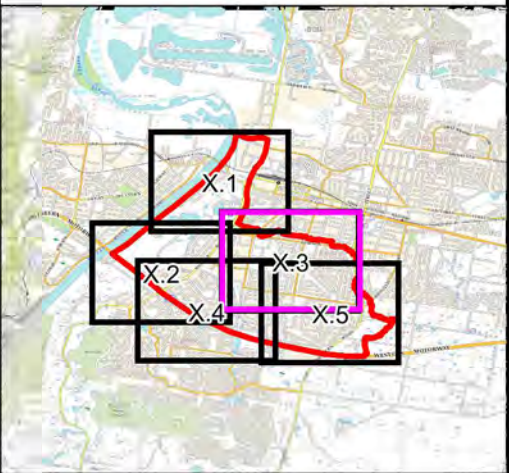
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig55.2 - HydCat for 0.5% AEP
Flood.wor



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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

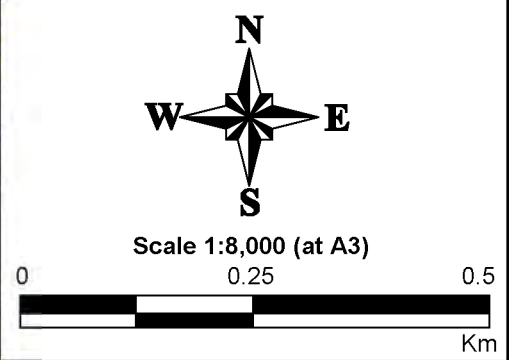
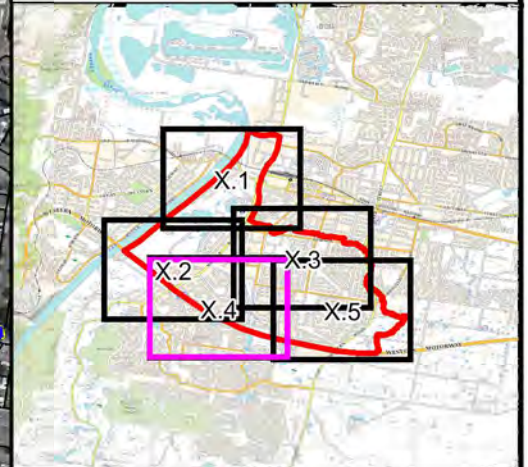


Figure 55.3:
Hydraulic Categories
for the 0.5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig55.3 - HydCat for 0.5% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

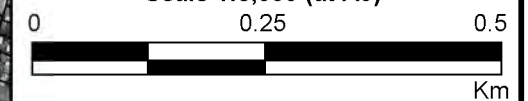

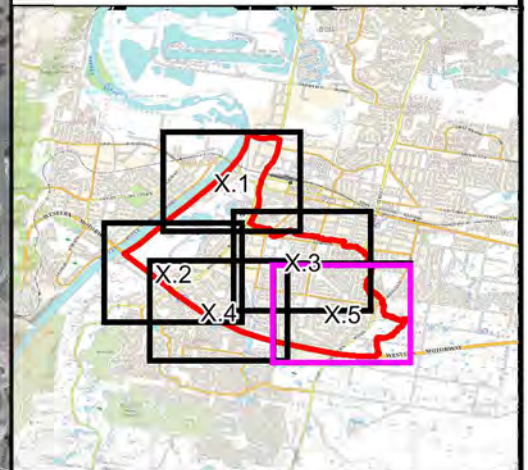


Figure 55.4:
Hydraulic Categories
for the 0.5% AEP Local
Catchment Flood

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig55.4 - HydCat for 0.5% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



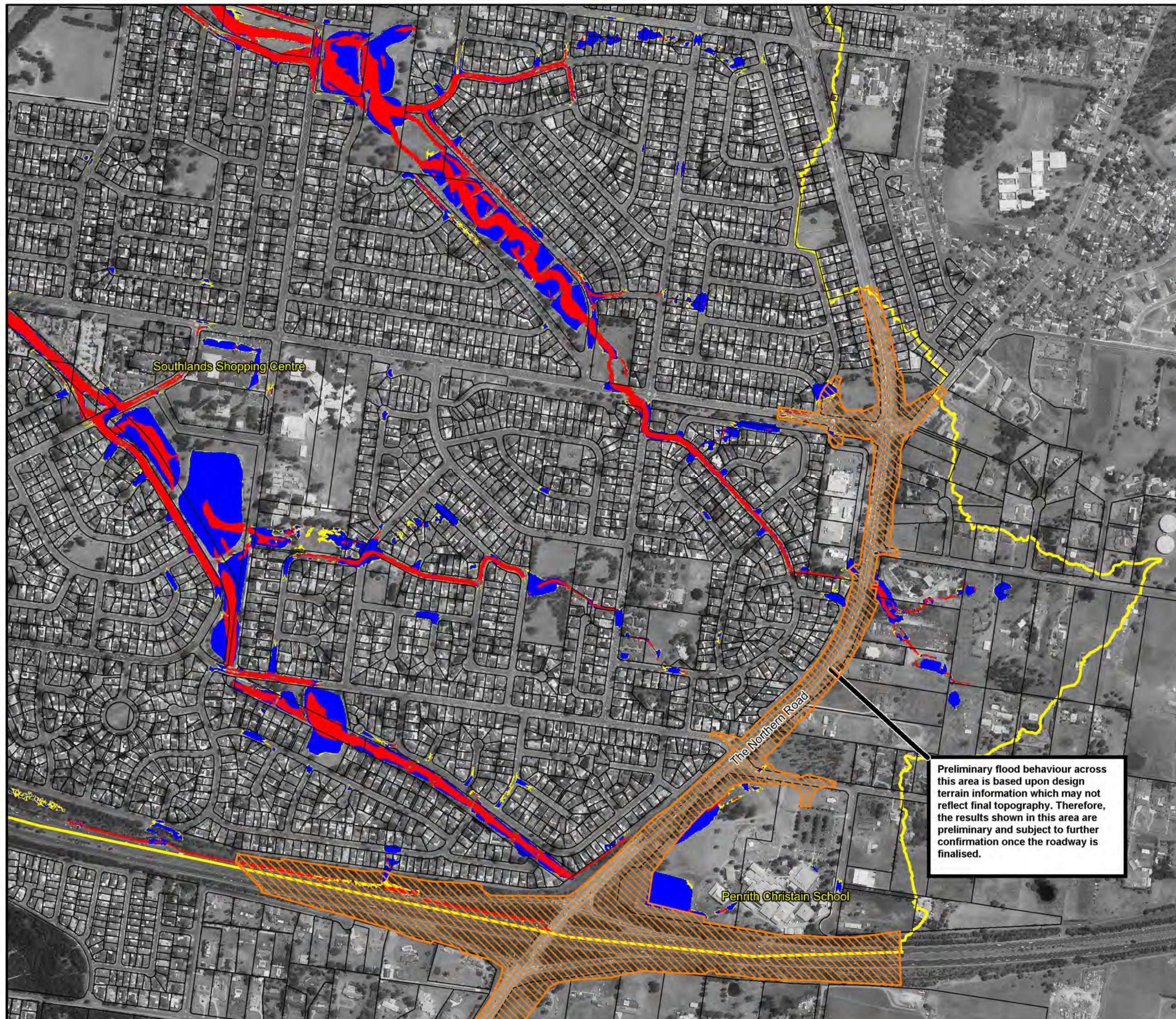
Scale 1:8,000 (at A3)



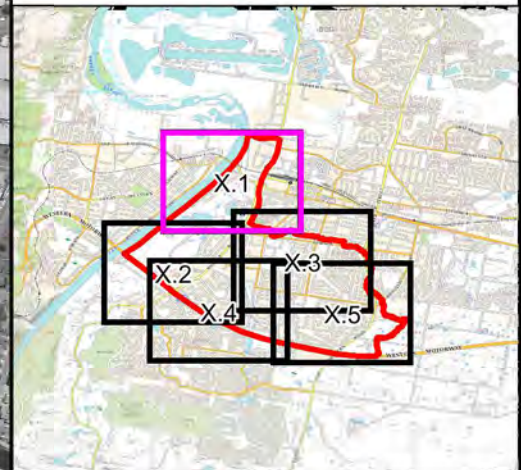
Figure 55.5:
Hydraulic Categories
for the 0.5% AEP Local
Catchment Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig55.5 - HydCat for 0.5% AEP
Flood.wor



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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

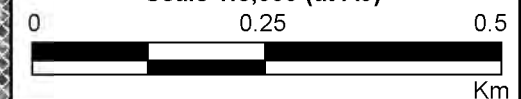
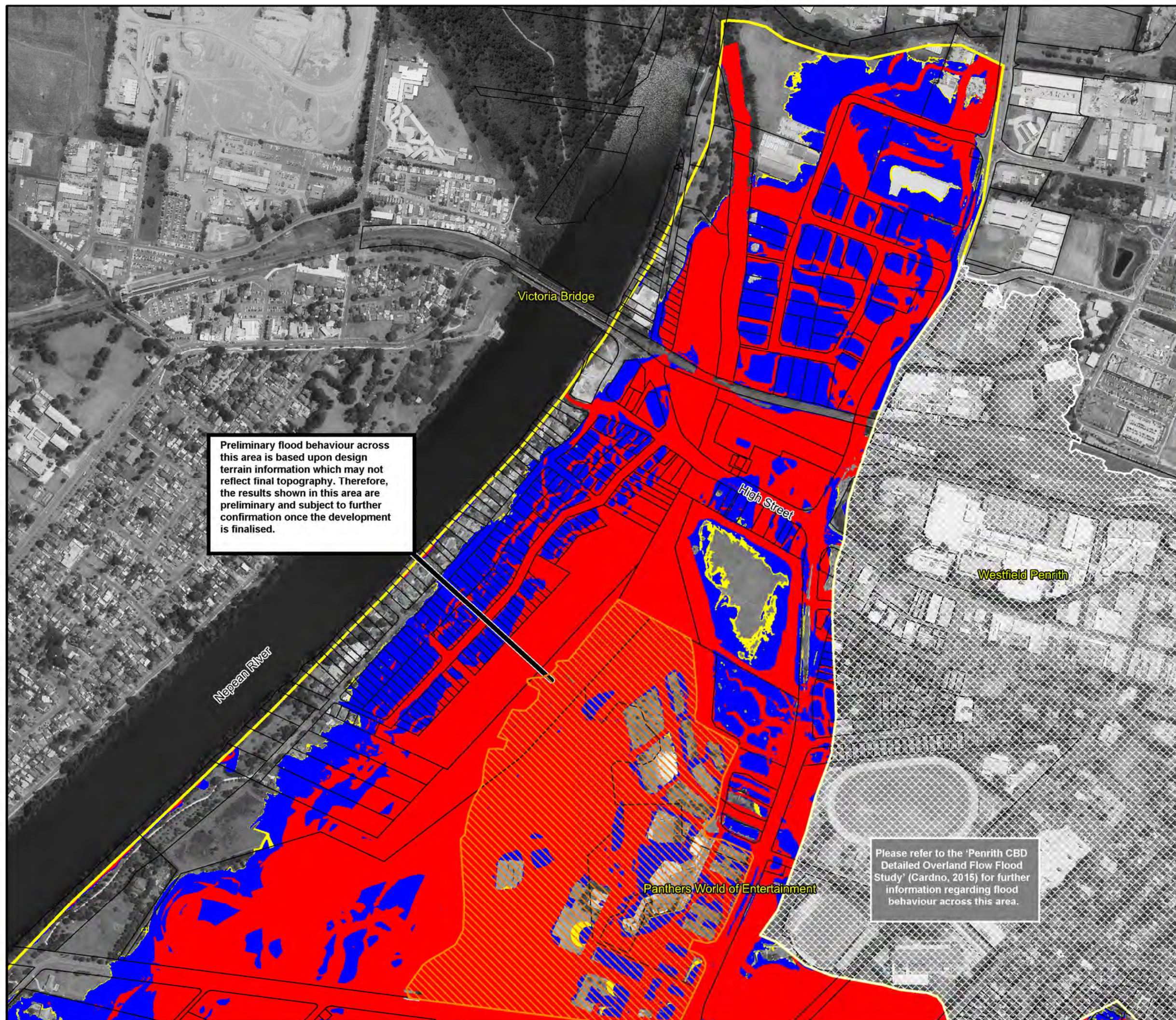


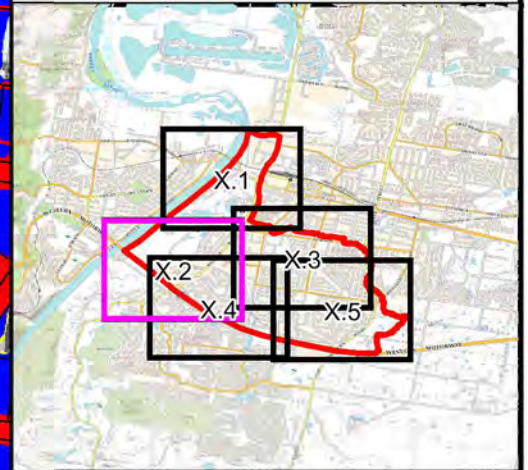
Figure 56.1:
Hydraulic Categories
for the Local
Catchment PMF

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig56.1 - HydCat for 0.5% AEP
Flood.wor



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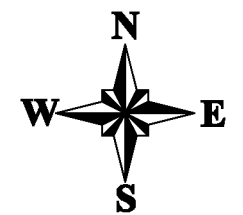


LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

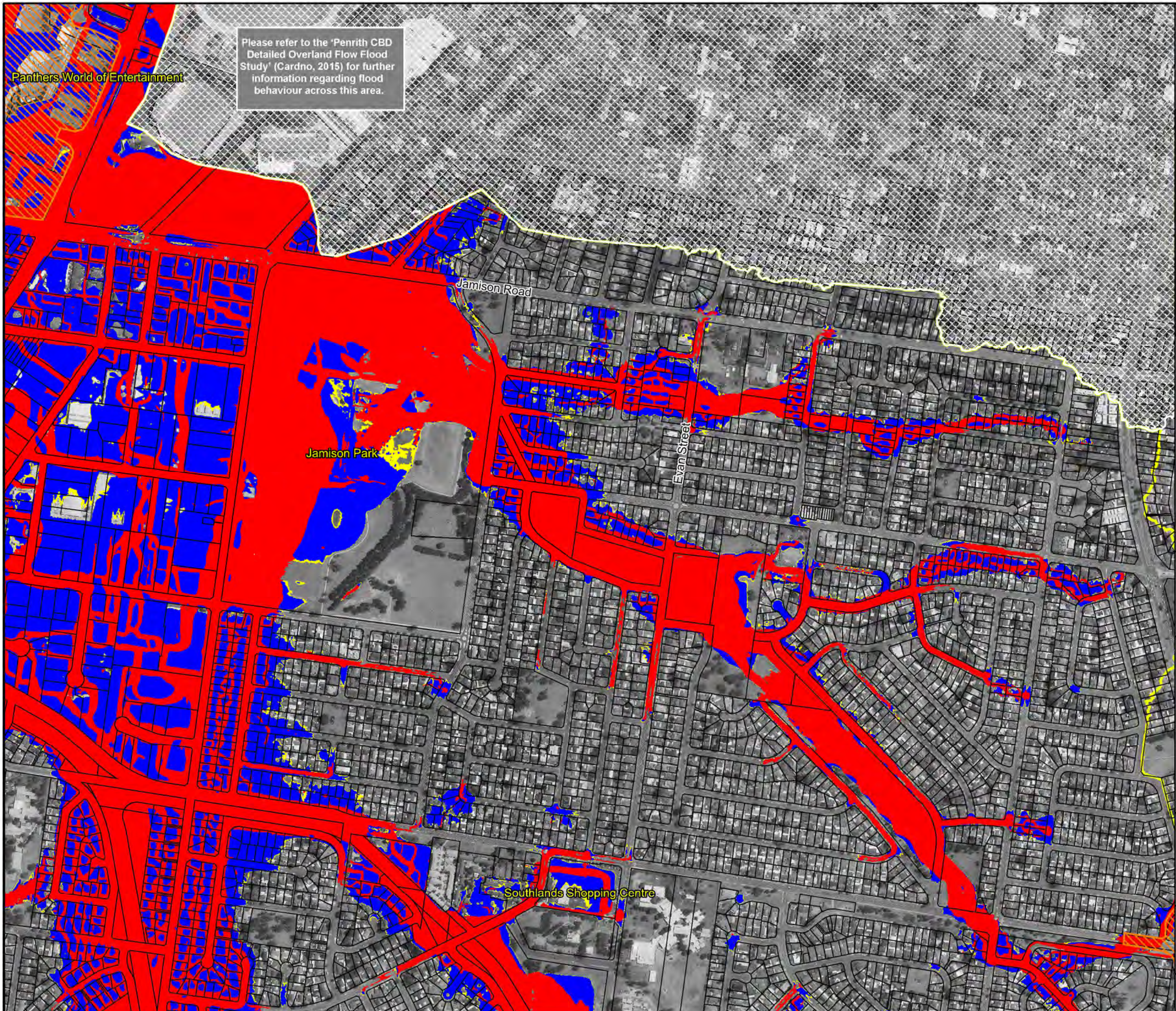


Figure 56.2:
Hydraulic Categories
for the Local
Catchment PMF

Prepared By:

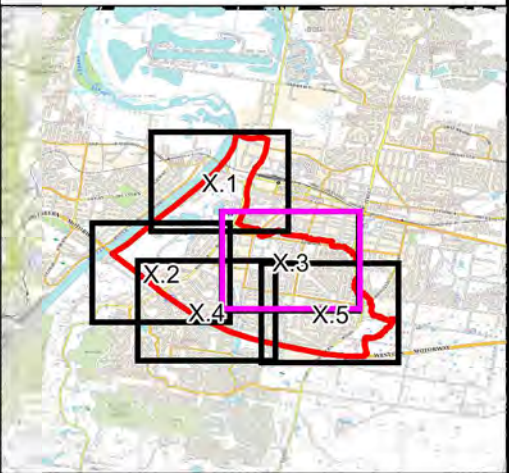
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig56.2 - HydCat for 0.5% AEP
Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

Hydraulic Categories

- Flood Fringe
- Flood Storage
- Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

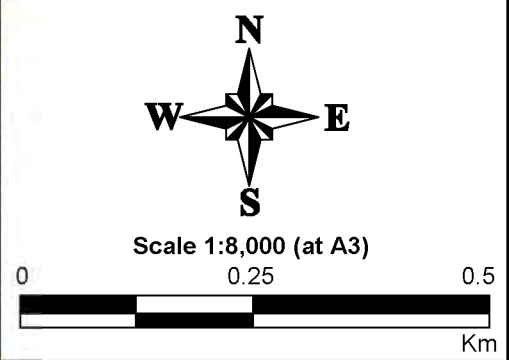
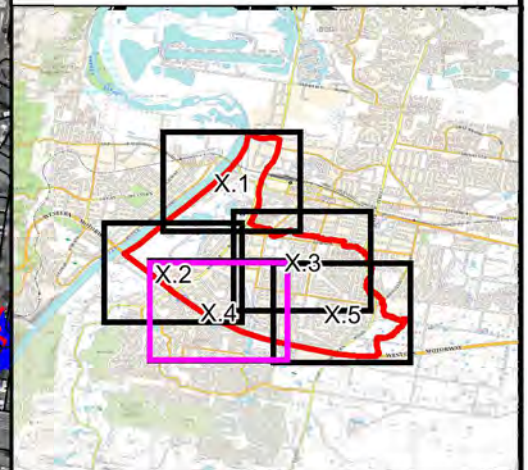


Figure 56.3:
Hydraulic Categories
for the Local
Catchment PMF

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig56.3 - HydCat for 0.5% AEP Flood.wor

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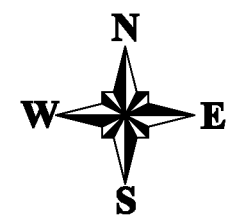


LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood




Scale 1:8,000 (at A3)

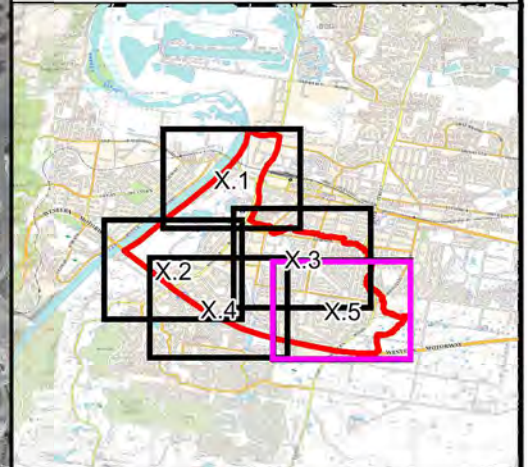


Figure 56.4:
Hydraulic Categories
for the Local
Catchment PMF

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig56.4 - HydCat for 0.5% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



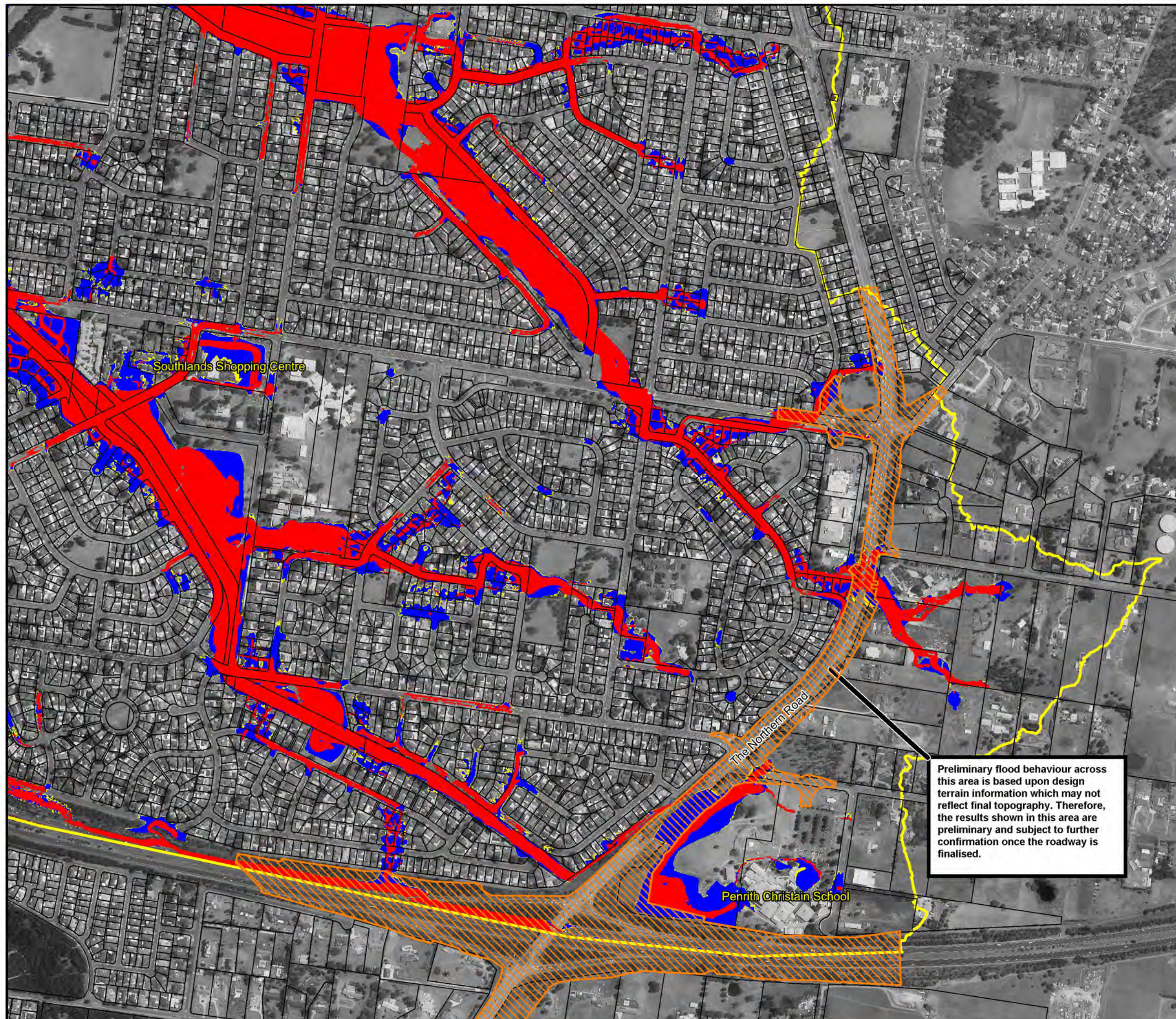
Scale 1:8,000 (at A3)



Figure 56.5:
Hydraulic Categories
for the Local
Catchment PMF

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

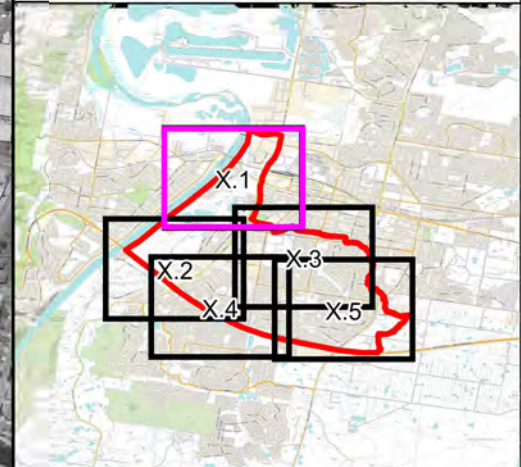
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Flood.wor



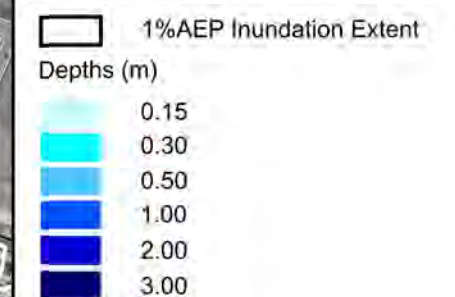


NEPEAN RIVER SENSITIVITY SIMULATION MAPS





LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

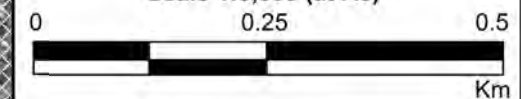


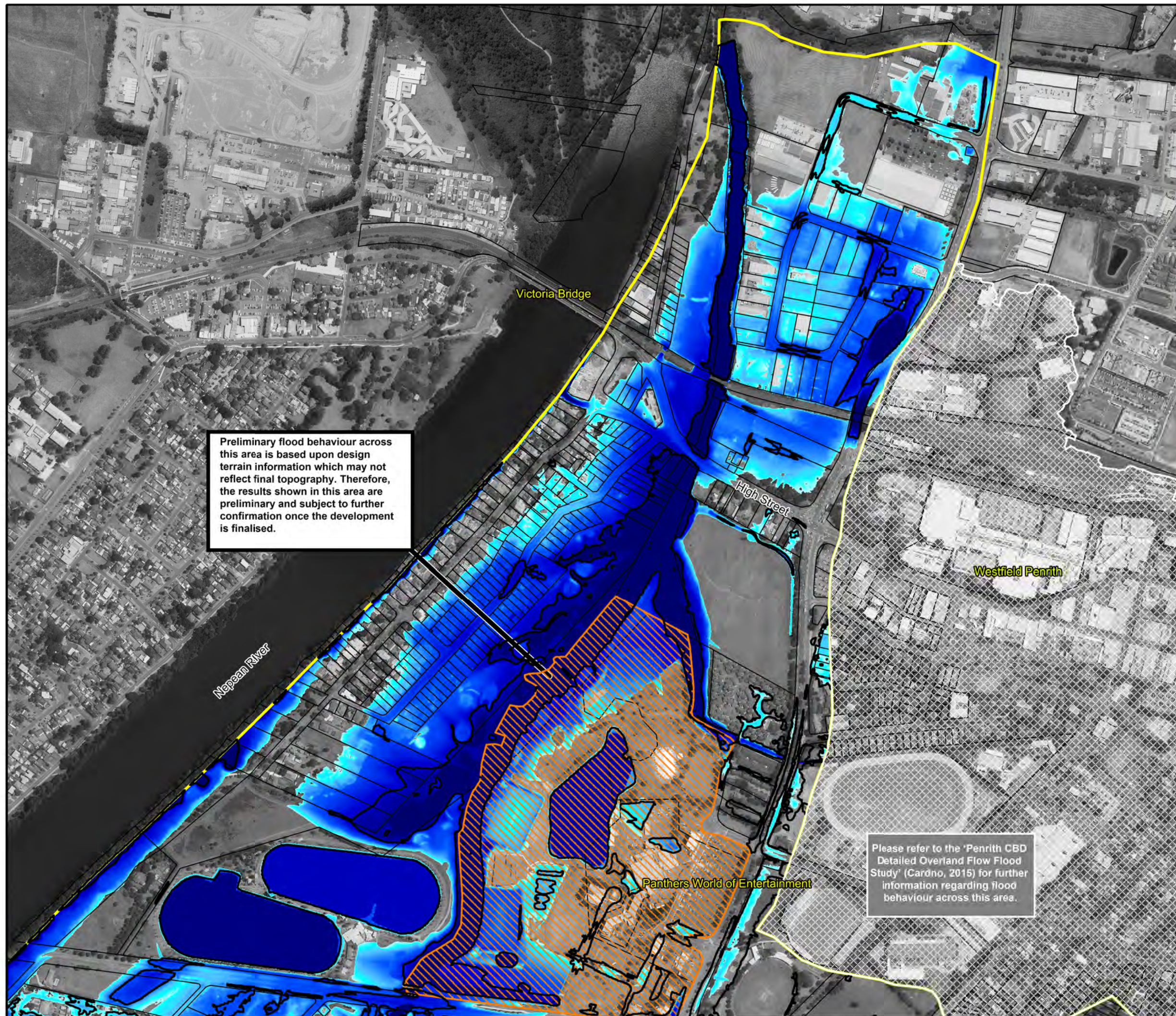
Figure 57.1:
Peak Water Depths for 5% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

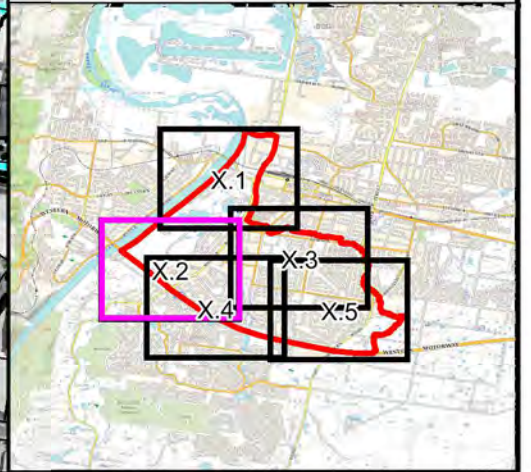
Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig57.1 - Depths for 5%AEP w
1%AEP Nepean Flood.wor

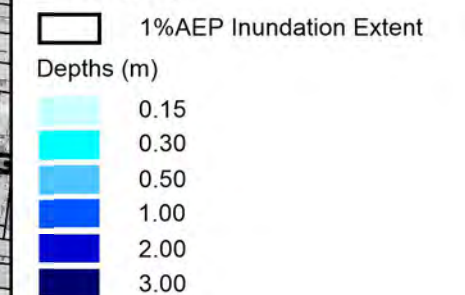
Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.





LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

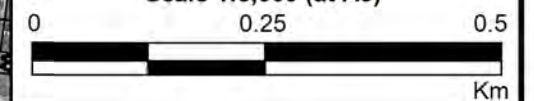



Figure 57.2:
Peak Water Depths for 5% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

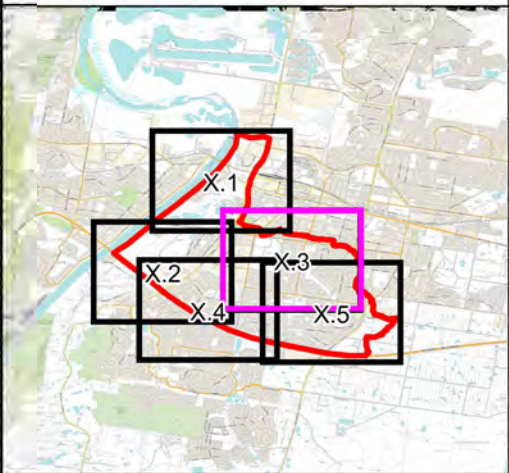
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig57.2 - Depths for 5%AEP w
1%AEP Nepean Flood.wor



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LEGEND

- 1% AEP Inundation Extent
- Depths (m)
 - 0.15
 - 0.30
 - 0.50
 - 1.00
 - 2.00
 - 3.00

Notes:
Aerial photograph date: 2016

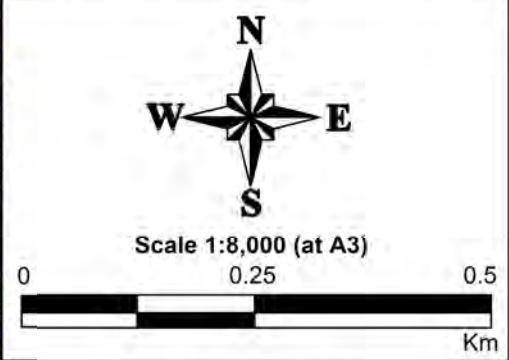
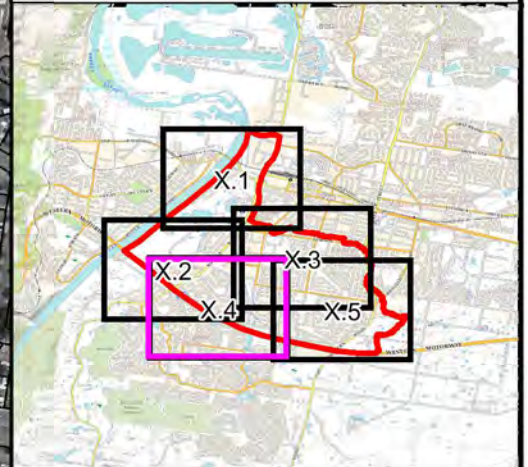


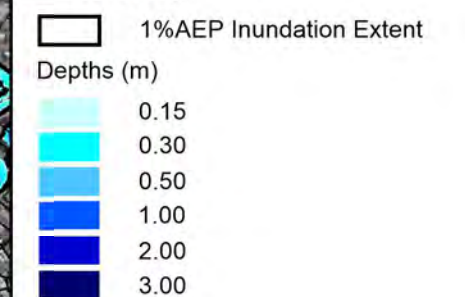
Figure 57.3:
Peak Water Depths for 5% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig57.3 - Depths for 5%AEP w
1%AEP Nepean Flood.wor



LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

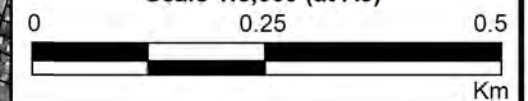
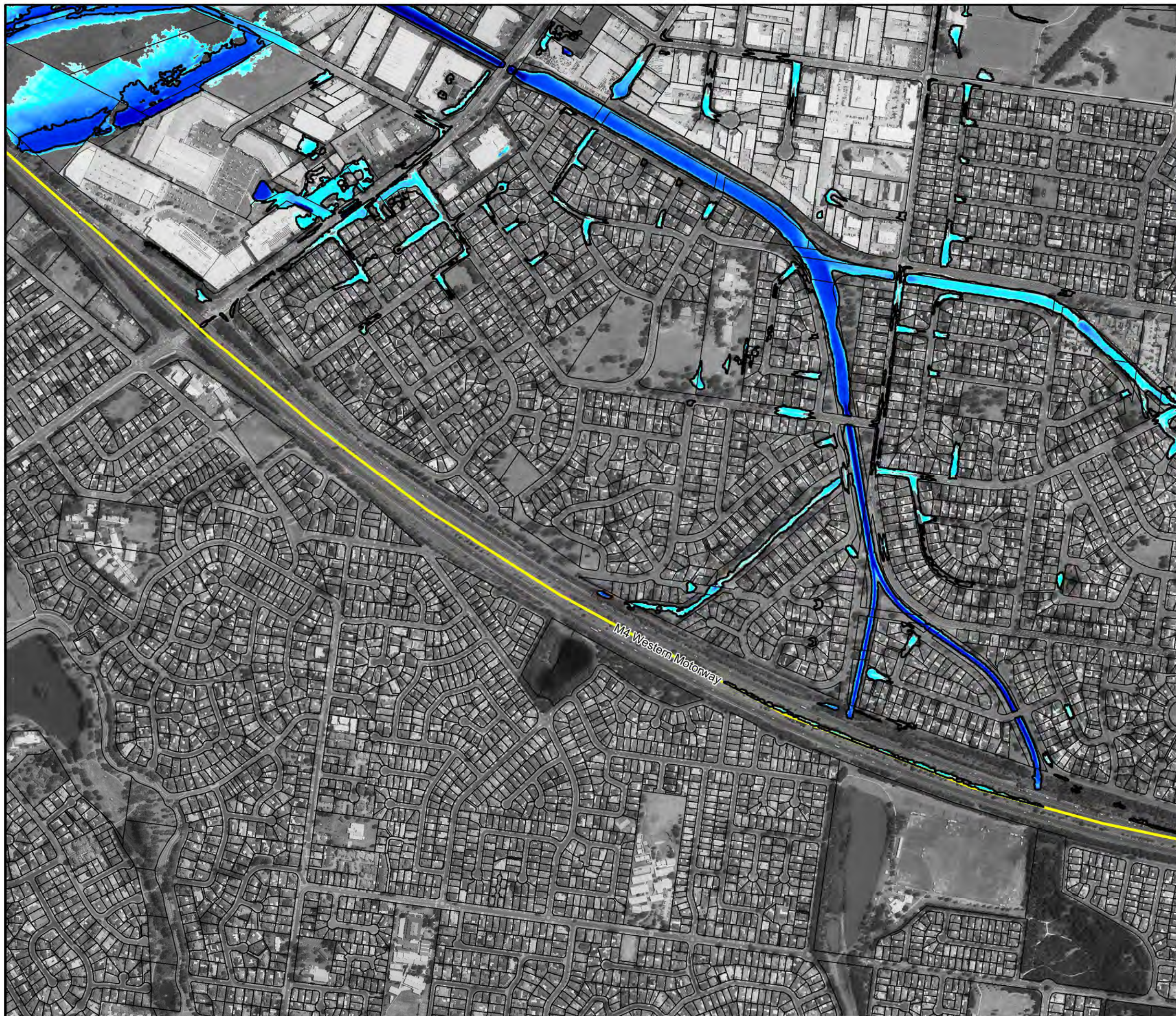


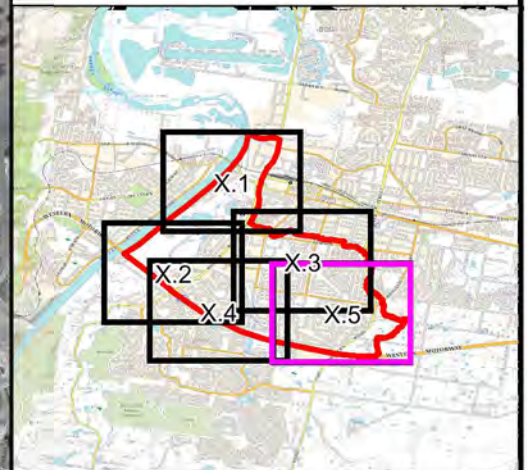
Figure 57.4:
Peak Water Depths for 5% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:

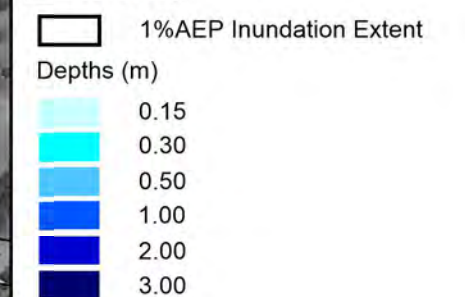
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig57.4 - Depths for 5%AEP w
1%AEP Nepean Flood.wor





LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

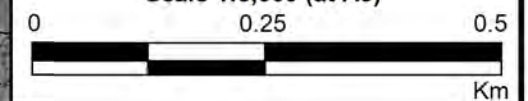
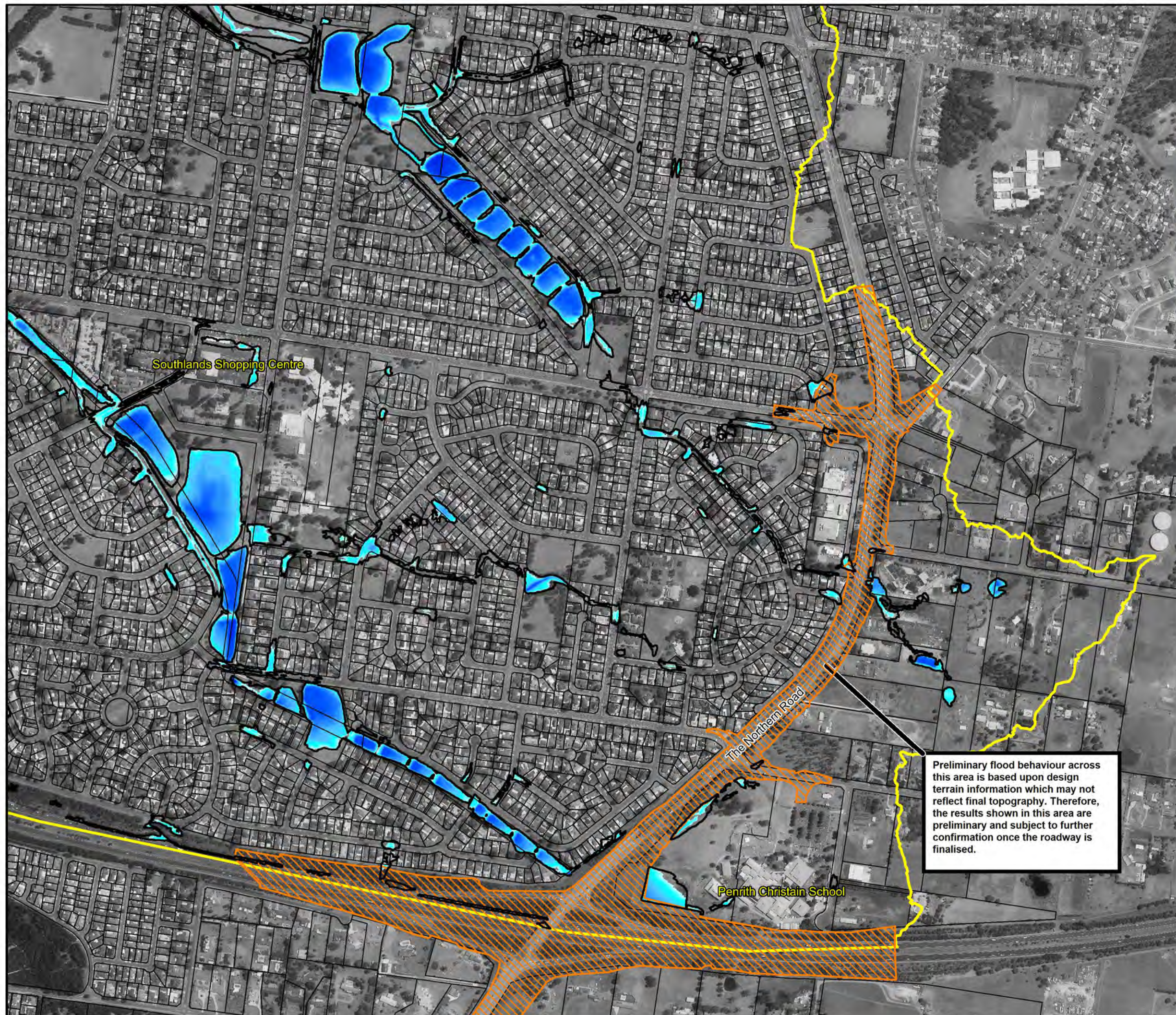


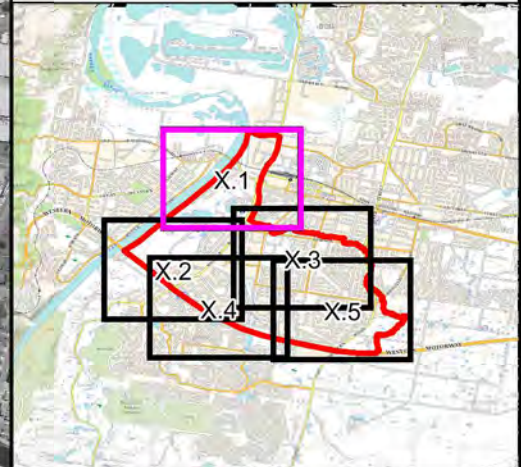
Figure 57.5:
Peak Water Depths for 5% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig57.5 - Depths for 5%AEP w
1%AEP Nepean Flood.wor





LEGEND

	1%AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

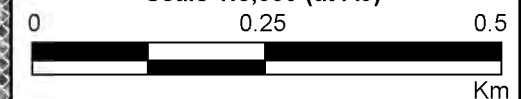


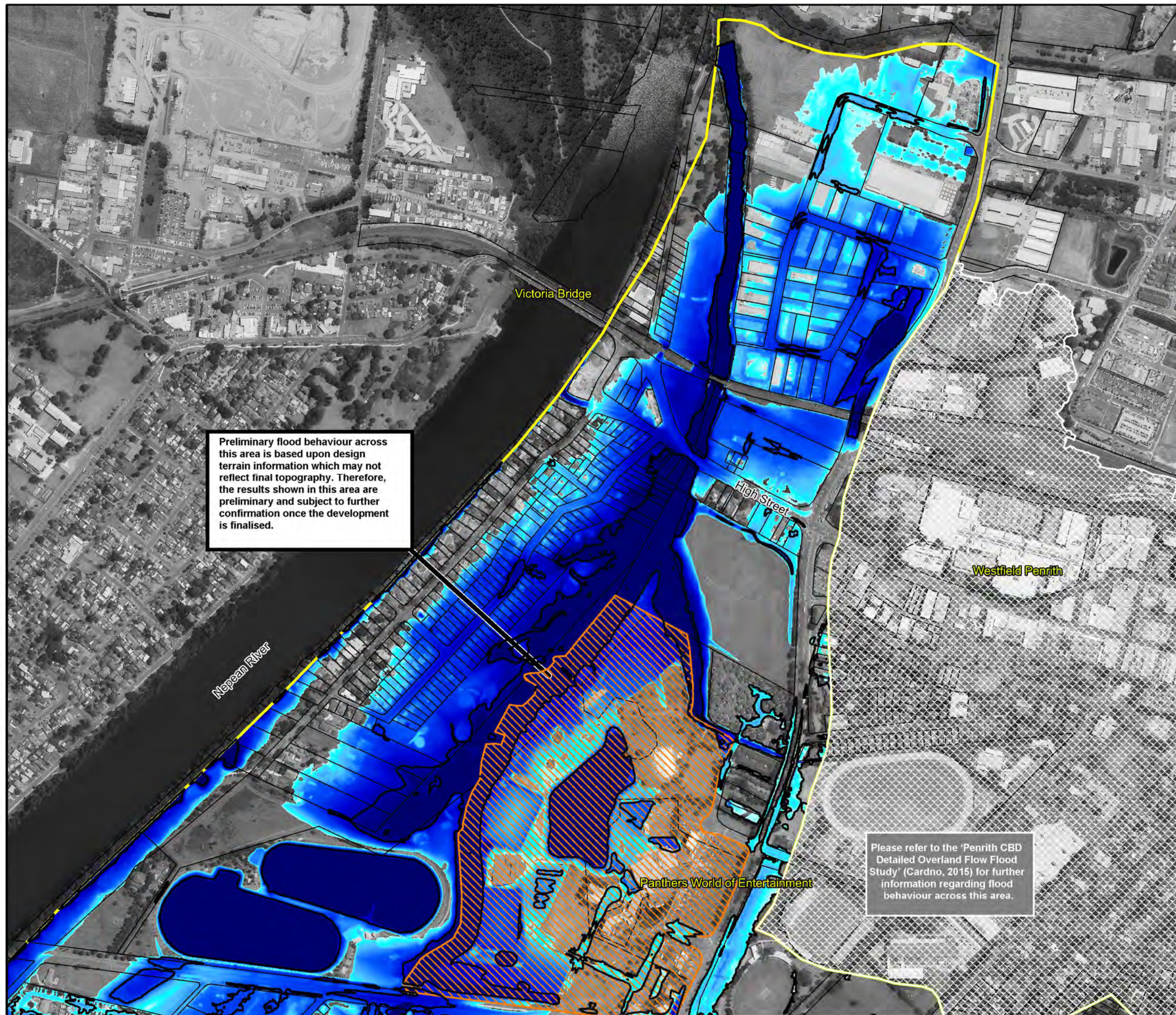
Figure 58.1:
Peak Water Depths for 1% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

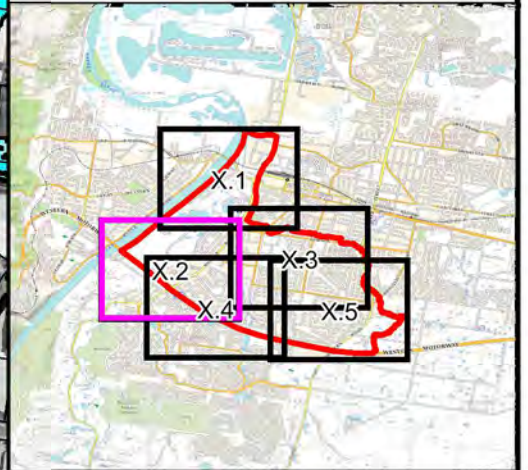
File Name: Fig58.1 - Depths for 1%AEP w
1%AEP Nepean Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

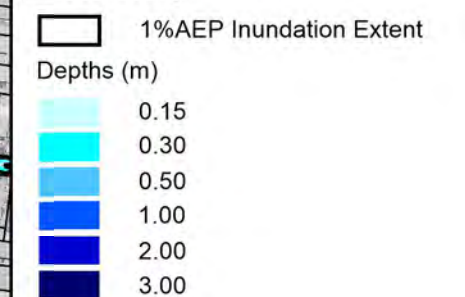
Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



Figure 58.2:
Peak Water Depths for 1% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

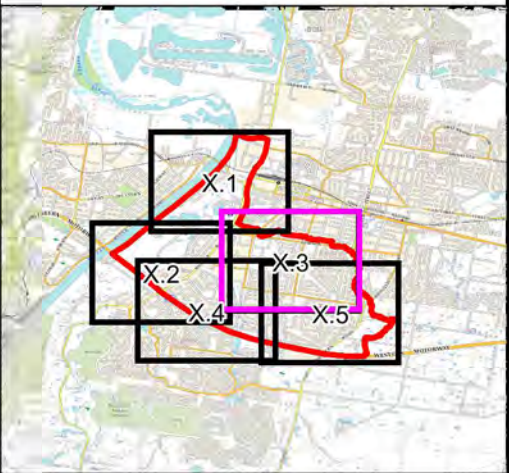
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig58.2 - Depths for 1%AEP w
1%AEP Nepean Flood.wor



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LEGEND

- 1% AEP Inundation Extent
- Depths (m)
- 0.15
 - 0.30
 - 0.50
 - 1.00
 - 2.00
 - 3.00

Notes:
Aerial photograph date: 2016

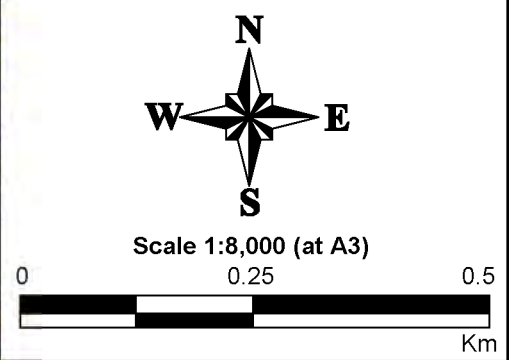
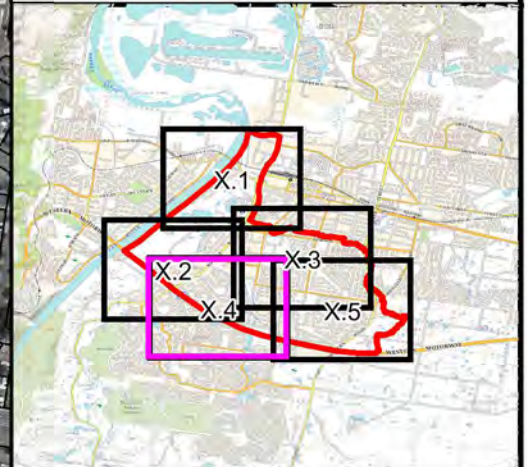


Figure 58.3:
Peak Water Depths for 1% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig58.3 - Depths for 1%AEP w
1%AEP Nepean Flood.wor



LEGEND

	1% AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

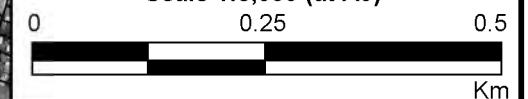
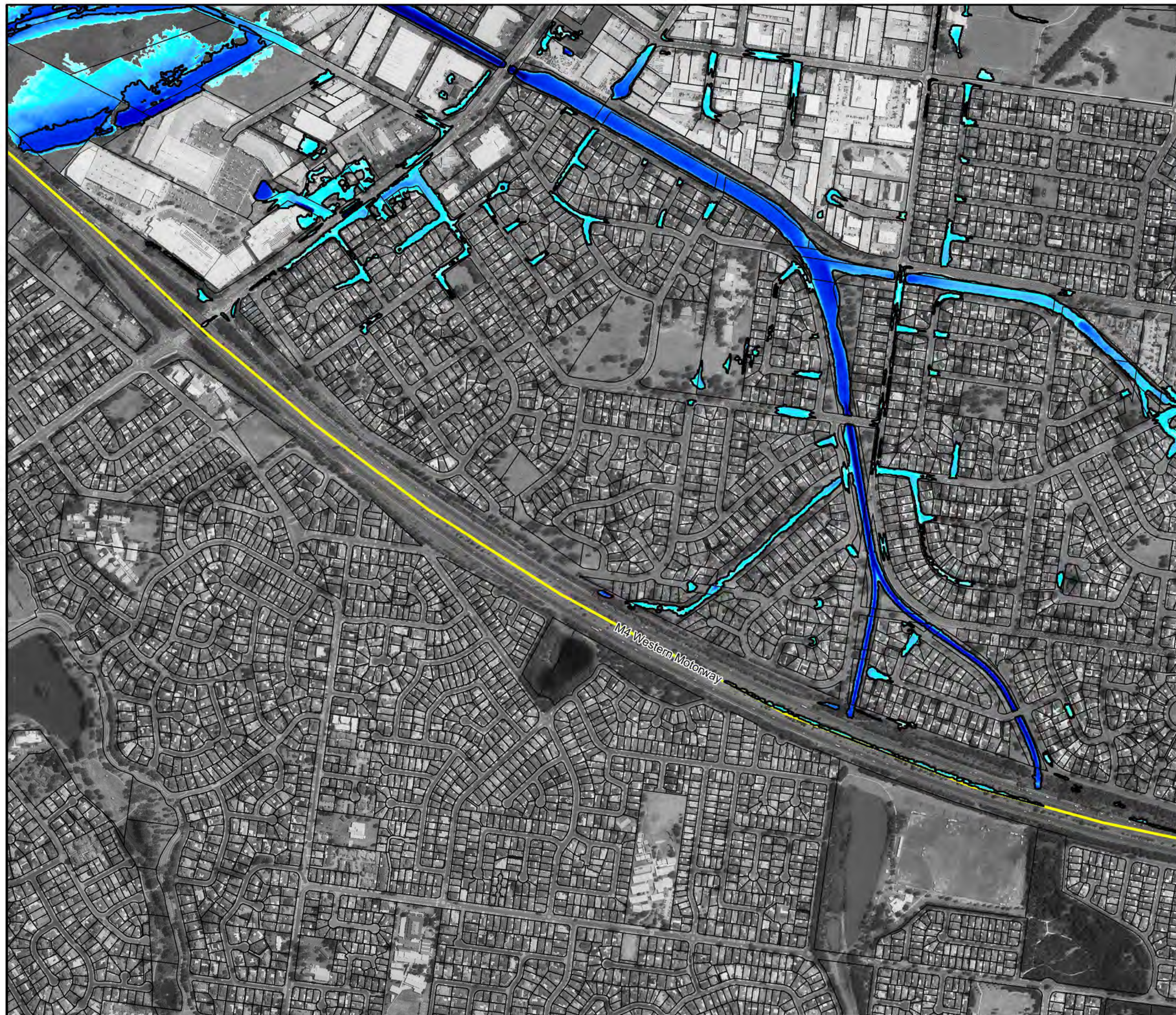


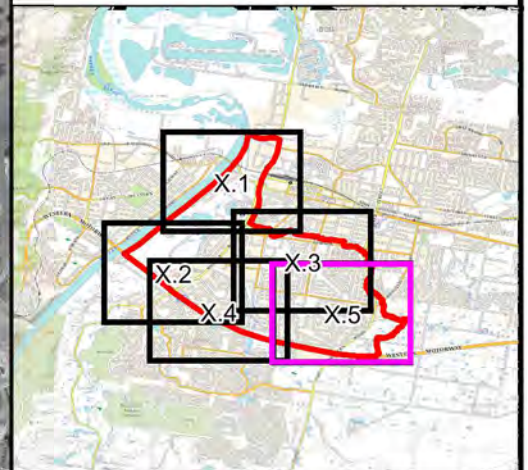
Figure 58.4:
Peak Water Depths for 1% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig58.4 - Depths for 1%AEP w
1%AEP Nepean Flood.wor





LEGEND

	1% AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

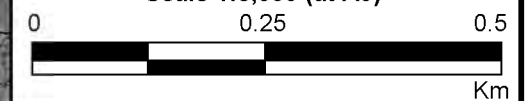
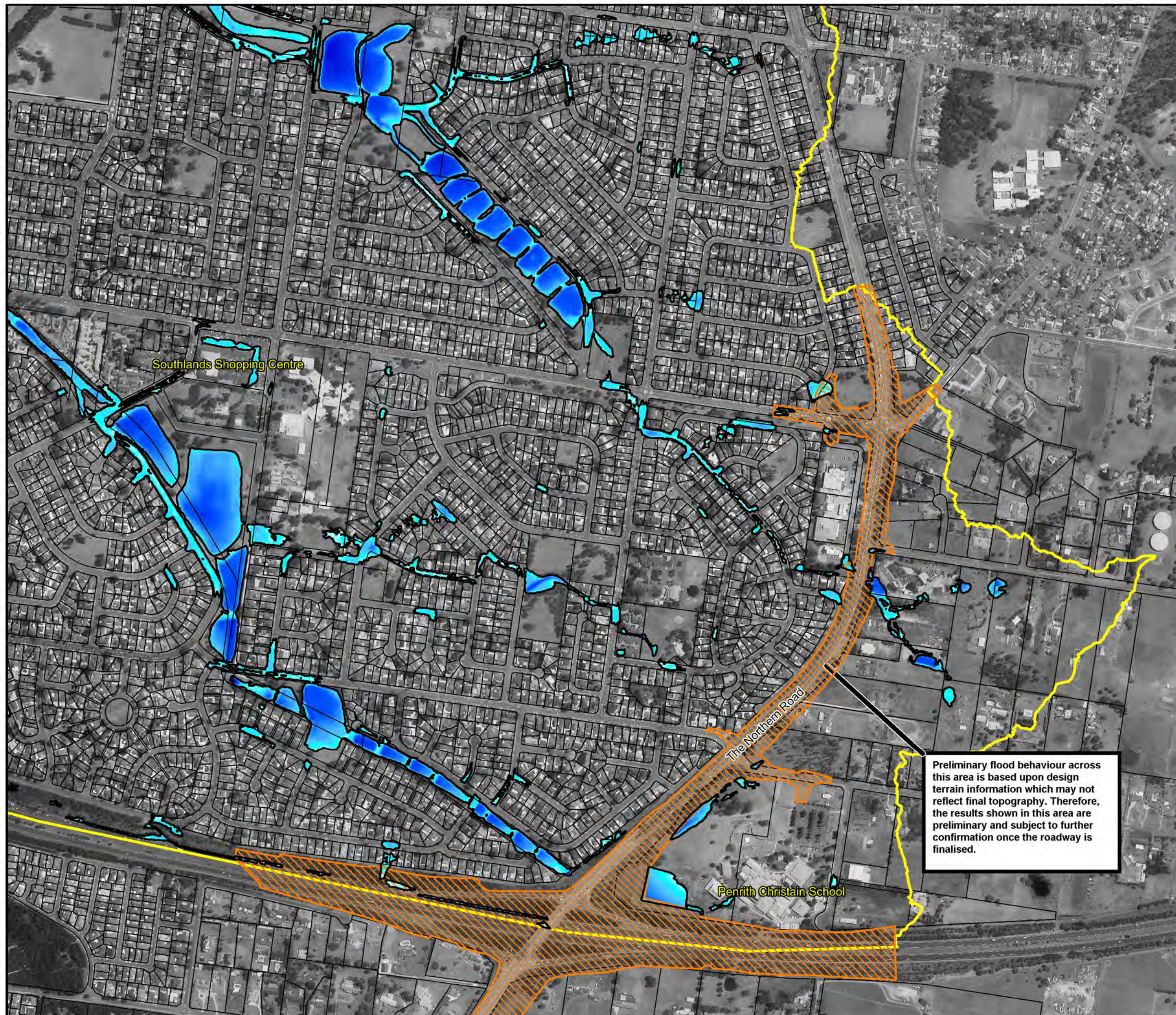
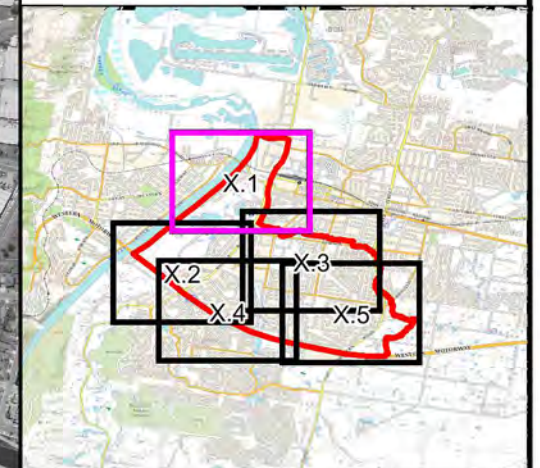


Figure 58.5:
Peak Water Depths for 1% AEP
Local Catchment Flood with
1% AEP Nepean River Tailwater

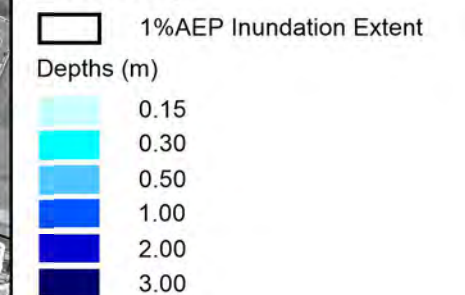
Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig58.5 - Depths for 1%AEP w
1%AEP Nepean Flood.wor

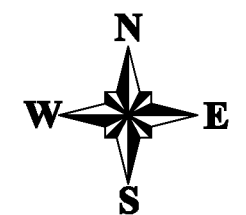




LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



Figure 59.1:
Peak Water Depths for 1% AEP
Local Catchment Flood
with 0.2% AEP Nepean River
Tailwater

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig59.1 - Depths for 1%AEP w
0.2%AEP Nepean Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

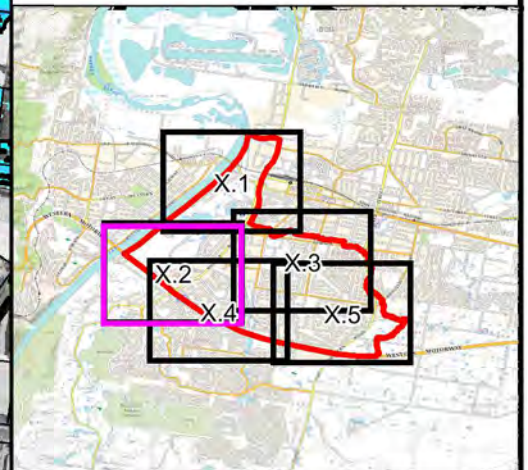
High Street

Westfield Penrith

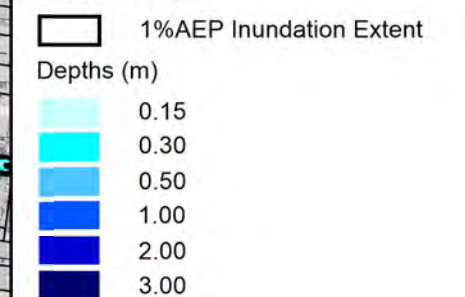
Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

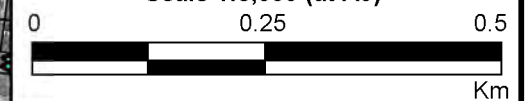



Figure 59.2:
Peak Water Depths for 1% AEP
Local Catchment Flood
with 0.2% AEP Nepean River
Tailwater

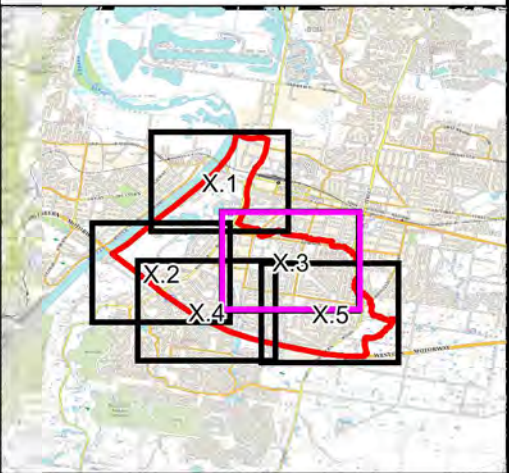
Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

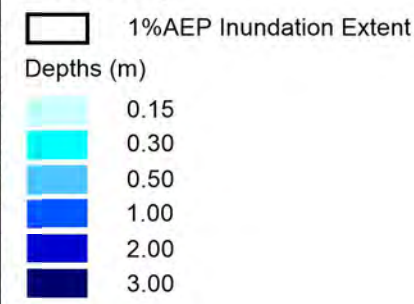
File Name: Fig59.2 - Depths for 1%AEP w
0.2%AEP Nepean Flood.wor



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LEGEND



Notes:
Aerial photograph date: 2016

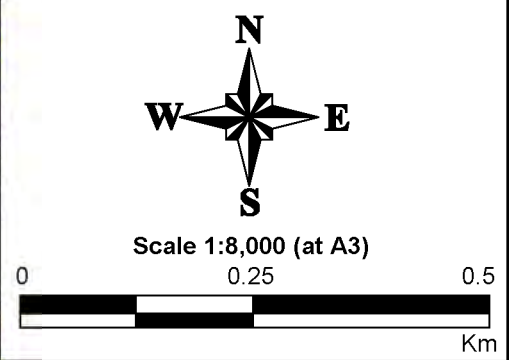
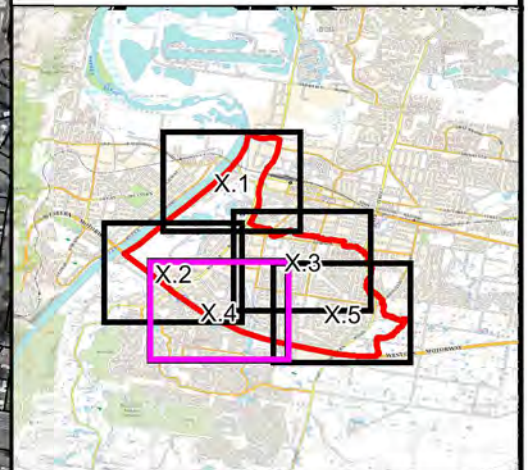


Figure 59.3:
Peak Water Depths for 1% AEP
Local Catchment Flood
with 0.2% AEP Nepean River
Tailwater

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig59.3 - Depths for 1%AEP w
0.2%AEP Nepean Flood.wor



LEGEND

	1% AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

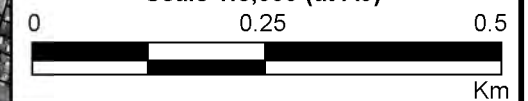
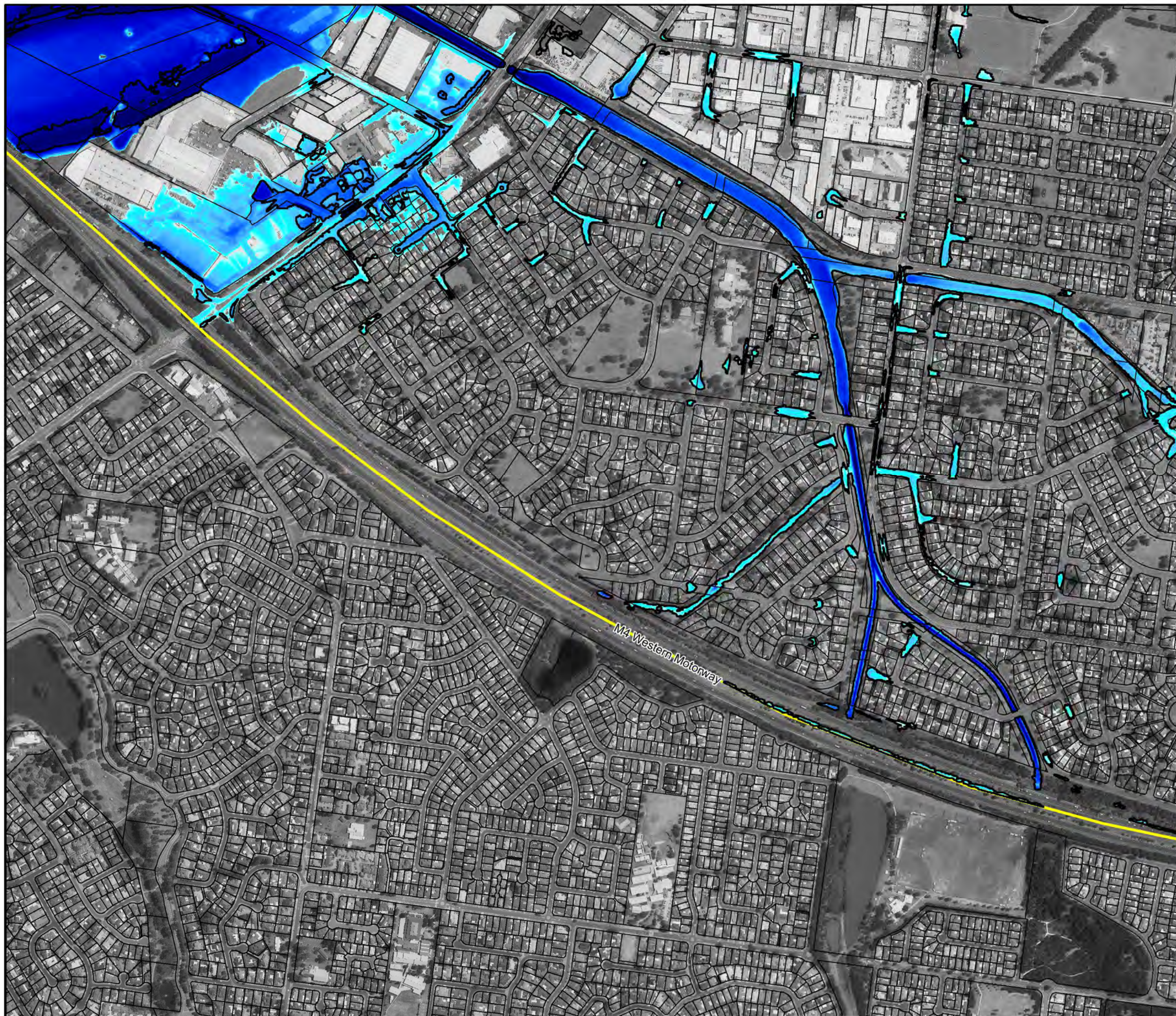


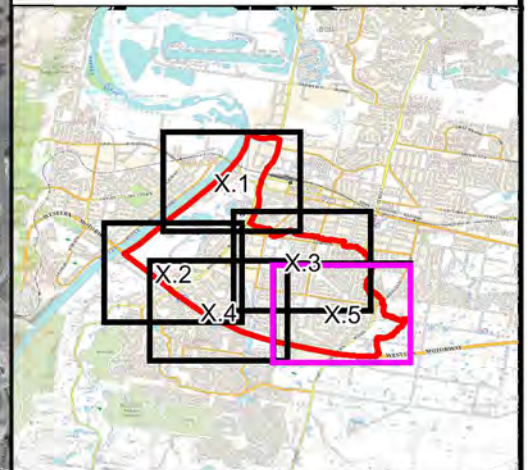
Figure 59.4:
Peak Water Depths for 1% AEP
Local Catchment Flood
with 0.2% AEP Nepean River
Tailwater

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig59.4 - Depths for 1%AEP w
0.2%AEP Nepean Flood.wor





LEGEND

	1%AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



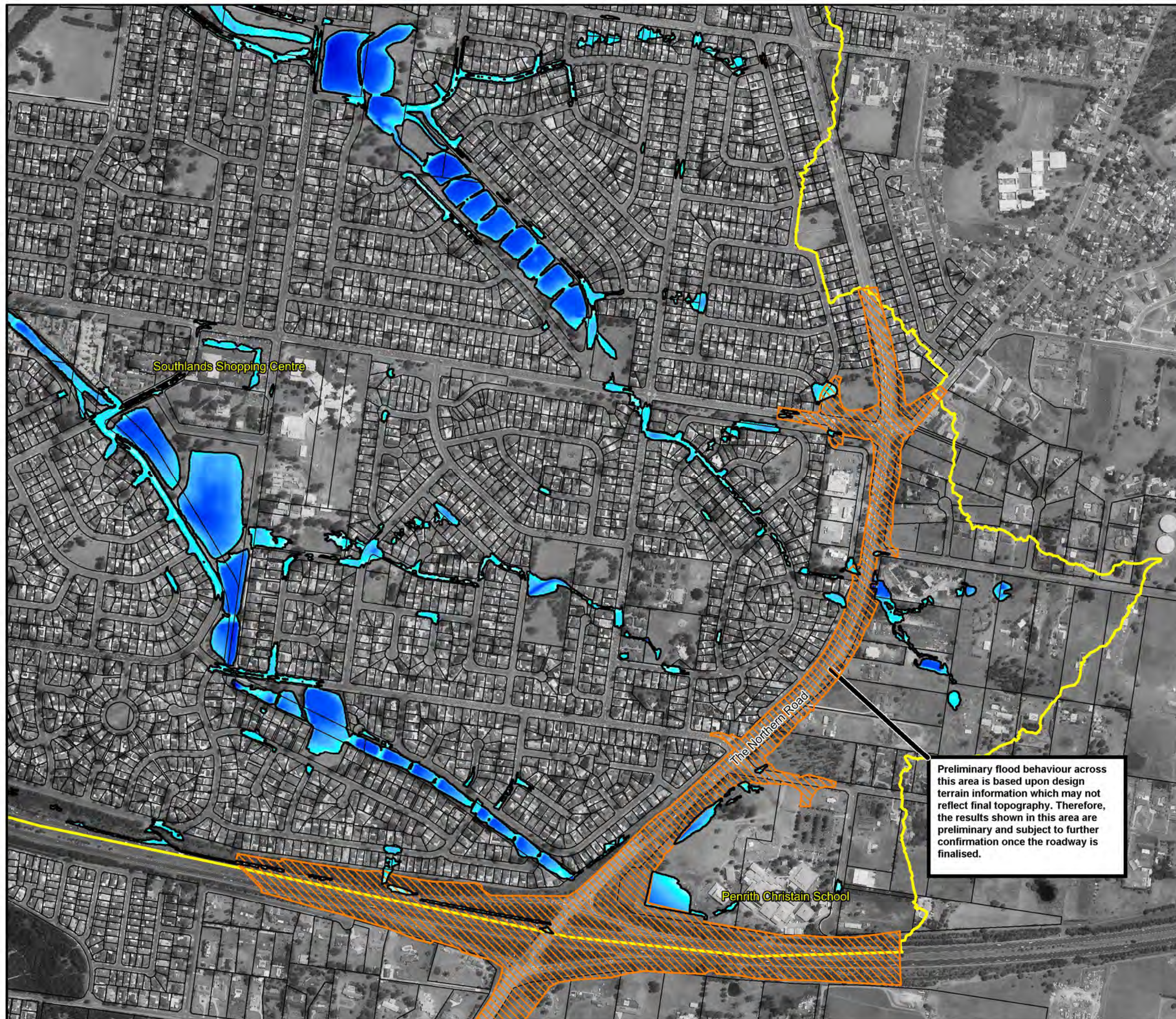
Scale 1:8,000 (at A3)

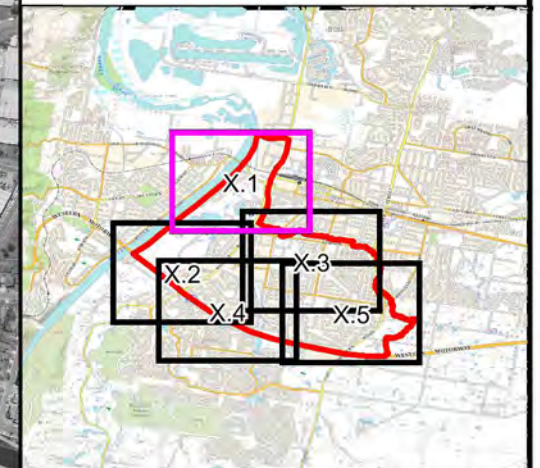


Figure 59.5:
Peak Water Depths for 1% AEP
Local Catchment Flood
with 0.2% AEP Nepean River
Tailwater

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig59.5 - Depths for 1%AEP w
0.2%AEP Nepean Flood.wor

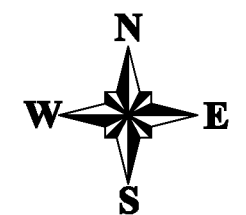




LEGEND

	1%AEP Inundation Extent
Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



Figure 60.1:
Peak Water Depths for 1% AEP
Local Catchment Flood
with PMF Nepean River
Tailwater

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig60.1 - Depths for 1%AEP w
PMF Nepean Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

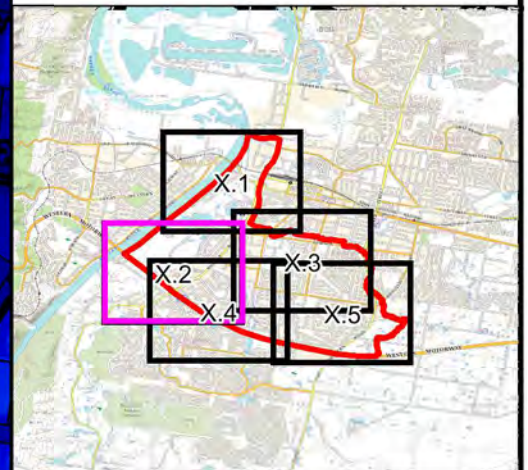
High Street

Westfield Penrith

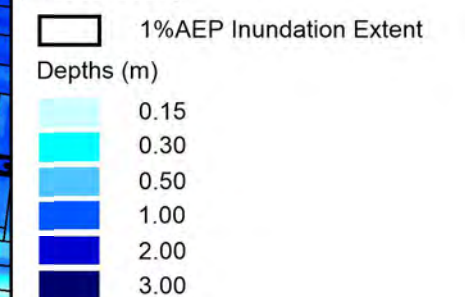
Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND



Notes:
Aerial photograph date: 2016




Scale 1:8,000 (at A3)

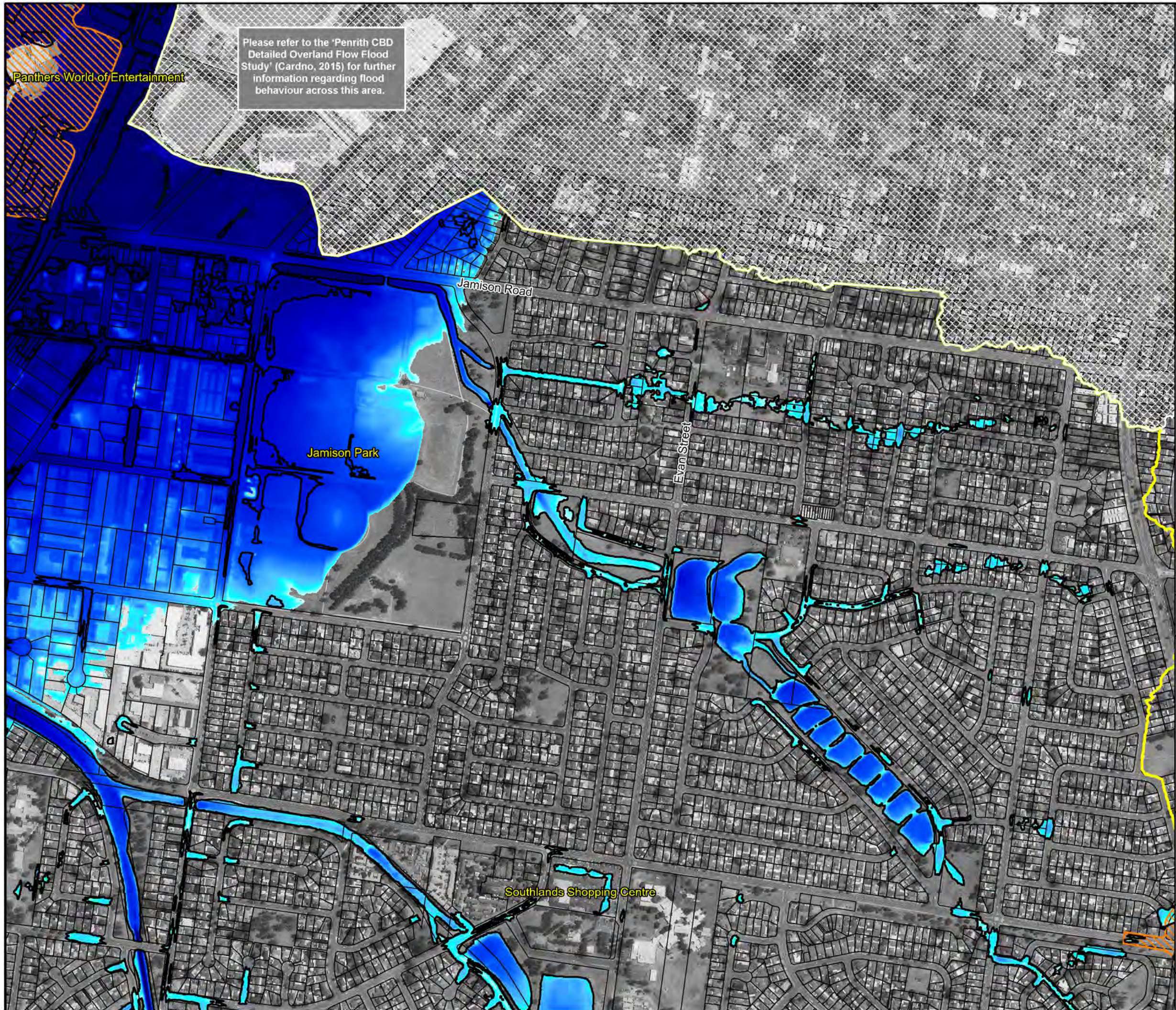


Figure 60.2:
Peak Water Depths for 1% AEP
Local Catchment Flood
with PMF Nepean River
Tailwater

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

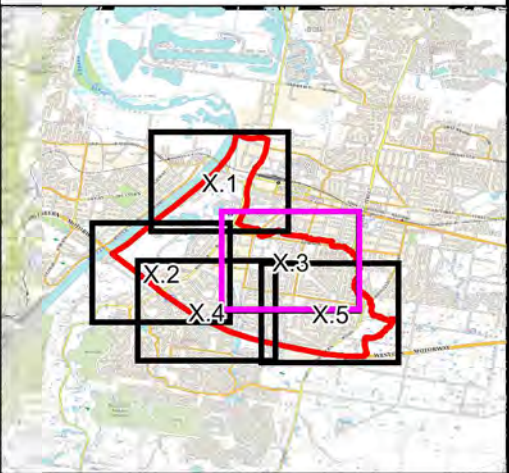
File Name: Fig60.2 - Depths for 1%AEP w
PMF Nepean Flood.wor



Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

- 1% AEP Inundation Extent
- Depths (m)
 - 0.15
 - 0.30
 - 0.50
 - 1.00
 - 2.00
 - 3.00

Notes:
Aerial photograph date: 2016

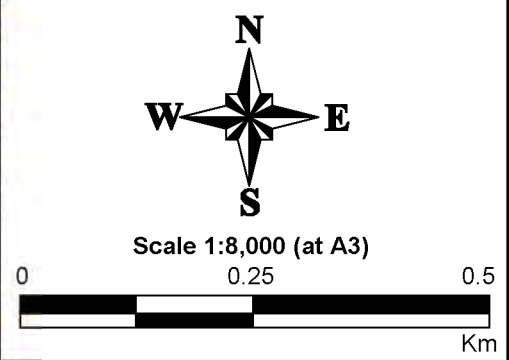
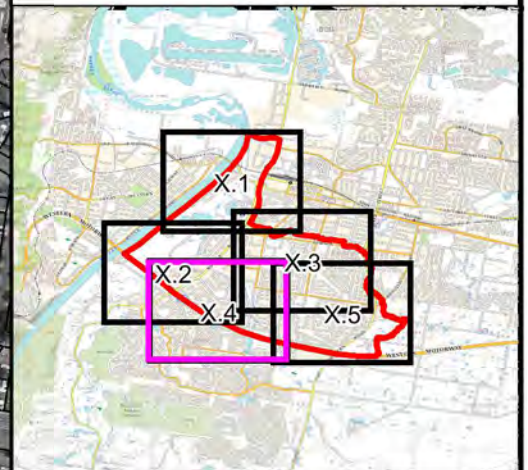


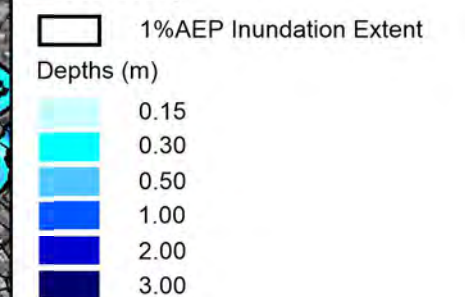
Figure 60.3:
Peak Water Depths for 1% AEP
Local Catchment Flood
with PMF Nepean River
Tailwater

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig60.3 - Depths for 1%AEP w
PMF Nepean Flood.wor



LEGEND



Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

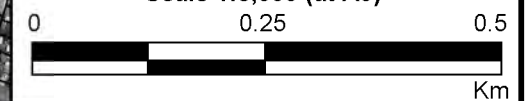
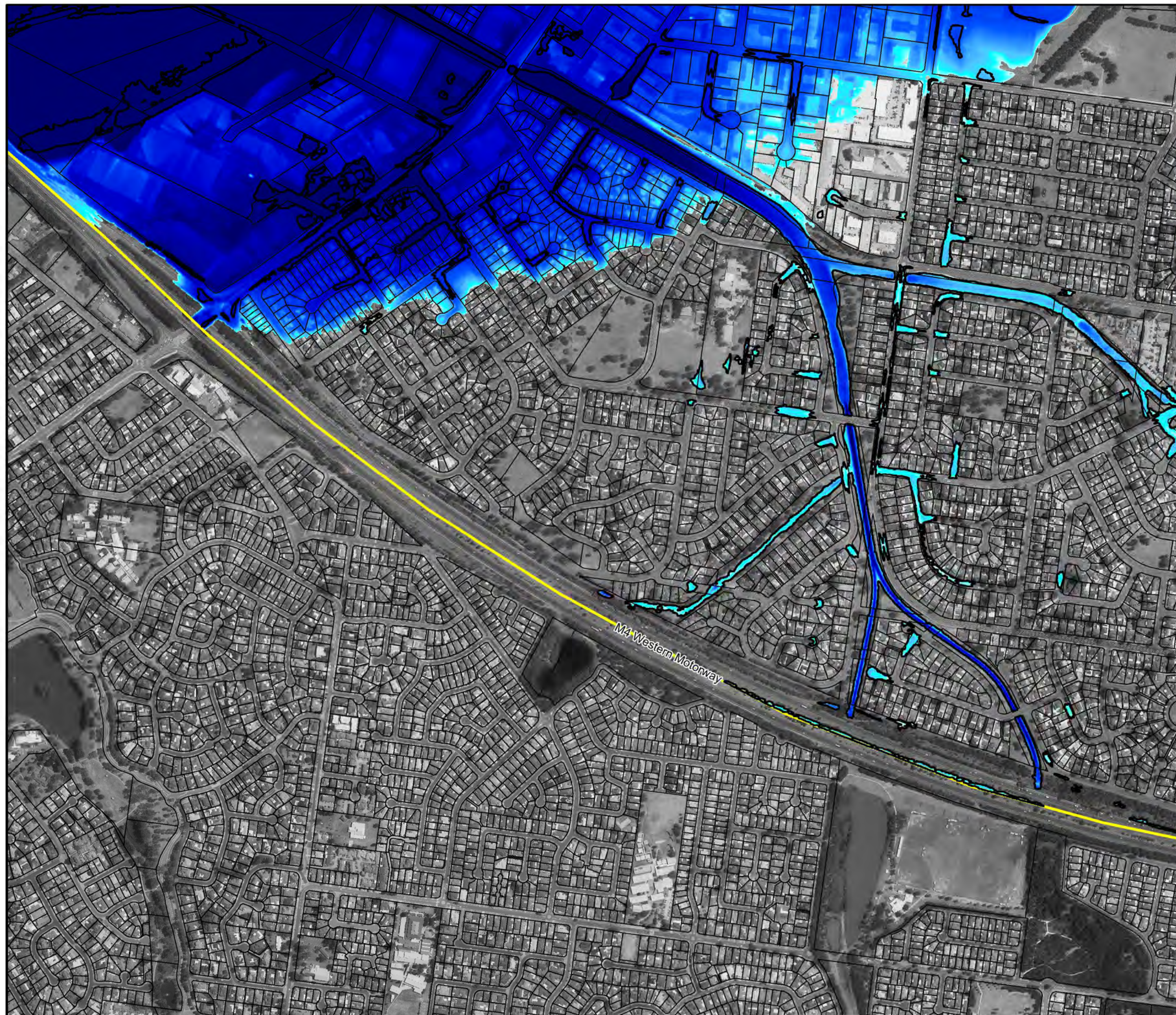


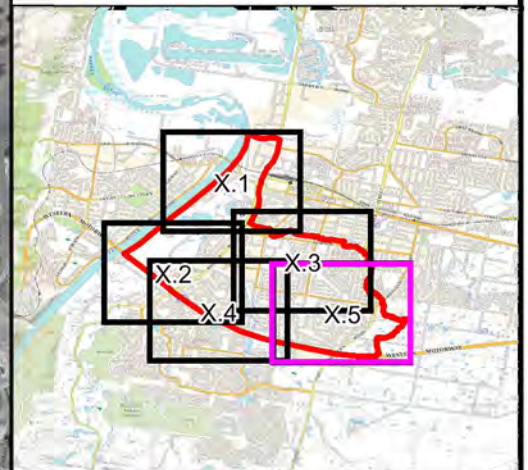
Figure 60.4:
Peak Water Depths for 1% AEP
Local Catchment Flood
with PMF Nepean River
Tailwater

Prepared By:

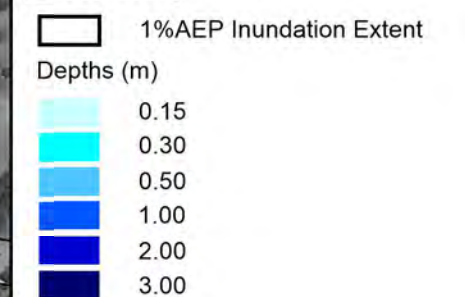
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig60.4 - Depths for 1%AEP w
PMF Nepean Flood.wor





LEGEND



Notes:
Aerial photograph date: 2016



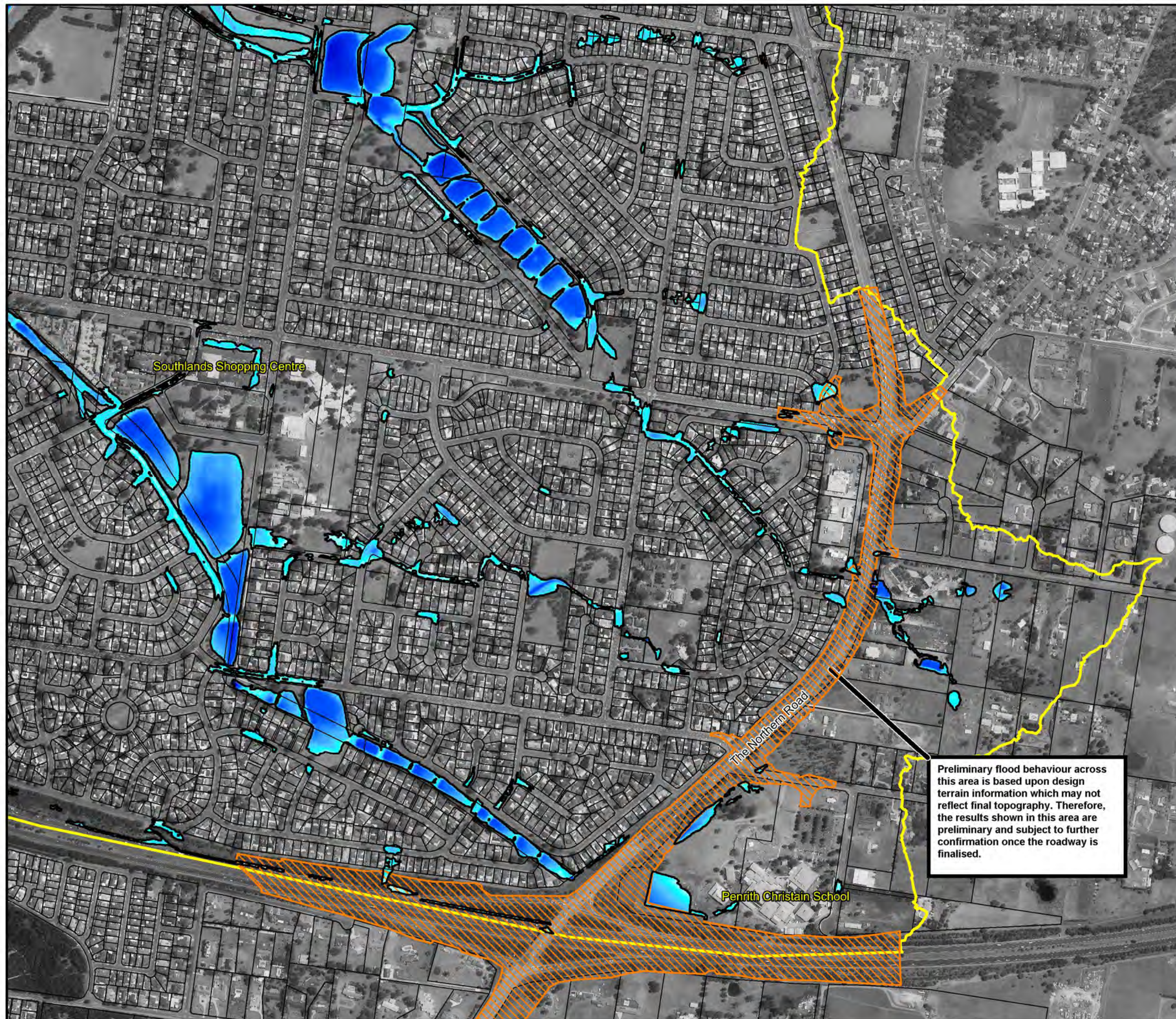
Scale 1:8,000 (at A3)



Figure 60.5:
Peak Water Depths for 1% AEP
Local Catchment Flood
with PMF Nepean River
Tailwater

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

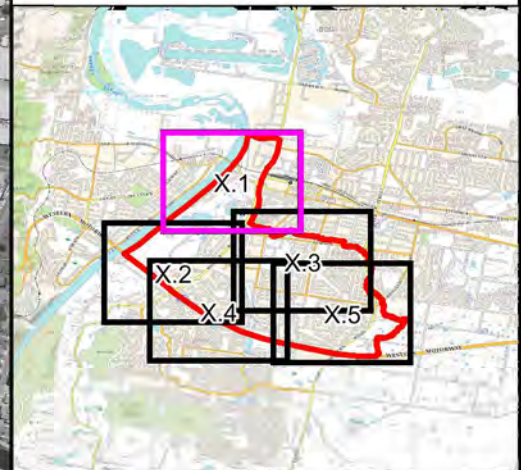
File Name: Fig60.5 - Depths for 1%AEP w
PMF Nepean Flood.wor





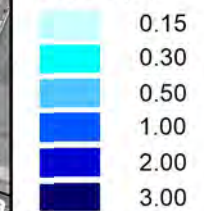
FLOOD PLANNING MAPS





LEGEND

Depths (m)



Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)

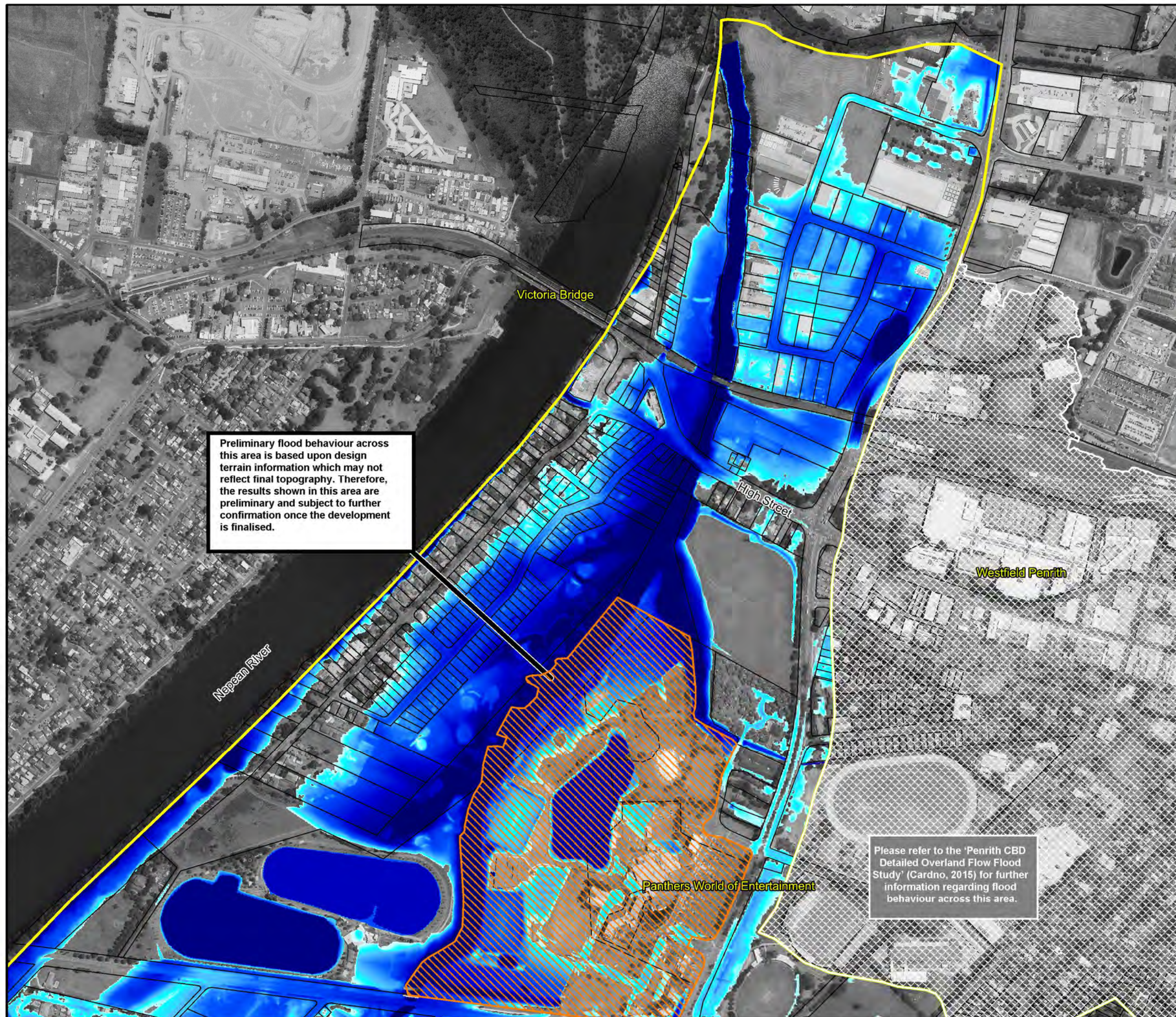


Figure 61.1:
Peak Water Depths
for the 1% AEP Flood

Prepared By:

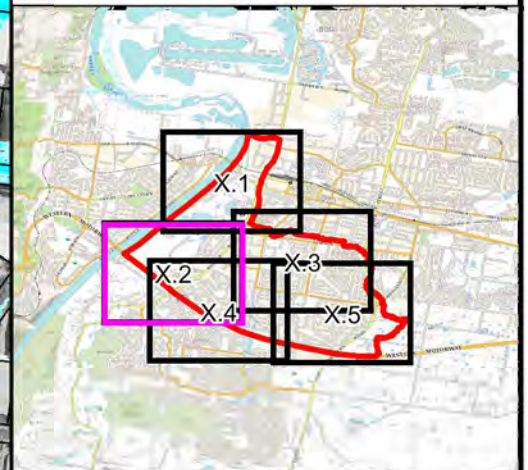
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig61.1 - Depths for 1% AEP
Flood.wor



Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



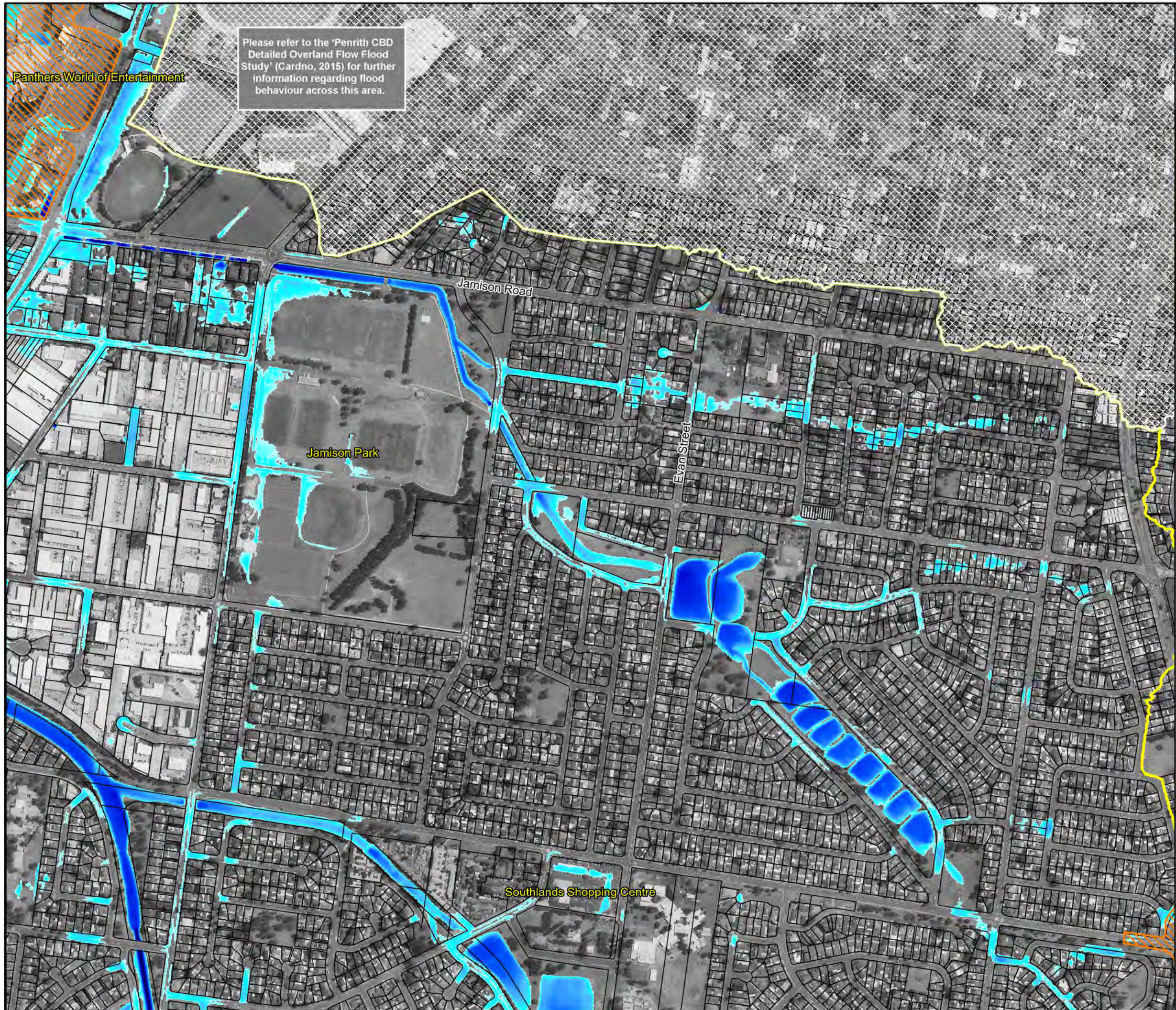
Scale 1:8,000 (at A3)



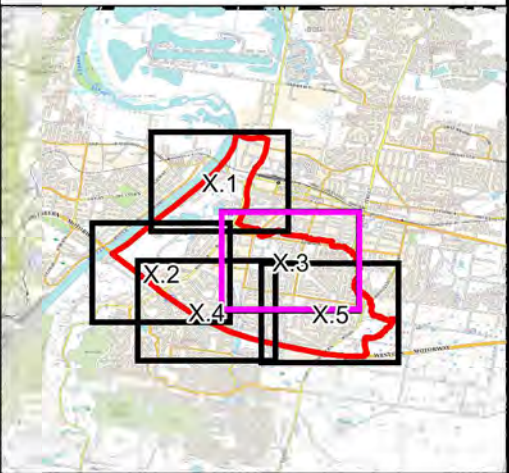
Figure 61.2:
Peak Water Depths
for the 1% AEP Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig61.2 - Depths for 1% AEP
Flood.wor

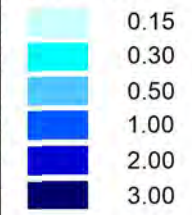


PENRITH CITY COUNCIL



LEGEND

Depths (m)



Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood

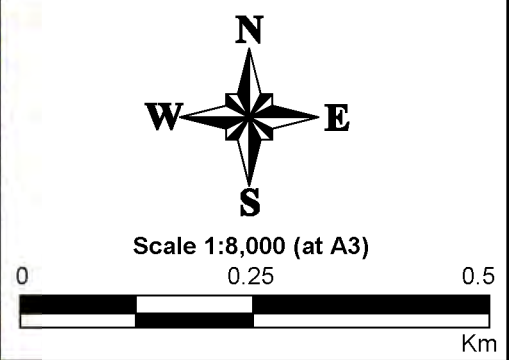
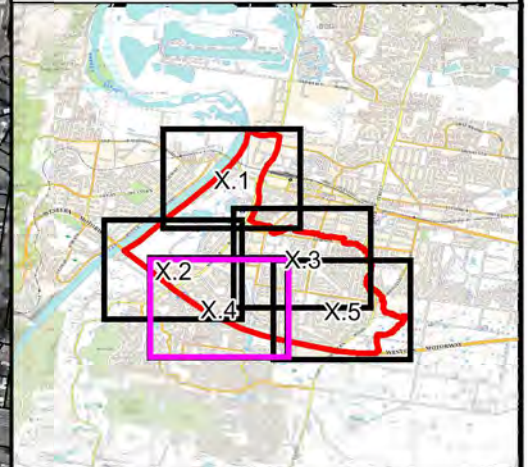


Figure 61.3:
Peak Water Depths
for the 1% AEP Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig61.3 - Depths for 1% AEP
Flood.wor



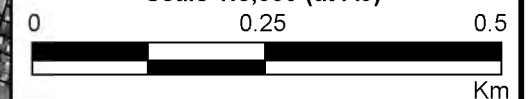
LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



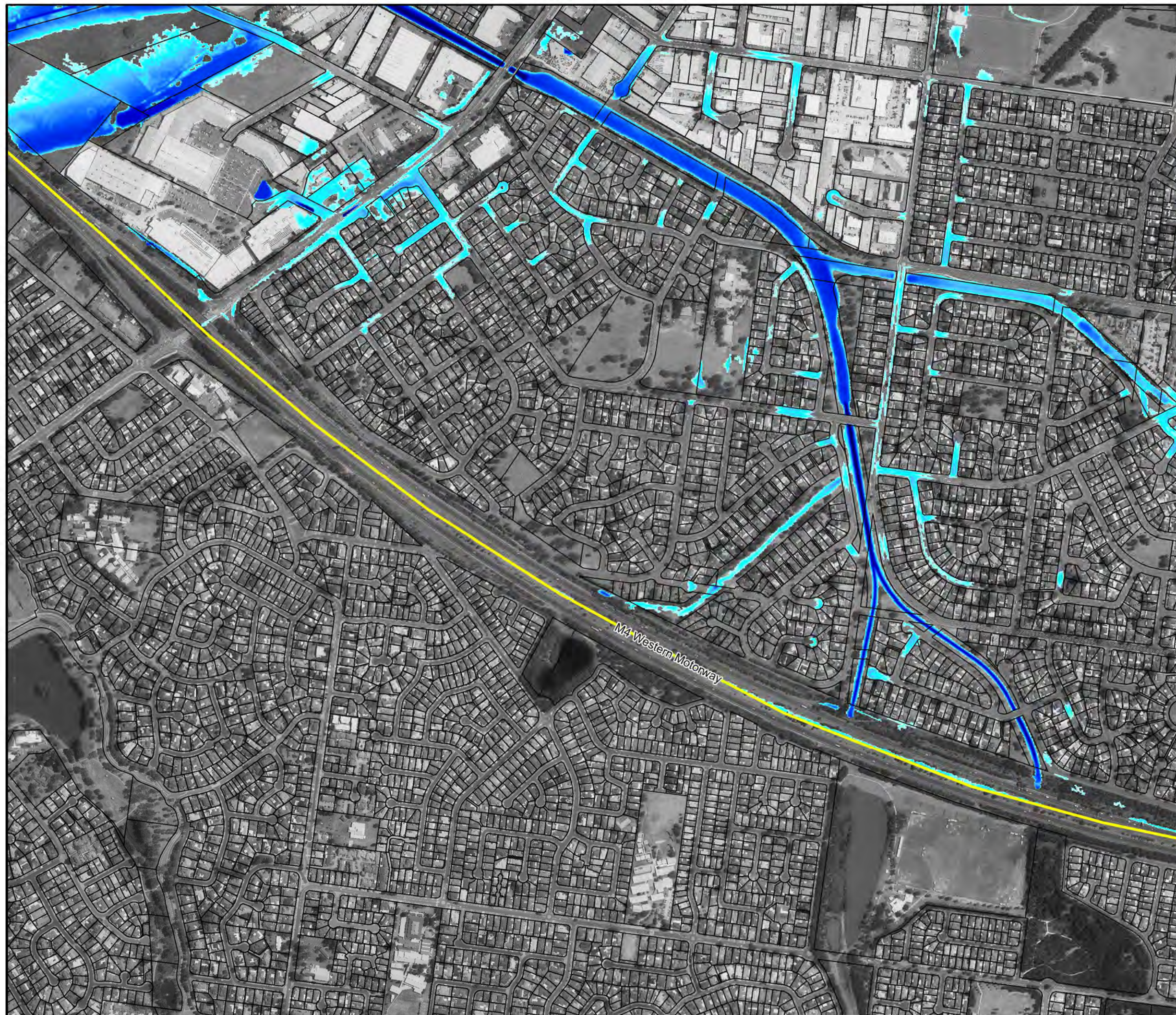
Scale 1:8,000 (at A3)

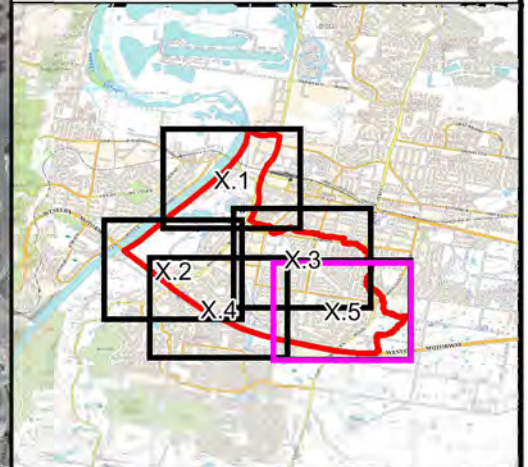


**Figure 61.4:
Peak Water Depths
for the 1% AEP Flood**

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig61.4 - Depths for 1% AEP
Flood.wor





LEGEND

Depths (m)	
	0.15
	0.30
	0.50
	1.00
	2.00
	3.00

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)

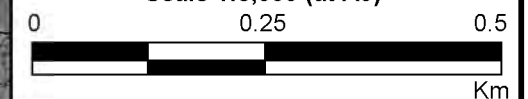
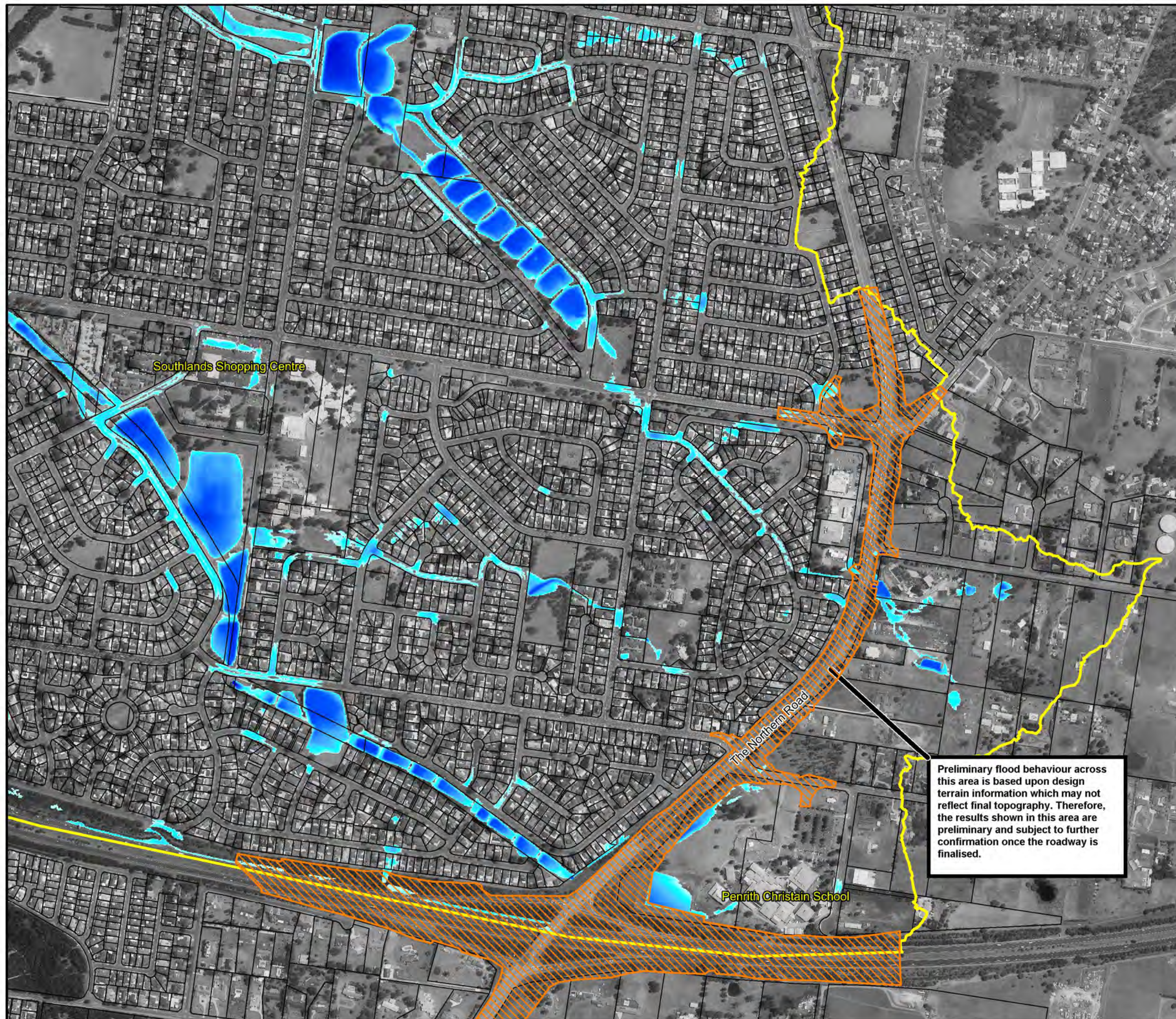
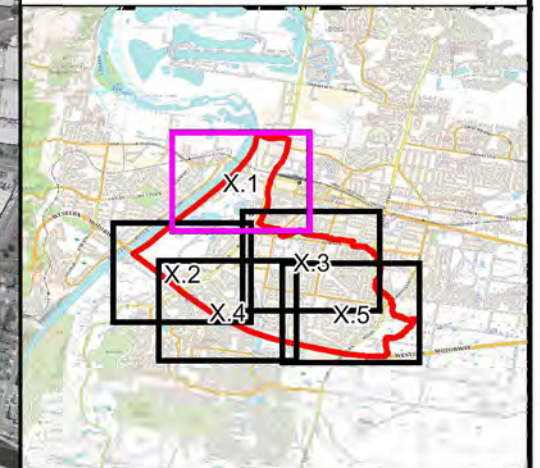


Figure 61.5:
Peak Water Depths
for the 1% AEP Flood

Prepared By:
 Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig61.5 - Depths for 1% AEP
Flood.wor





LEGEND

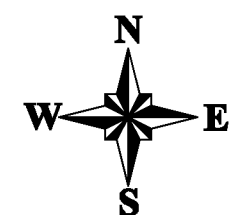
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

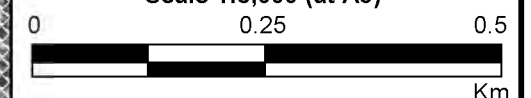
	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 62.1:
Peak Water Levels
for the 1% AEP Flood**

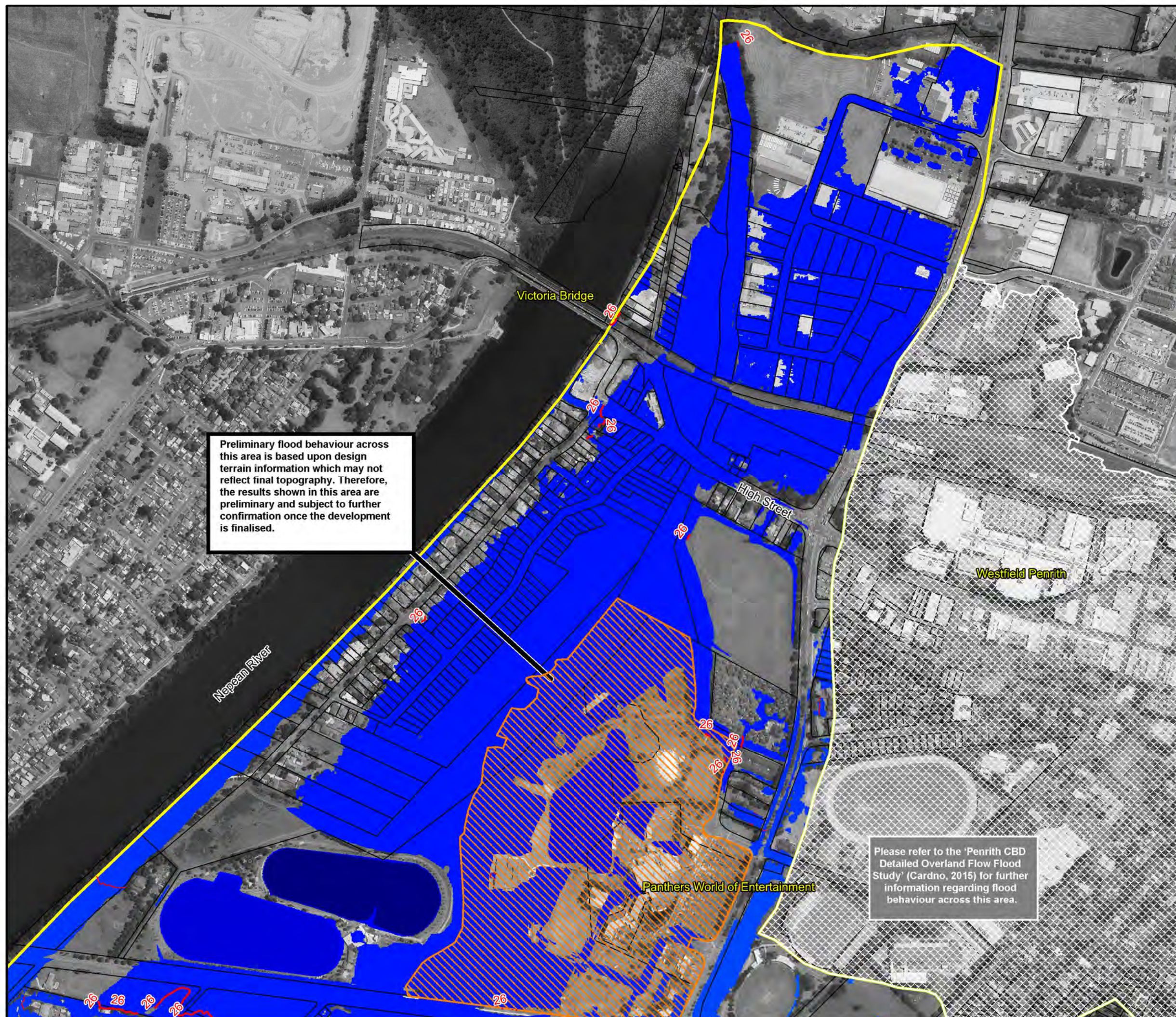
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

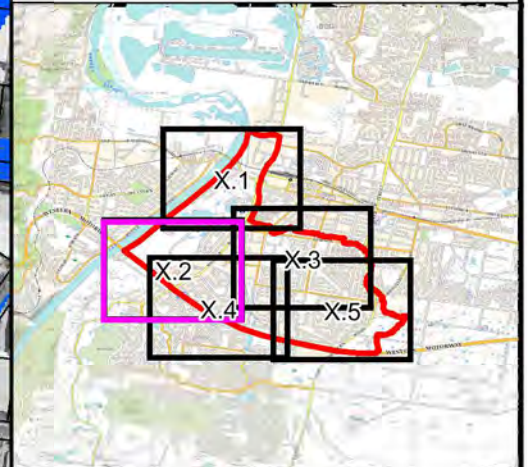
File Name: Fig62.1 - Levels for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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LEGEND

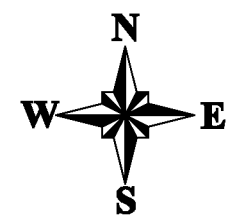
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 62.2:
Peak Water Levels
for the 1% AEP Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig62.2 - Levels for 1% AEP
Flood.wor

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

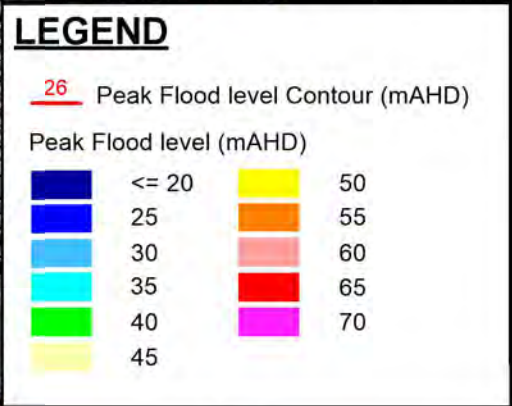
Panthers World of Entertainment

Jamison Park

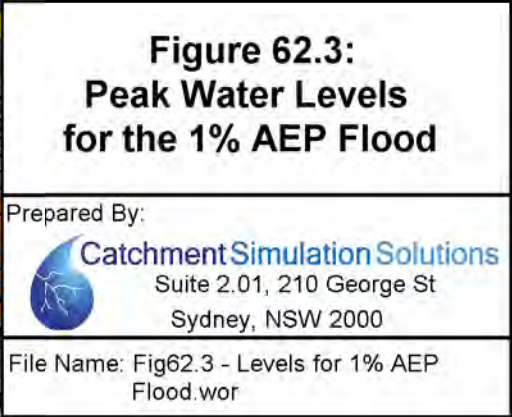
Jamison Road

Evan Street

Southlands Shopping Centre



Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood

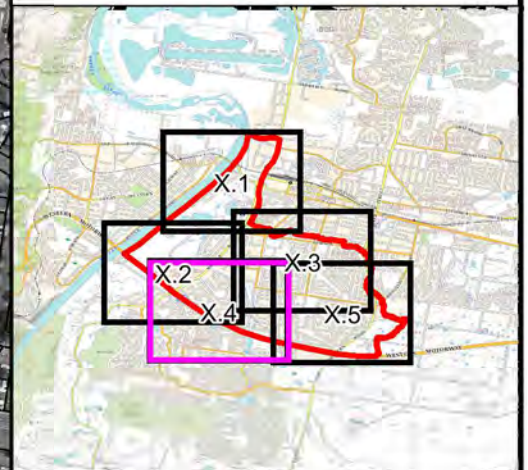


Prepared By:	 Catchment Simulation Solutions Suite 2.01, 210 George St Sydney, NSW 2000
File Name:	Fig62.3 - Levels for 1% AEP Flood.wor

File Name: Fig62.3 - Levels for 1% AEP
Flood.wor

File Name: Fig62.3 - Levels for 1% AEP
Flood.wor

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LEGEND

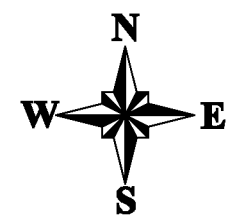
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



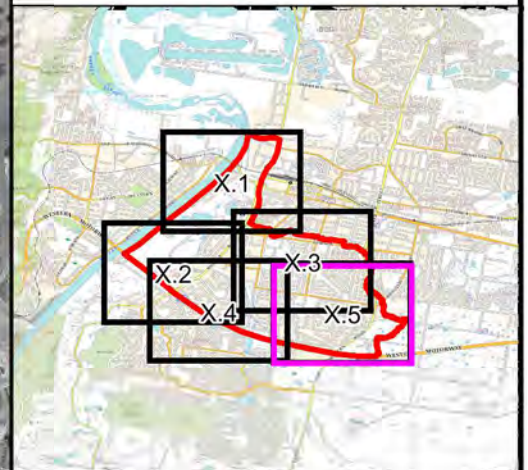
Figure 62.4:
Peak Water Levels
for the 1% AEP Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig62.4 - Levels for 1% AEP
Flood.wor

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LEGEND

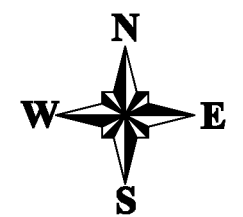
26 Peak Flood level Contour (mAHD)

Peak Flood level (mAHD)

	<= 20		50
	25		55
	30		60
	35		65
	40		70
	45		

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)

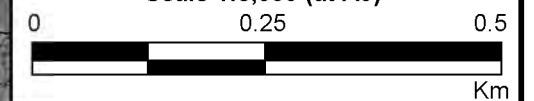
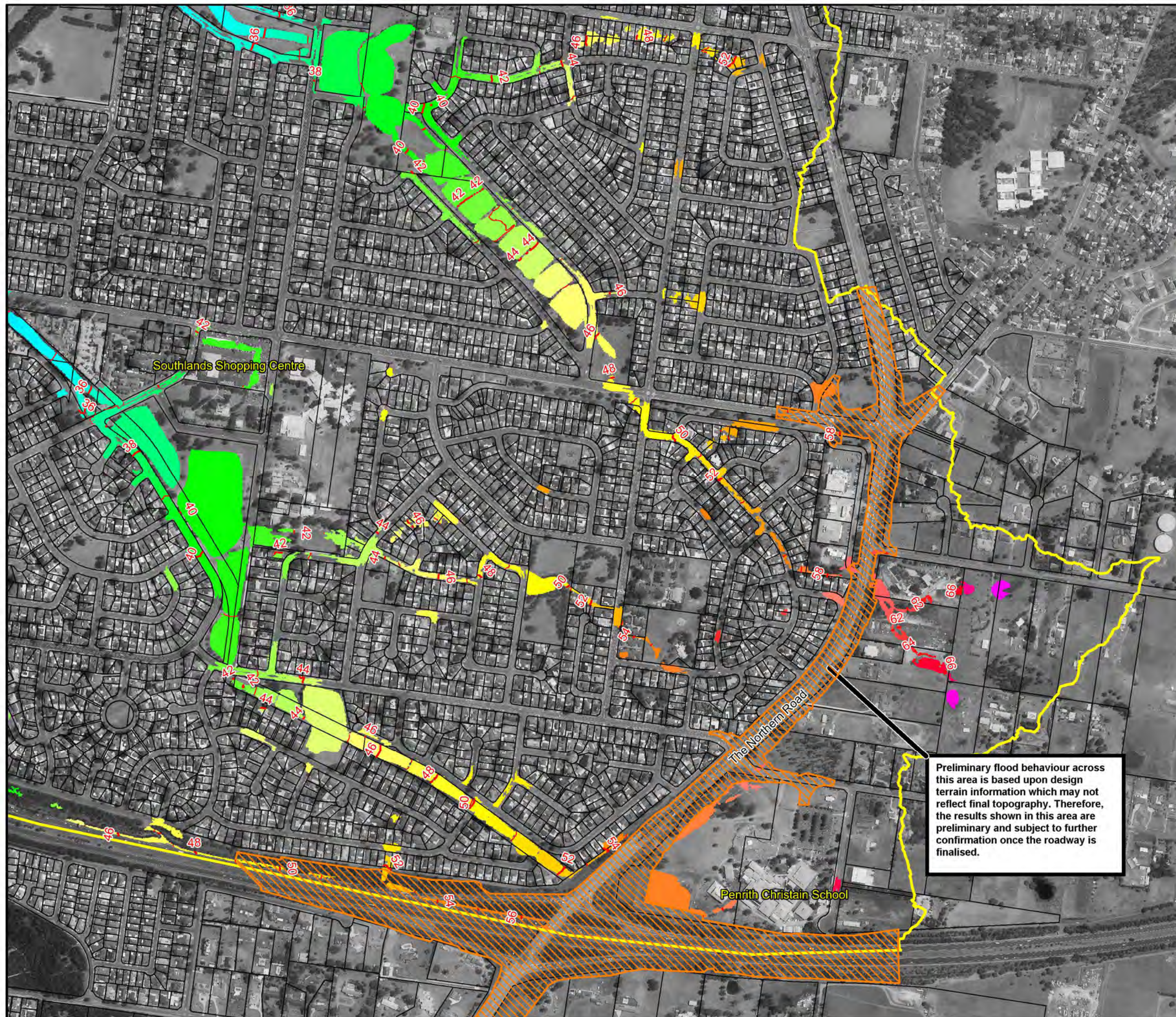


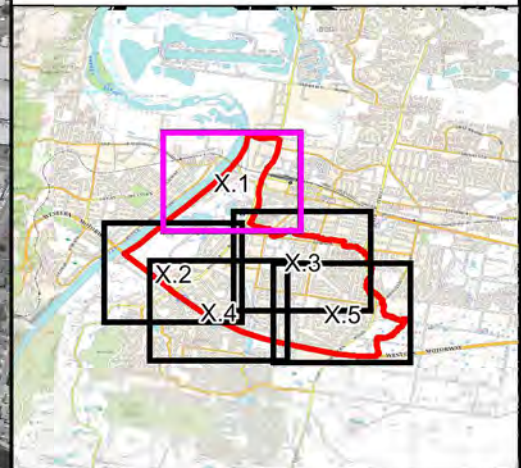
Figure 62.5:
Peak Water Levels
for the 1% AEP Flood

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig62.5 - Levels for 1% AEP
Flood.wor





LEGEND

Velocities (m/s)	
 	< 0.25
 	0.25 to 0.5
 	0.5 to 1.0
 	1.0 to 2.0
 	> 2.0

Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



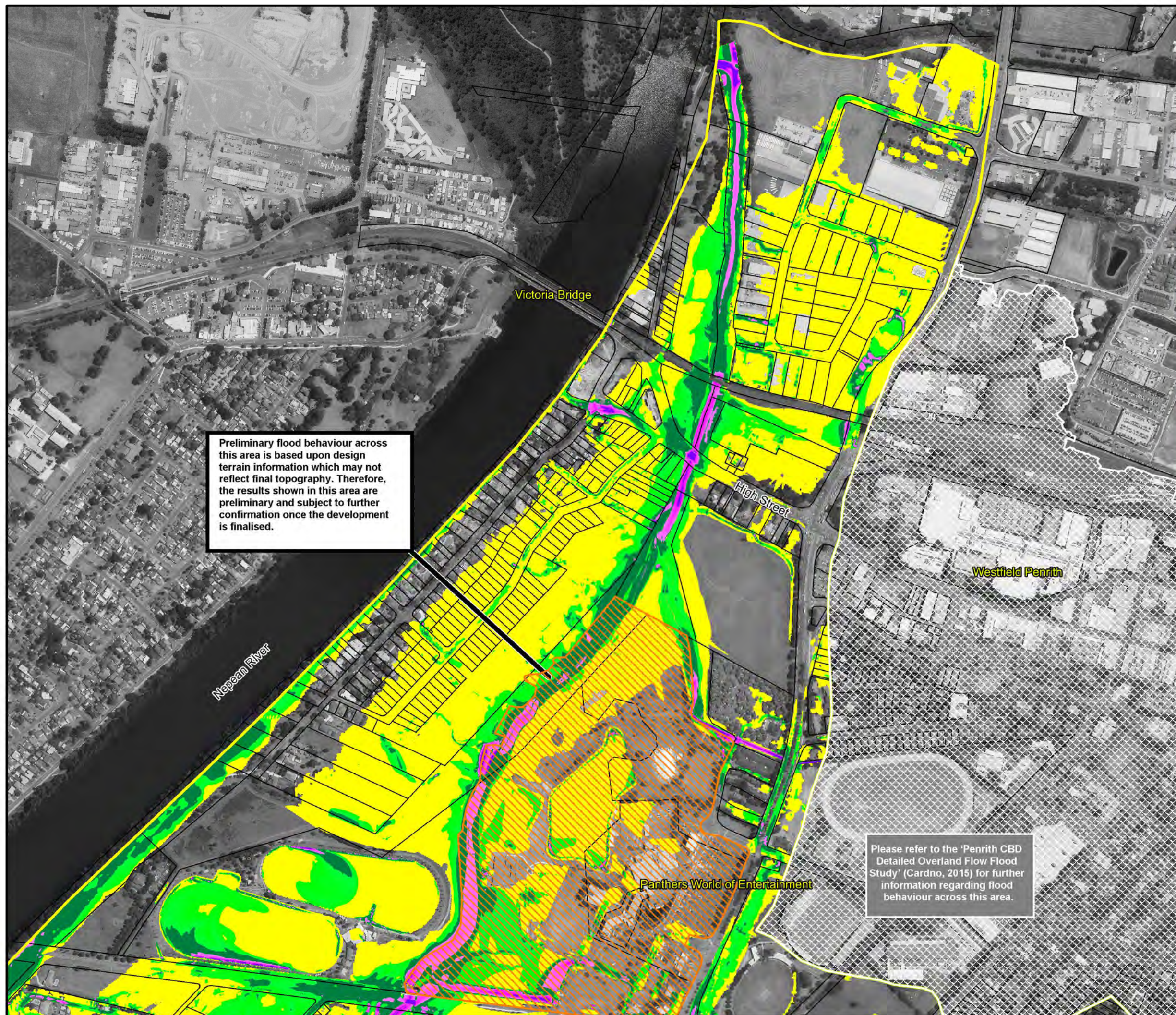
**Figure 63.1:
Peak Flow Velocities
for the 1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

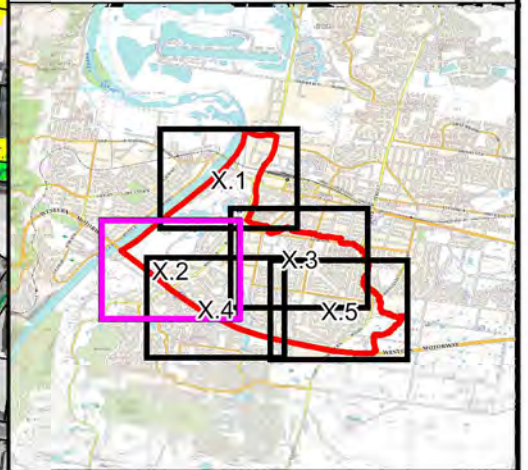
File Name: Fig63.1 - Velocity for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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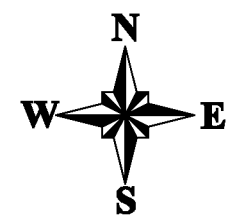
LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)



Figure 63.2:
Peak Flow Velocities
for the 1% AEP Flood

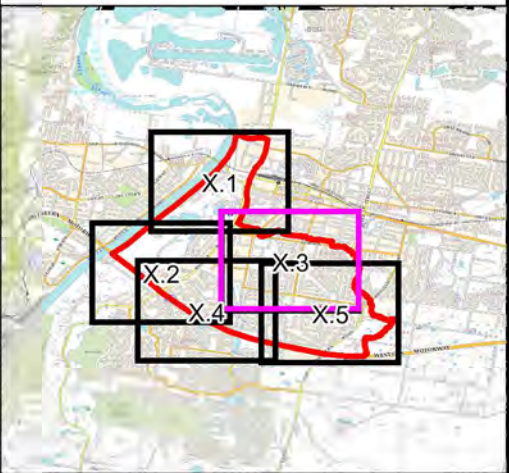
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig63.2 - Velocity for 1% AEP
Flood.wor



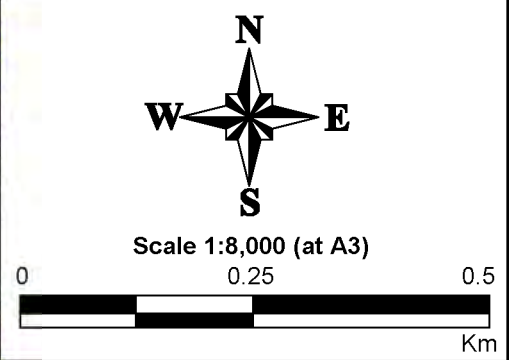
PENRITH CITY COUNCIL




LEGEND

Velocities (m/s)	
■	< 0.25
■	0.25 to 0.5
■	0.5 to 1.0
■	1.0 to 2.0
■	> 2.0

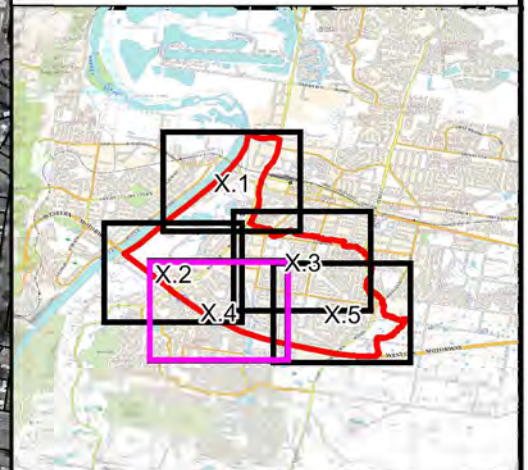
Notes:
Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



**Figure 63.3:
Peak Flow Velocities
for the 1% AEP Flood**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig63.3 - Velocity for 1% AEP Flood.wor



LEGEND

Velocities (m/s)

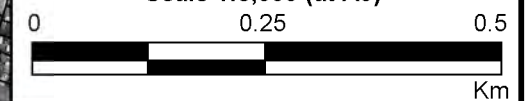
- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood




Scale 1:8,000 (at A3)

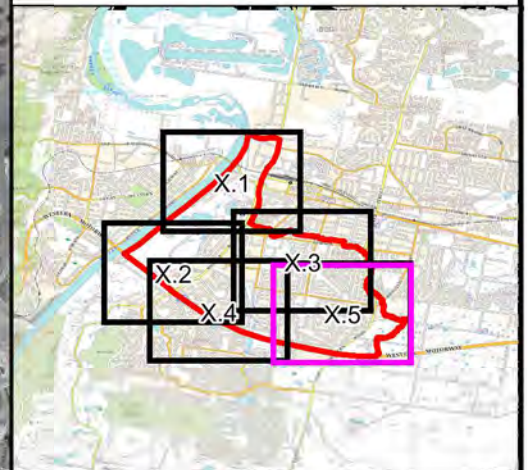


**Figure 63.4:
Peak Flow Velocities
for the 1% AEP Flood**

Prepared By:

 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig63.4 - Velocity for 1% AEP
Flood.wor



LEGEND

Velocities (m/s)

- < 0.25
- 0.25 to 0.5
- 0.5 to 1.0
- 1.0 to 2.0
- > 2.0

Notes:

Aerial photograph date: 2016
Results presented in this figure are a combination of a 1% AEP local catchment flood with 5% AEP Nepean River flood and a 5% AEP local catchment flood with 1% AEP Nepean River flood



Scale 1:8,000 (at A3)

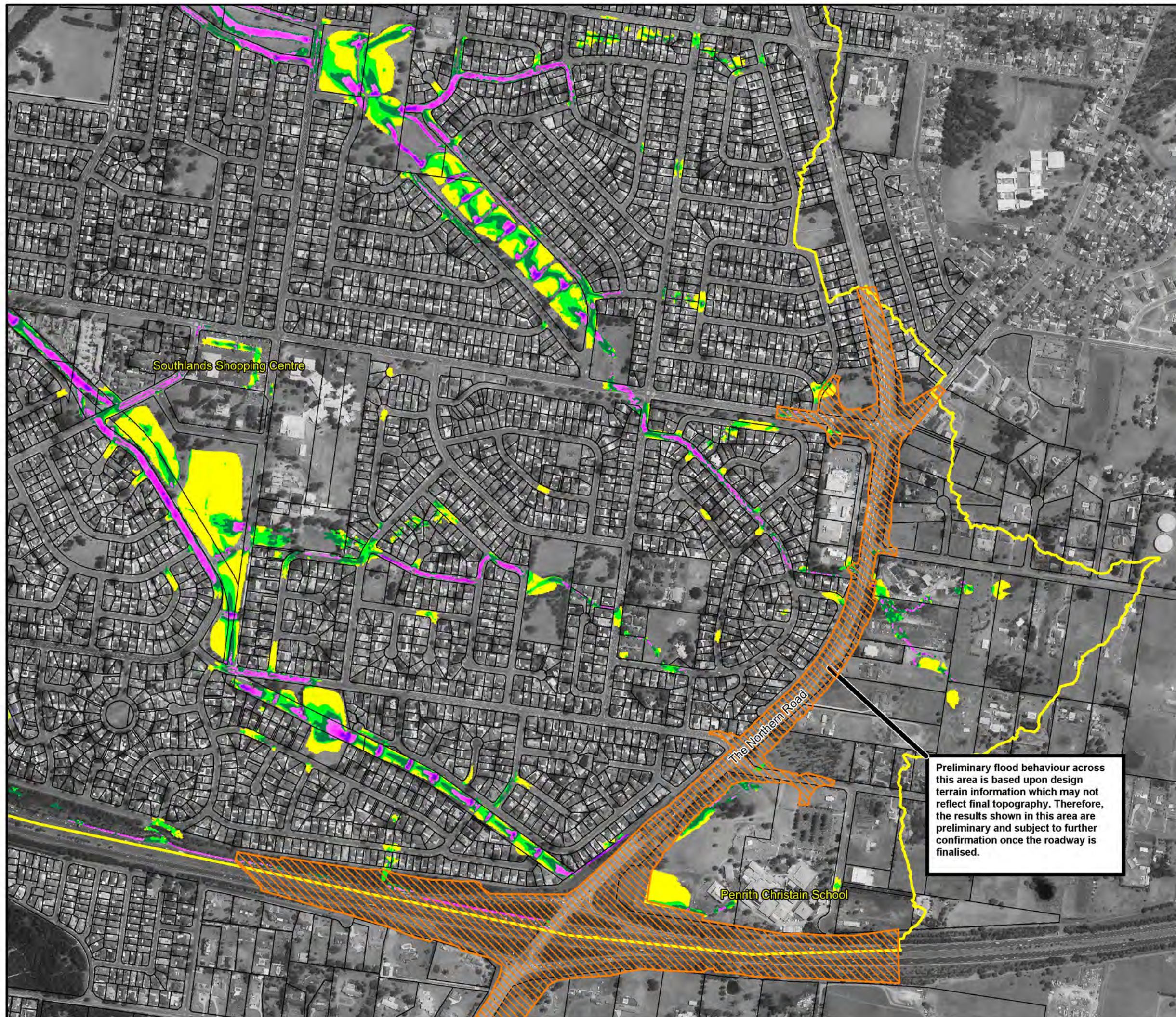


Figure 63.5:
Peak Flow Velocities
for the 1% AEP Flood

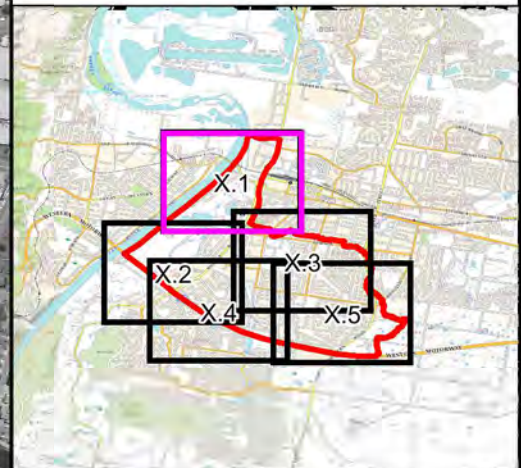
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig63.5 - Velocity for 1% AEP
Flood.wor



Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the roadway is finalised.



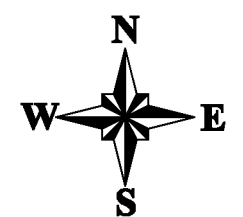
LEGEND

Hazard Categories

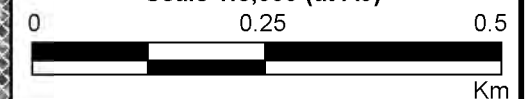
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 64.1:
Flood Hazard
for the 1% AEP
Flood**

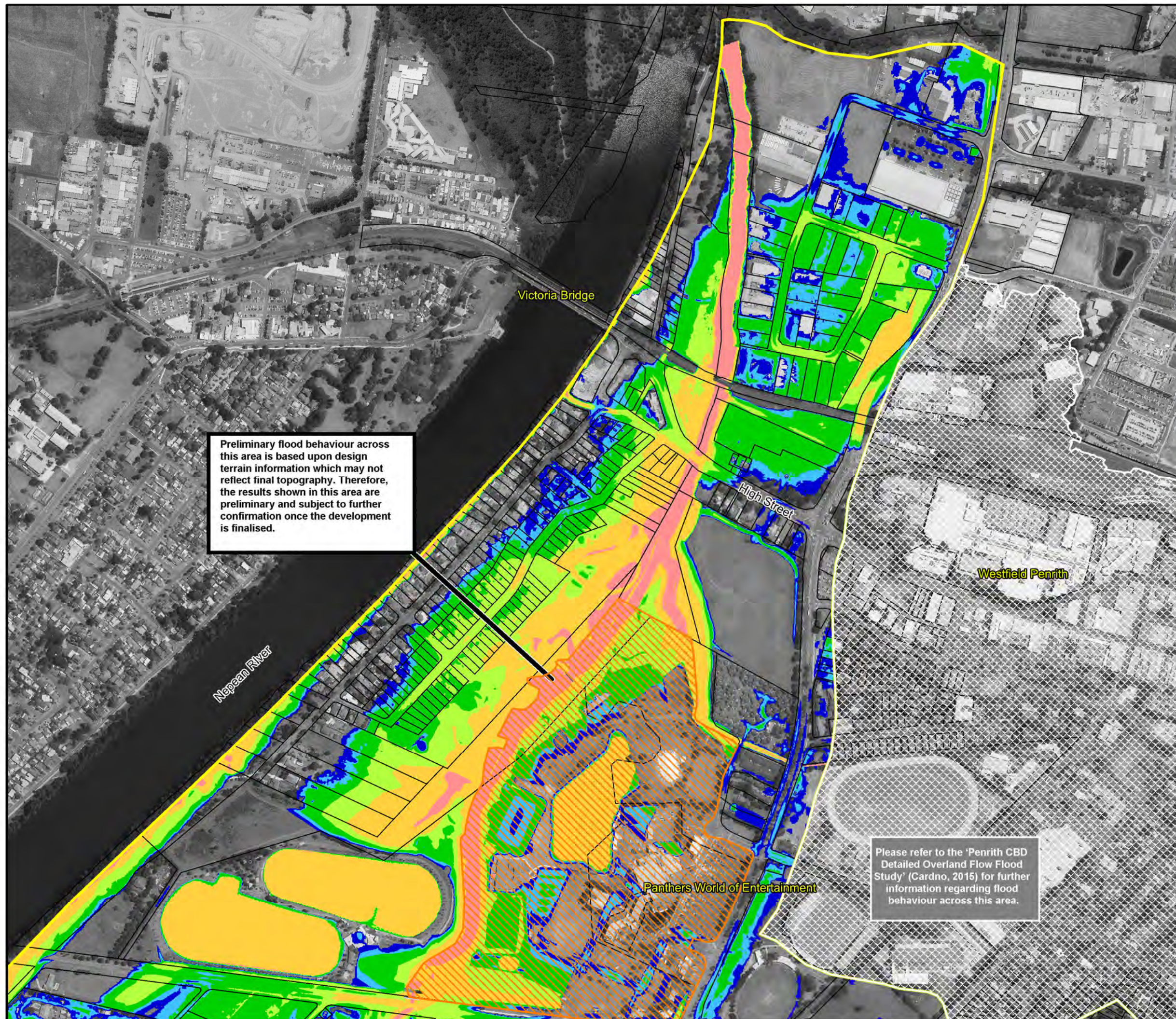
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

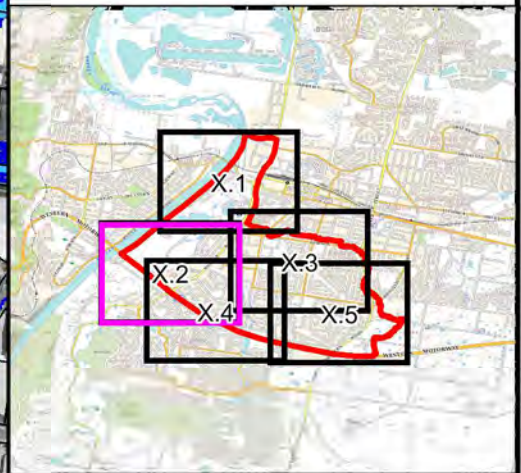
File Name: Fig64.1 - Flood Hazard
1% AEP Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



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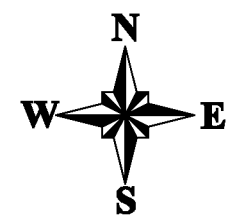
LEGEND

Hazard Categories

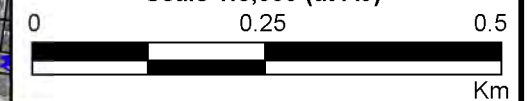
- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 64.2:
Flood Hazard
for the 1% AEP
Flood**

Prepared By:

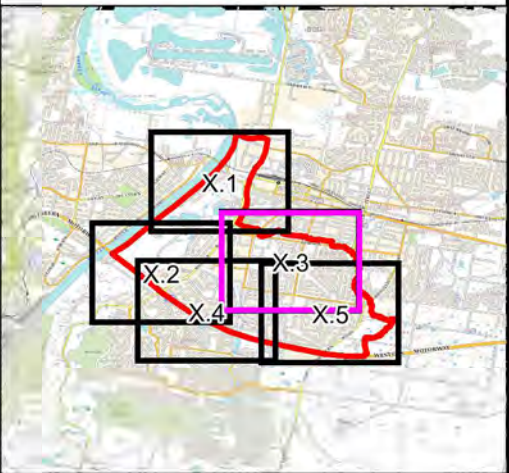
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig64.2 - Flood Hazard
1% AEP Flood.wor



Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

PENRITH CITY COUNCIL

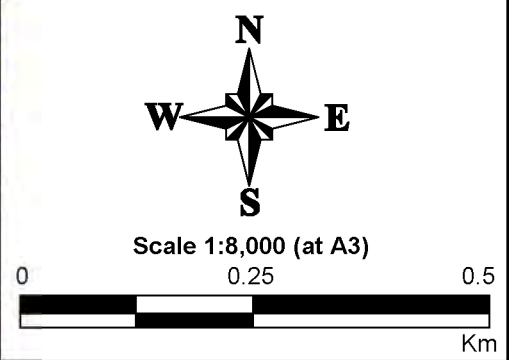


LEGEND

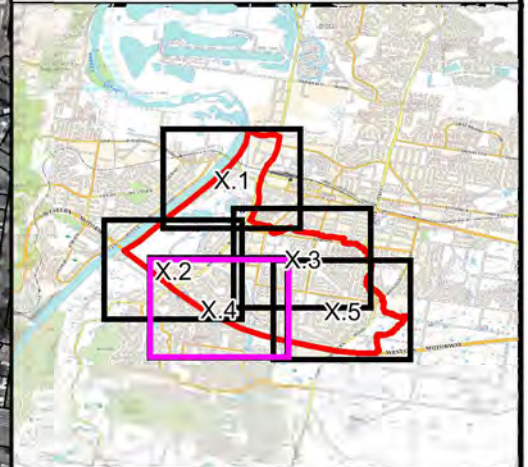
Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



**Figure 64.3:
Flood Hazard
for the 1% AEP
Flood**



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

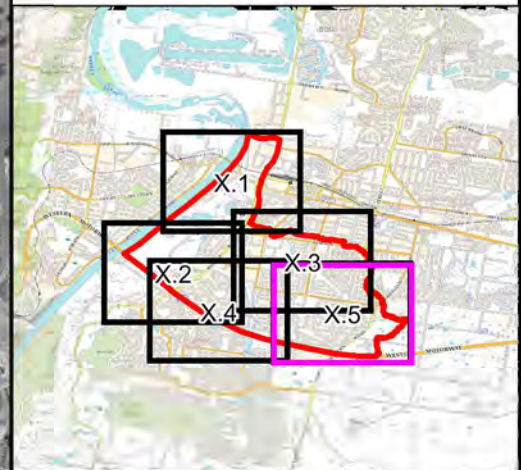


**Figure 64.4:
Flood Hazard
for the 1% AEP
Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig64.4 - Flood Hazard
1% AEP Flood.wor



LEGEND

Hazard Categories

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people or vehicles. Buildings require special design
- H6 - unsafe for people or vehicles. All buildings vulnerable to failure

Notes:

Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)

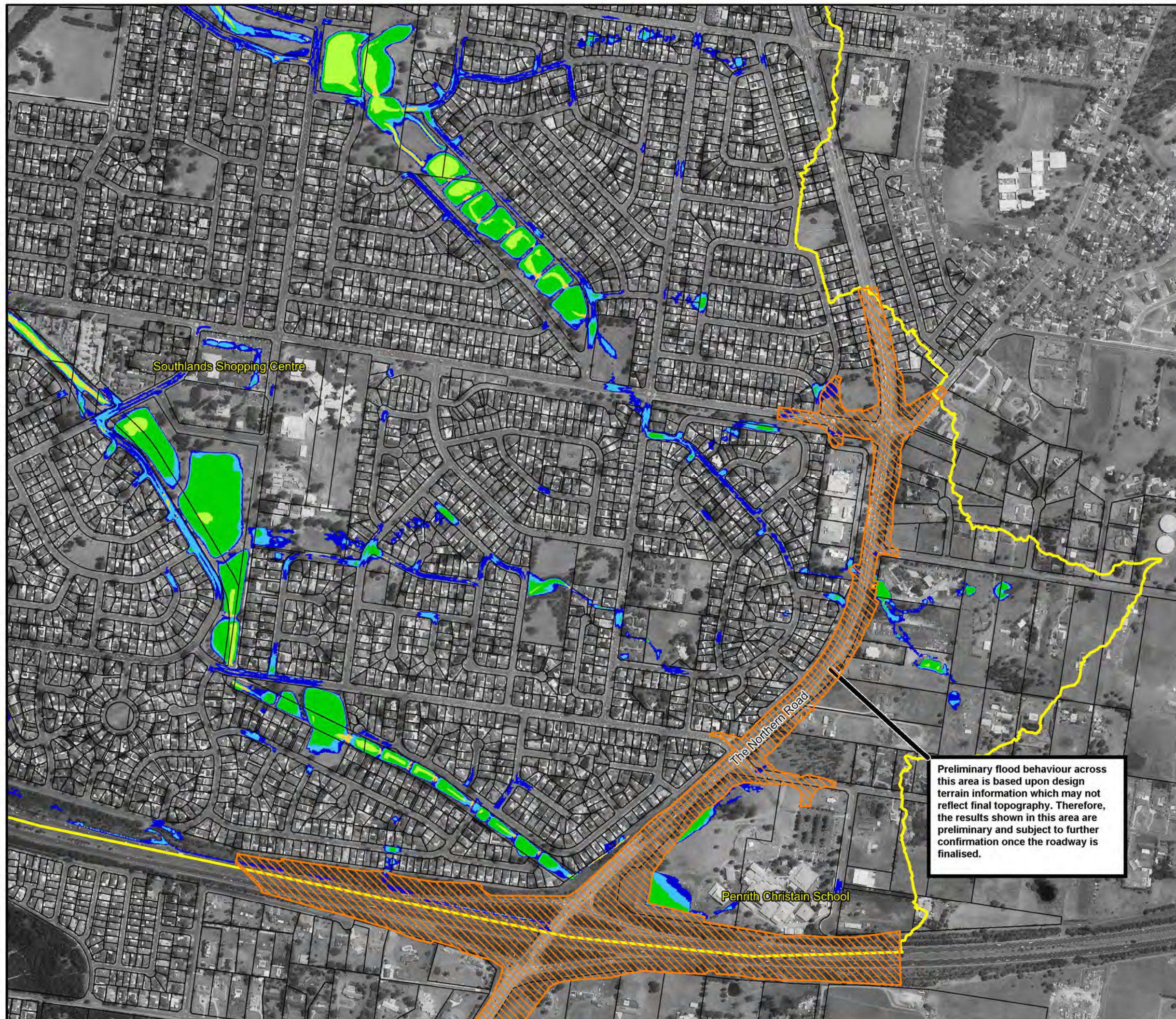


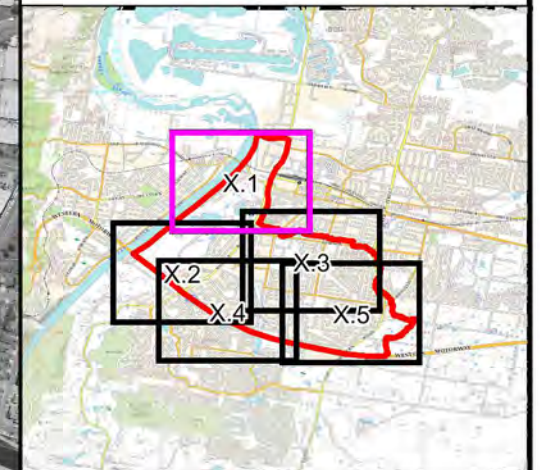
**Figure 64.5:
Flood Hazard
for the 1% AEP
Flood**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig64.5 - Flood Hazard
1% AEP Flood.wor

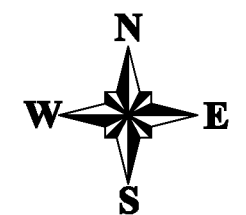




LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



Scale 1:8,000 (at A3)



**Figure 65.1:
Hydraulic Categories
for the 1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig65.1 - HydCat for 1% AEP
Flood.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

Victoria Bridge

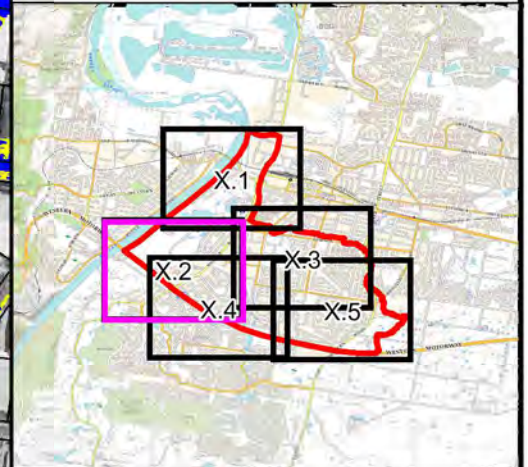
High Street

Westfield Penrith

Panthers World of Entertainment

Nepean River

PENRITH CITY COUNCIL



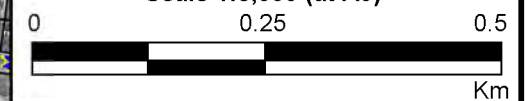
LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



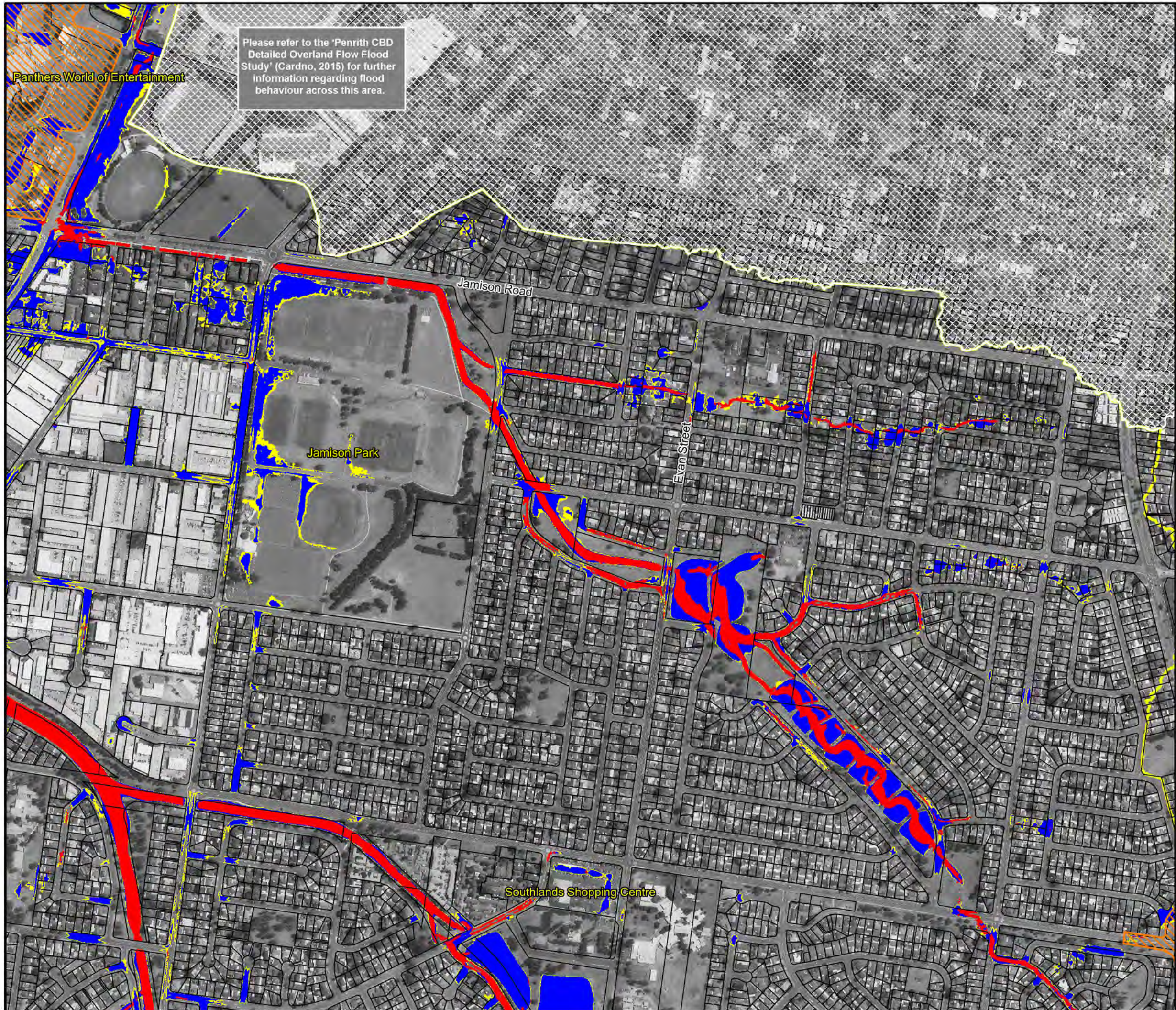
Scale 1:8,000 (at A3)



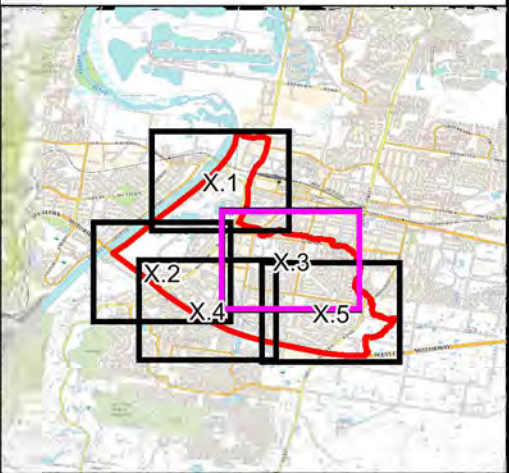
**Figure 65.2:
Hydraulic Categories
for the 1% AEP Flood**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig65.2 - HydCat for 1% AEP
Flood.wor



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LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood

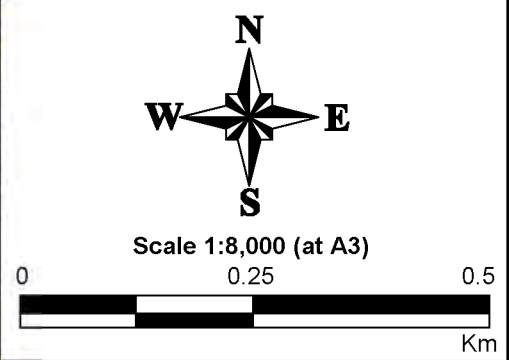
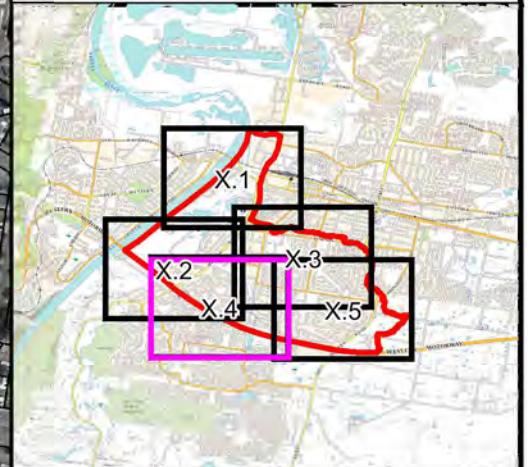


Figure 65.3:
Hydraulic Categories
for the 1% AEP Flood

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig65.3 - HydCat for 1% AEP Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway


Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



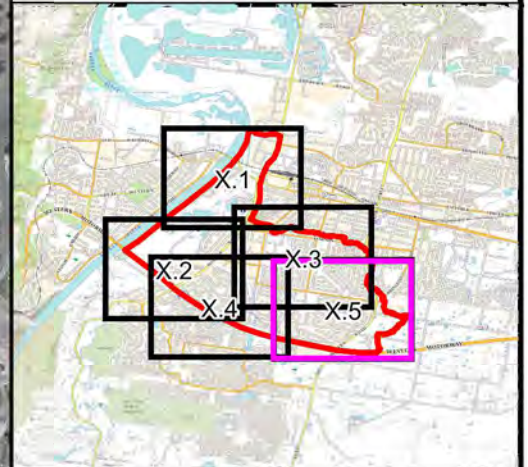
Scale 1:8,000 (at A3)



Figure 65.4:
Hydraulic Categories
for the 1% AEP Flood

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig65.4 - HydCat for 1% AEP
Flood.wor



LEGEND

- Hydraulic Categories
- Flood Fringe
 - Flood Storage
 - Floodway

Notes:
Aerial photograph date: 2016
Results presented in this figure assume a flood from the local catchment occurs at the same time as a 5% AEP Nepean River flood



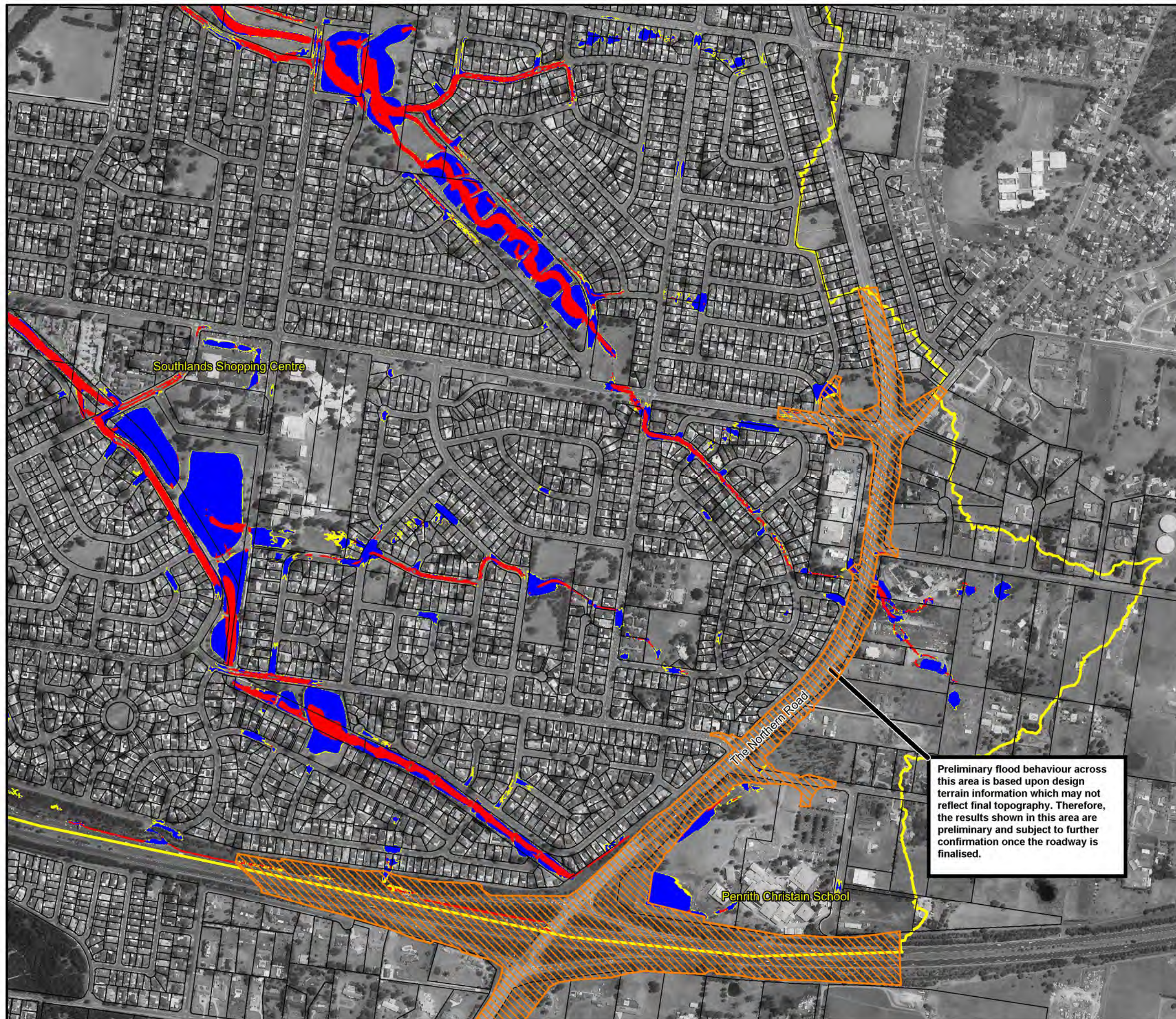
Scale 1:8,000 (at A3)

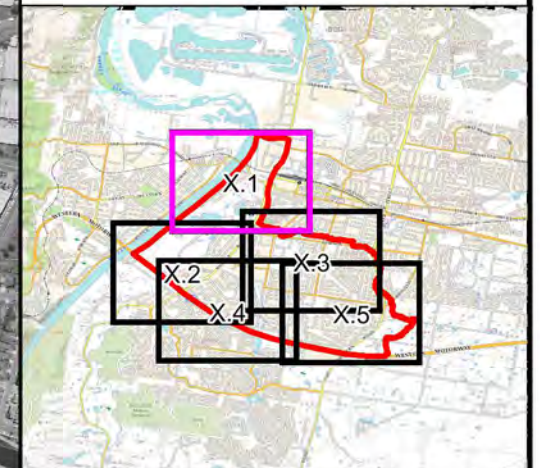


**Figure 65.5:
Hydraulic Categories
for the 1% AEP Flood**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig65.5 - HydCat for 1% AEP
Flood.wor

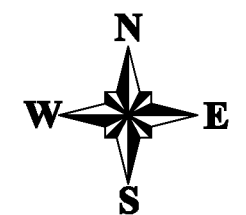




LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 66.1:
Flood Planning
Area**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.1 - FPA.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

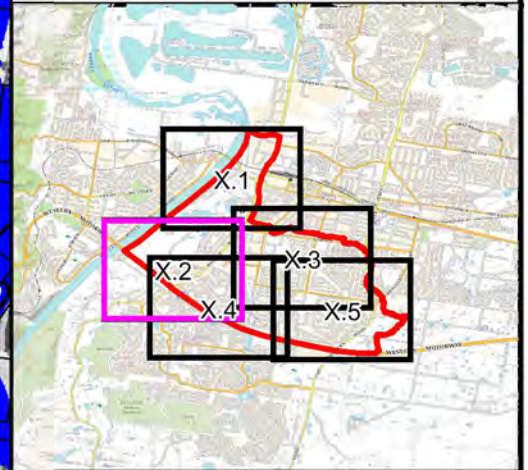
Victoria Bridge

High Street

Westfield Penrith

Panthers World of Entertainment

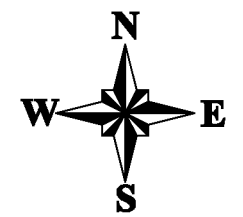
Nepean River



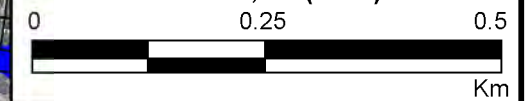
LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

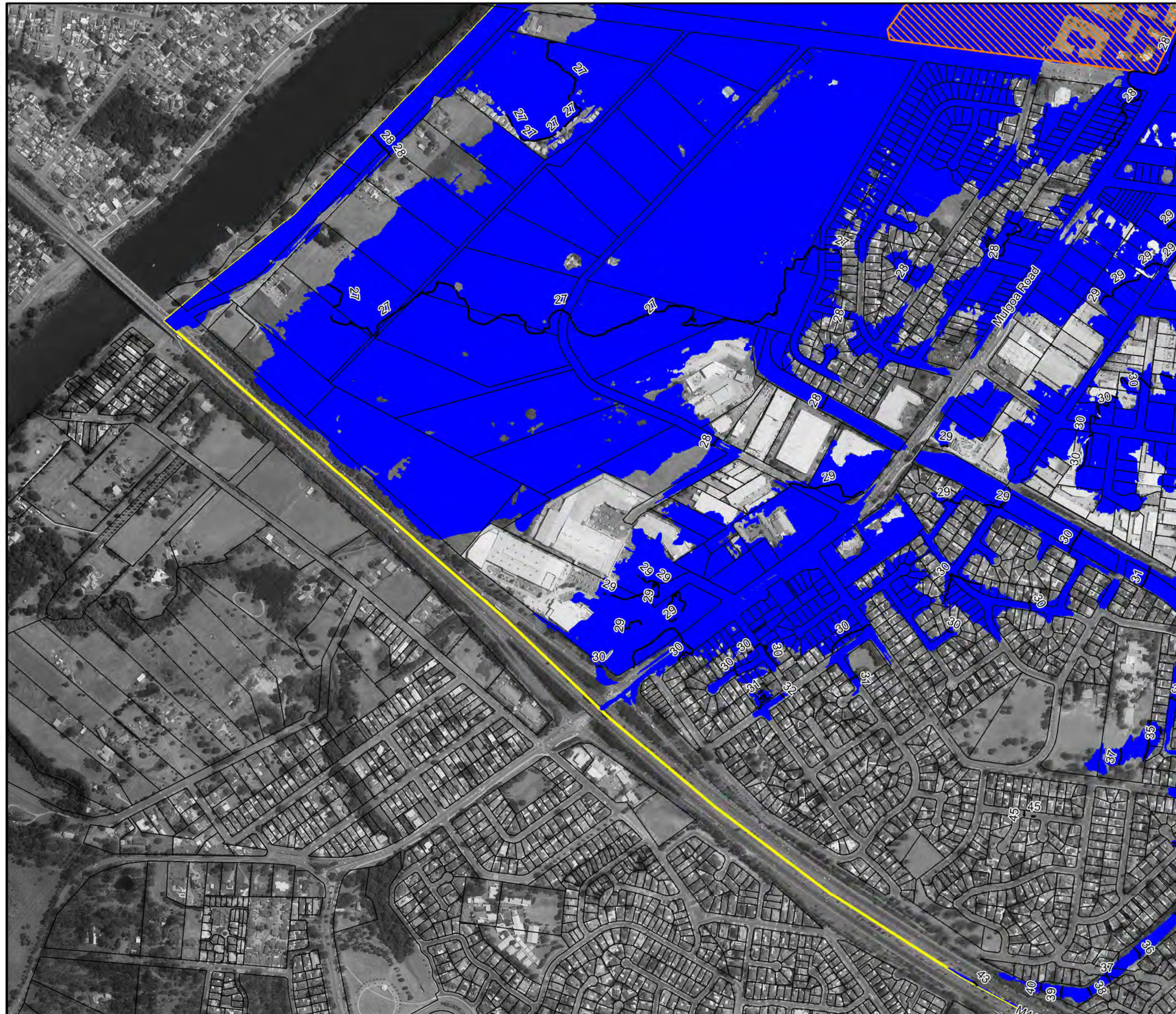


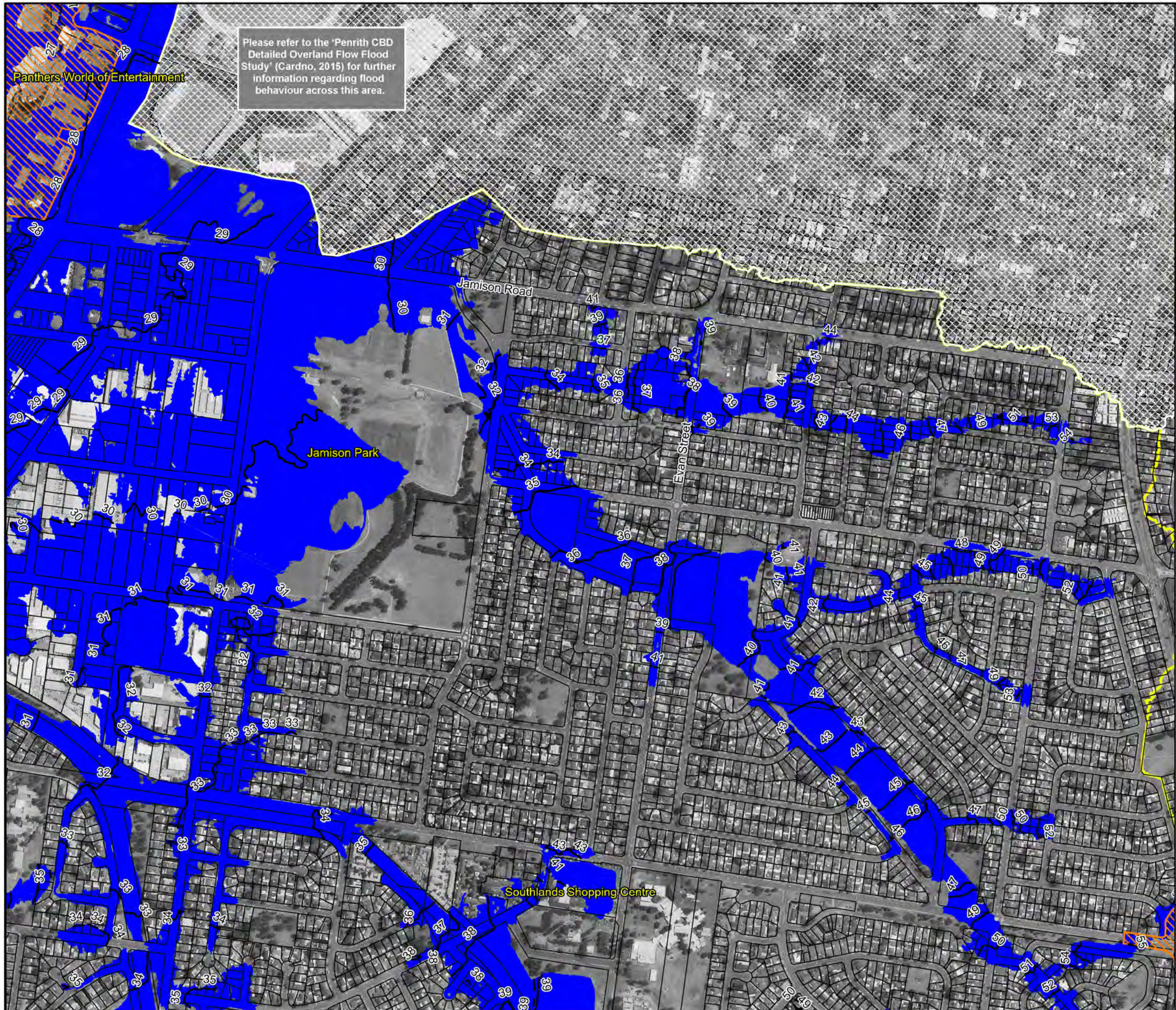
**Figure 66.2:
Flood Planning
Area**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

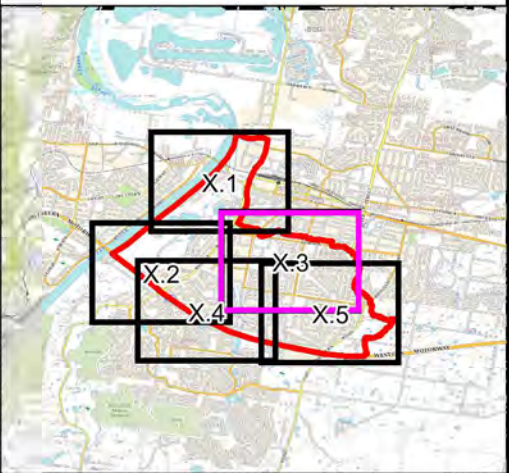
File Name: Fig66.2 - FPA.wor





Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

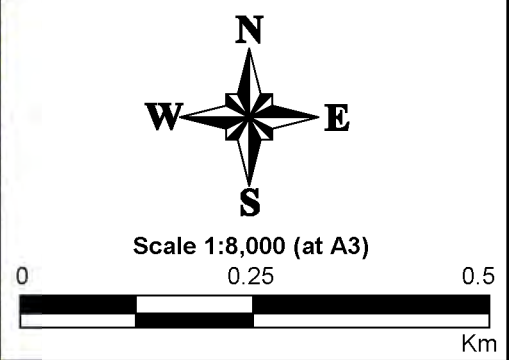
PENRITH CITY COUNCIL




LEGEND

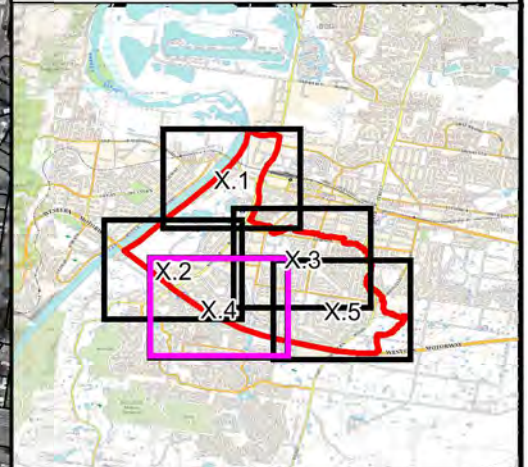
- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



**Figure 66.3:
Flood Planning
Area**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig66.3 - FPA.wor



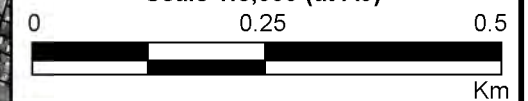
LEGEND

- Flood Planning Area
- 25 Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

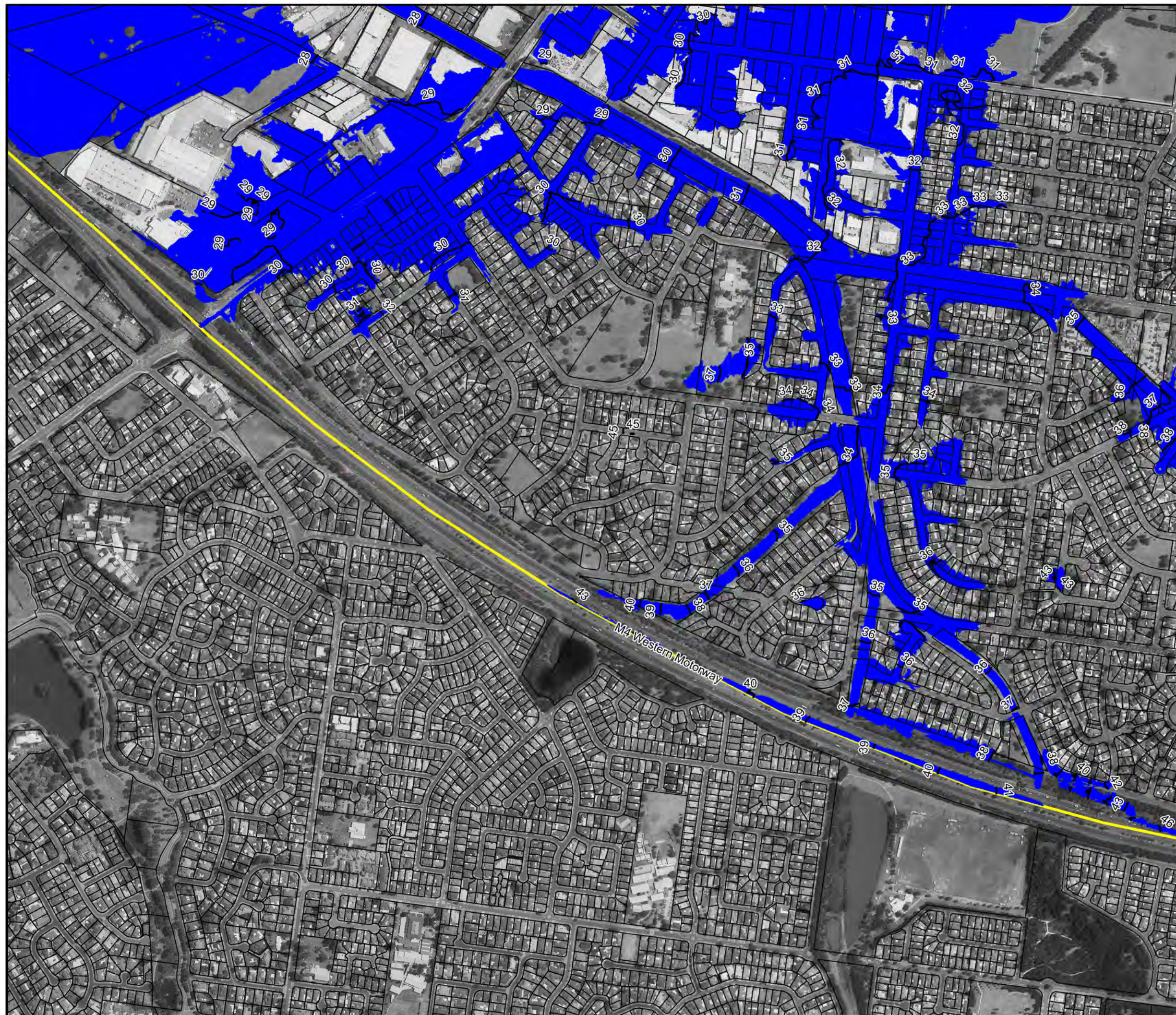


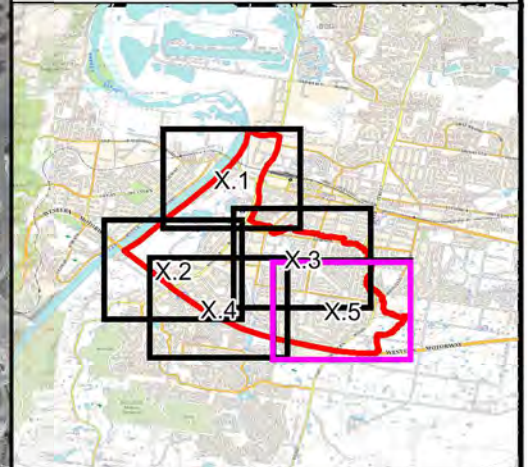
**Figure 66.4:
Flood Planning
Area**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.4 - FPA.wor





LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

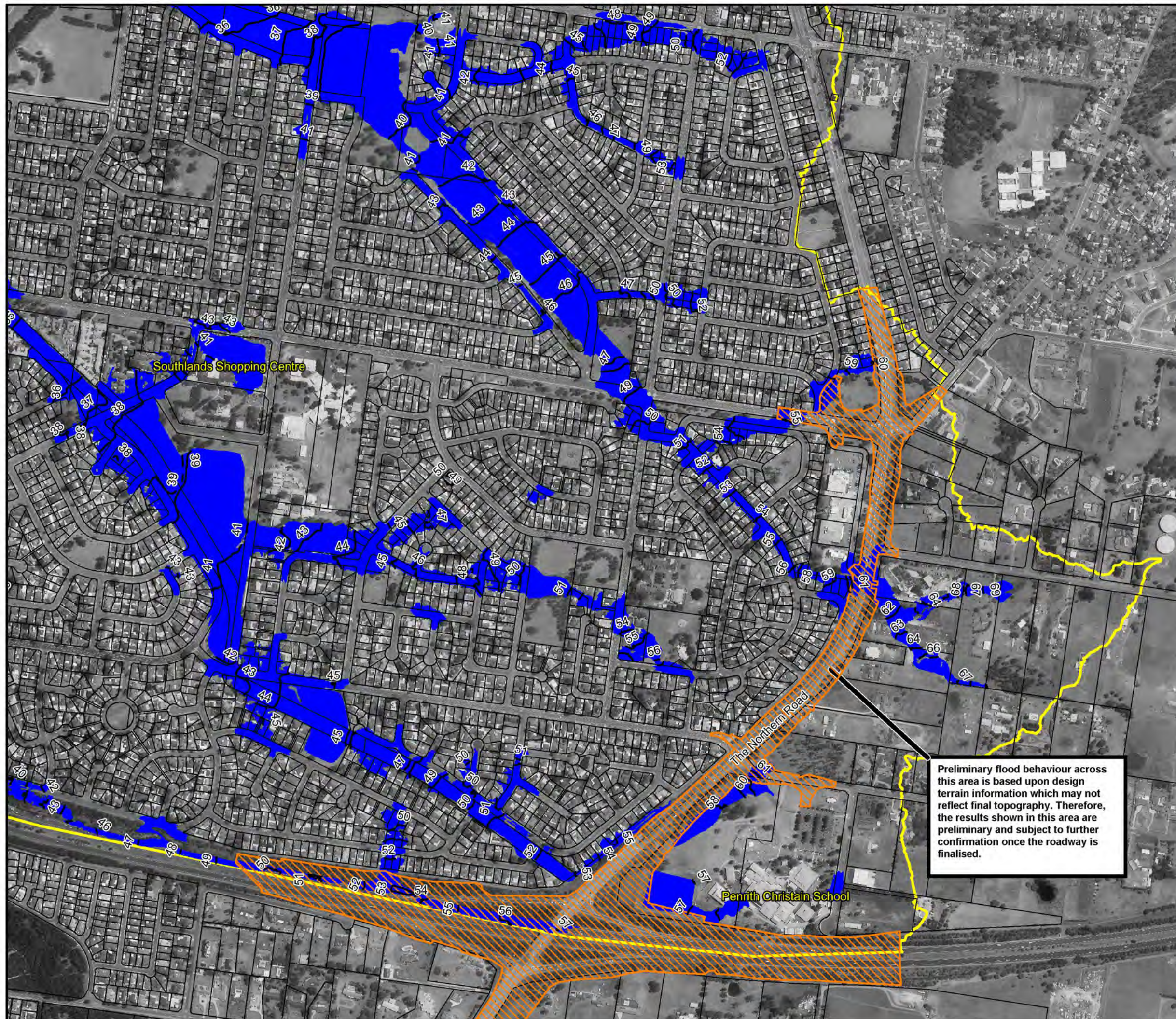


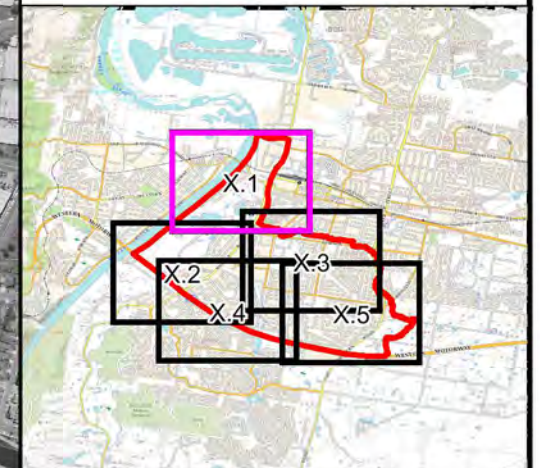
**Figure 66.5:
Flood Planning
Area**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.5 - FPA.wor

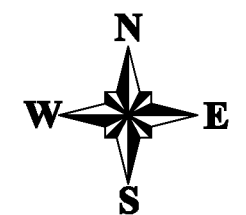




LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)



**Figure 66.1:
Flood Planning
Area**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.1 - FPA.wor

Preliminary flood behaviour across this area is based upon design terrain information which may not reflect final topography. Therefore, the results shown in this area are preliminary and subject to further confirmation once the development is finalised.

Victoria Bridge

26

High Street

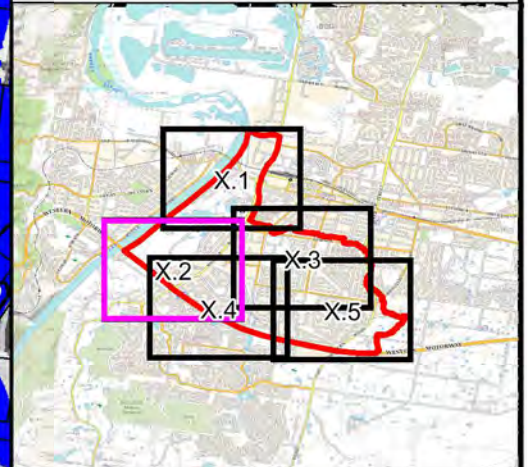
Westfield Penrith

Nepean River

Panthers World of Entertainment

Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.

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LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

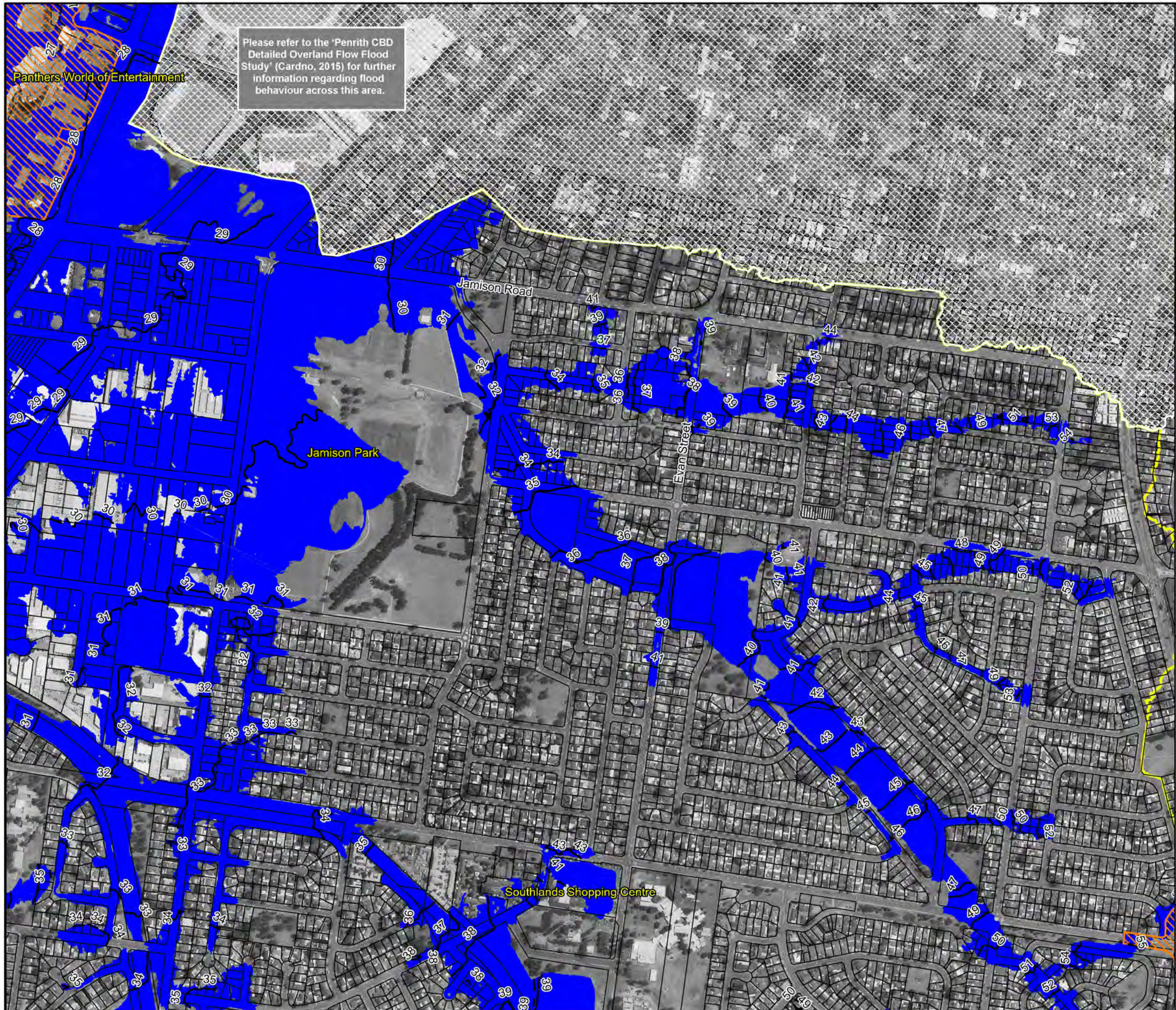


**Figure 66.2:
Flood Planning
Area**

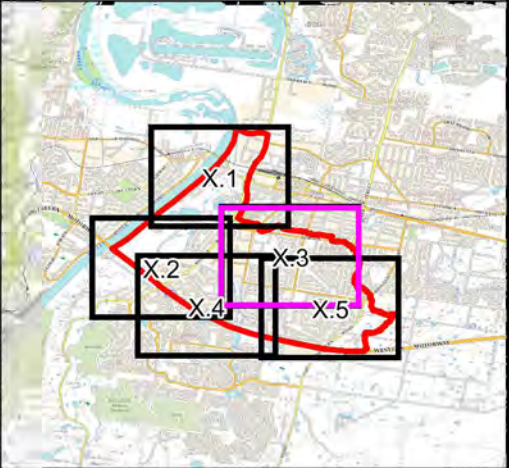
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.2 - FPA.wor



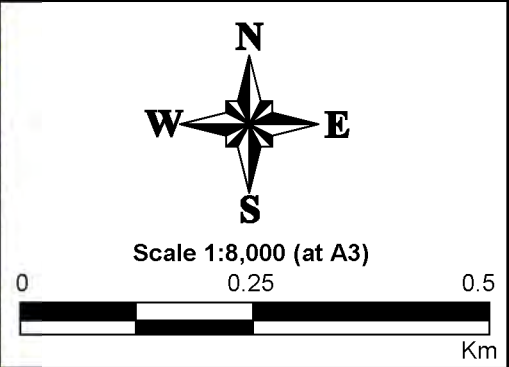
Please refer to the 'Penrith CBD Detailed Overland Flow Flood Study' (Cardno, 2015) for further information regarding flood behaviour across this area.



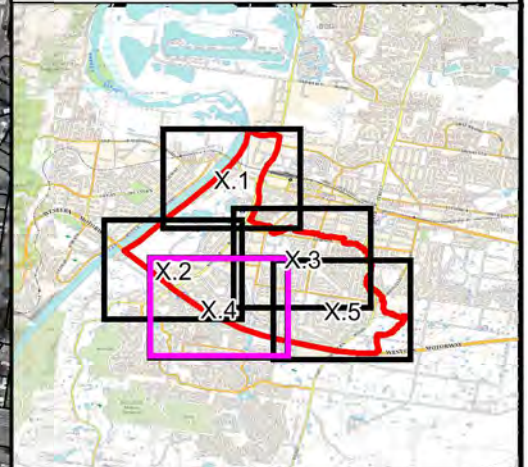
LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



**Figure 66.3:
Flood Planning
Area**



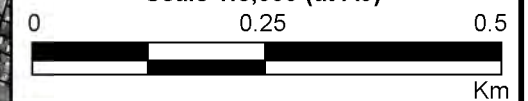
LEGEND

- Flood Planning Area
- Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

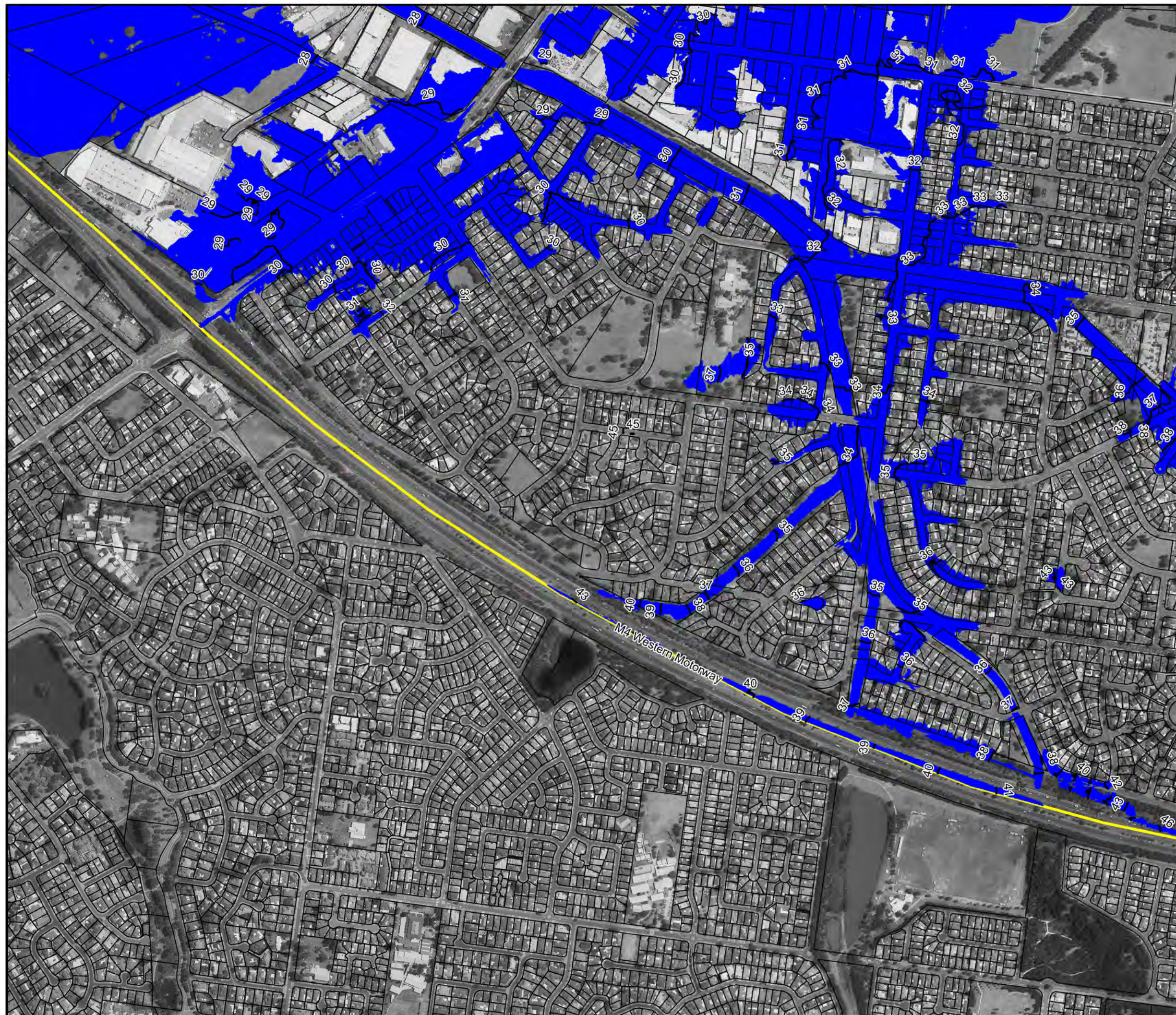


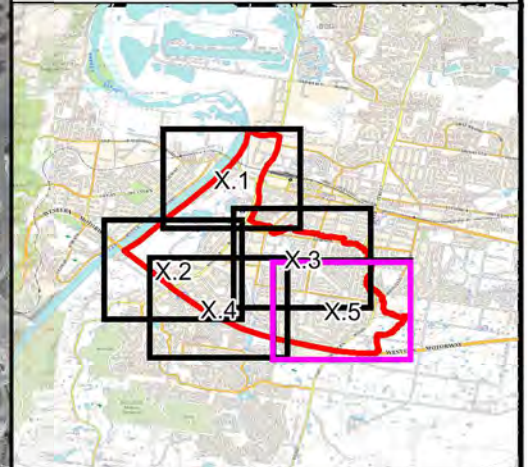
**Figure 66.4:
Flood Planning
Area**

Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.4 - FPA.wor





LEGEND

- Flood Planning Area
- 25 Flood Planning Level Contour (mAHD)

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

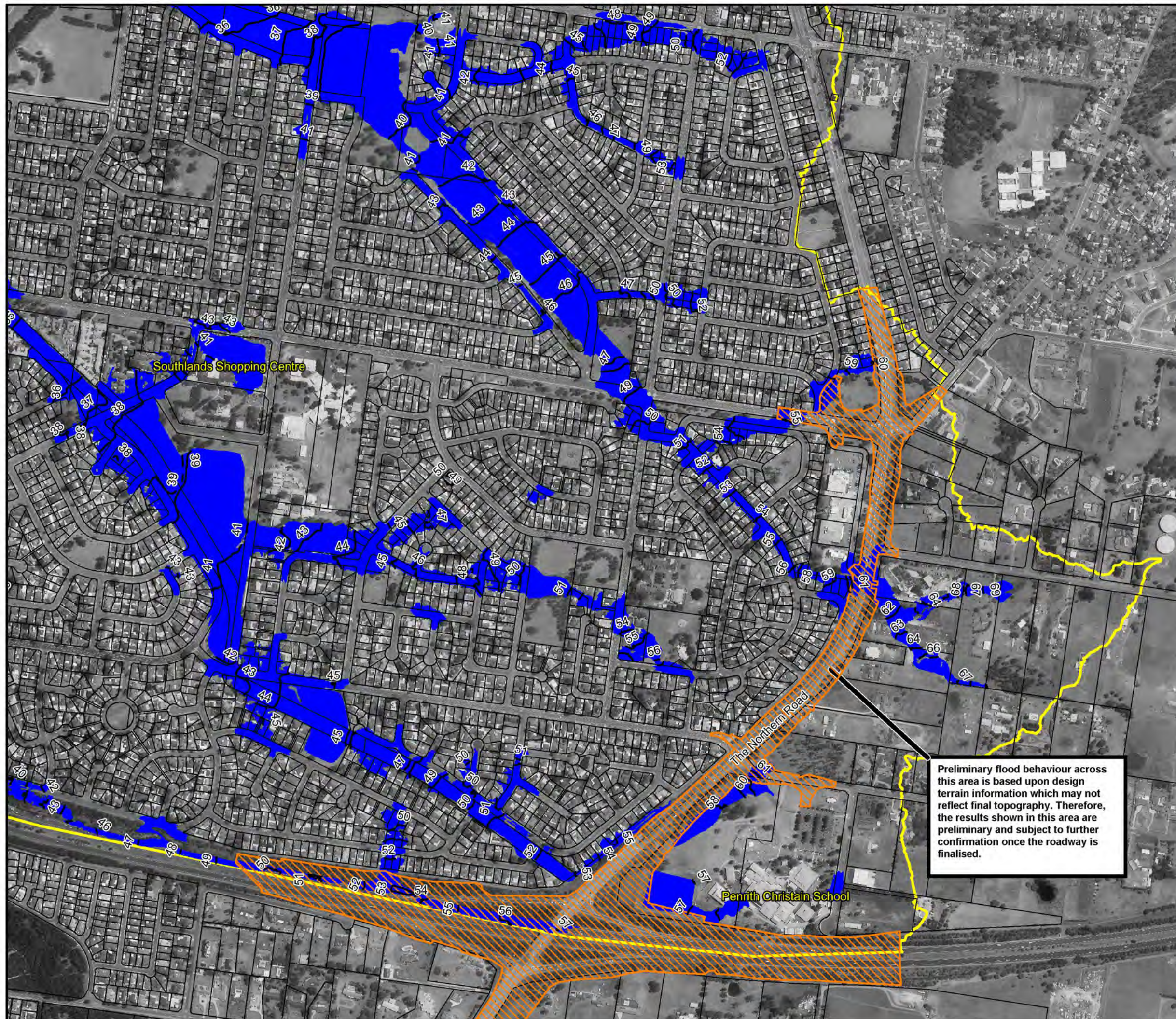


**Figure 66.5:
Flood Planning
Area**

Prepared By:

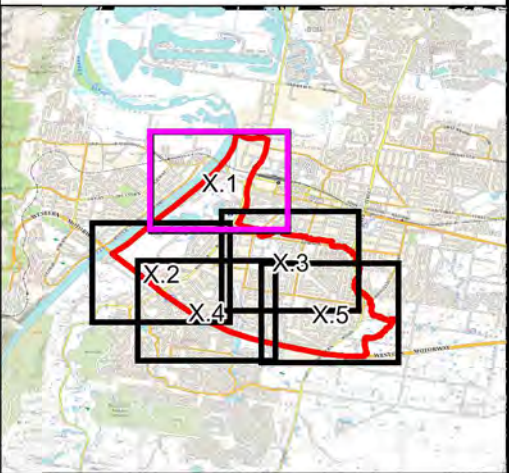
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig66.5 - FPA.wor





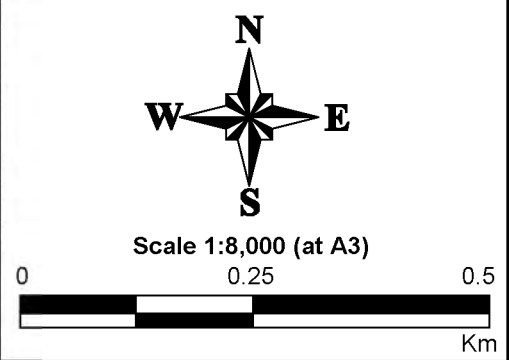
PENRITH CITY COUNCIL



LEGEND

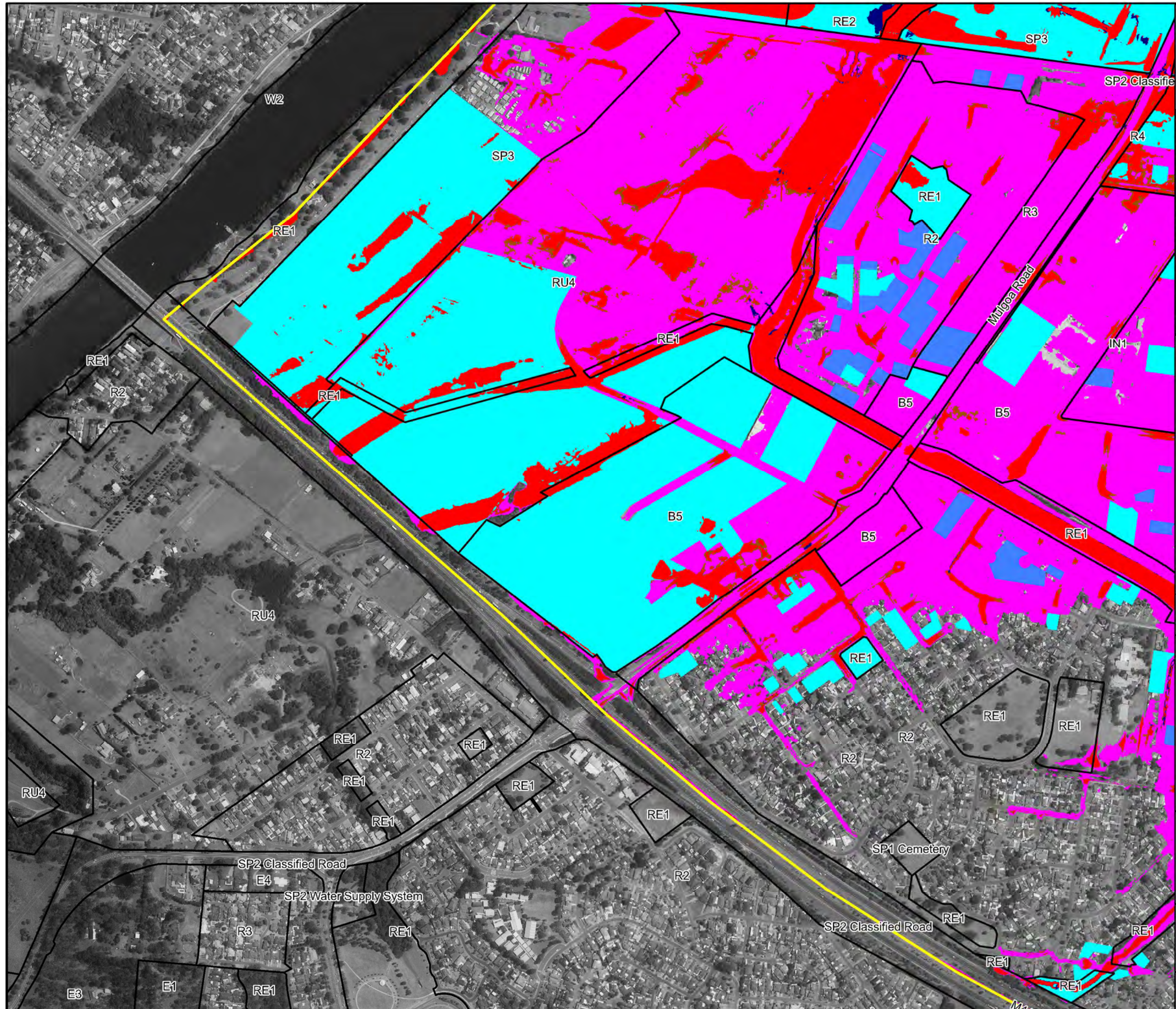
- Category 1
- A
 - B
- Category 2
- A
 - B
 - C
 - D
 - E
- Category 3
-
- Category 4
-
- R2 Land Zone Extent

Notes:
Aerial photograph date: 2016

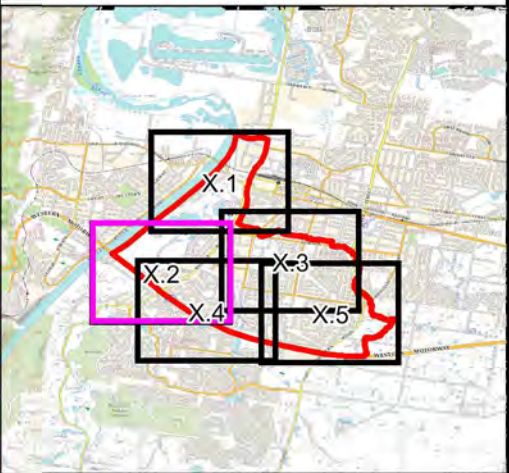


**Figure 67.1:
Flood Planning
Constraint Categories**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig67.1 - FPCC.wor



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LEGEND

Category 1

- A
- B

Category 2

- A
- B
- C
- D
- E

Category 3

-

Category 4

-

R2 Land Zone Extent

Notes:
Aerial photograph date: 2016

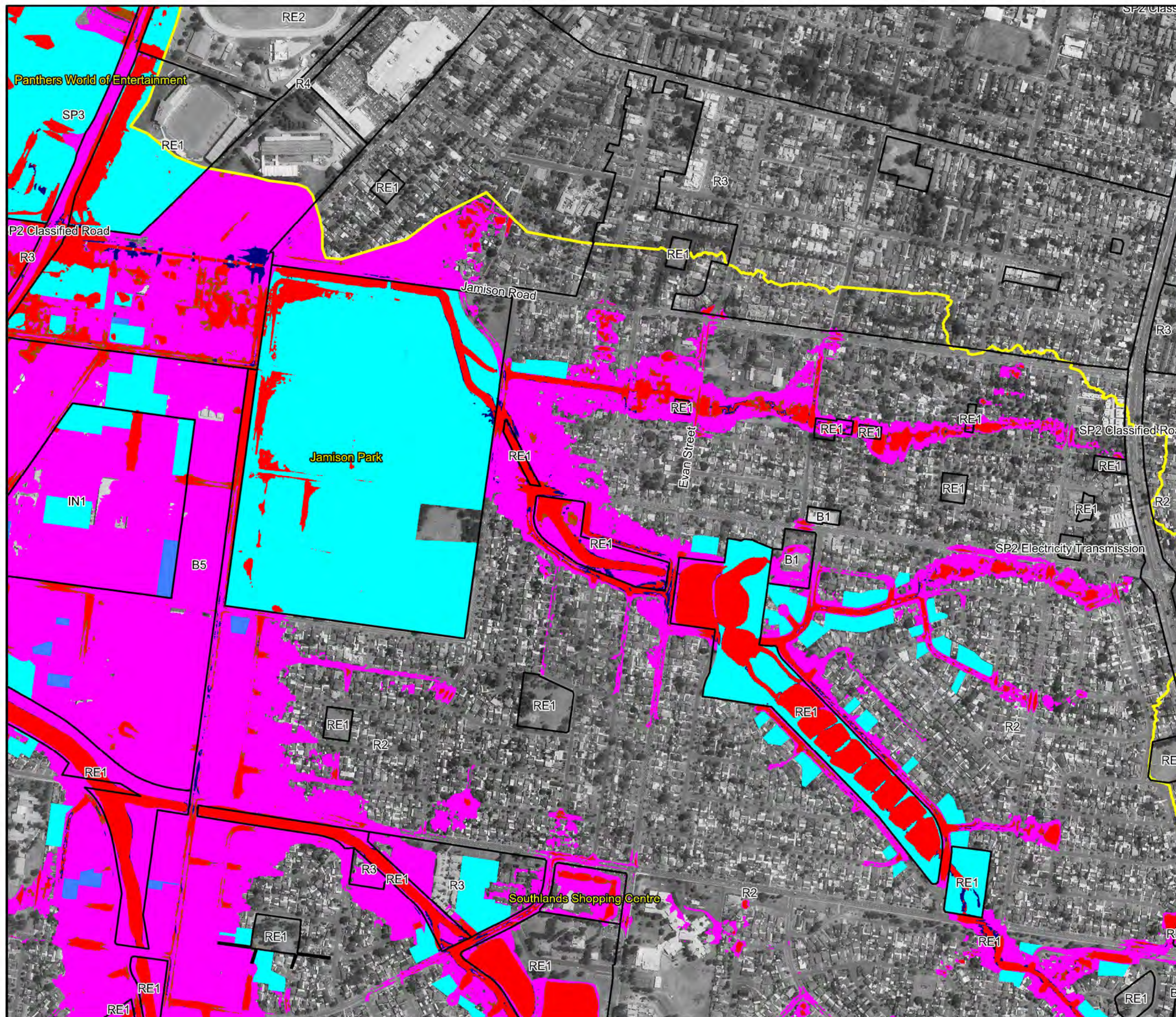
N
W E
S

Scale 1:8,000 (at A3)

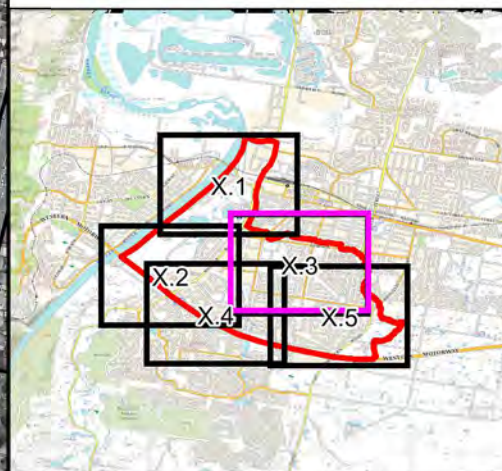
0 0.25 0.5
Km

**Figure 67.2:
Flood Planning
Constraint Categories**

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig67.2 - FPCC.wor



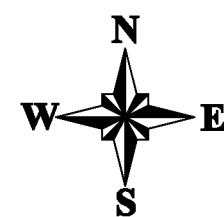
PENRITH CITY COUNCIL



LEGEND

- Category 1
- A
 - B
- Category 2
- A
 - B
 - C
 - D
 - E
- Category 3
-
- Category 4
-
- R2 Land Zone Extent

Notes:
Aerial photograph date: 2016



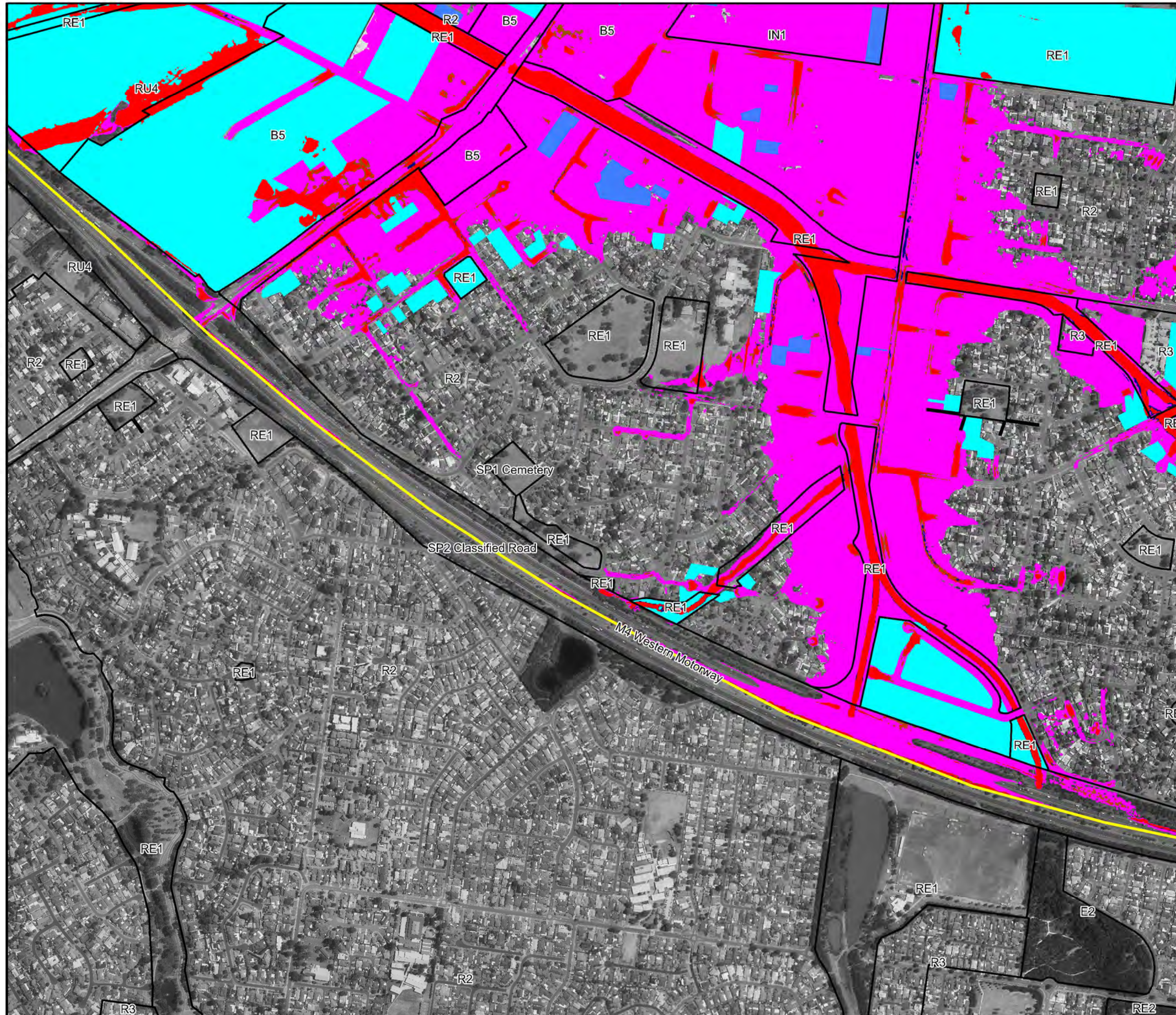
Scale 1:8,000 (at A3)



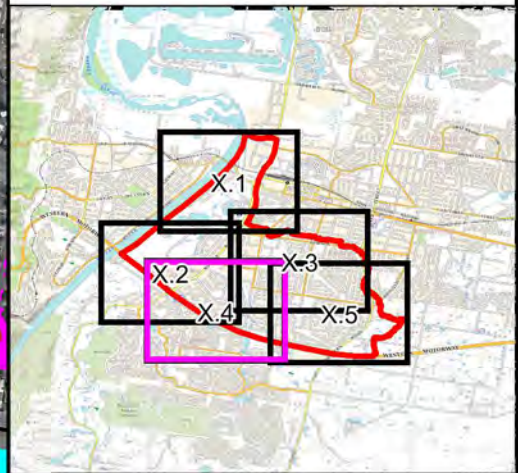
Figure 67.3:
Flood Planning
Constraint Categories

Prepared By:
Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig67.3 - FPCC.wor



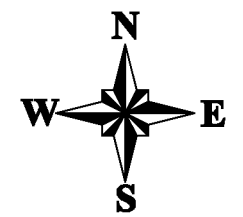
PENRITH CITY COUNCIL



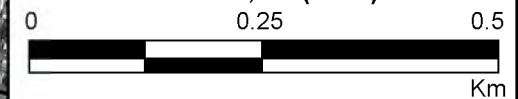
LEGEND

- Category 1
- A
 - B
- Category 2
- A
 - B
 - C
 - D
 - E
- Category 3
-
- Category 4
-
- R2 Land Zone Extent

Notes:
Aerial photograph date: 2016



Scale 1:8,000 (at A3)

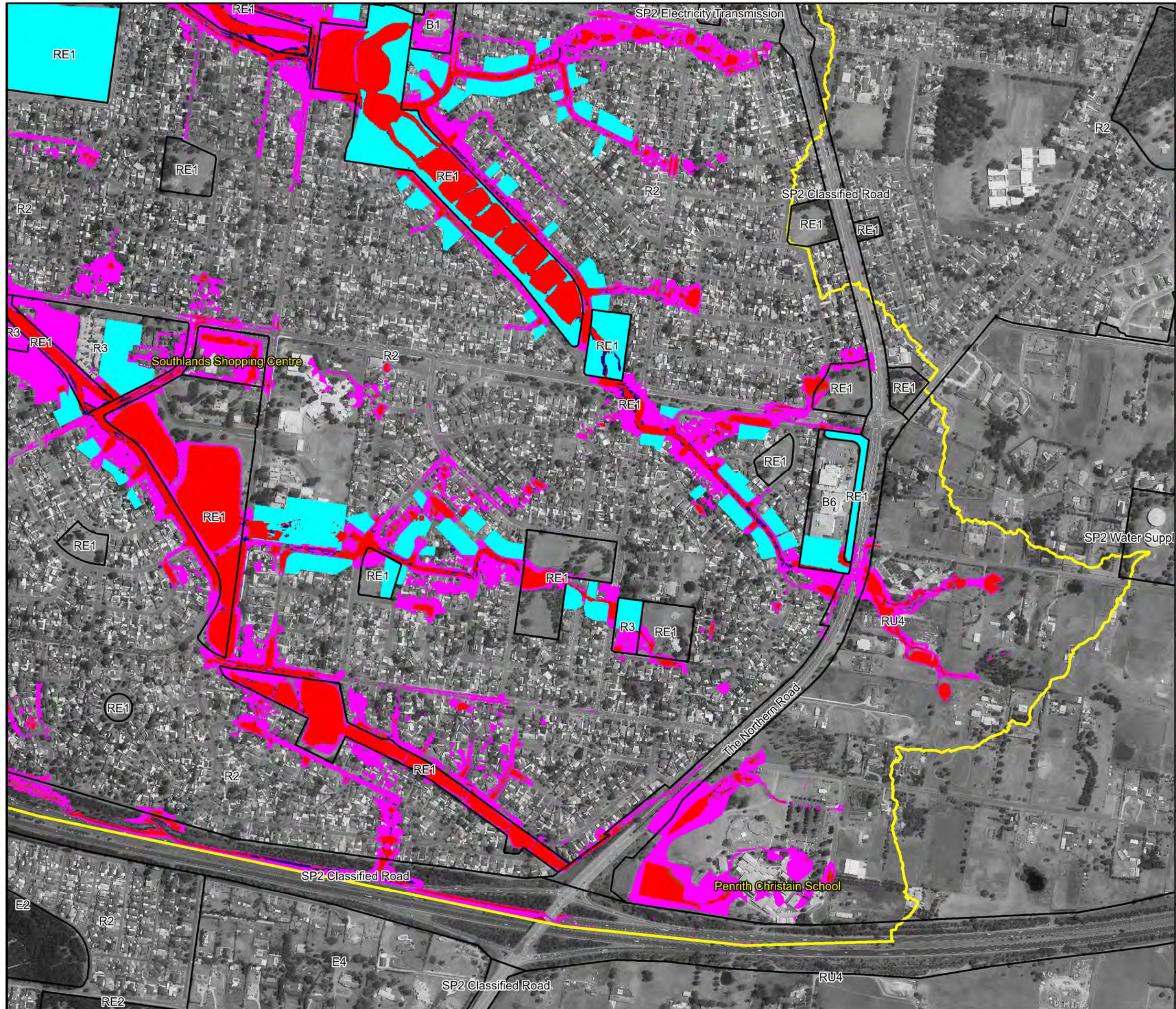


**Figure 67.4:
Flood Planning
Constraint Categories**

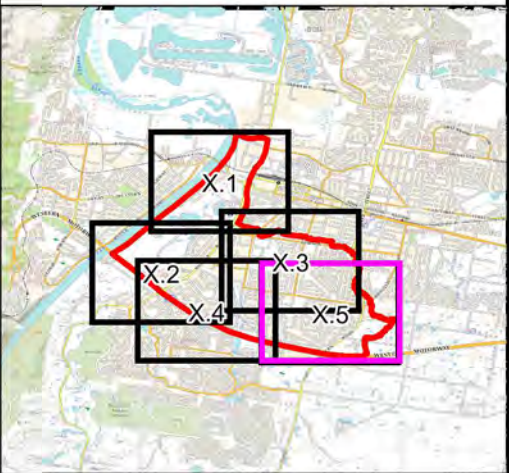
Prepared By:

Catchment Simulation Solutions
Suite 2.01, 210 George St
Sydney, NSW 2000

File Name: Fig67.4 - FPCC.wor

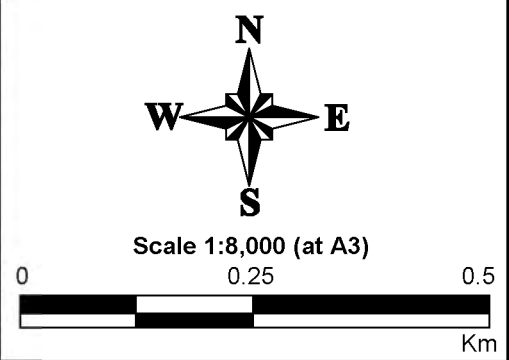


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LEGEND	
Category 1	
Red	A
Orange	B
Category 2	
Dark Blue	A
Blue	B
Light Blue	C
Cyan	D
Green	E
Category 3	
Brown	
Category 4	
Pink	
Yellow line	Land Zone Extent

Notes:
Aerial photograph date: 2016



**Figure 67.5:
Flood Planning
Constraint Categories**

Prepared By:
 **Catchment Simulation Solutions**
Suite 2.01, 210 George St
Sydney, NSW 2000
File Name: Fig67.5 - FPCC.wor



POTENTIAL FLOOD MITIGATION OPTIONS





LEGEND

- Peak 1% AEP Flood Extent
- Existing Stormwater Pit
- Existing Stormwater Pipe
- Flood Mitigation Options**
- Regrading
- Drainage Easement
- Detention Basin
- Stormwater Pit Upgrade
- Stormwater Pipe Upgrade

Notes:
Aerial photograph date: 2016



Scale 1:4,000 (at A3)



**Figure 68.1:
Potential Flood
Mitigation Options**

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Sydney, NSW 2000

File Name: Fig68.1 - Potential Flood Mitigation Options.wor





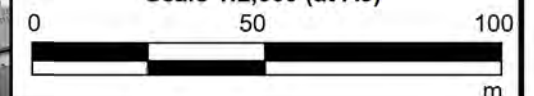
LEGEND

- Peak 1% AEP Flood Extent
- Existing Stormwater Pit
- Existing Stormwater Pipe
- Flood Mitigation Options**
 - Underground Storage
 - Drainage Easement
 - Stormwater Pit Upgrade
 - Stormwater Pipe Upgrade

Notes:
Aerial photograph date: 2016



Scale 1:2,000 (at A3)



**Figure 68.2:
Potential Flood
Mitigation Options**

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Sydney, NSW 2000

File Name: Fig68.2 - Potential Flood Mitigation Options.wor



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LEGEND

- Peak 1% AEP Flood Extent
- Existing Stormwater Pit
- Existing Stormwater Pipe
- Flood Mitigation Options**
 - Roadworks
 - Detention Basin
 - Stormwater Pit Upgrade
 - Stormwater Pipe Upgrade

Notes:
Aerial photograph date: 2016



Scale 1:1,000 (at A3)

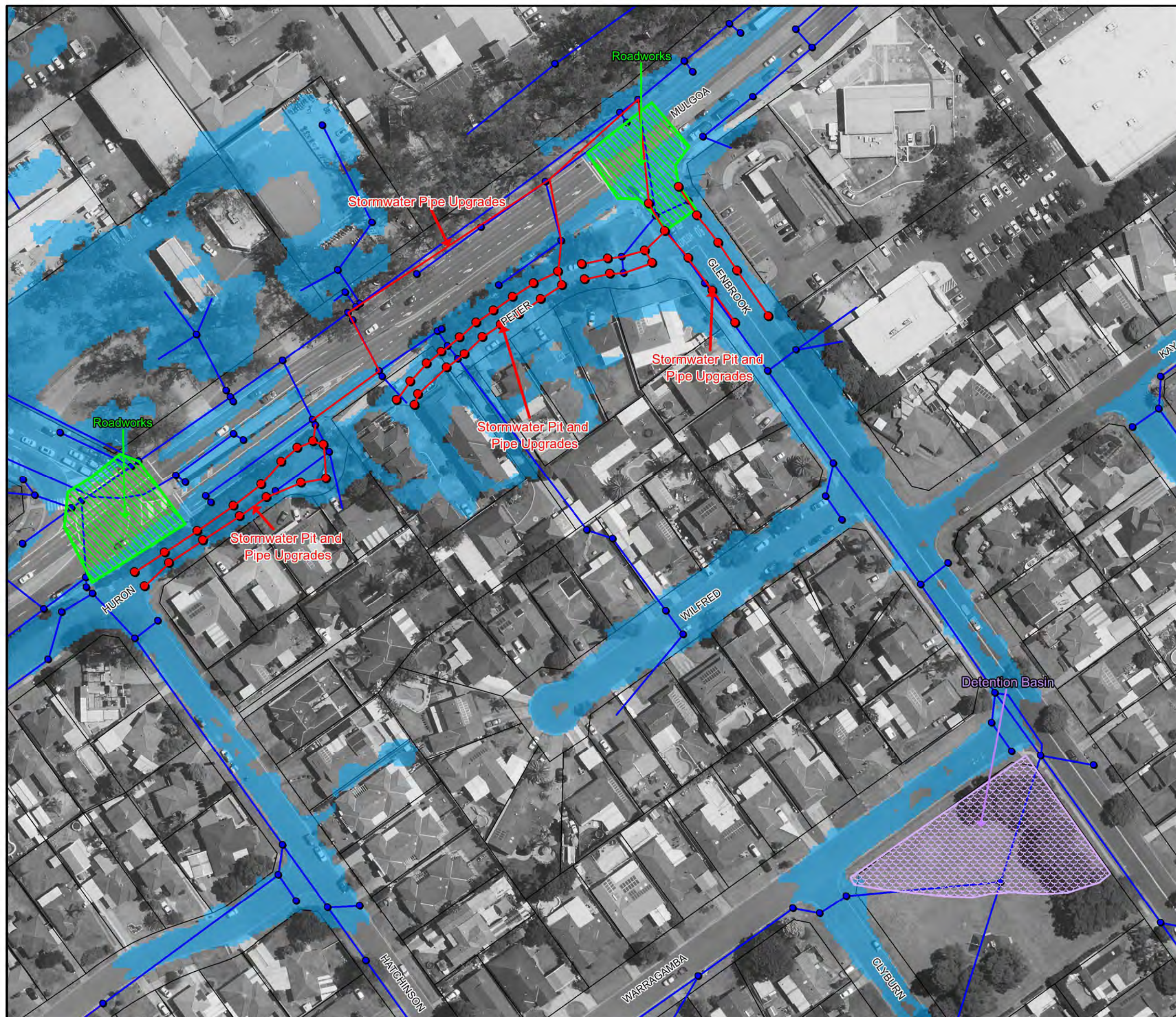


**Figure 68.3:
Potential Flood
Mitigation Options**

Prepared By:

Catchment Simulation Solutions
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Sydney, NSW 2000

File Name: Fig68.3 - Potential Flood Mitigation Options.wor





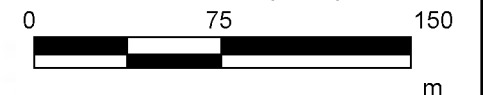
LEGEND

- Peak 1% AEP Flood Extent
- Existing Stormwater Pit
- Existing Stormwater Pipe
- Flood Mitigation Options**
 - Detention Basin
 - Stormwater Pit Upgrade
 - Stormwater Pipe Upgrade
 - Debris Control Structure
 - Culvert Upgrade

Notes:
Aerial photograph date: 2016



Scale 1:3,000 (at A3)



**Figure 68.4:
Potential Flood
Mitigation Options**

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File Name: Fig68.4 - Potential Flood Mitigation Options.wor





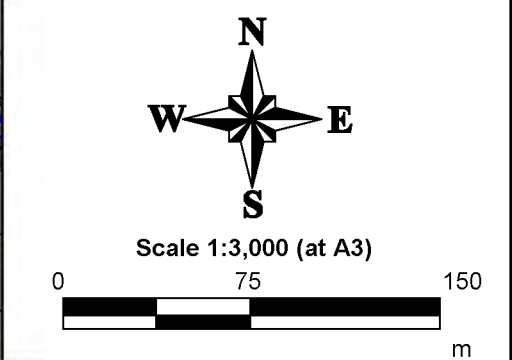
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LEGEND

- Peak 1% AEP Flood Extent
- Existing Stormwater Pit
- Existing Stormwater Pipe
- Flood Mitigation Options**
 - Offline Storage
 - Channel Improvement
 - Underground Storage
 - Levee
 - Stormwater Pit Upgrade
 - Stormwater Pipe Upgrade

Notes:
Aerial photograph date: 2016



**Figure 68.5:
Potential Flood
Mitigation Options**

Prepared By:
Catchment Simulation Solutions
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Sydney, NSW 2000

File Name: Fig68.5 - Potential Flood Mitigation Options.wor