



# Nattai Ponds Catchment

## Floodplain Risk Management Study & Draft Plan

Final Report

Volume 2 of 2: Figures

► Revision 3  
December 2019



Catchment Simulation Solutions

## ► FIGURES

Figure 1: Nattai Ponds Catchment

Figure 2: Nattai Ponds Elevations

Figure 3: Environmental Constraints and Heritage Sites

### Floodwater Depths, Levels, Velocity Maps

Figure 4: Floodwater Depths, Levels and Velocities for the 20% AEP Flood

Figure 5: Floodwater Depths, Levels and Velocities for the 10% AEP Flood

Figure 6: Floodwater Depths, Levels and Velocities for the 5% AEP Flood

Figure 7: Floodwater Depths, Levels and Velocities for the 2% AEP Flood

Figure 8: Floodwater Depths, Levels and Velocities for the 1% AEP Flood

Figure 9: Floodwater Depths, Levels and Velocities for the 0.5% AEP Flood

Figure 10: Floodwater Depths, Levels and Velocities for the 0.2% AEP Flood

Figure 11: Floodwater Depths, Levels and Velocities for the PMF

### Flood Hazard Maps

Figure 12: 10% AEP Flood Hazard

Figure 13: 1% AEP Flood Hazard

Figure 14: 0.5% AEP Flood Hazard

Figure 15: PMF Flood Hazard

### Hydraulic Category Maps

Figure 16: 10% AEP Hydraulic Categories

Figure 17: 1% AEP Hydraulic Categories

Figure 18: PMF Hydraulic Categories

### Emergency Response Precinct Classifications

Figure 19: 5% AEP Flood Emergency Response Classifications

Figure 20: 2% AEP Flood Emergency Response Classifications

Figure 21: 1% AEP Flood Emergency Response Classifications

Figure 22: PMF Flood Emergency Response Classifications

### Future Catchment Development Maps

Figure 23: Potential Future Catchment Land Use

Figure 24: Floodwater Depths, Levels and Velocities for the 20% AEP Flood for Future Catchment Conditions

Figure 25: Floodwater Depths, Levels and Velocities for the 1% AEP Flood for Future Catchment Conditions

Figure 26: Floodwater Depths, Levels and Velocities for the 0.5% AEP Flood for Future Catchment Conditions

Figure 27: 1% AEP Flood Hazard for Future Catchment Conditions

Figure 28: 1% AEP Hydraulic Categories for Future Catchment Conditions

### Miscellaneous Maps

Figure 29: Frequency of Above Floor Flooding

Figure 30: Flood Risk Precincts

Figure 31: Complying Development Assessment

Figure 32: Existing LEP Zoning

Figure 33: Flood Planning Constraint Categories

Figure 34: Flood Planning Area

### Concept Designs for Floodplain Risk Management Options

Figure 35 Concept Design for Modifications to Oldfield Rd Detention Basin Outlet (FM1)

Figure 36 Concept Design for Detention Basin Near Railway Line and Braemar Ave (FM2)

Figure 37 Concept Design for Detention Basin Upstream of Bong Bong Road (FM3)

Figure 38 Concept Design for Detention Basin Downstream of Renwick (FM4)

Figure 39 Concept Design for Upgrading Stormwater System between Biggera St & Old Hume Hwy (FM5)

- Figure 40 Concept Design for the Blockage of Railway Culverts (FM6)
- Figure 41 Concept Design for the Installation of Kerb and Guttering and Stormwater System in Biggera Street and the Old Hume Highway (FM7)
- Figure 42 Concept Design for the Elevation of Railway Embankment near Biggera Street (FM8)
- Figure 43 Concept Design for Industrial Area Channel Enlargement (FM9)
- Figure 44 Concept Design for the Formalised Channel on Western Side of Railway (FM10)
- Figure 45 Concept Design for Enlarging Old Hume Highway Roadside Swales (FM11)
- Figure 46 Concept Design for Creation of Channels through properties on Inkerman Rd and Scarlet St (FM12)
- Figure 47 Concept Design for Raising of Inkerman Rd and Scarlet St (RM7)
- Figure 48 Potential Future Catchment Land Use and OSD Exceptions
- Figure 49 Outcome of Flood Risk Management Options Evaluation



#### LEGEND

- Nattai Ponds Catchment
- Watercourse
- Railway
- Stormwater Network
- Existing Detention Basin

Notes:  
Aerial photograph date: May 2014

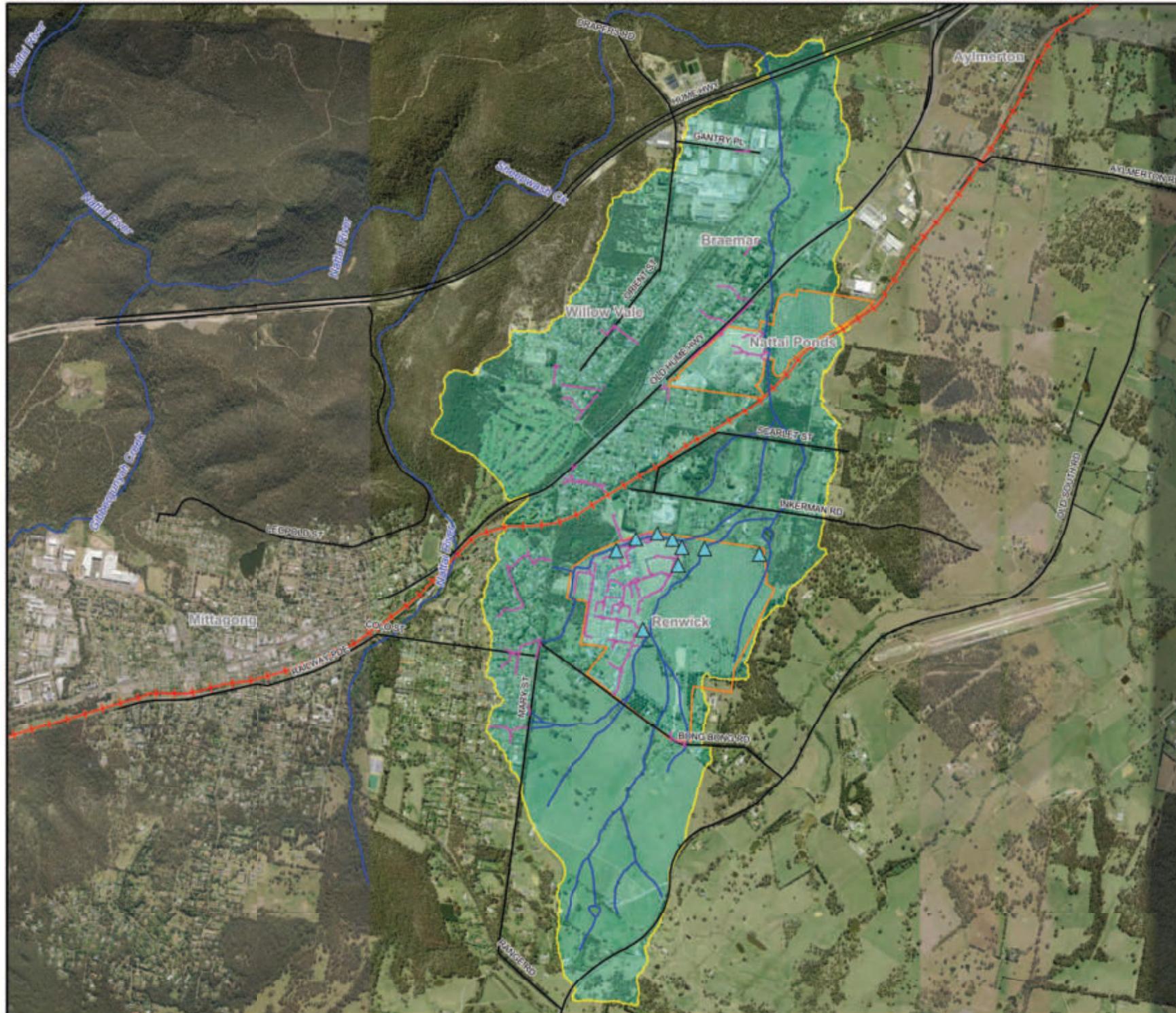


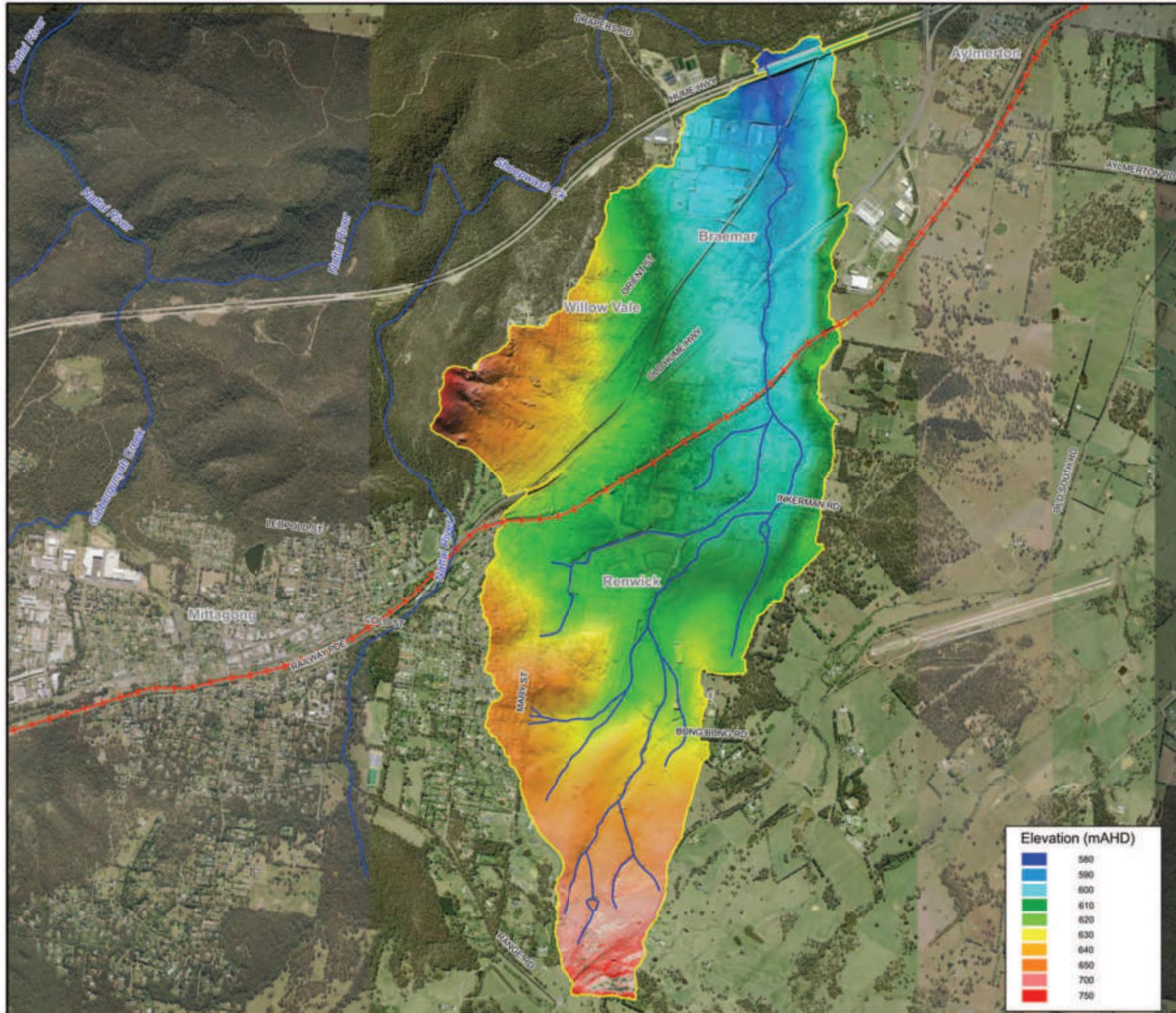
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Km

**Figure 1:  
Nattai Ponds  
Catchment**

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

File Name: Fig1 - Study Area.wor





#### LEGEND

- Nattai Ponds Catchment
- Watercourse
- Railway

Notes:  
Aerial photograph date: May 2014



Scale 1:22,000 (at A3)  
0 0.5 1.0  
Km

#### Elevation (mAHM)

580
590
600
610
620
630
640
650
660
670
680
690
700
750

**Figure 2:  
Nattai Ponds  
Elevations**

Prepared By:  
**Catchment Simulation Solutions**  
Suite 2.01, 210 George St  
Sydney, NSW 2000  
File Name: Fig2 - Nattai Ponds DEM.wor



#### LEGEND

- [Yellow Box] Nattai Ponds Study Area
- [Green Box] Robertson Basalt Tall Open Forest
- [Purple Circle] Location of Aboriginal Heritage Site
- [Orange Box] Heritage Item
- [Blue Line] Watercourse
- [Red Line] Railway

*Notes:*  
Aerial photograph date: May 2014



Scale 1:22,000 (at A3)  
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Km

**Figure 3:  
Environmental  
Constraints and  
Heritage Sites**

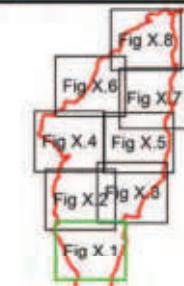
Prepared By:  
**Catchment Simulation Solutions**  
Suite 2.01, 210 George St  
Sydney, NSW 2000

File Name: Fig3 - Environmental Constraints  
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## FLOODWATER DEPTH, LEVEL & VELOCITY MAPS

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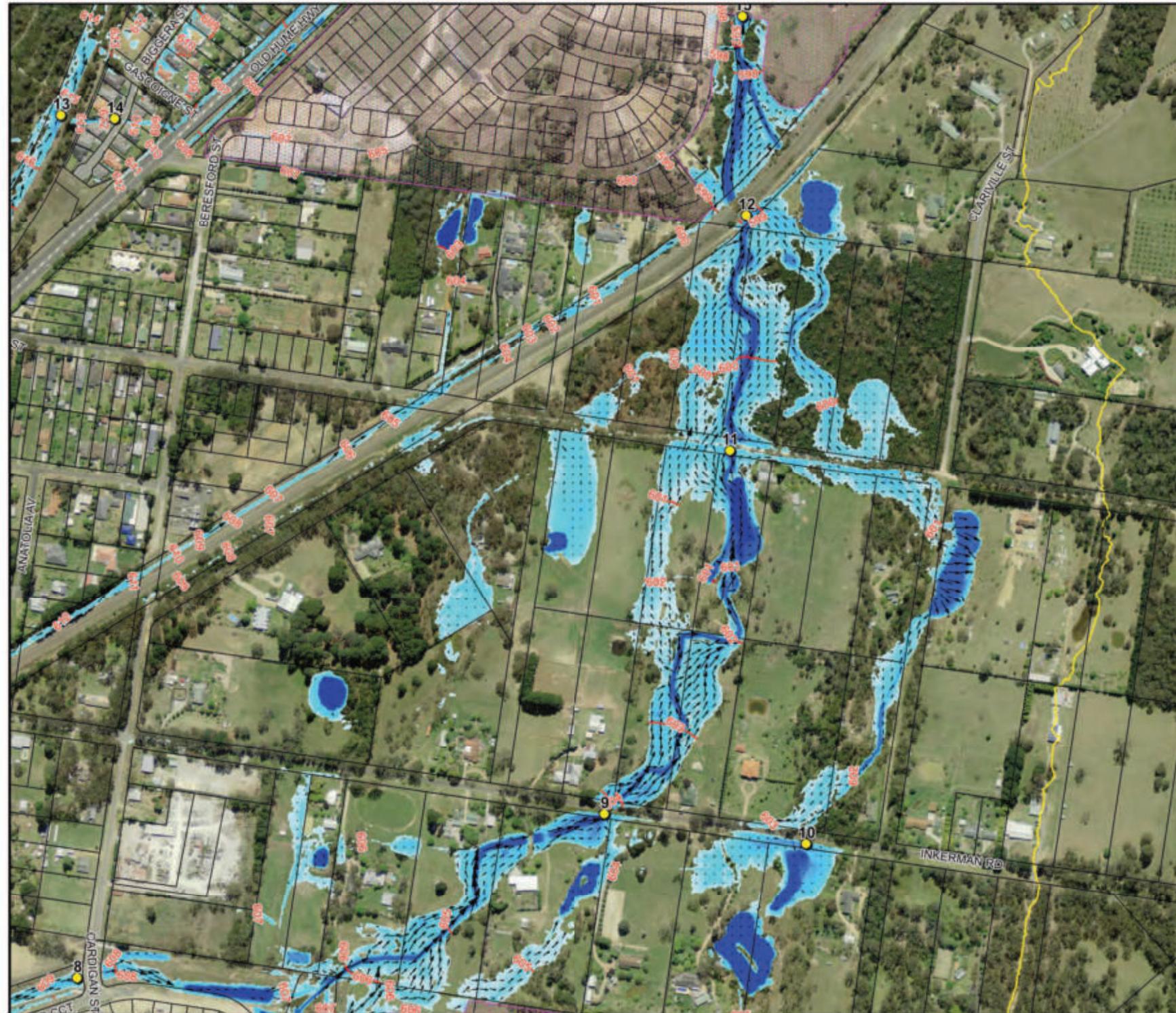


**Figure 4.2:  
Floodwater Depths,  
Levels and Velocities  
for the 20% AEP Flood**

Prepared By:  
**Catchment Simulation Solutions**  
 Suite 2.01, 210 George St  
 Sydney, NSW 2000  
 File Name: Fig4.2 - 20% AEP Depths,  
 Levels and Velocities.wor



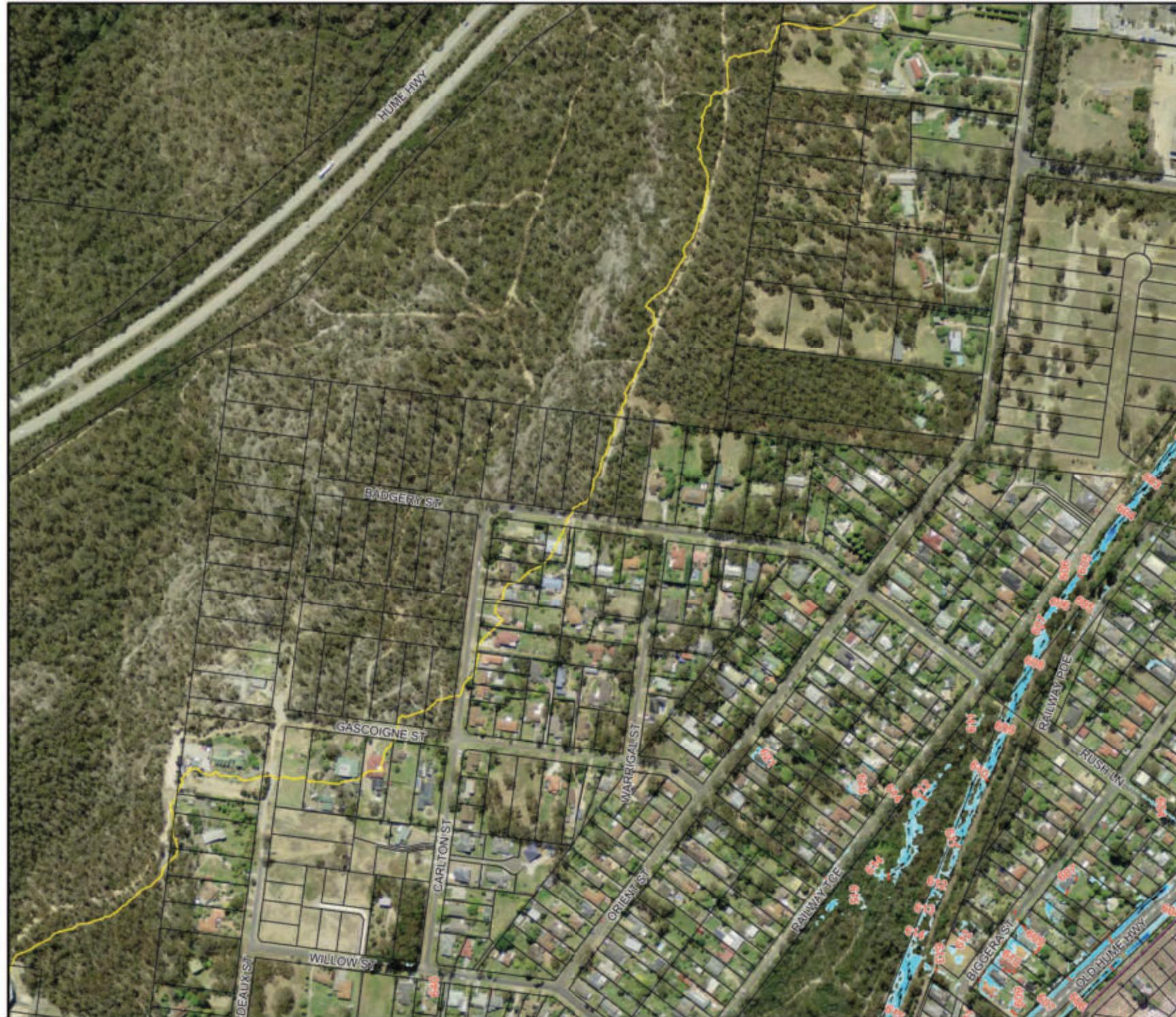




**Figure 4.5:**  
**Floodwater Depths,  
Levels and Velocities  
for the 20% AEP Flood**

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

File Name: Fig4.5 - 20% AEP Depths,  
Levels and Velocities.wor

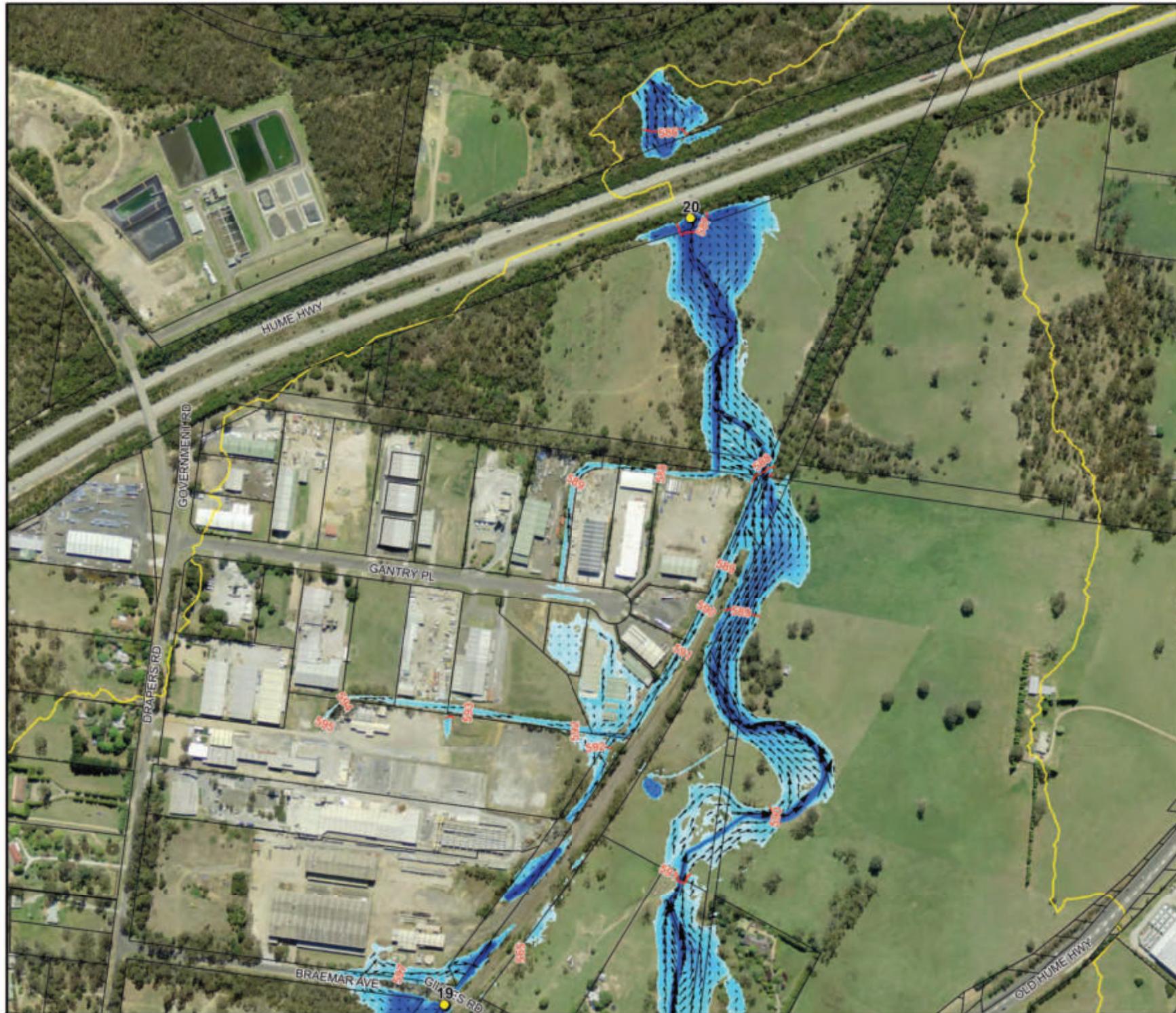


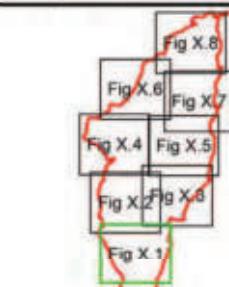
**Figure 4.6:**  
**Floodwater Depths,  
 Levels and Velocities  
 for the 20% AEP Flood**

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

File Name: Fig4.6 - 20% AEP Depths,  
 Levels and Velocities.wor







#### LEGEND

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

#### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



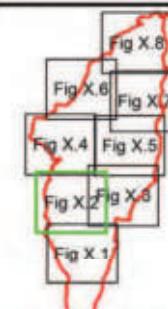
Scale 1:4,000 (at A3)  
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**Figure 5.1:**  
Floodwater Depths,  
Levels and Velocities  
for the 10% AEP Flood

Prepared By:

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

File Name: Fig5.1 - 10% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

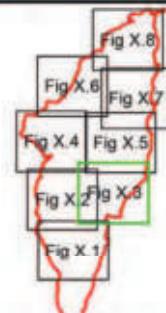


Scale 1:4,000 (at A3)  
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**Figure 5.2:**  
**Floodwater Depths,  
 Levels and Velocities  
 for the 10% AEP Flood**

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

File Name: Fig5.2 - 10% AEP Depths,  
 Levels and Velocities.wor


**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

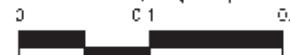
Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)



**Figure 5.3:**  
**Floodwater Depths,  
Levels and Velocities  
for the 10% AEP Flood**

Prepared By:

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

File Name: Fig5.3 - 10% AEP Depths,  
Levels and Velocities.wor

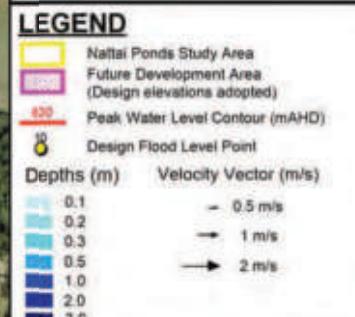
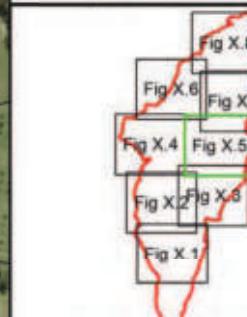
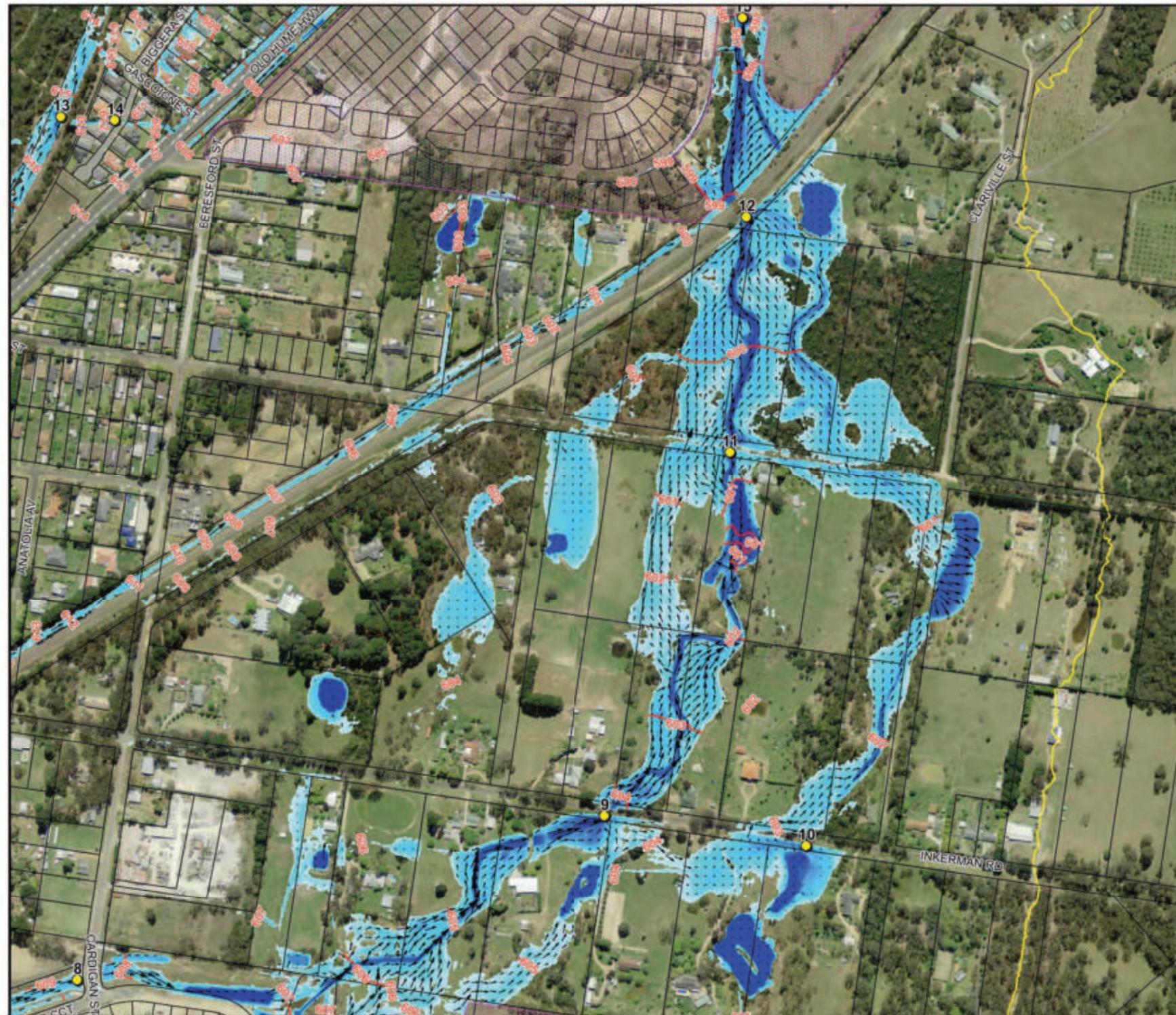




**Figure 5.4:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 10% AEP Flood**

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

File Name: Fig 5.4 - 10% AEP Depths,  
 Levels and Velocities.wor



**Notes:**  
Aerial photograph date: September 2013  
Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4000 (at A3)

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**Figure 5.5:**  
**Floodwater Depths, Levels and Velocities for the 10% AEP Flood**

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

File Name: Fig5.5 - 10% AEP Depths, Levels and Velocities.wor



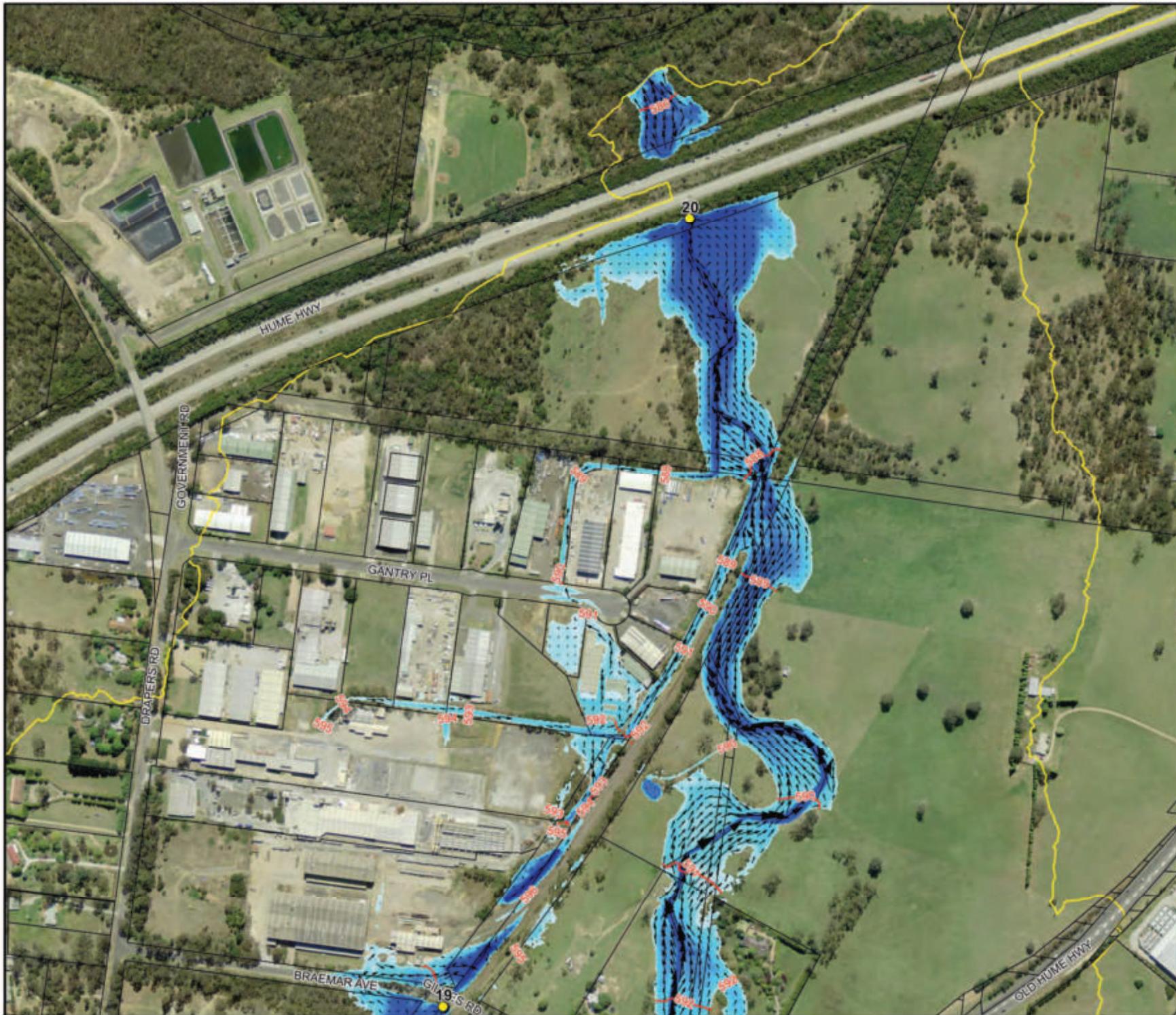


Scale 1:4,000 (at A3)  
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 K...

**Figure 5.7:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 10% AEP Flood**

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

File Name: Fig5.7 - 10% AEP Depths,  
 Levels and Velocities.wor



### LEGEND

  Nattai Ponds Study Area  
  Future Development Area.  
 (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point  
● Design Flood Level Point

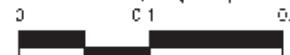
Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

#### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



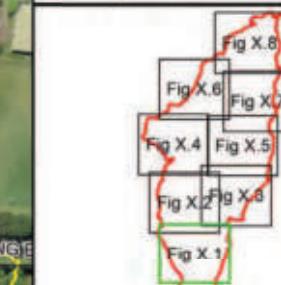
Scale 1:4,000 (at A3)



**Figure 5.8:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 10% AEP Flood**

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

File Name: Fig5.8 - 10% AEP Depths,  
 Levels and Velocities.wor



Depths (m)	Velocity Vector (m/s)
0.1	0.5 m/s
0.2	1 m/s
0.3	1 m/s
0.5	2 m/s
1.0	2 m/s
2.0	2 m/s
3.0	2 m/s

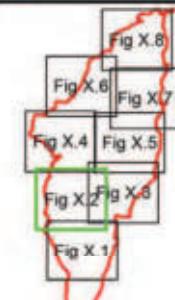
Aerial photograph date: September 2013  
Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)

0 C 1 0.2

**Figure 6.1:**  
**Floodwater Depths, Levels and Velocities for the 5% AEP Flood**


**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

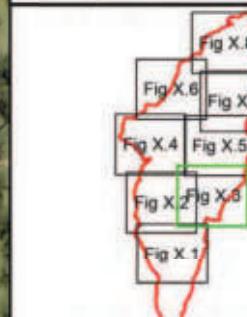


Scale 1:4,000 (at A3)  
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**Figure 6.2:  
Floodwater Depths,  
Levels and Velocities  
for the 5% AEP Flood**

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

File Name: Fig6.2 - 5% AEP Depths,  
Levels and Velocities.wor



LEGEND	
<b>Nattai Ponds Study Area</b>	
<b>Future Development Area (Design elevations adopted)</b>	
<b>Peak Water Level Contour (mAHD)</b>	
<b>Design Flood Level Point</b>	
<b>Depths (m)</b>	
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**  
Aerial photograph date: September 2013  
Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)

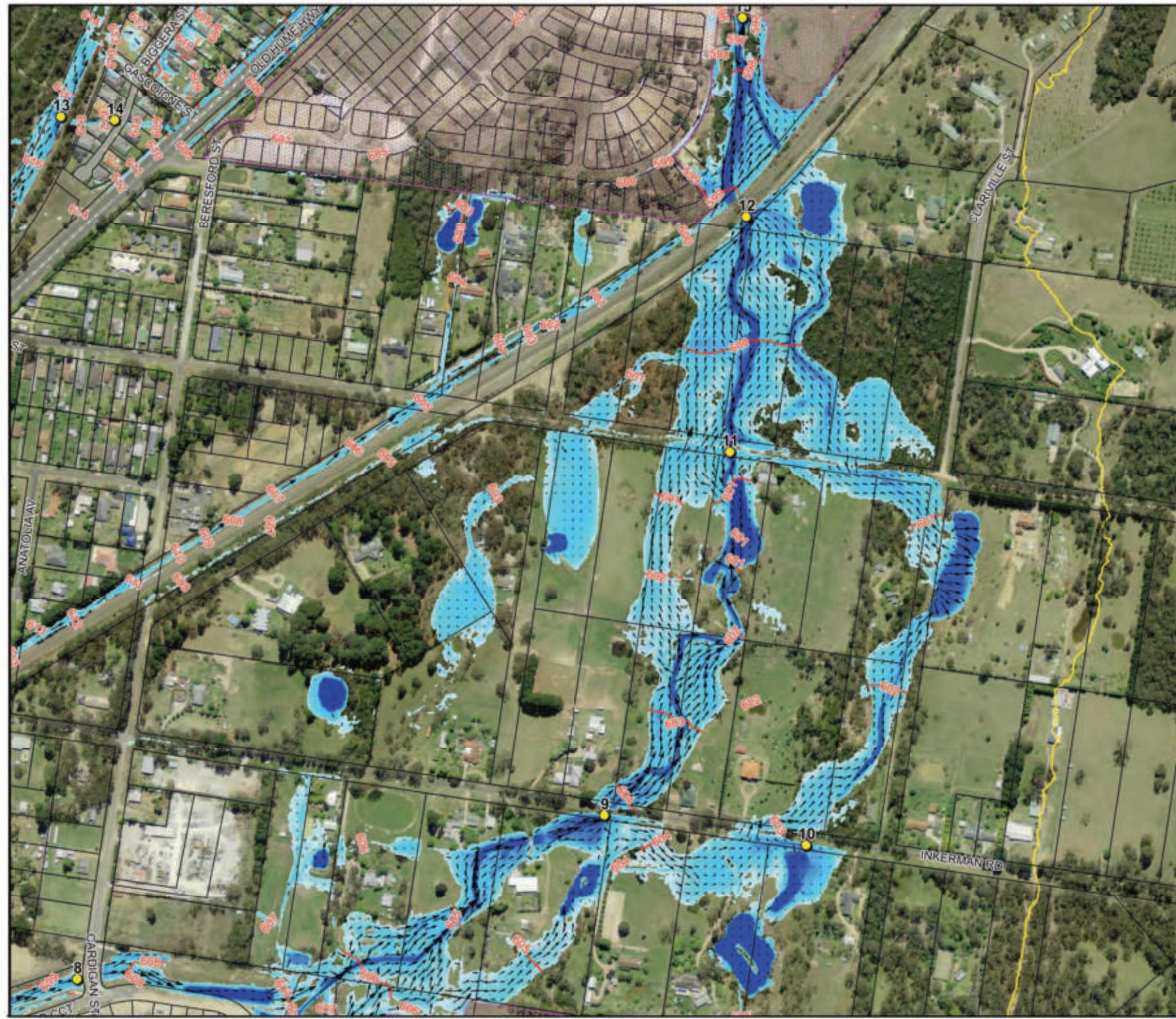
0      C 1      0.2

**Figure 6.3:  
Floodwater Depths,  
Levels and Velocities  
for the 5% AEP Flood**

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

File Name: Fig6.3 - 5% AEP Depths,  
Levels and Velocities.wor




**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area.  
— (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	
0.5	
1.0	→ 2 m/s
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within future development areas based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)



**Figure 6.5:  
Floodwater Depths,  
Levels and Velocities  
for the 5% AEP Flood**

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

File Name: Fig6.5 - 5% AEP Depths,  
 Levels and Velocities.wor

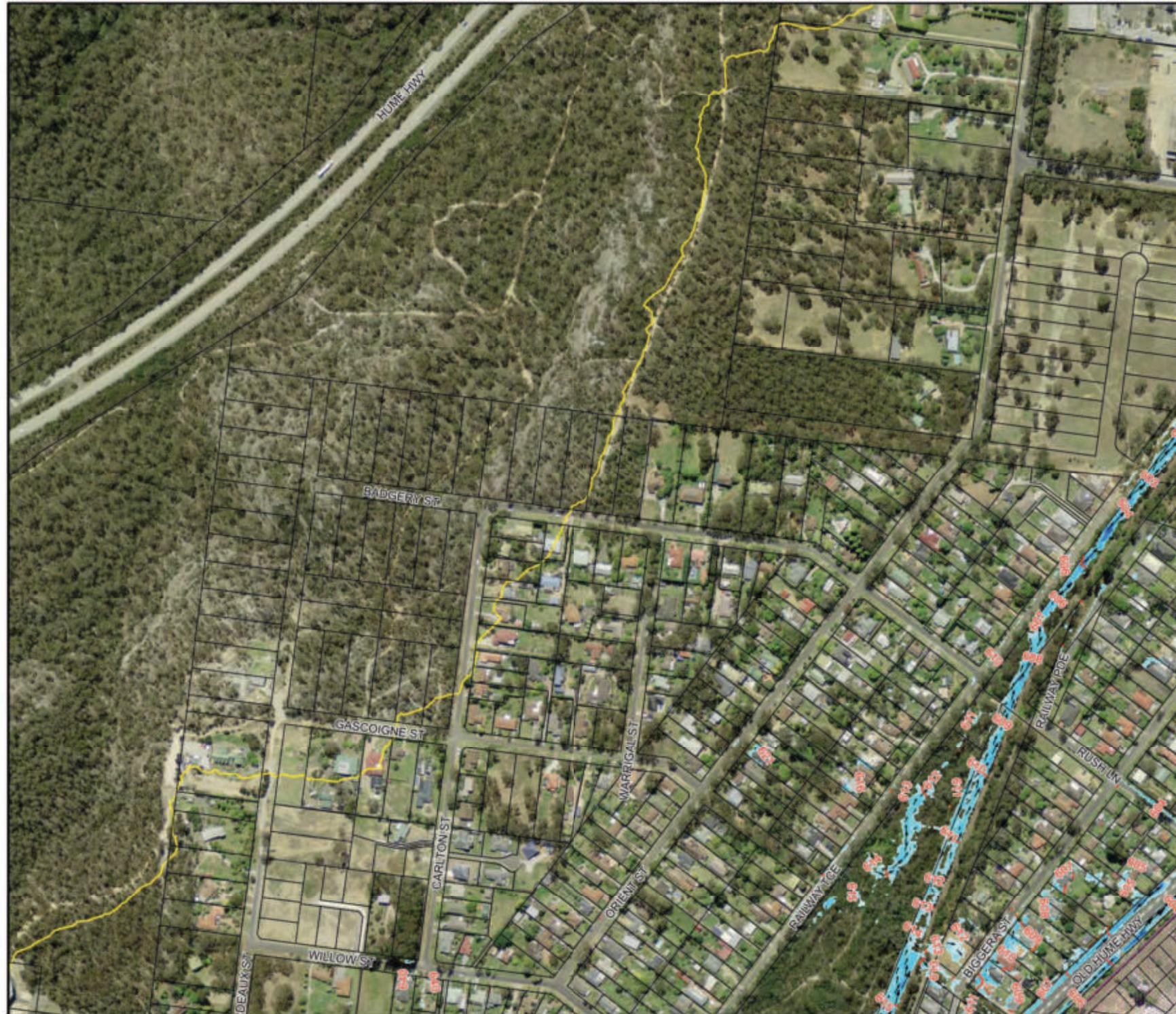


Fig X.8  
Fig X.6 Fig X.7  
Fig X.4 Fig X.5  
Fig X.2 Fig X.6  
Fig X.1

### LEGEND

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)      Velocity Vector (m/s)

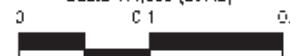
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)



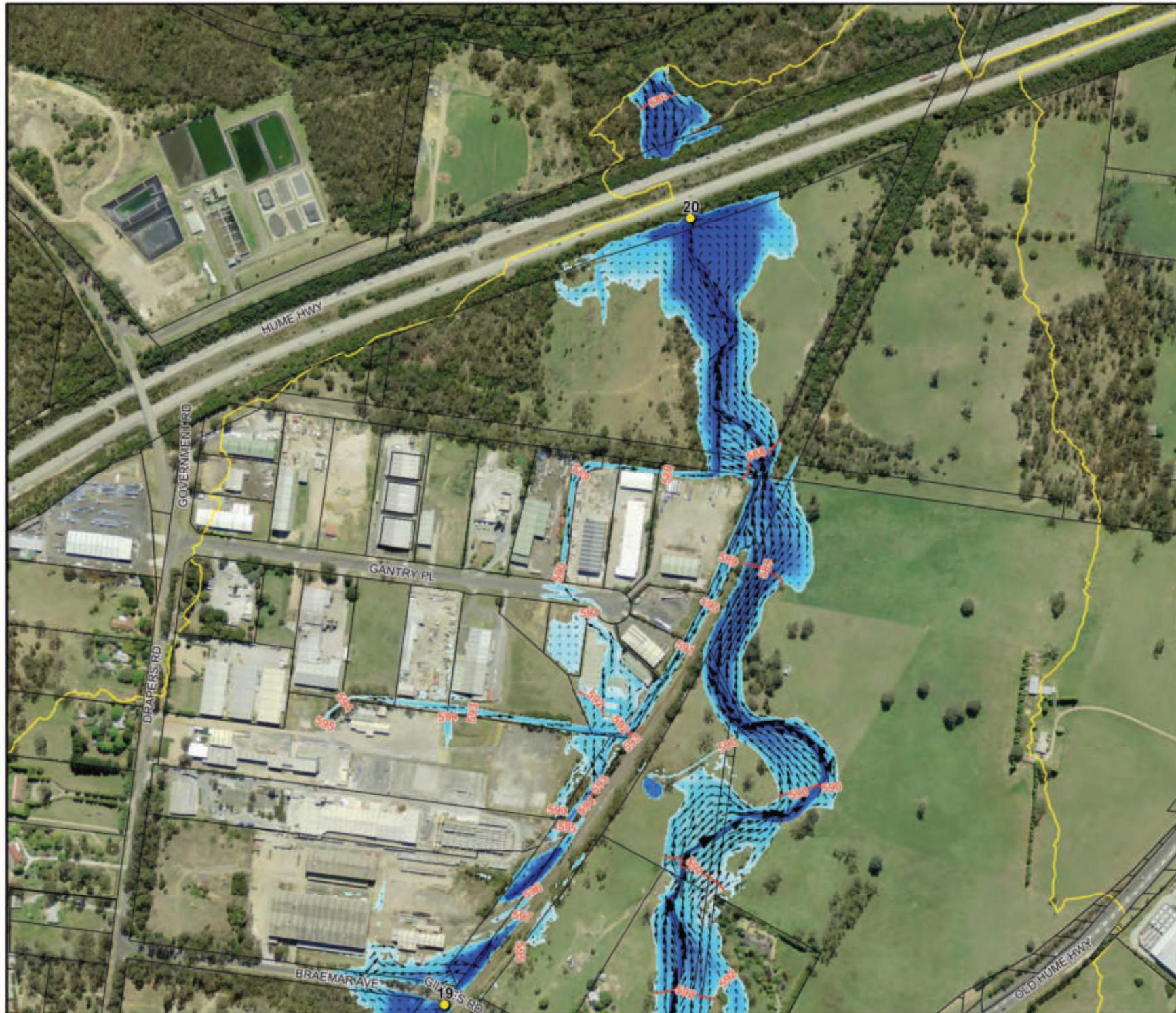
**Figure 6.7:  
Floodwater Depths,  
Levels and Velocities  
for the 5% AEP Flood**

Prepared By:

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

File Name: Fig6.7 - 5% AEP Depths,  
Levels and Velocities.wor





### LEGEND

Peak Water Level Contour (mAHD)  
Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	0.5 m/s
0.2	1 m/s
0.3	
0.5	
1.0	
2.0	
3.0	2 m/s

**N**



Scale 1:4000 (at A3)  
0 C 1 0.2

**Figure 6.8:  
Floodwater Depths,  
Levels and Velocities  
for the 5% AEP Flood**



Fig X.8  
Fig X.6 Fig X.7  
Fig X.4 Fig X.5  
Fig X.2 Fig X.3  
Fig X.1

#### LEGEND

Nattai Ponds Study Area  
Future Development Area  
(Design elevations adopted)

Peak Water Level Contour (mAHD)

Design Flood Level Point

Depths (m) Velocity Vector (m/s)

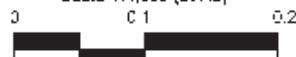
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

#### Notes:

Aerial photograph date: September 2013  
Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)



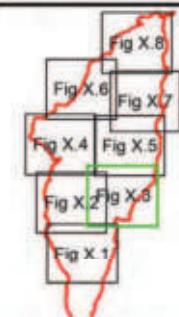
**Figure 7.1:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 2% AEP Flood**

Prepared By:

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

File Name: Fig.7.1 - 2% AEP Depths,  
Levels and Velocities.wor




**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



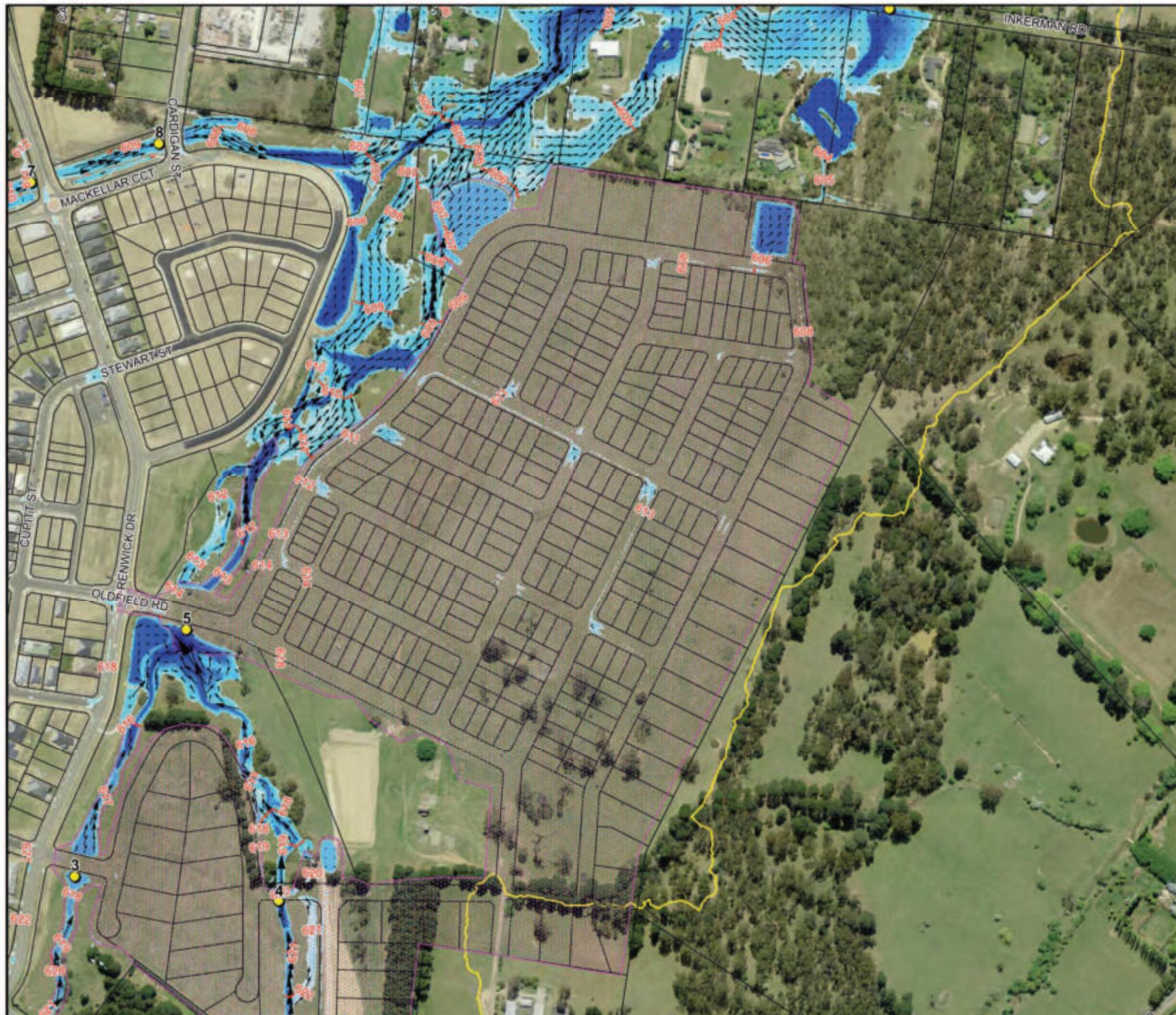
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**Figure 7.3:  
Floodwater Depths,  
Levels and Velocities  
for the 2% AEP Flood**

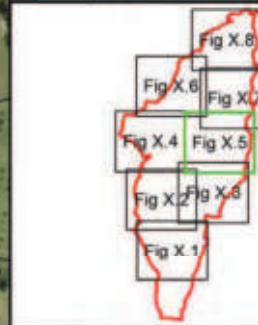
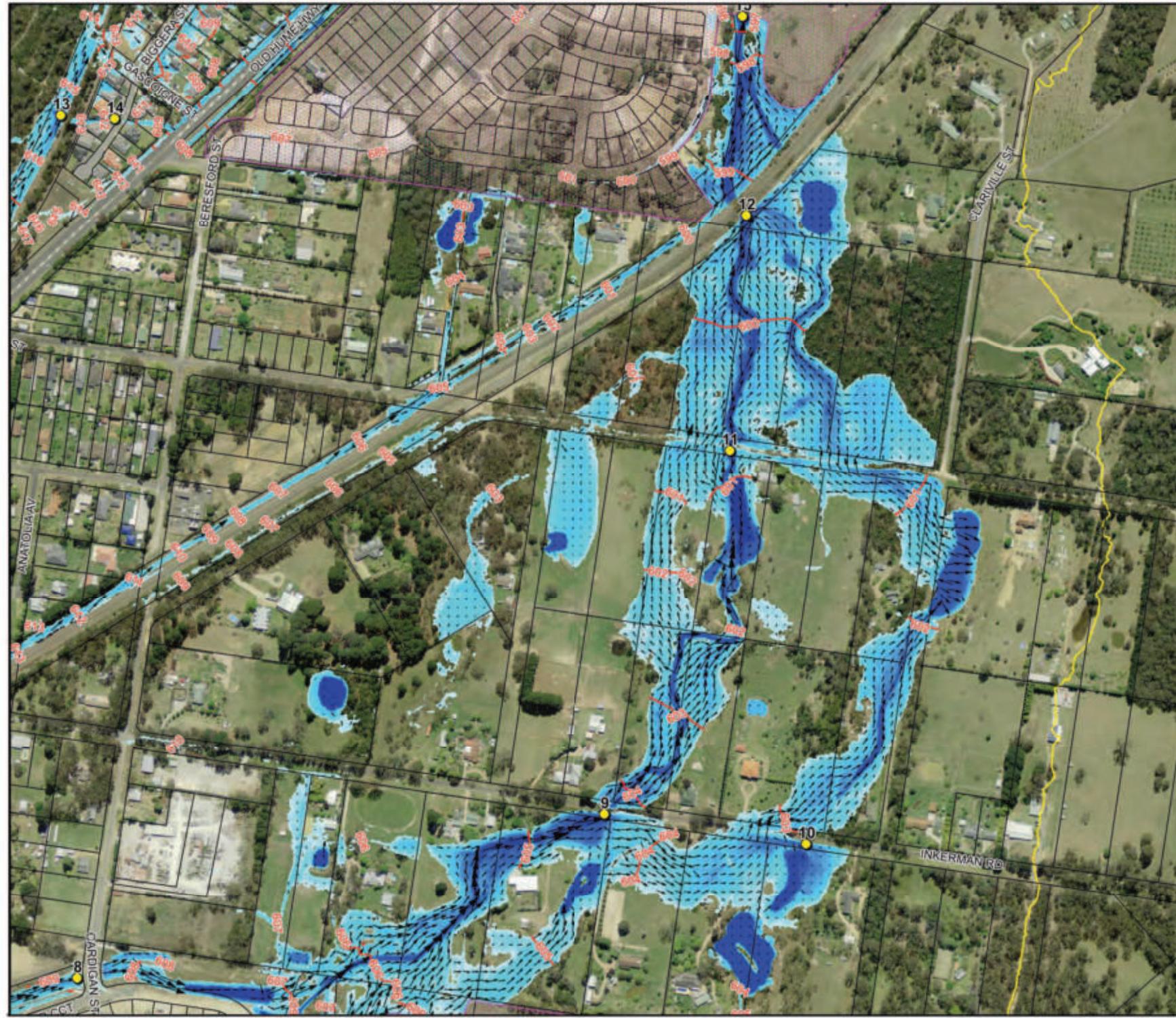
Prepared By:

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

File Name: Fig.7.3 - 2% AEP Depths,  
Levels and Velocities.wor







#### LEGEND

Nattai Ponds Study Area  
 Future Development Area  
 (Design elevations adopted)  
 Peak Water Level Contour (mAHN)

Design Flood Level Point

Depths (m) Velocity Vector (m/s)

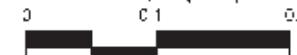
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4000 (at A3)



**Figure 7.5:  
Floodwater Depths,  
Levels and Velocities  
for the 2% AEP Flood**

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

File Name: Fig7.5 - 2% AEP Depths,  
 Levels and Velocities.wor




**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area.  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

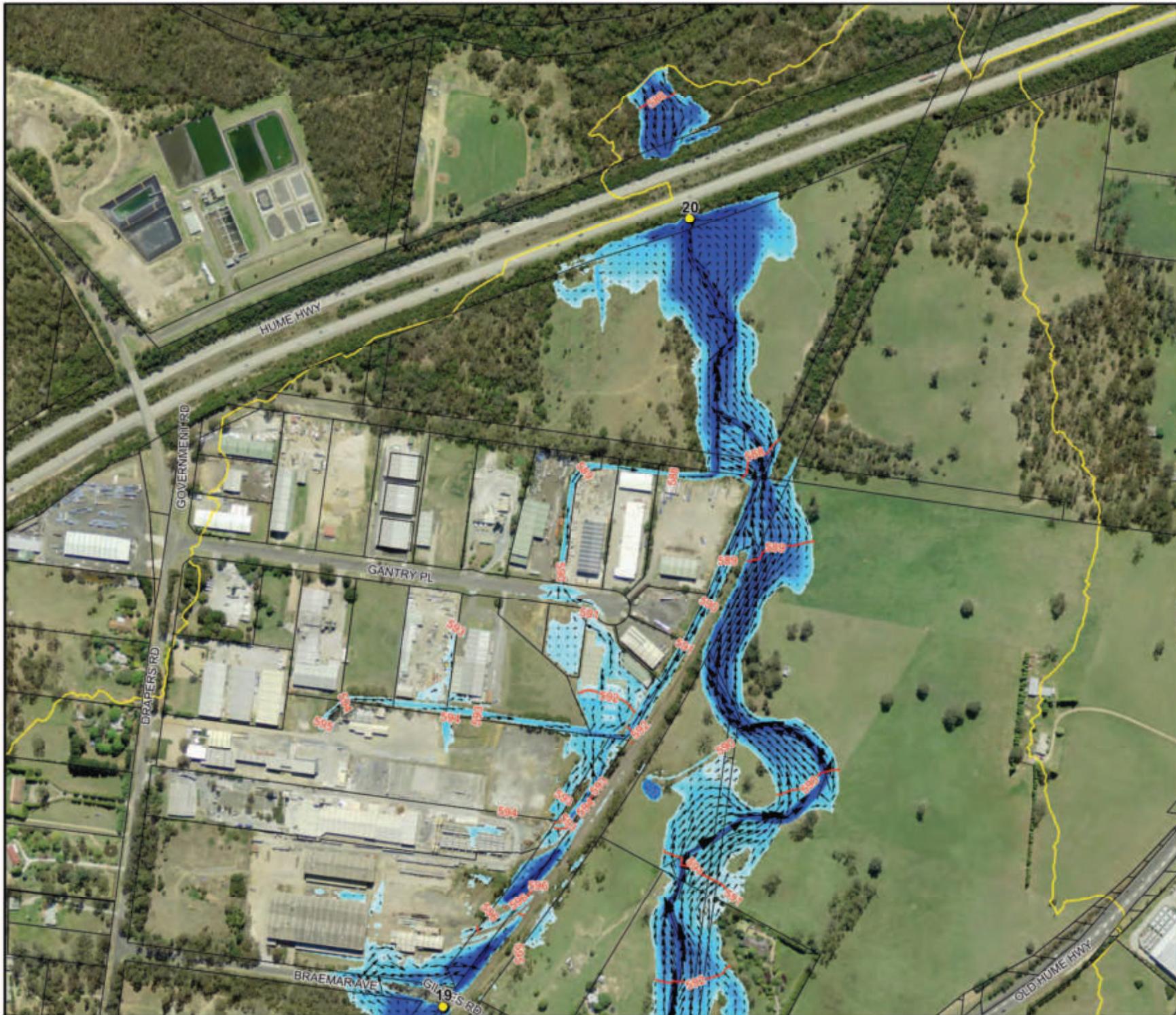


Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 7.7:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 2% AEP Flood**

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

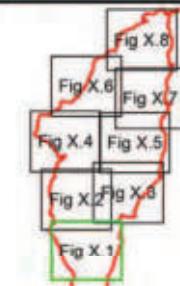
File Name: Fig7.7 - 2% AEP Depths,  
 Levels and Velocities.wor



**Figure 7.8:  
Floodwater Depths,  
Levels and Velocities  
for the 2% AEP Flood**

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

File Name: Fig7.8 - 2% AEP Depths,  
Levels and Velocities.wor

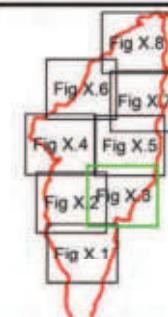




**Figure 8.2:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

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

File Name: Fig8.2 - 1% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

● Depths (m)      ● Velocity Vector (m/s)

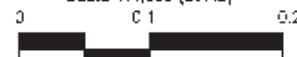
0.1	— 0.5 m/s
0.2	— 1 m/s
0.3	— 2 m/s
0.5	
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)

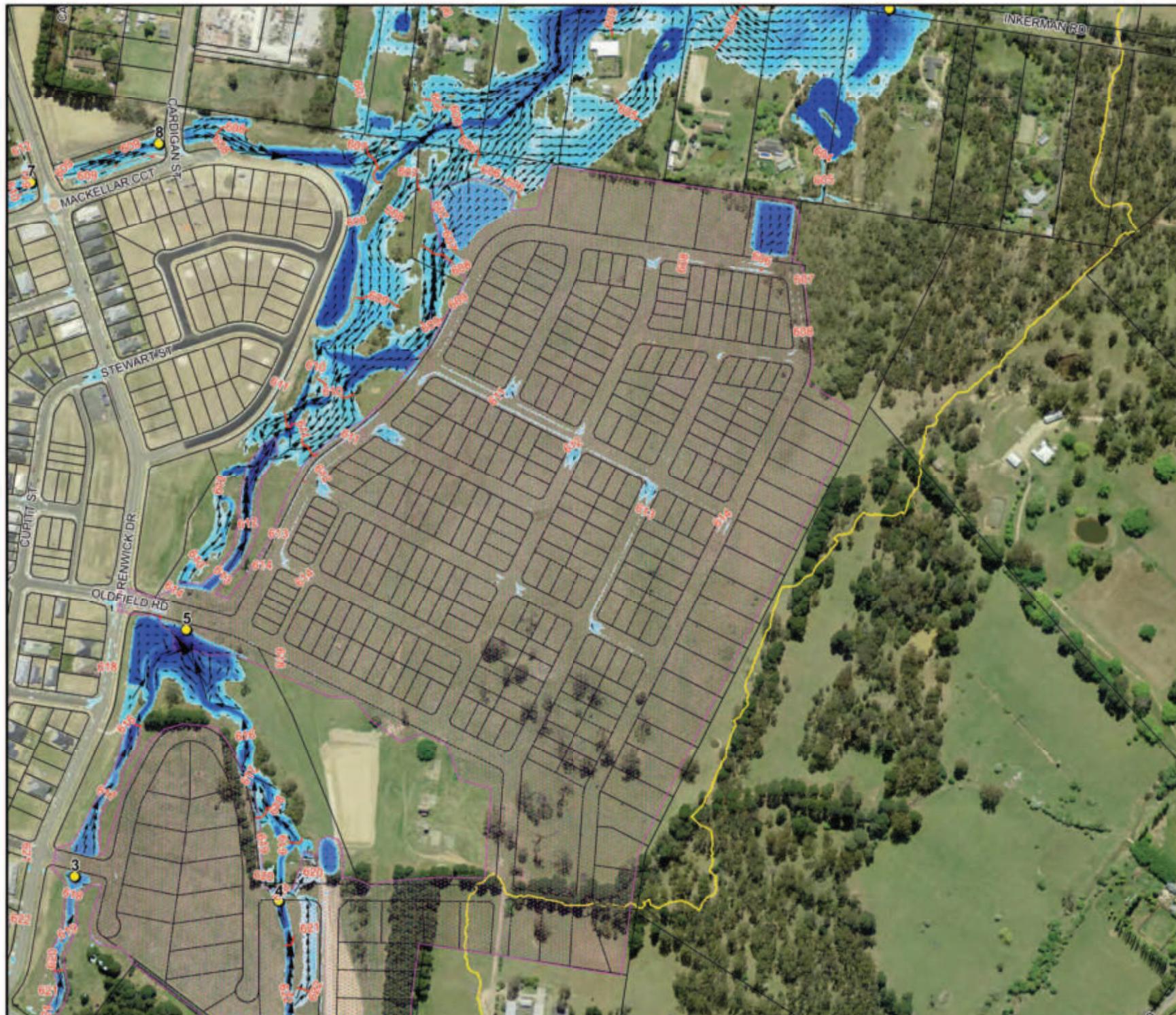


**Figure 8.3:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

Prepared By:

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

File Name: Fig8.3 - 1% AEP Depths, Levels and Velocities.wor




**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area.  
 (Design elevations adopted)

830 Peak Water Level Contour (mAHN)

10 Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on  
 assumed elevations and results should be verified  
 against final topography before use.



Scale 1:4,000 (at A3)

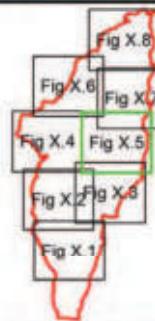


**Figure 8.4:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

Prepared By:

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

File Name: Fig8.4 - 1% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)      Velocity Vector (m/s)

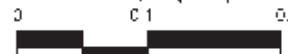
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)

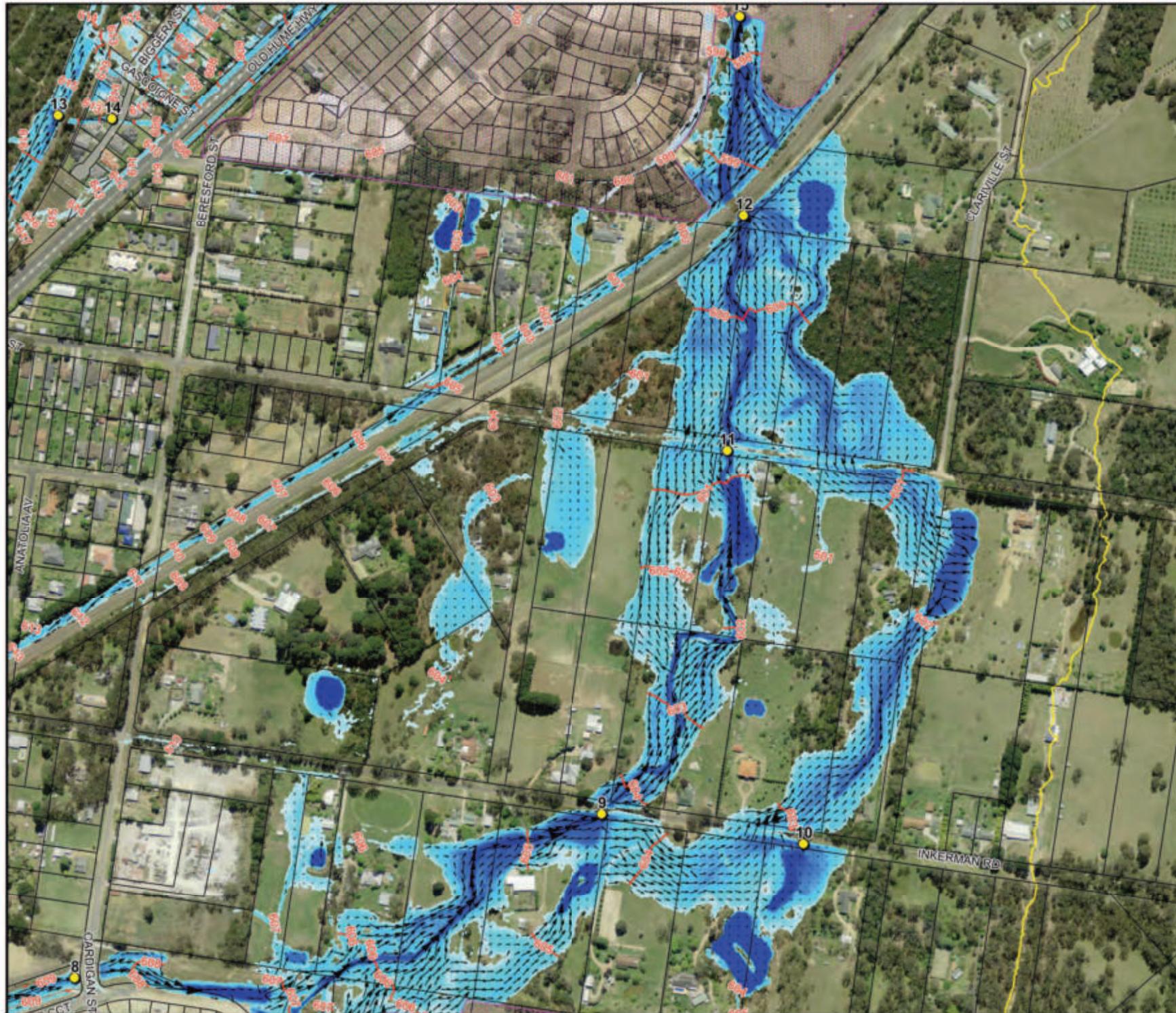


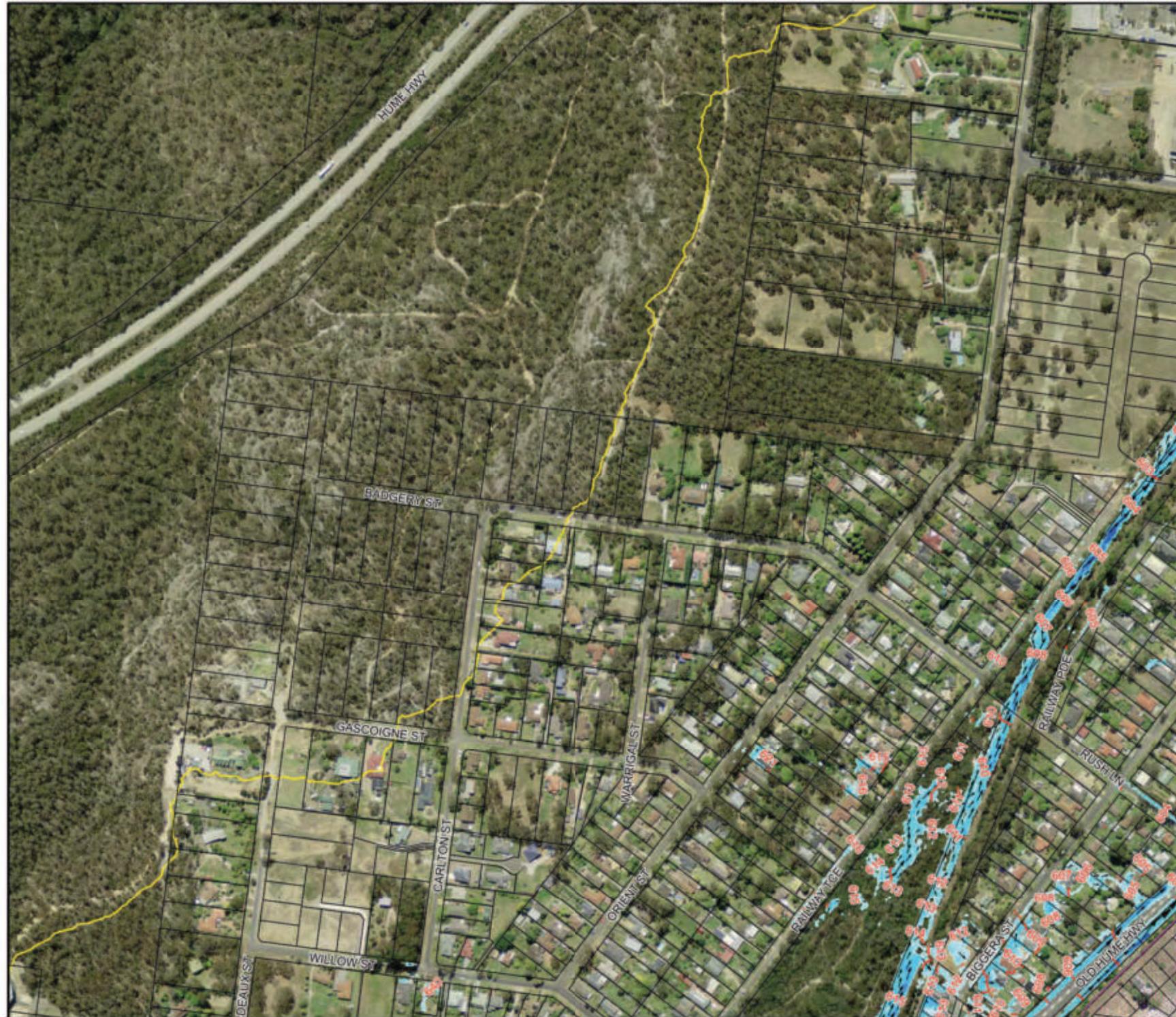
**Figure 8.5:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

Prepared By:

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

File Name: Fig8.5 - 1% AEP Depths, Levels and Velocities.wor

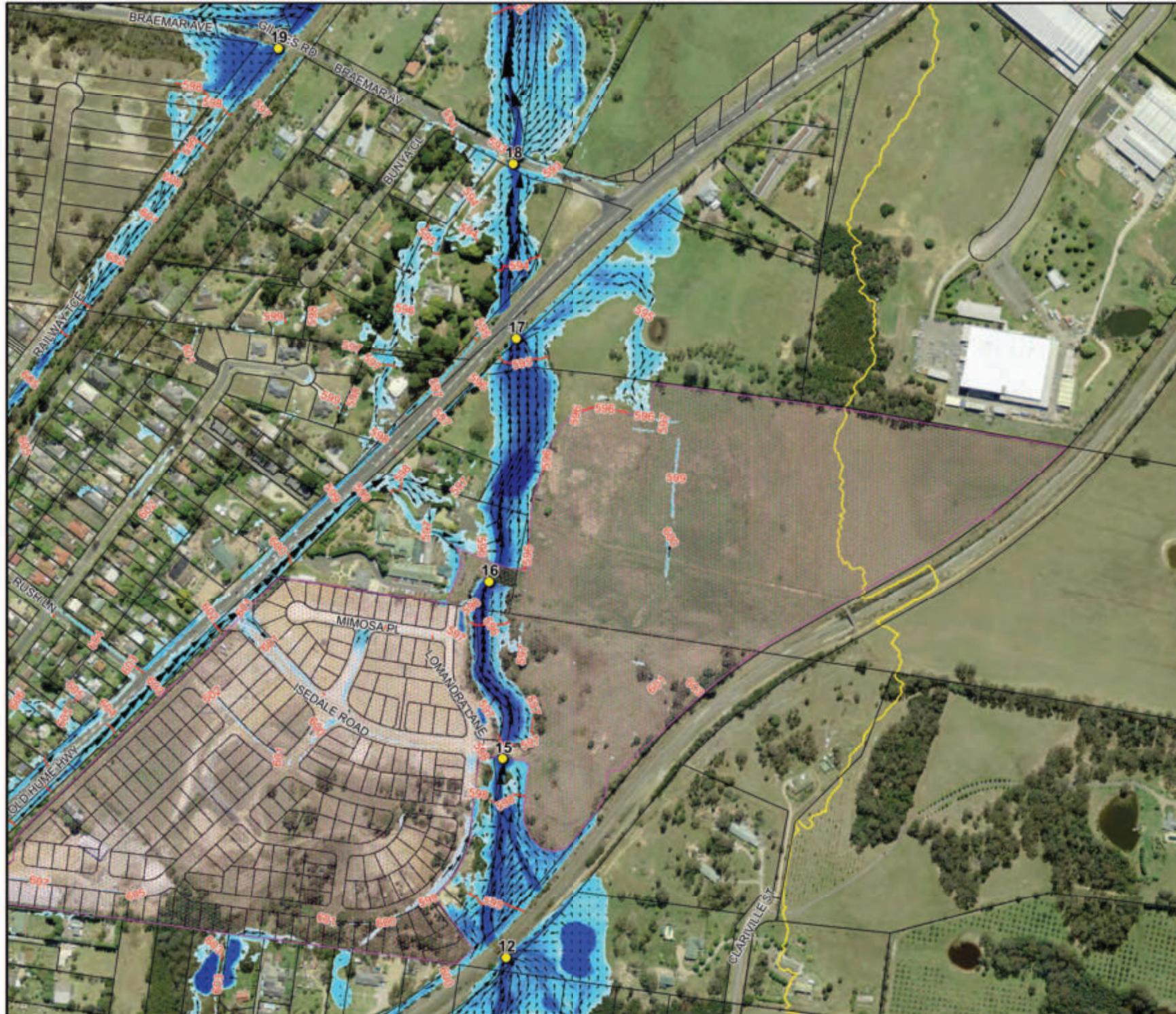




**Figure 8.6:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

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

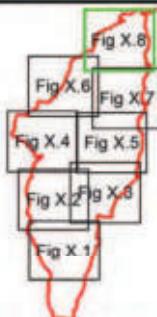
File Name: Fig8.6 - 1% AEP Depths,  
Levels and Velocities.wor



**Figure 8.7:  
Floodwater Depths,  
Levels and Velocities  
for the 1% AEP Flood**

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

File Name: Fig8.7 - 1% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

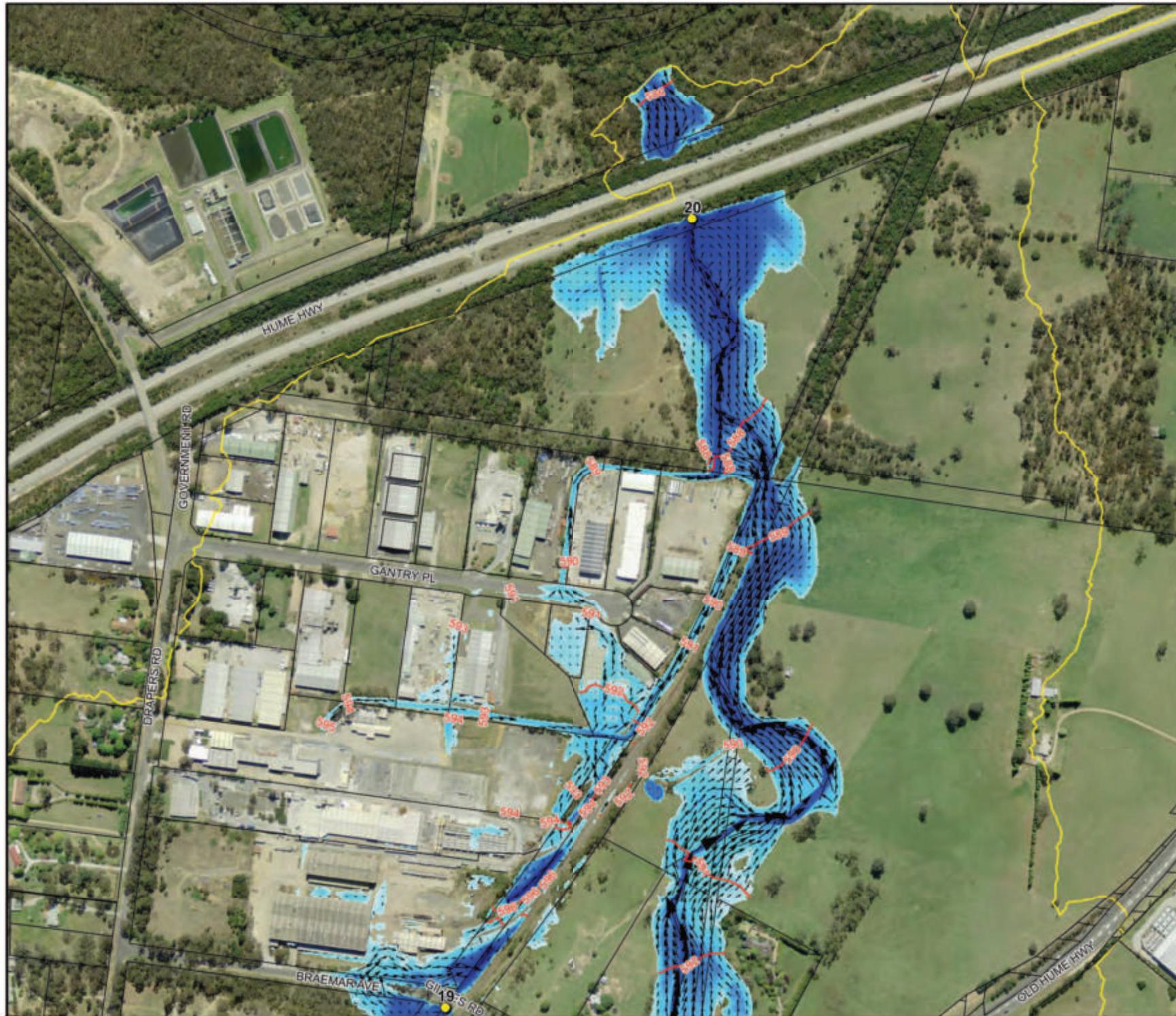


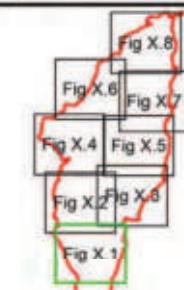
Scale 1:4000 (at A3)  
 0 C 1 0.2

**Figure 8.8:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 1% AEP Flood**

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

File Name: Fig8.8 - 1% AEP Depths,  
 Levels and Velocities.wor





#### LEGEND

Yellow line: Nattai Ponds Study Area  
Purple line: Future Development Area (Design elevations adopted)  
Red line: Peak Water Level Contour (mAHD)

Yellow dot: Design Flood Level Point

Depths (m)      Velocity Vector (m/s)

0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

#### Notes:

Aerial photograph date: September 2013  
Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)  
0      C 1      0.2  
Km

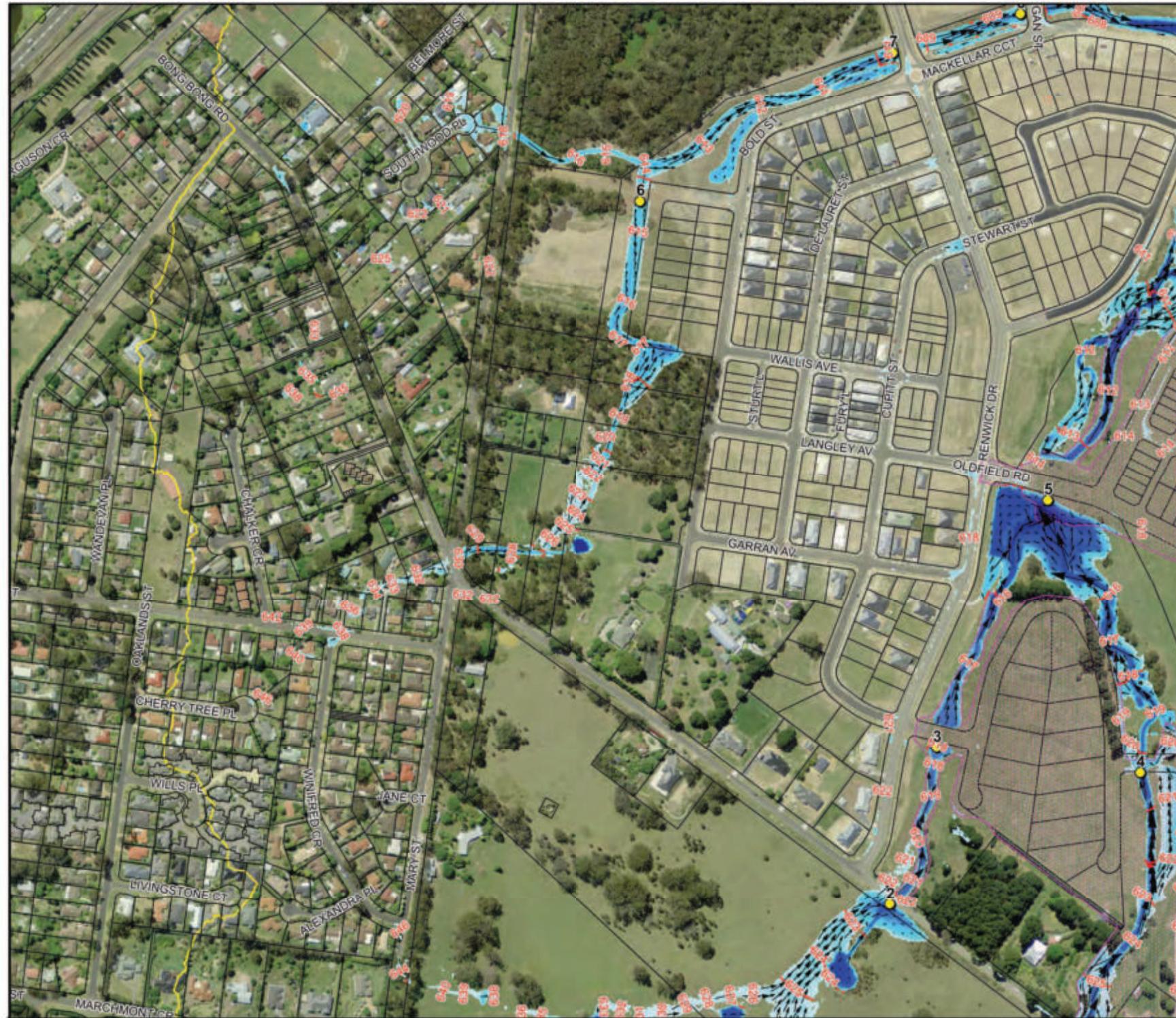
**Figure 9.1:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 0.5% AEP Flood**

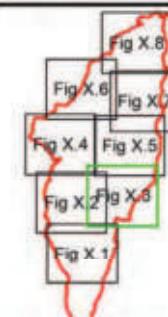
Prepared By:

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

File Name: Fig9.1 - 0.5% AEP Depths,  
Levels and Velocities.wor






**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 9.3:**  
**Floodwater Depths, Levels and Velocities for the 0.5% AEP Flood**

Prepared By:

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

File Name: Fig.9.3 - 0.5% AEP Depths, Levels and Velocities.wor

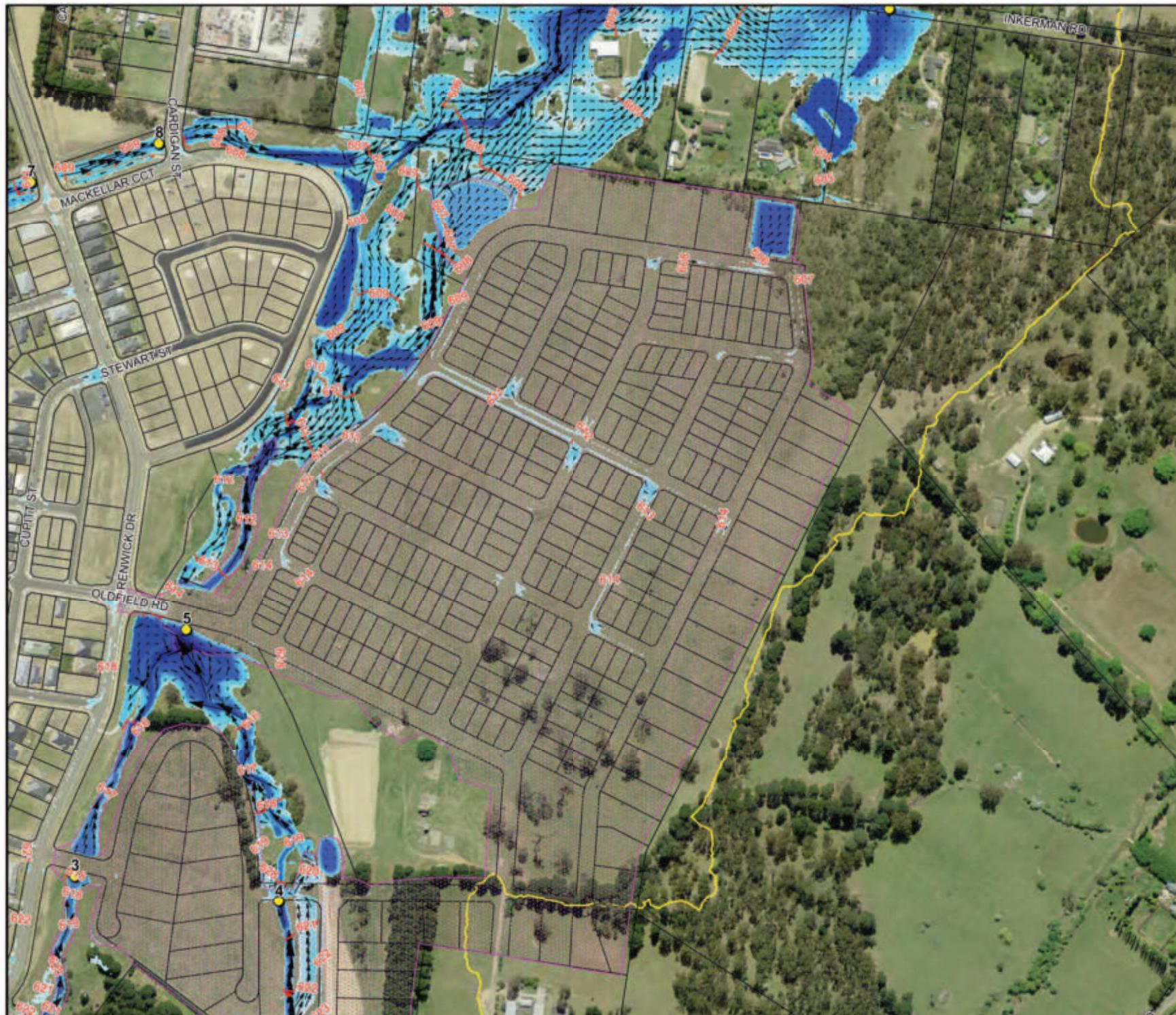


Fig X.8  
Fig X.6  
Fig X.7  
Fig X.4 Fig X.5  
Fig X.2 Fig X.6  
Fig X.1

### LEGEND

Nattai Ponds Study Area  
Future Development Area  
(Design elevations adopted)  
830 Peak Water Level Contour (mAHD)

Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

### Notes:

Aerial photograph date: September 2013  
Results within 'Future development areas' based on  
assumed elevations and results should be verified  
against final topography before use.



Scale 1:4,000 (at A3)  
0 C 1 0.2

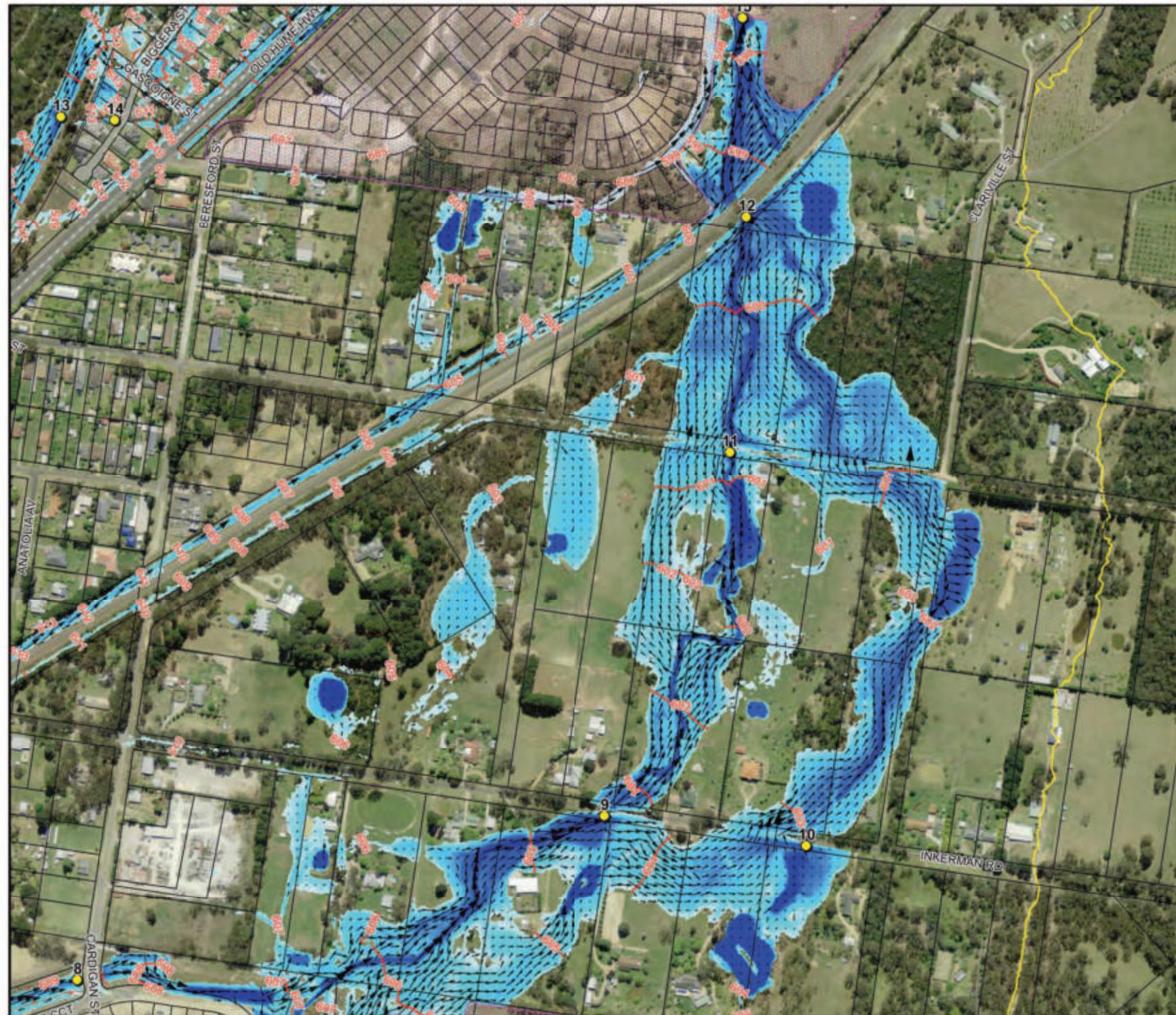
**Figure 9.4:  
Floodwater Depths,  
Levels and Velocities  
for the 0.5% AEP Flood**

Prepared By:

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

File Name: Fig9.4 - 0.5% AEP Depths,  
Levels and Velocities.wor




**LEGEND**

■ Nattai Ponds Study Area  
 Future Development Area  
 (Design elevations adopted)  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

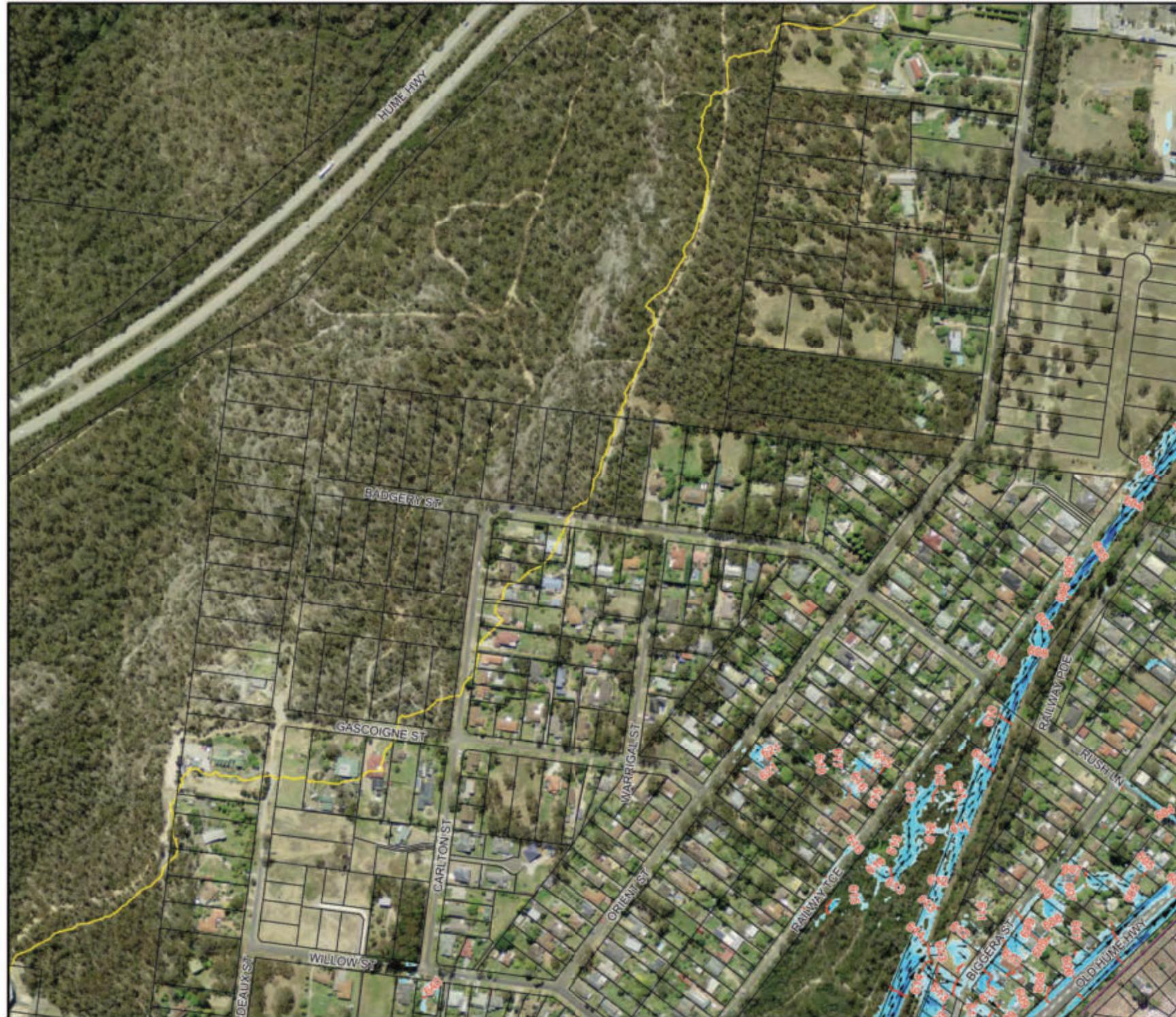


Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 9.5:**  
**Floodwater Depths,**  
**Levels and Velocities**  
**for the 0.5% AEP Flood**

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

File Name: Fig9.5 - 0.5% AEP Depths,  
 Levels and Velocities.wor



**Figure 9.6:  
Floodwater Depths,  
Levels and Velocities  
for the 0.5% AEP Flood**

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

File Name: Fig9.6 - 0.5% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

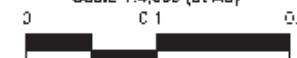
Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



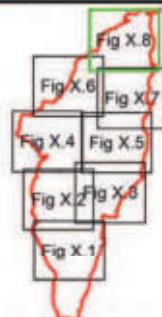
Scale 1:4,000 (at A3)



**Figure 9.7:**  
**Floodwater Depths,  
Levels and Velocities  
for the 0.5% AEP Flood**

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

File Name: Fig9.7 - 0.5% AEP Depths,  
Levels and Velocities.wor


**LEGEND**

■ Nattai Ponds Study Area  
■ Future Development Area (Design elevations adopted)  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

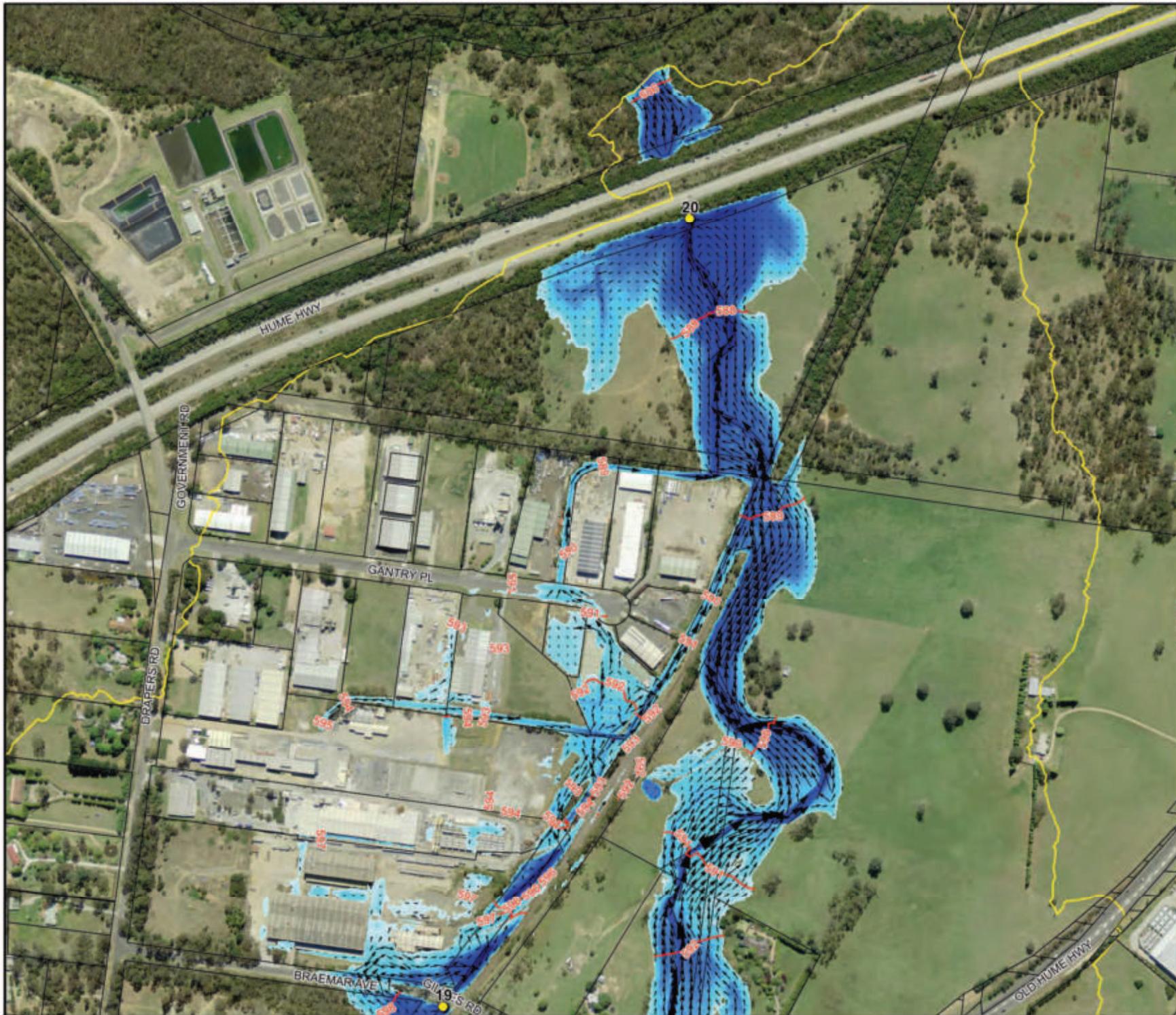


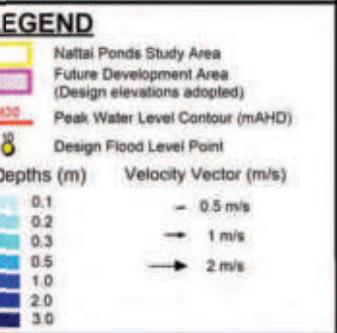
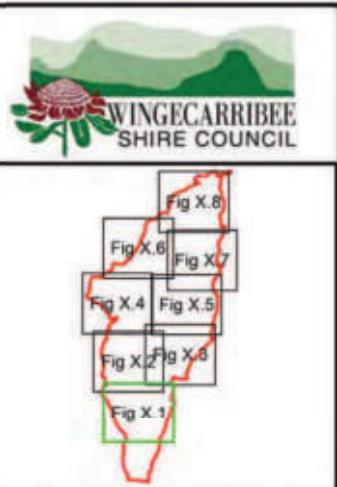
Scale 1:4000 (at A3)  
 0 C 1 0.2

**Figure 9.8:**  
**Floodwater Depths, Levels and Velocities for the 0.5% AEP Flood**

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

File Name: Fig9.8 - 0.5% AEP Depths, Levels and Velocities.wor

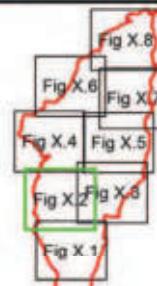




N



Scale 1:4,000 (at A3)  
0 C 1 0.2


**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

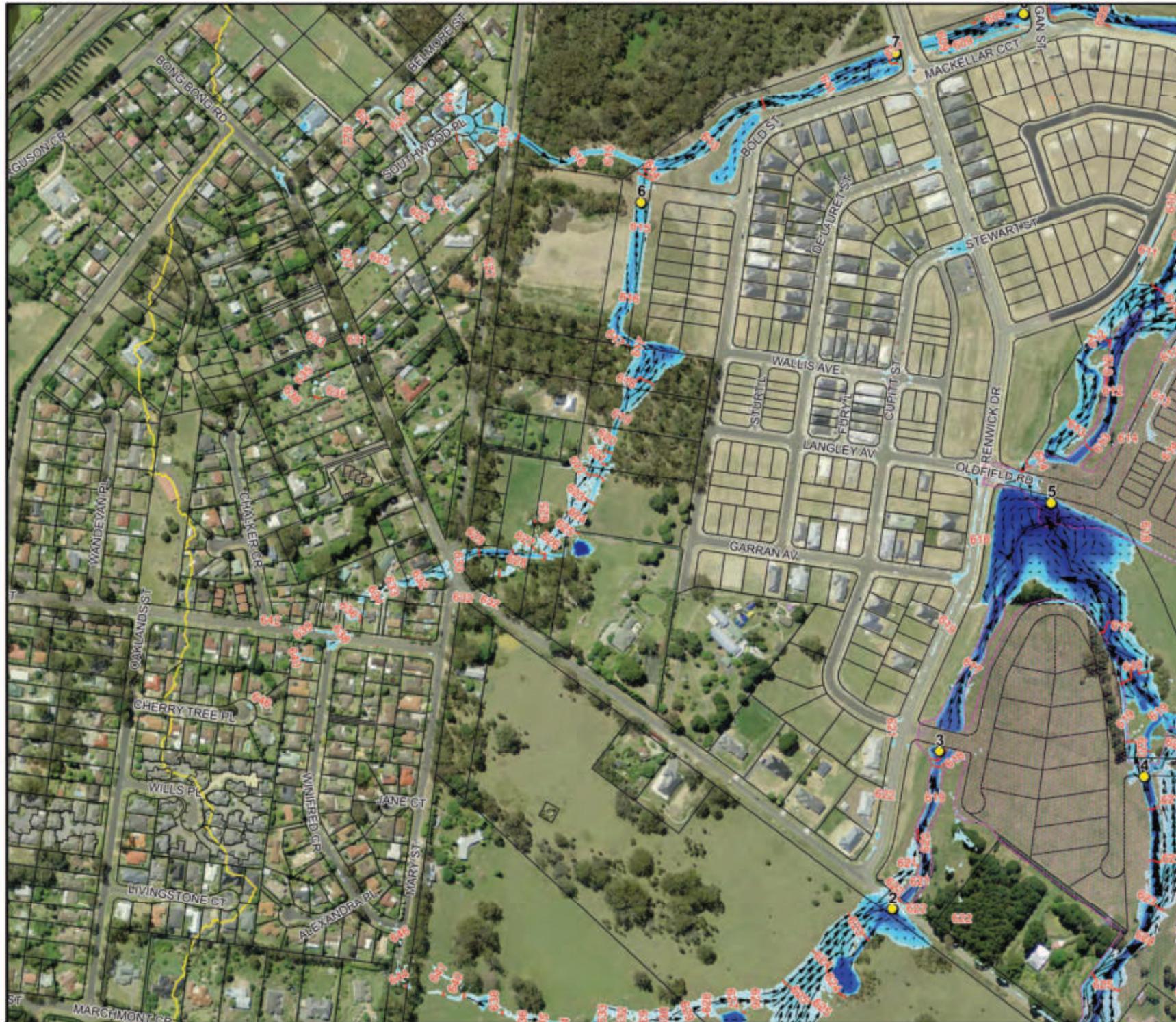


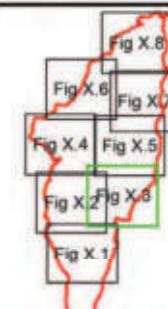
Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 10.2:  
Floodwater Depths,  
Levels and Velocities  
for the 0.2% AEP Flood**

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

File Name: Fig10.2 - 0.2% AEP Depths,  
 Levels and Velocities.wor




**LEGEND**

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	→ 2.5 m/s
2.0	→ 3 m/s
3.0	→ 3.5 m/s

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



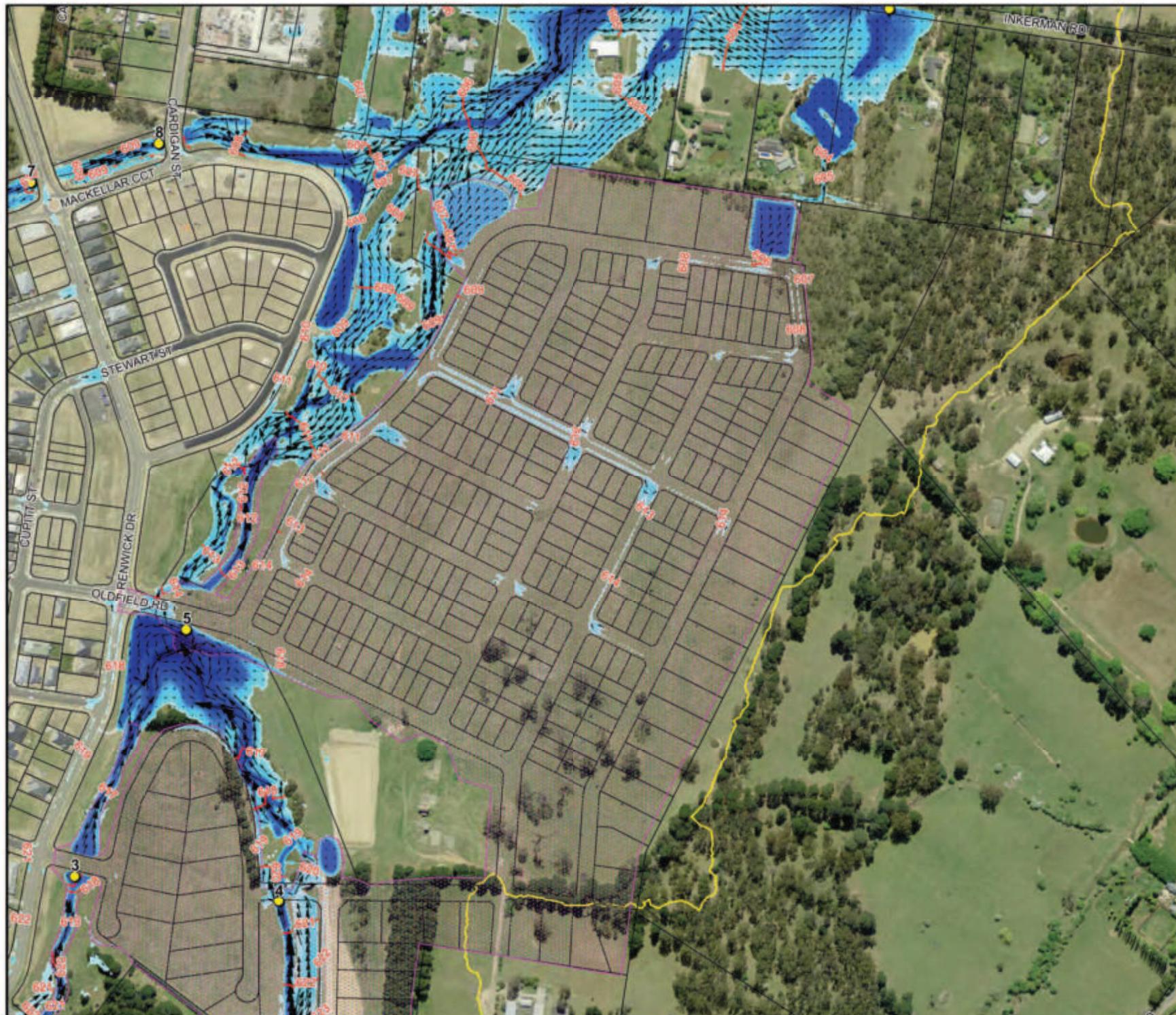
Scale 1:4,000 (at A3)  
 0      C 1      0.2

**Figure 10.3:**  
**Floodwater Depths,  
Levels and Velocities  
for the 0.2% AEP Flood**

Prepared By:

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

File Name: Fig10.3 - 0.2% AEP Depths,  
Levels and Velocities.wor





#### LEGEND

Nattai Ponds Study Area	
Future Development Area (Design elevations adopted)	
830 Peak Water Level Contour (mAHD)	
Design Flood Level Point	
Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

#### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



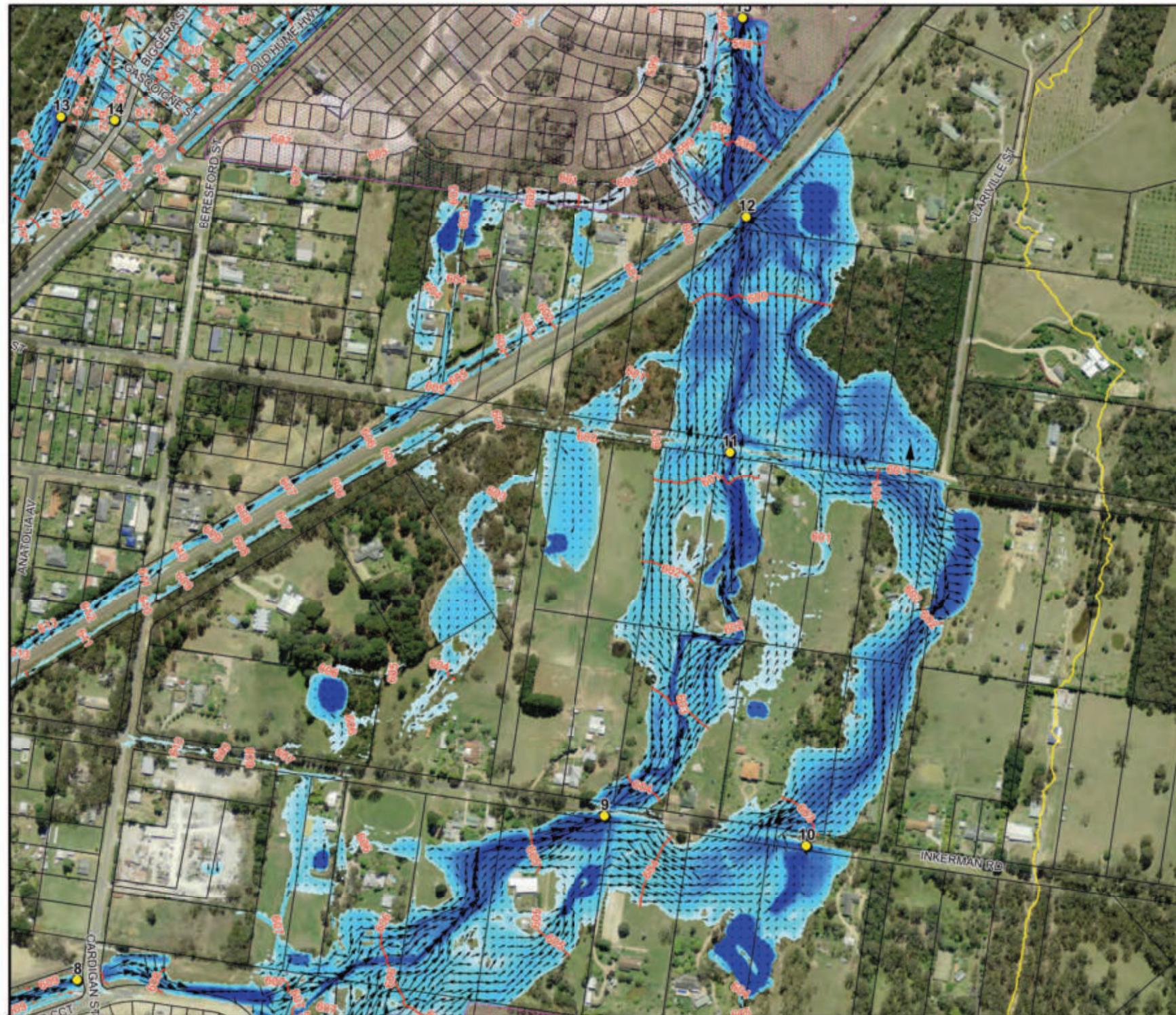
Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 10.4:  
Floodwater Depths,  
Levels and Velocities  
for the 0.2% AEP Flood**

Prepared By:

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

File Name: Fig10.4 - 0.2% AEP Depths,  
Levels and Velocities.wor



### LEGEND

■ Natrai Ponds Study Area  
■ Future Development Area.  
— Peak Water Level Contour (mAHD)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

#### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



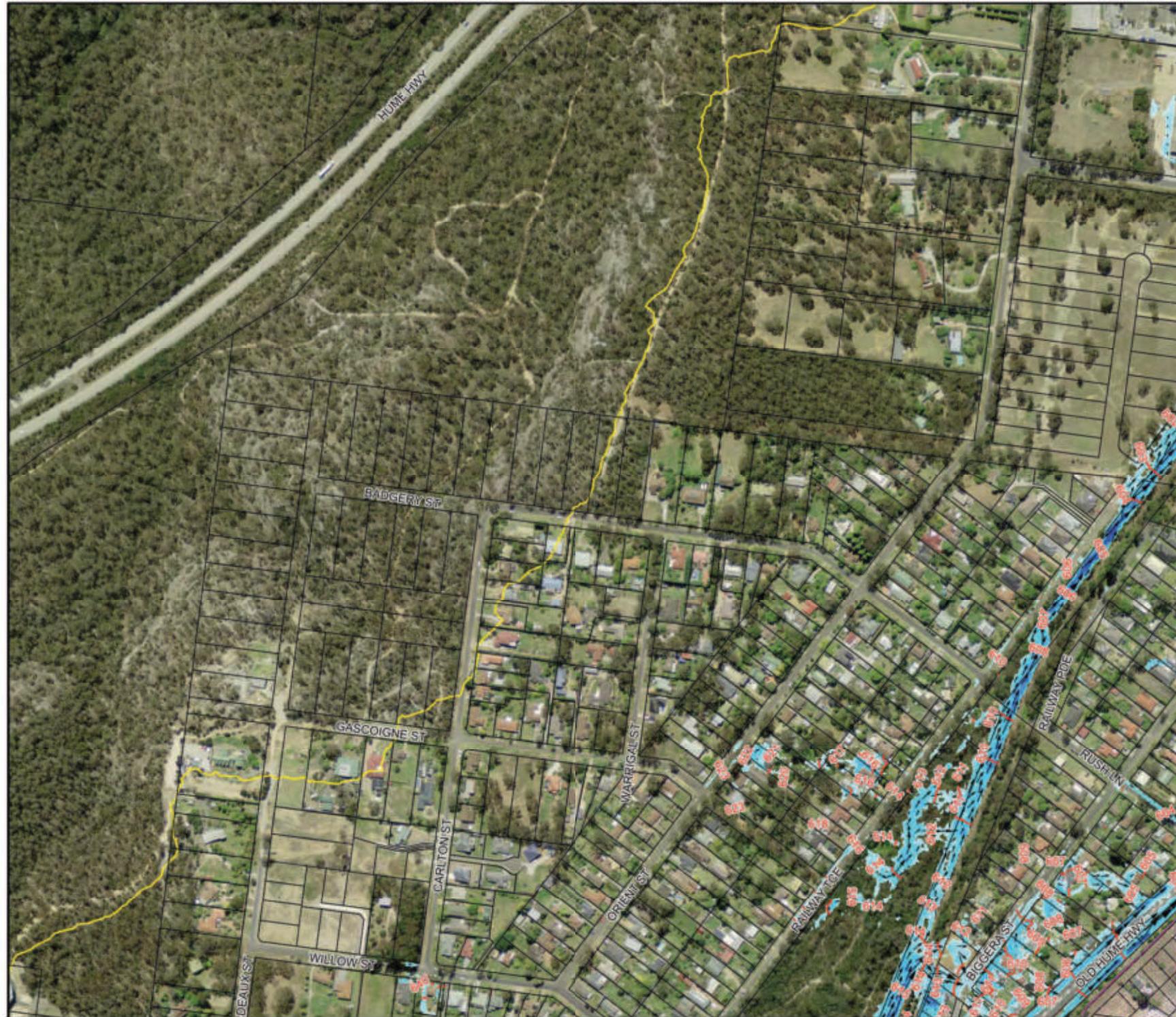
Scale 1:4000 (at A3)



**Figure 10.5:**  
**Floodwater Depths,  
 Levels and Velocities  
 for the 0.2% AEP Flood**

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

File Name: Fig10.5 - 0.2% AEP Depths,  
 Levels and Velocities.wor


**LEGEND**

Yellow Nattai Ponds Study Area  
 Future Development Area  
 (Design elevations adopted)  
800 Peak Water Level Contour (mAHN)

● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)



**Figure 10.6:  
Floodwater Depths,  
Levels and Velocities  
for the 0.2% AEP Flood**

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

File Name: Fig10.6 - 0.2% AEP Depths,  
 Levels and Velocities.wor

Fig X.8  
Fig X.6 Fig X.7  
Fig X.4 Fig X.5  
Fig X.2 Fig X.6  
Fig X.1

### LEGEND

  Nattai Ponds Study Area  
  Future Development Area  
— Peak Water Level Contour (mAHD)  
● Design Flood Level Point

Depths (m)	Velocity Vector (m/s)
0.1	— 0.5 m/s
0.2	→ 1 m/s
0.3	→ 2 m/s
0.5	
1.0	
2.0	
3.0	

### Notes:

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.

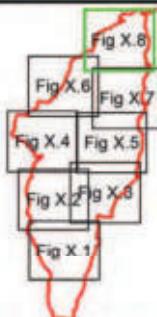


Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 10.7:**  
**Floodwater Depths,  
 Levels and Velocities  
 for the 0.2% AEP Flood**

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

File Name: Fig10.7 - 0.2% AEP Depths,  
 Levels and Velocities.wor


**LEGEND**

	Nattai Ponds Study Area
	Future Development Area (Design elevations adopted)
	Peak Water Level Contour (mAHD)
	Design Flood Level Point
<b>Depths (m)</b>	<b>Velocity Vector (m/s)</b>
0.1	→ 0.5 m/s
0.2	→ 1 m/s
0.3	→ 1.5 m/s
0.5	→ 2 m/s
1.0	
2.0	
3.0	

**Notes:**

Aerial photograph date: September 2013  
 Results within 'Future development areas' based on assumed elevations and results should be verified against final topography before use.



Scale 1:4,000 (at A3)  
 0 C 1 0.2

**Figure 10.8:**  
**Floodwater Depths,  
 Levels and Velocities  
 for the 0.2% AEP Flood**

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

File Name: Fig10.8 - 0.2% AEP Depths,  
 Levels and Velocities.wor

