



FIGURE 1  
LOCATION OF STUDY AREA

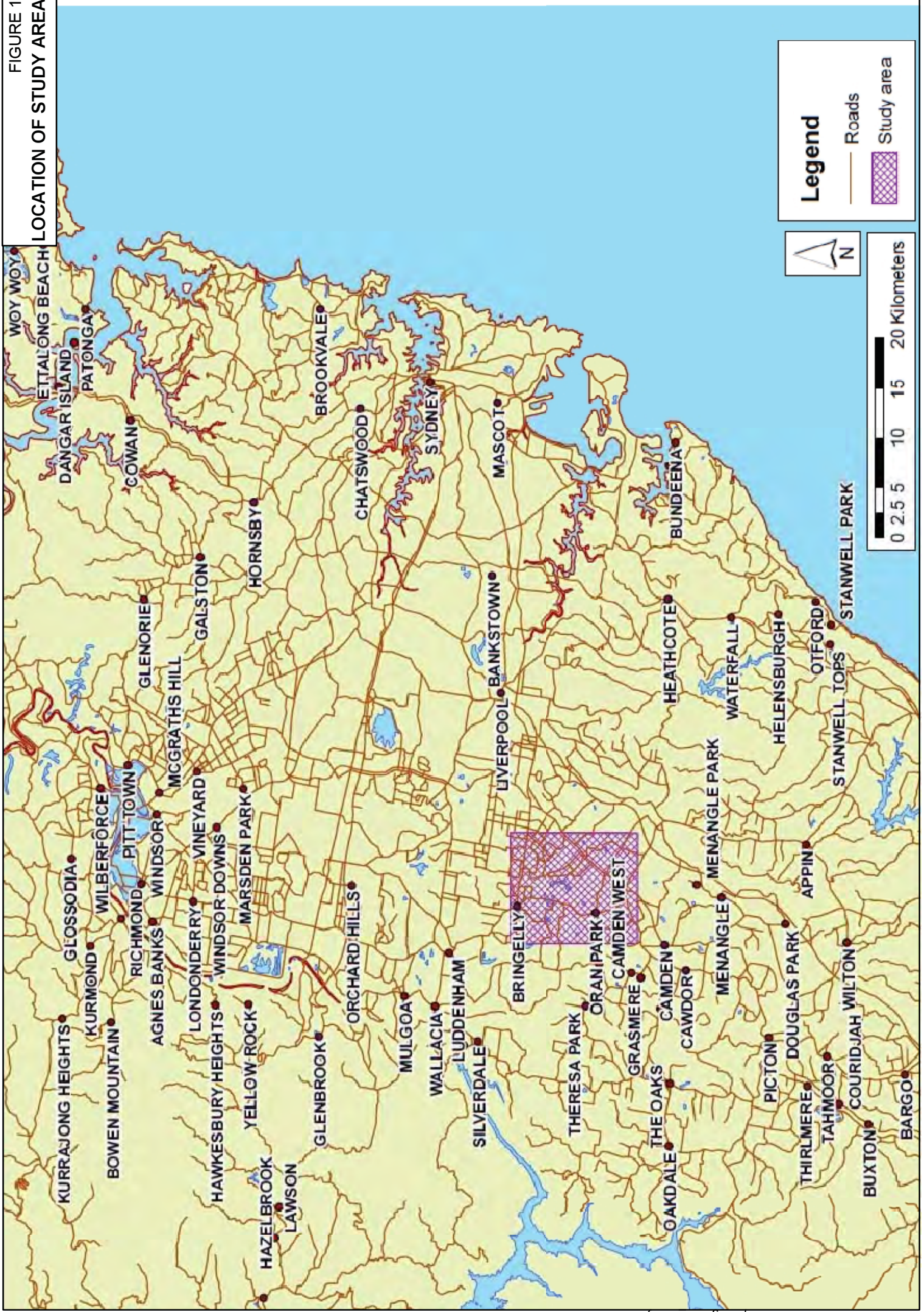
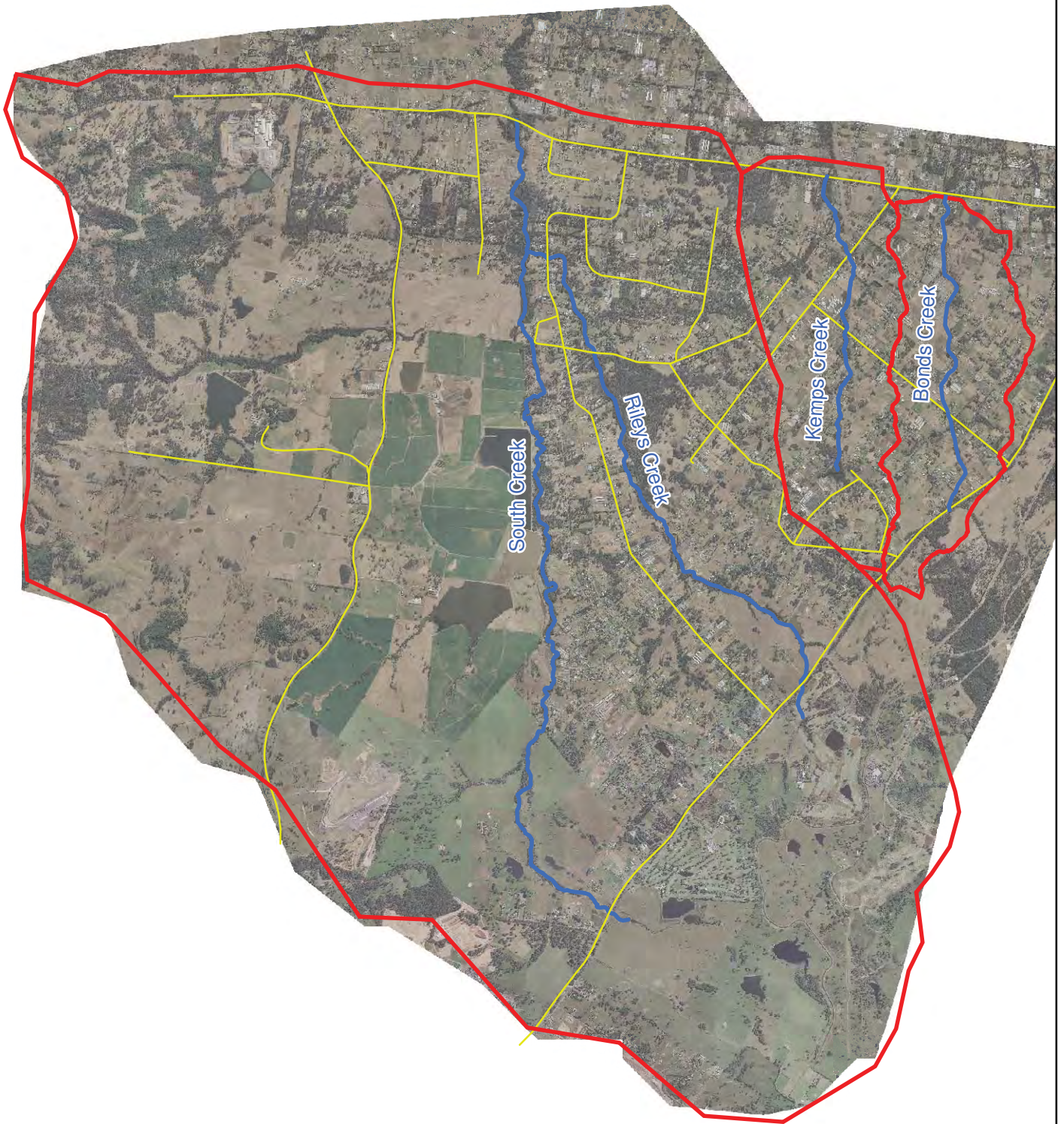







FIGURE 2  
STUDY AREA



 Catchment Boundary

 Main Watercourse

 Main roads

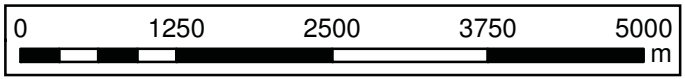
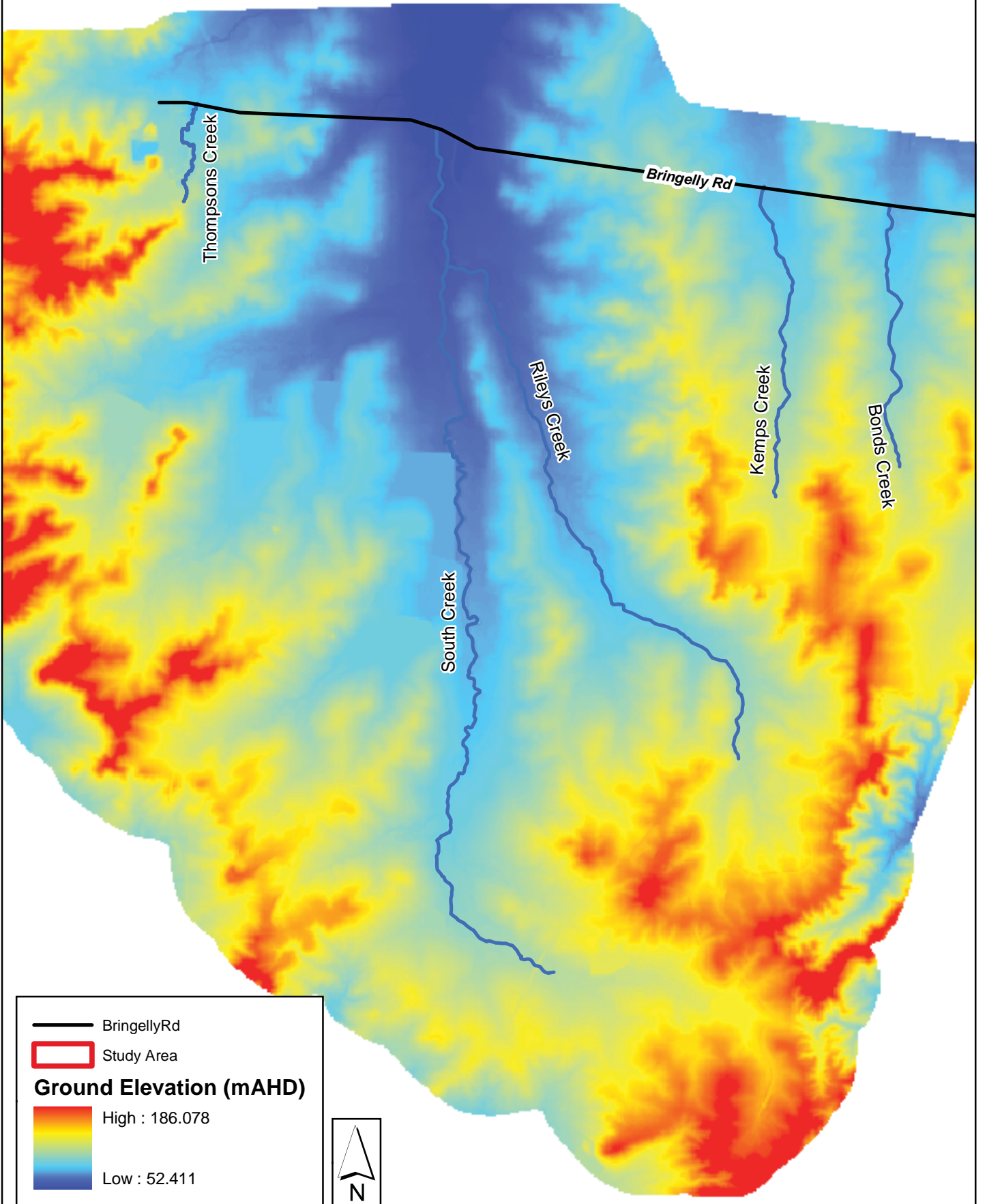




FIGURE 3  
SOUTH CREEK GROUND ELEVATION



— BringellyRd  
Study Area  
**Ground Elevation (mAHD)**  
High : 186.078  
Low : 52.411

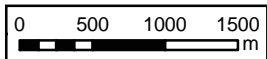
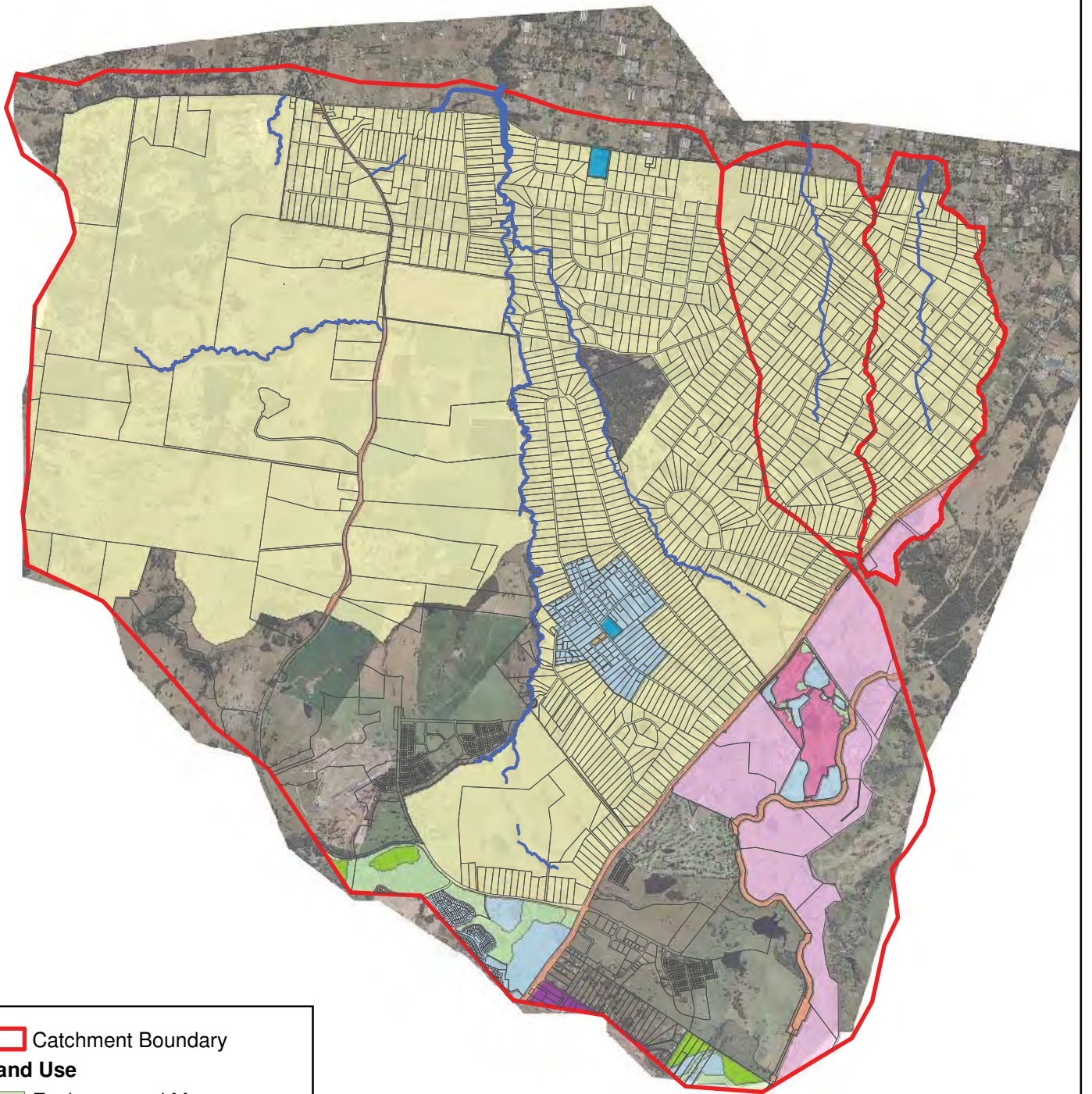


FIGURE 4  
PROPOSED LAND USE INFORMATION



 Catchment Boundary

**Land Use**

-  Environmental Management
-  Environmental Living
-  Infrastructure
-  General Industrial
-  General Residential
-  Neighbourhood Centre
-  Primary Production
-  Private Recreation
-  Public Recreation
-  Rural Landscape
-  Creeks

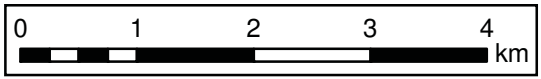
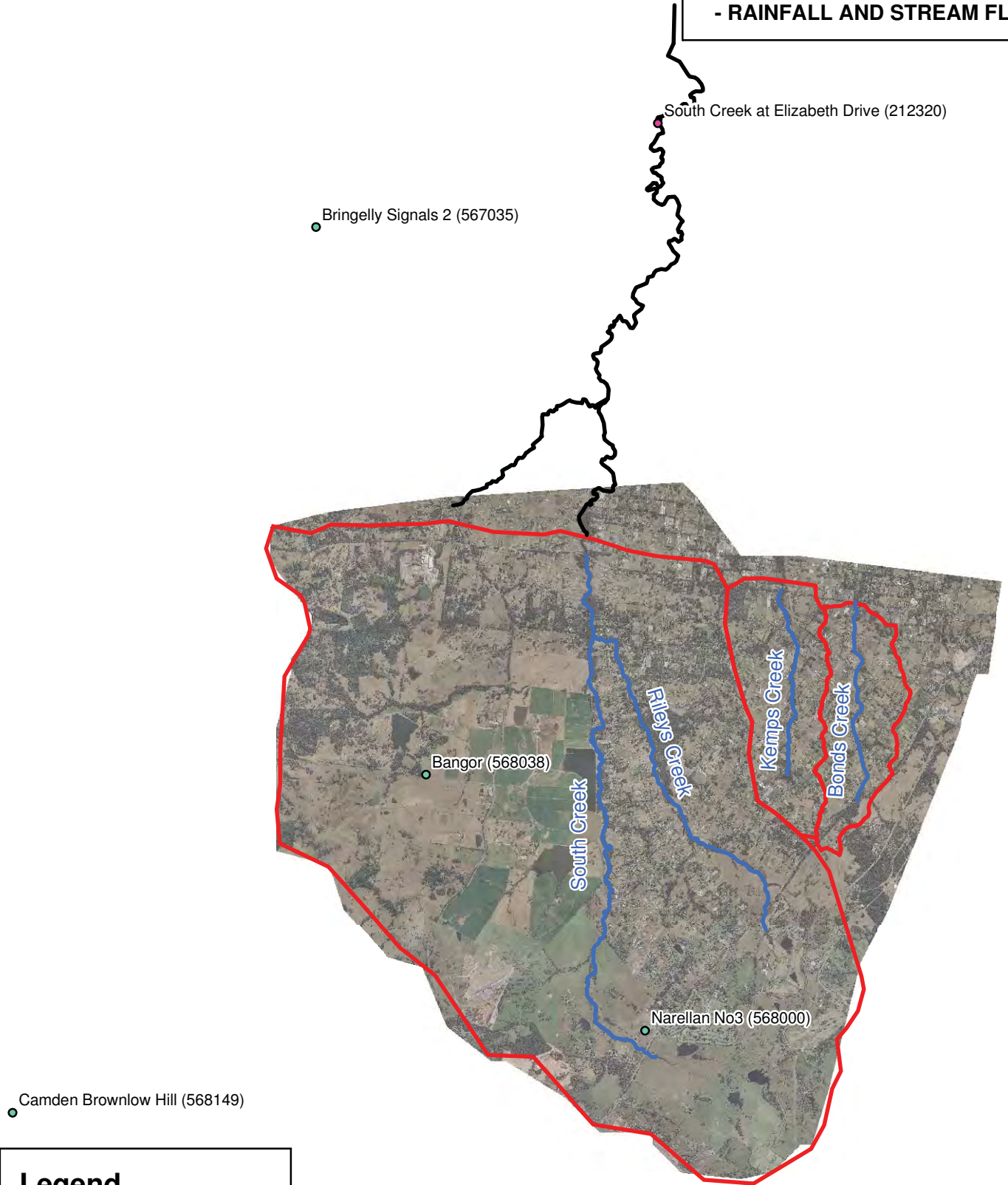




FIGURE 5

**GAUGING STATION LOCATIONS  
- RAINFALL AND STREAM FLOW**



**Legend**

- Downstream Gauge
- Rainfall Gauge
- 1D Network Creeks
- Main Watercourse
- ▭ Catchment Boundary

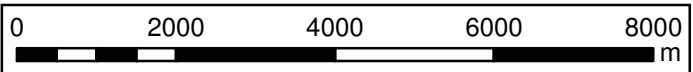


FIGURE 6  
 APRIL 1988 RAINFALL COMPARISON WITH IFD

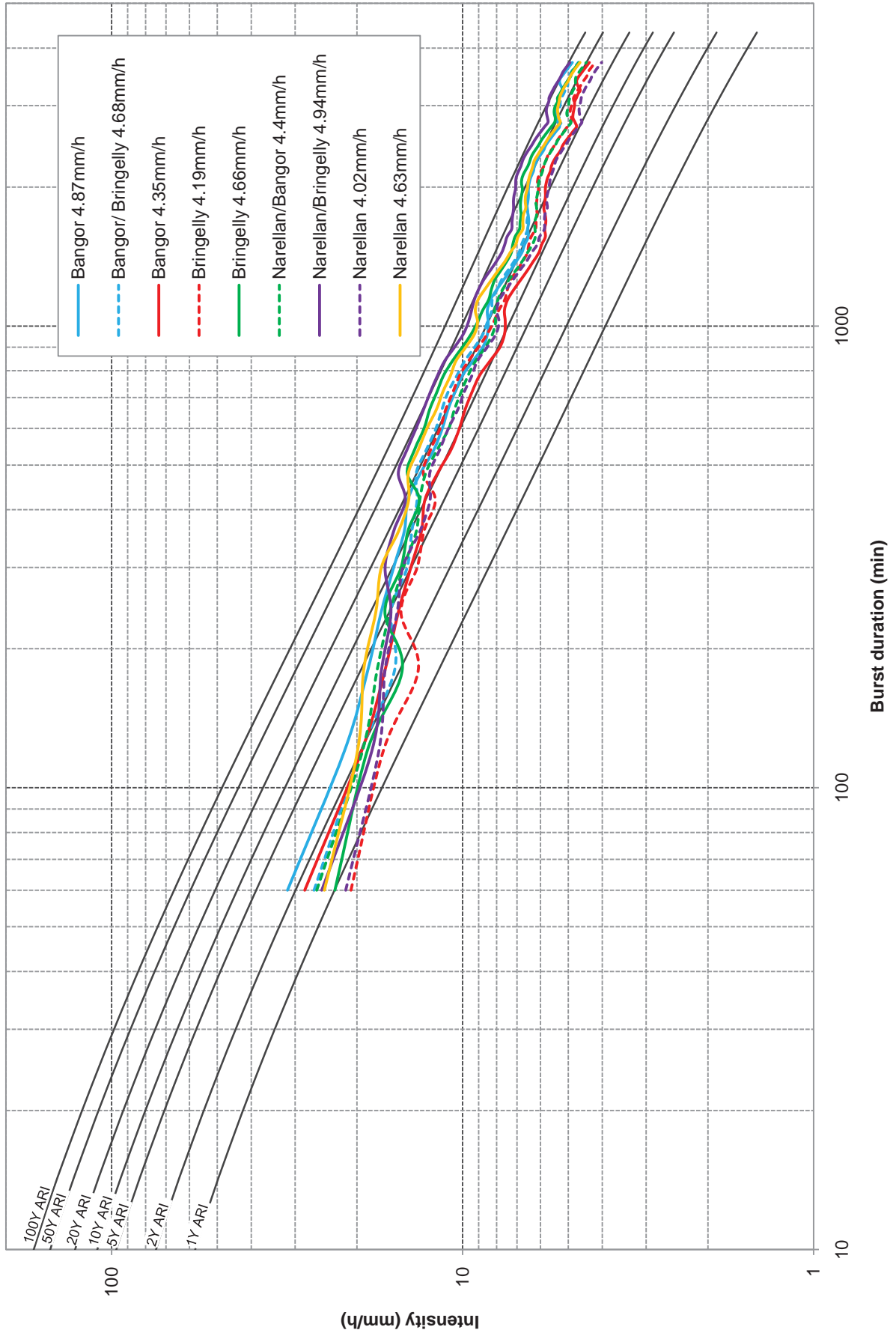
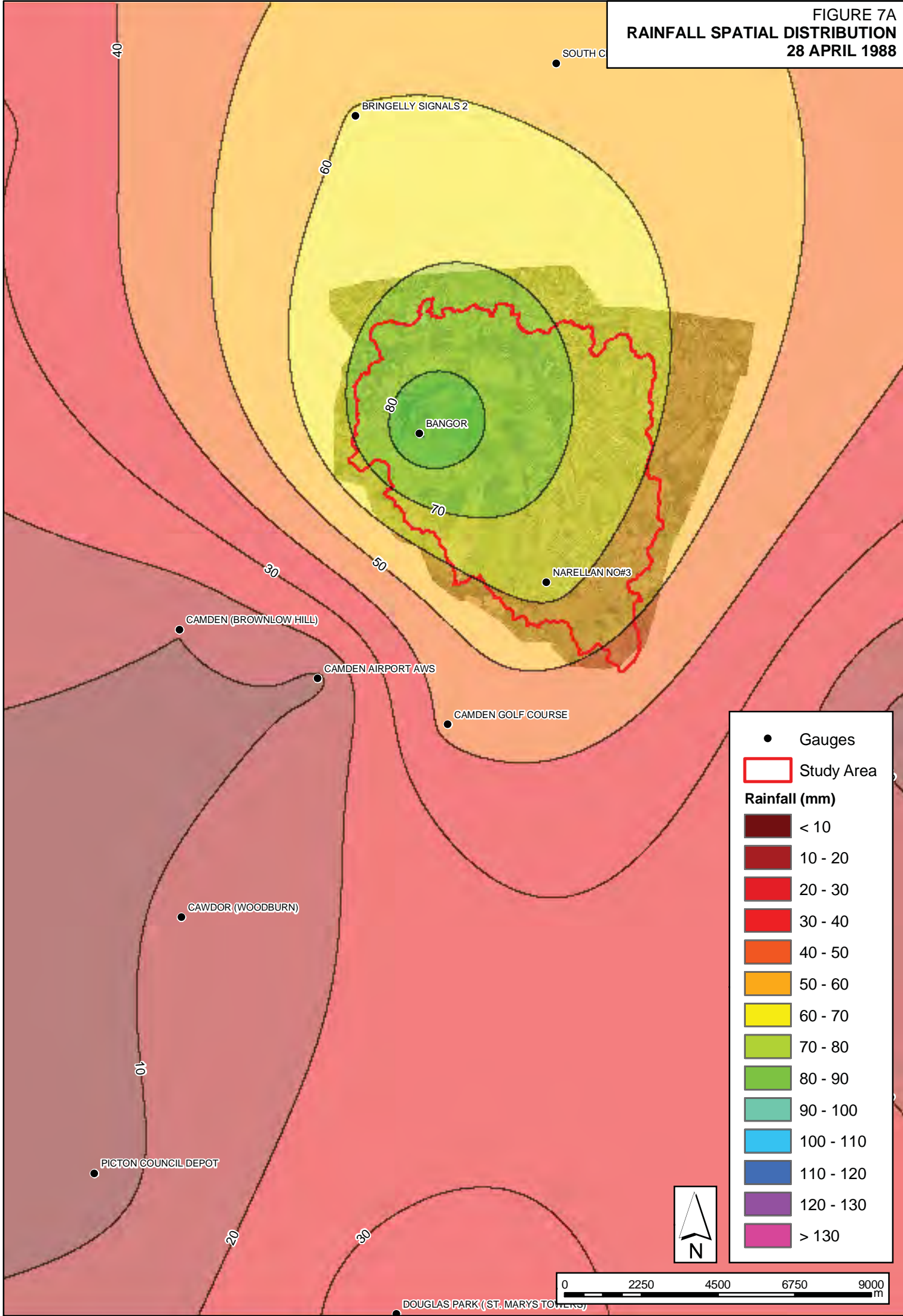


FIGURE 7A  
**RAINFALL SPATIAL DISTRIBUTION**  
 28 APRIL 1988



- Gauges
- ▭ Study Area

**Rainfall (mm)**

	< 10
	10 - 20
	20 - 30
	30 - 40
	40 - 50
	50 - 60
	60 - 70
	70 - 80
	80 - 90
	90 - 100
	100 - 110
	110 - 120
	120 - 130
	> 130

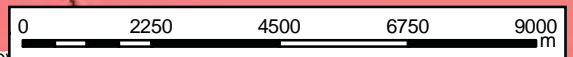
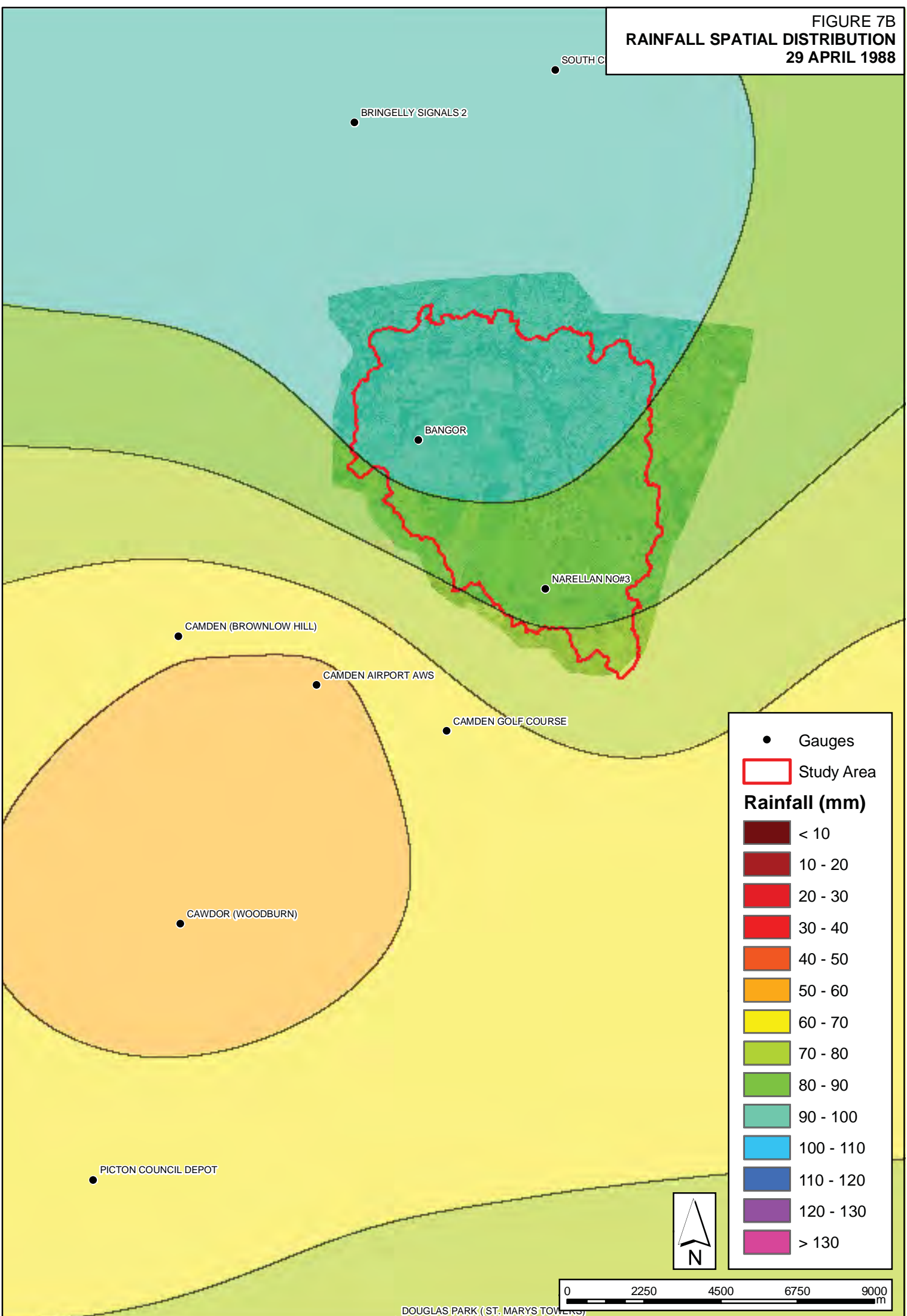




FIGURE 7B  
**RAINFALL SPATIAL DISTRIBUTION**  
**29 APRIL 1988**



- Gauges
- ▭ Study Area

**Rainfall (mm)**

Dark Red	< 10
Red	10 - 20
Bright Red	20 - 30
Red-Orange	30 - 40
Orange	40 - 50
Light Orange	50 - 60
Yellow-Orange	60 - 70
Yellow	70 - 80
Light Green	80 - 90
Green	90 - 100
Light Blue	100 - 110
Blue	110 - 120
Purple	120 - 130
Magenta	> 130

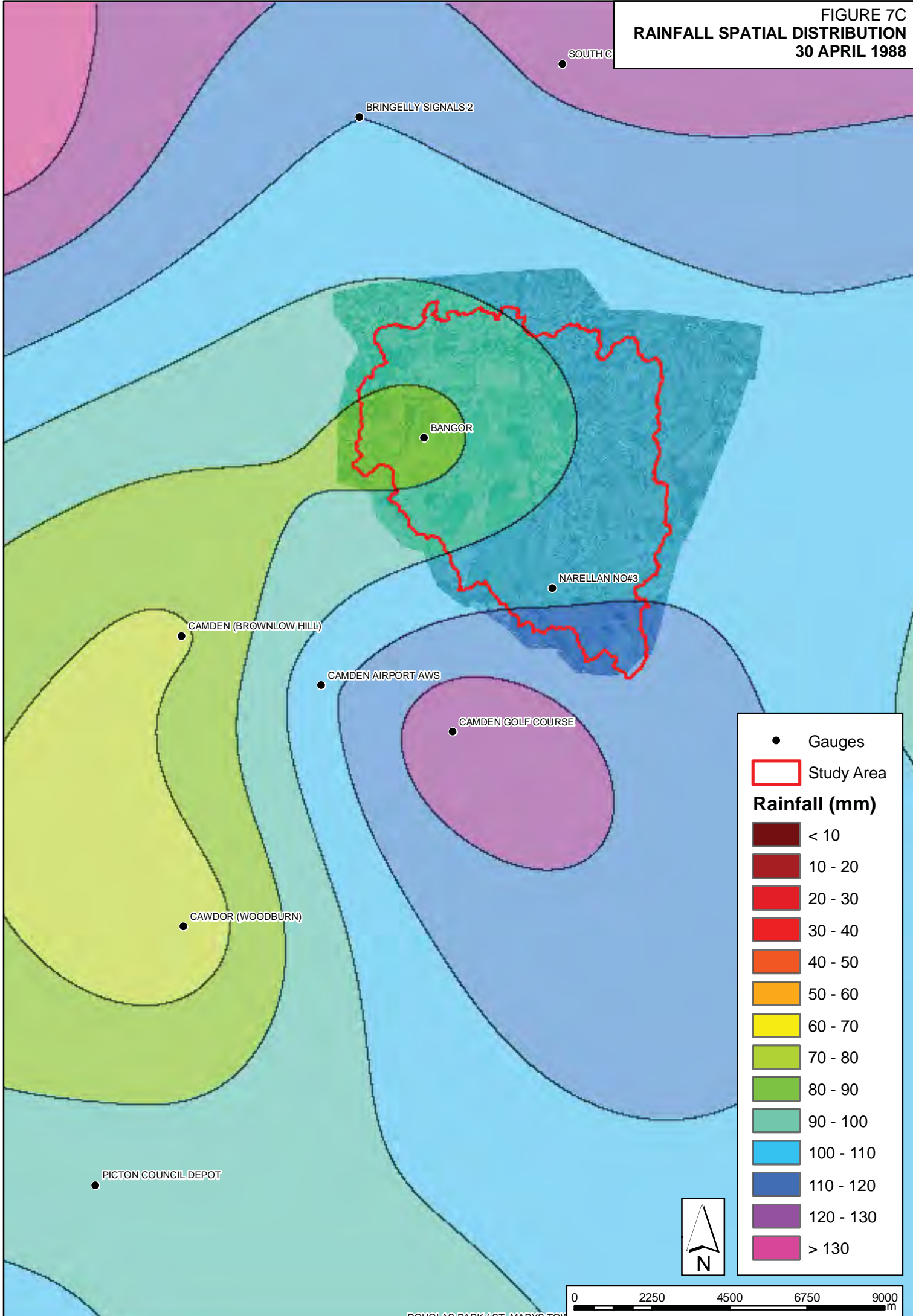
J:\Jobs\29024\ArcView\Arcmaps\Figure7B\_RainfallSpatialDistribution\_290488.mxd

0 2250 4500 6750 9000 m



DOUGLAS PARK ((ST. MARYS TOWER))

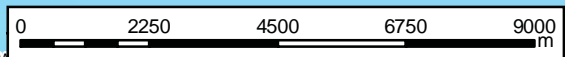
FIGURE 7C  
**RAINFALL SPATIAL DISTRIBUTION**  
**30 APRIL 1988**



- Gauges
- ▭ Study Area

**Rainfall (mm)**

Dark Red	< 10
Red	10 - 20
Bright Red	20 - 30
Orange-Red	30 - 40
Orange	40 - 50
Yellow-Orange	50 - 60
Yellow	60 - 70
Light Green	70 - 80
Green	80 - 90
Teal	90 - 100
Light Blue	100 - 110
Blue	110 - 120
Dark Blue	120 - 130
Purple	120 - 130
Pink	> 130



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DOUGLAS PARK ((ST. MARYS TOWER))



FIGURE 8  
JUNE 1991 RAINFALL COMPARISON WITH IFD

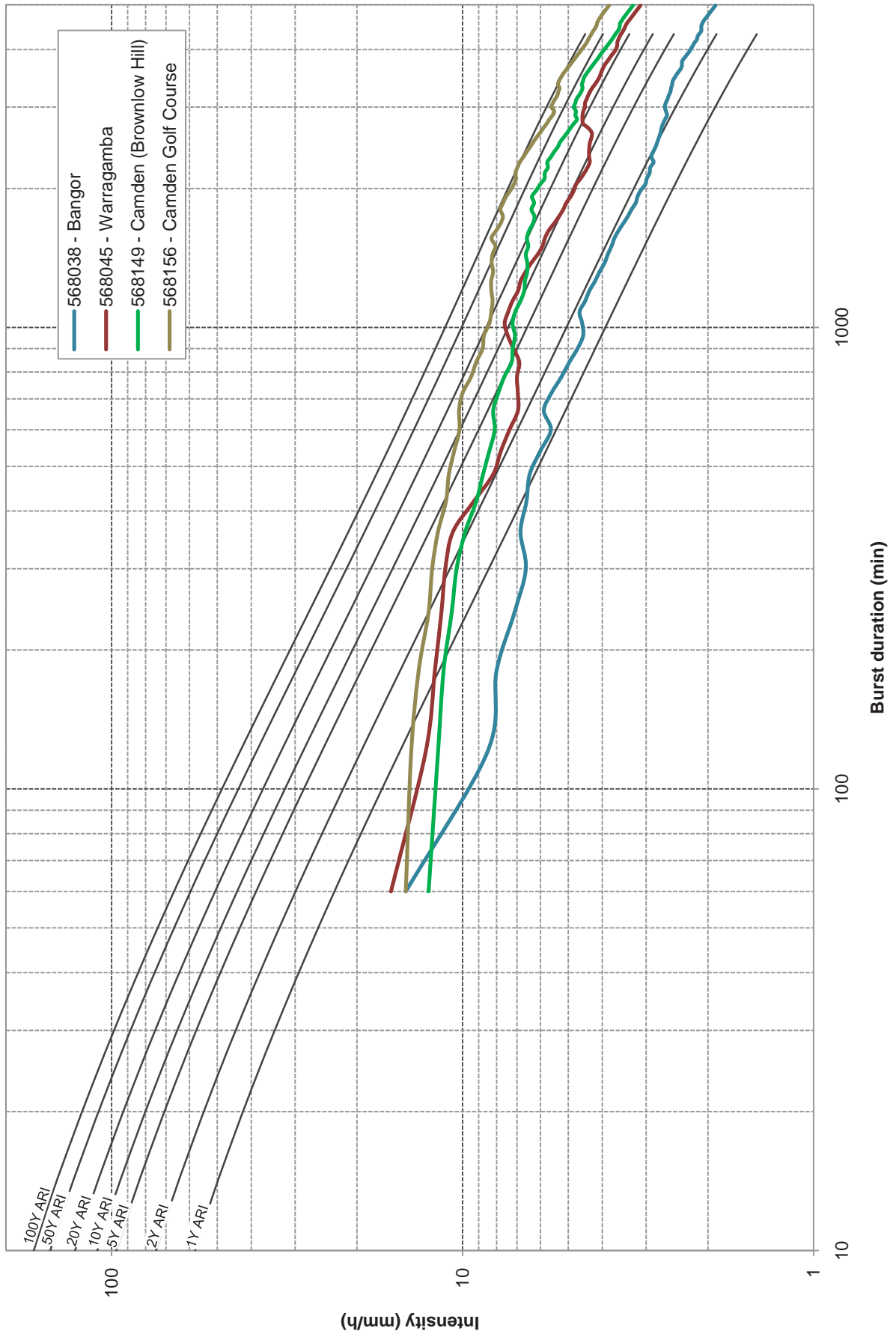


FIGURE 9  
FEBRUARY 1992 RAINFALL COMPARISON WITH IFD

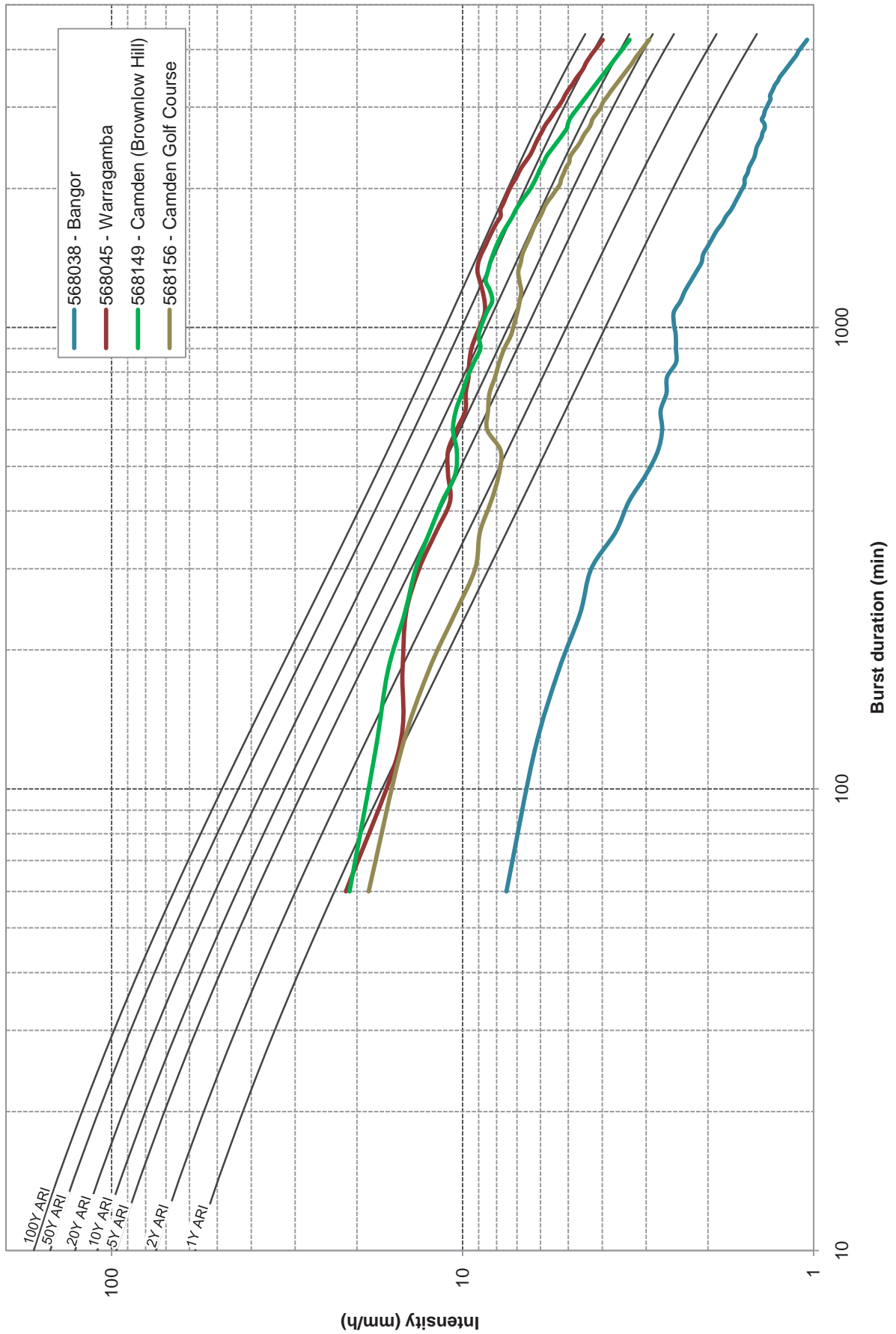
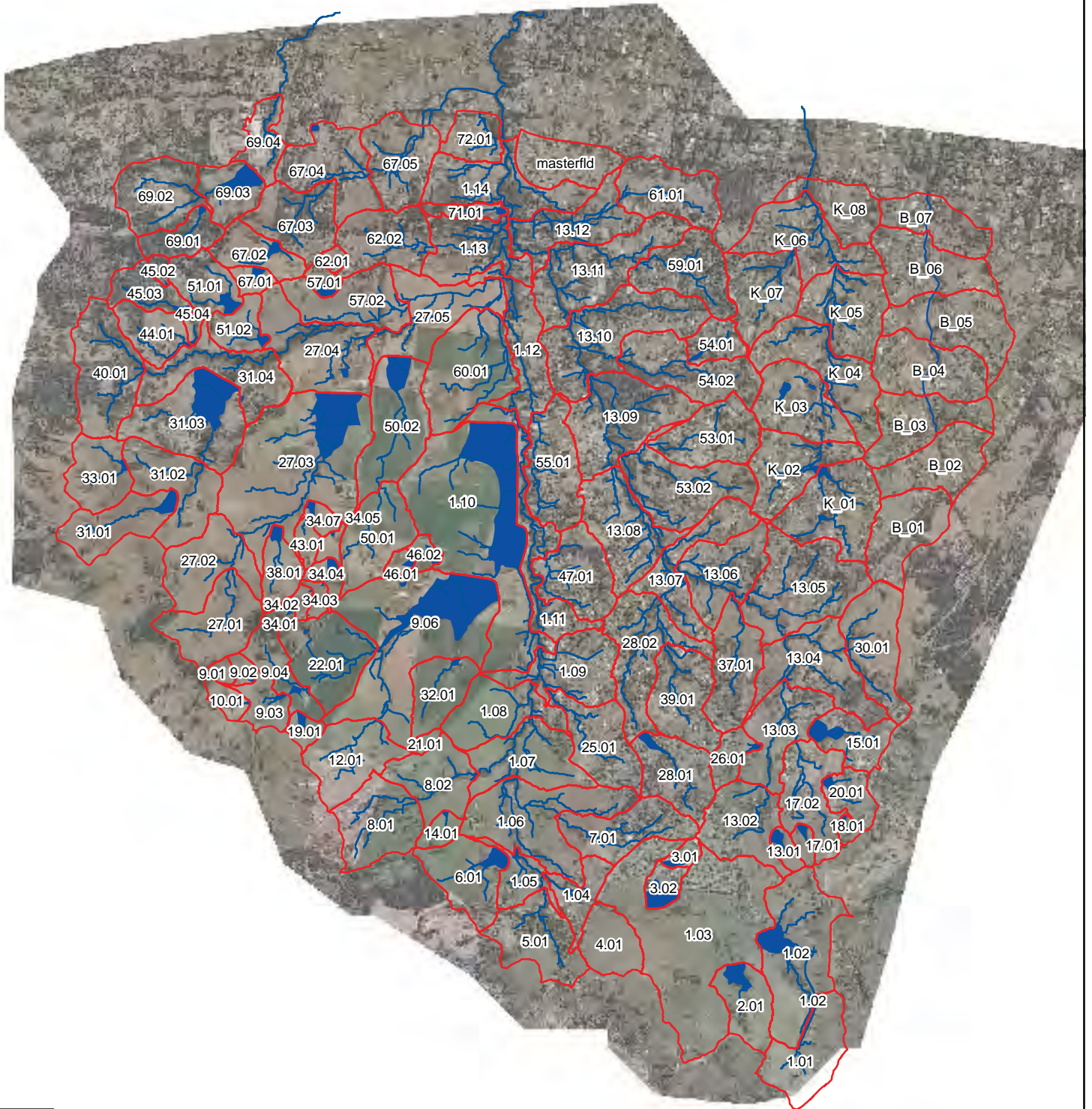






FIGURE 10  
HYDROLOGICAL SUB-CATCHMENTS



	Subcatchment
	Water courses

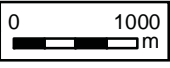
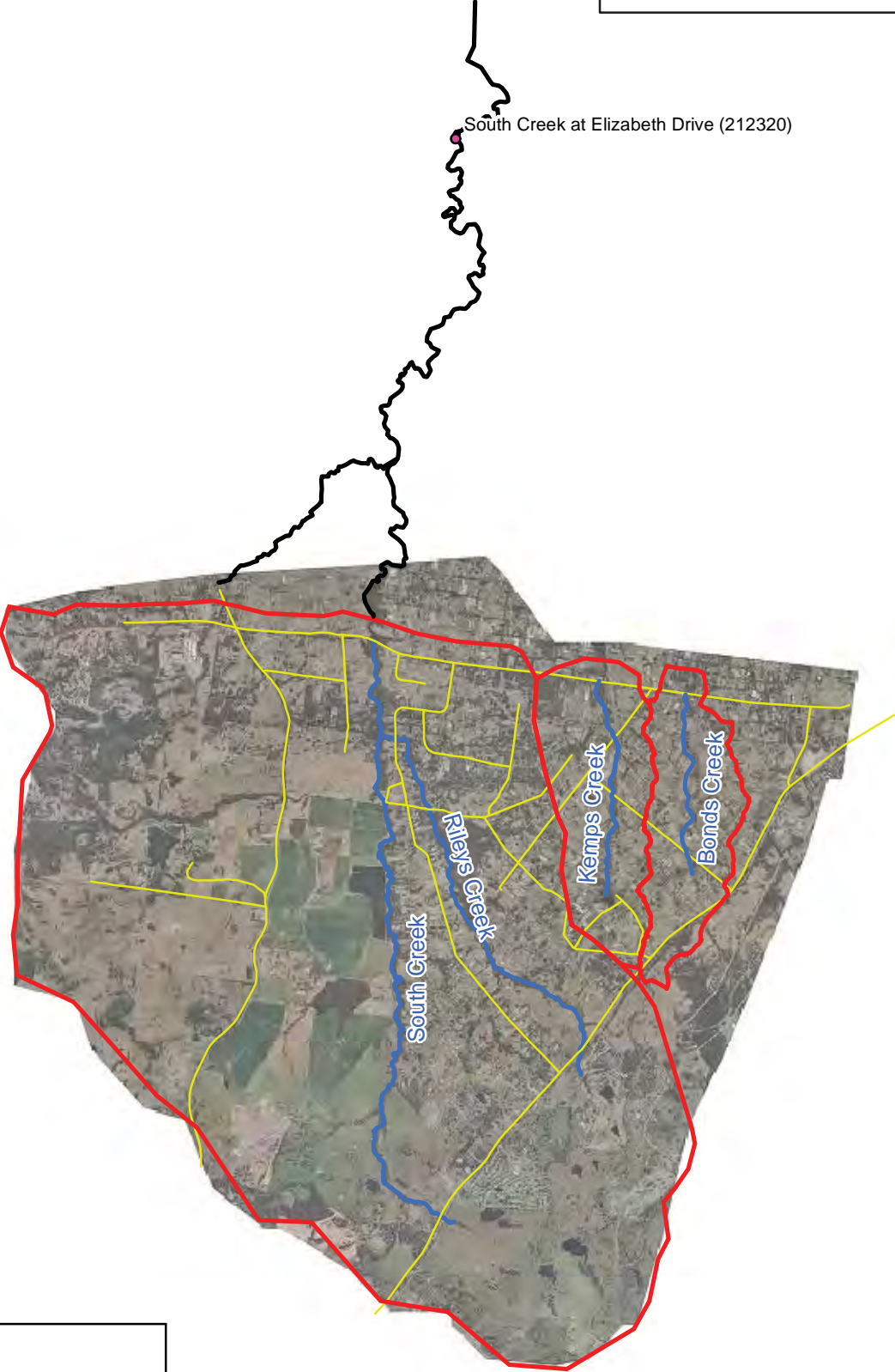


FIGURE 11  
HYDRAULIC MODEL BUILD  
KEMPS CREEK AND SOUTH CREEK



South Creek at Elizabeth Drive (212320)

**Legend**

- Downstream Gauge
- 1D Network Creeks
- Main Watercourse
- Main roads
- Catchment Boundary





FIGURE 12  
STRUCTURES SURVEYED





FIGURE 13  
**CALIBRATION EVENT - APRIL 1988**

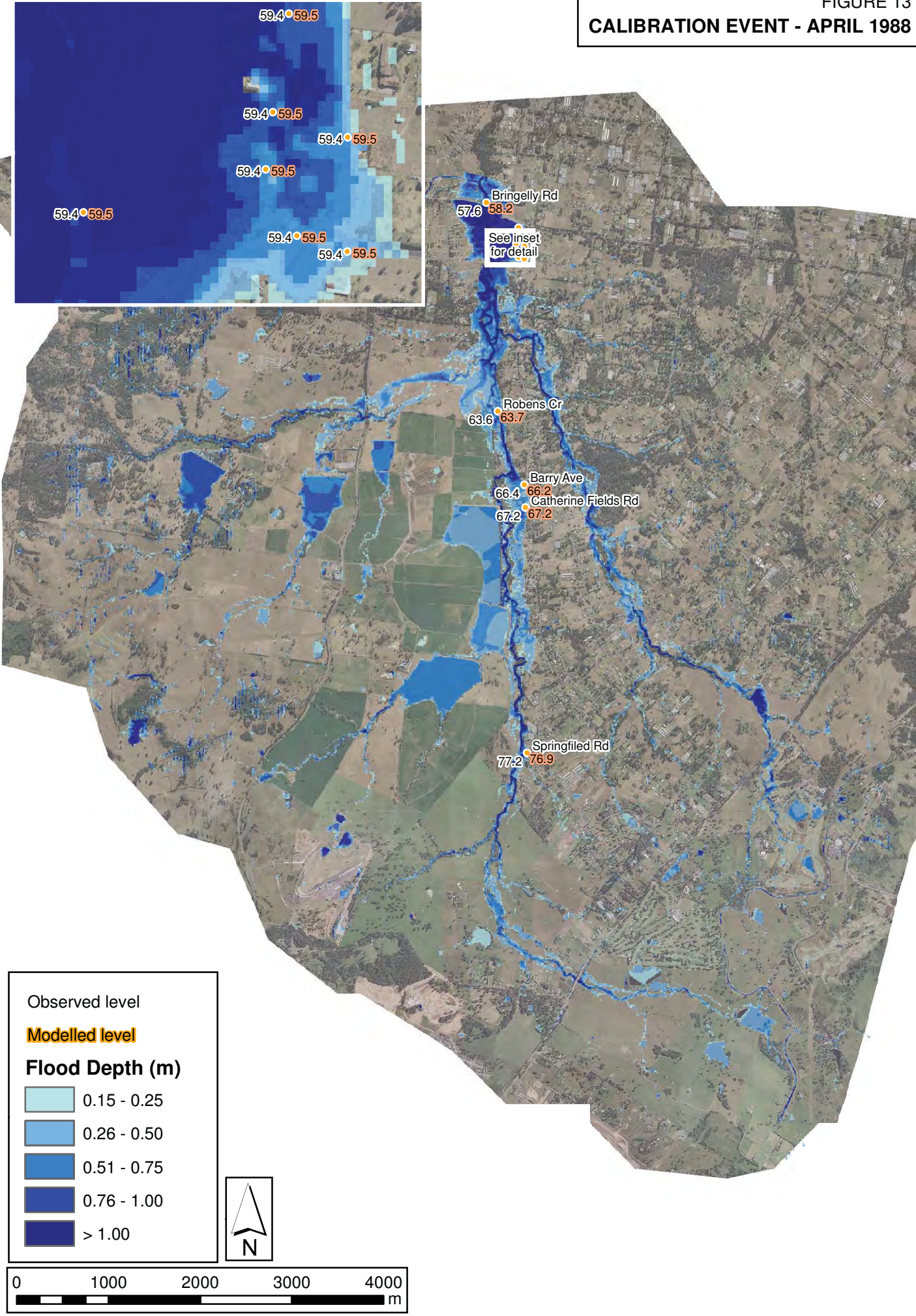
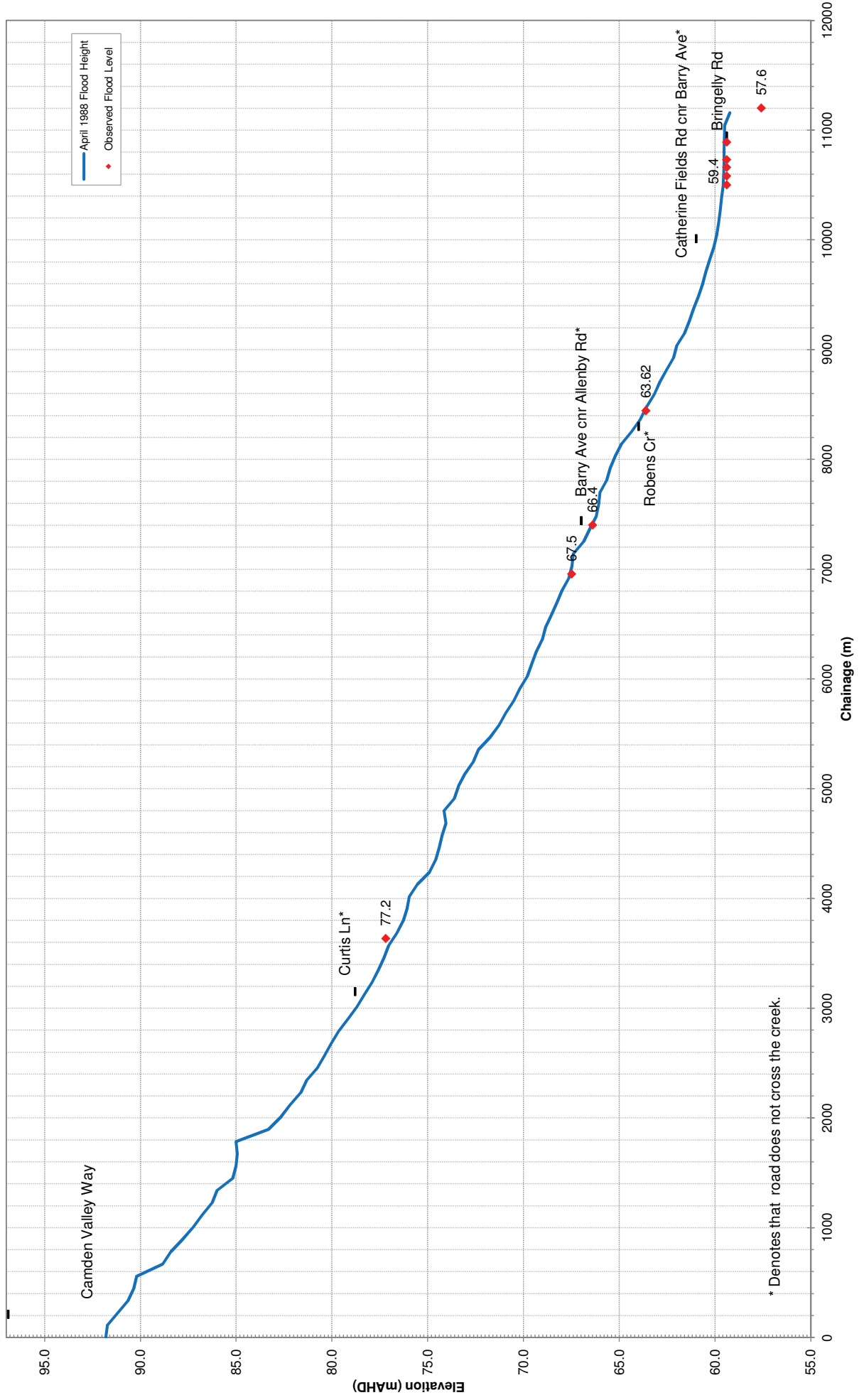




FIGURE 14  
 UPPER SOUTH CREEK  
 PEAK FLOOD HEIGHTS  
 APRIL 1988



\* Denotes that road does not cross the creek.

1988 - CALIBRATION RESULTS - ELIZABETH DRIVE STAGE

FIGURE 15

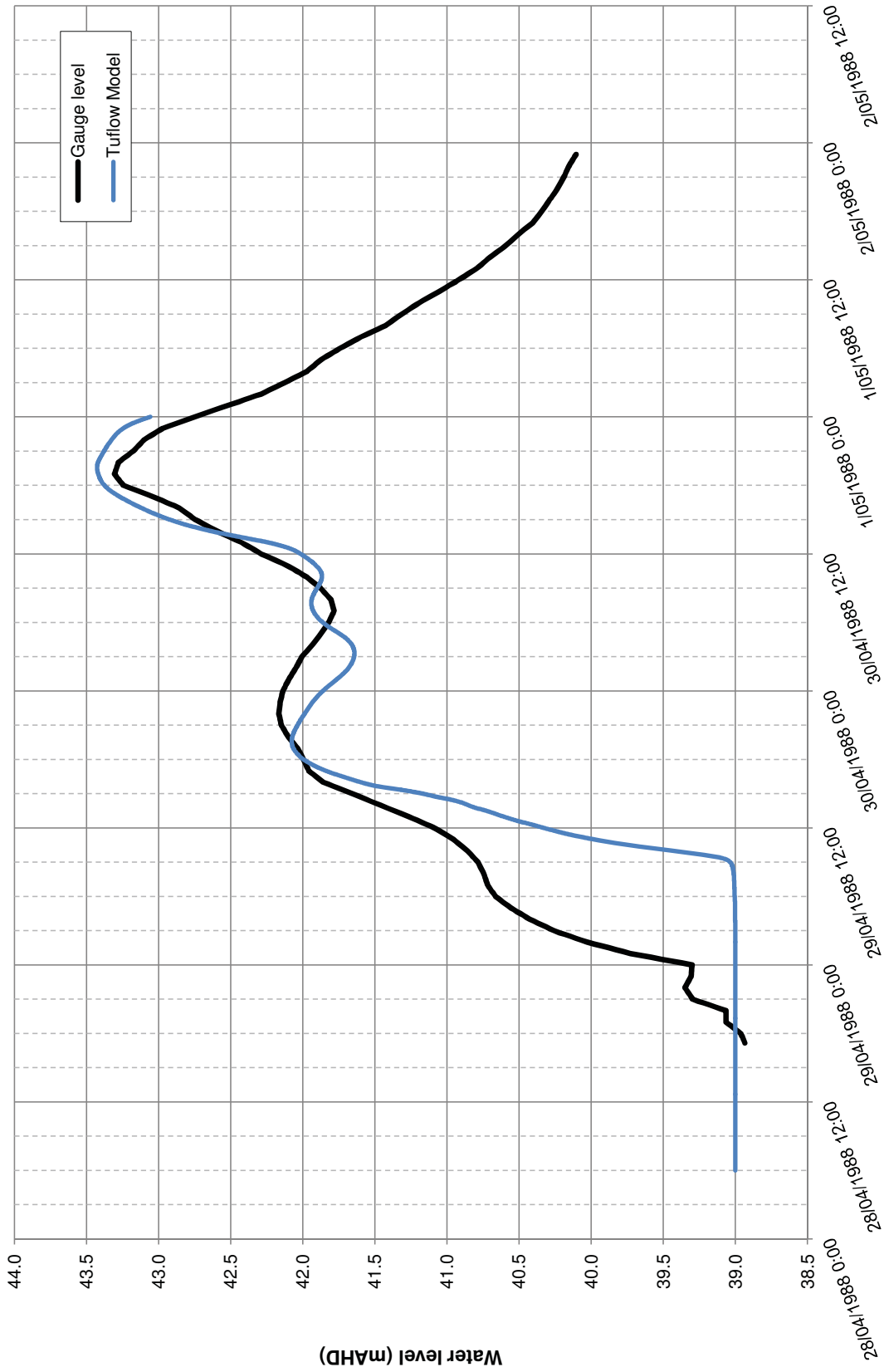




FIGURE 16  
 1991 - VALIDATION RESULTS - ELIZABETH DRIVE STAGE

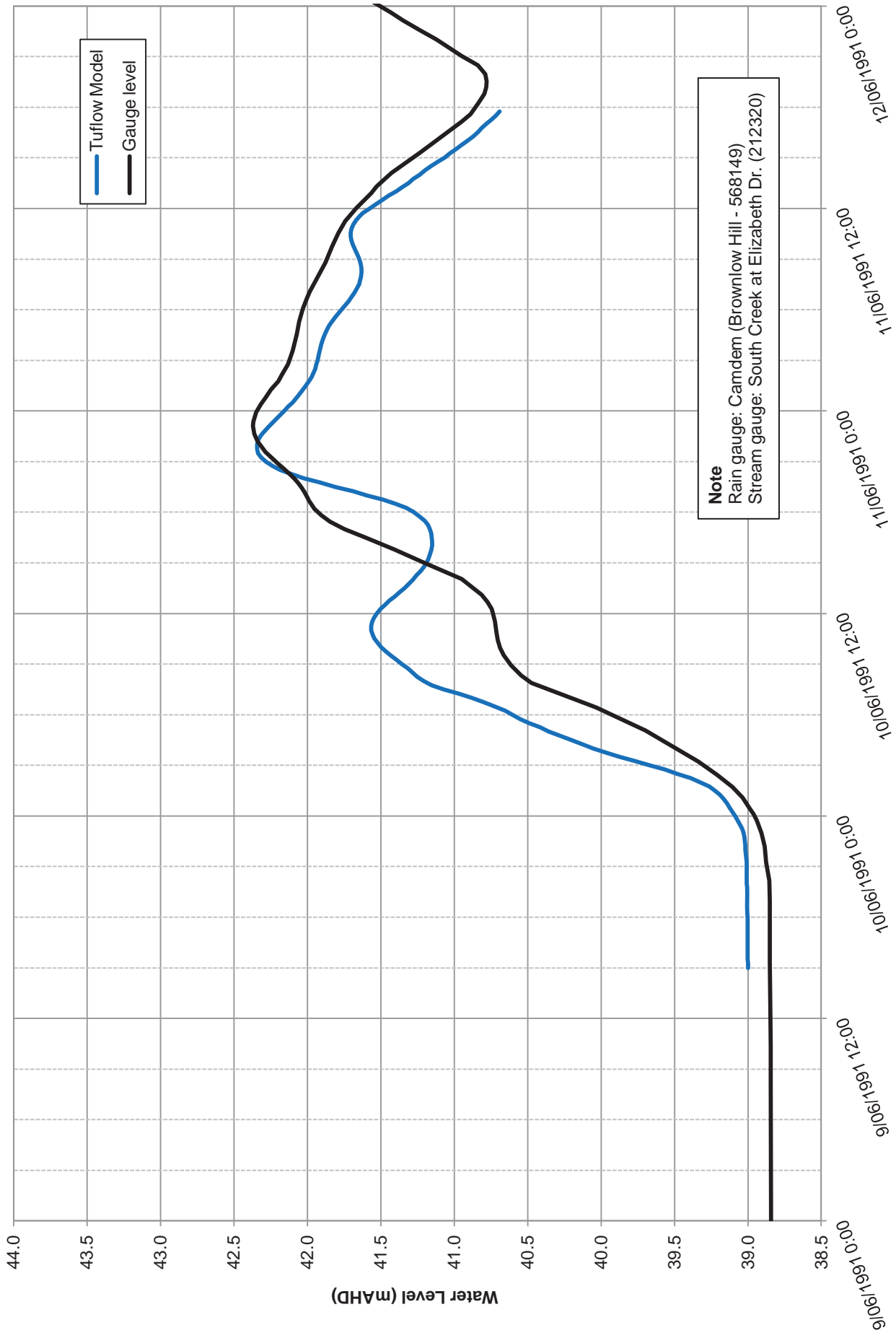


FIGURE 17  
1992 - VALIDATION RESULTS - ELIZABETH DRIVE STAGE

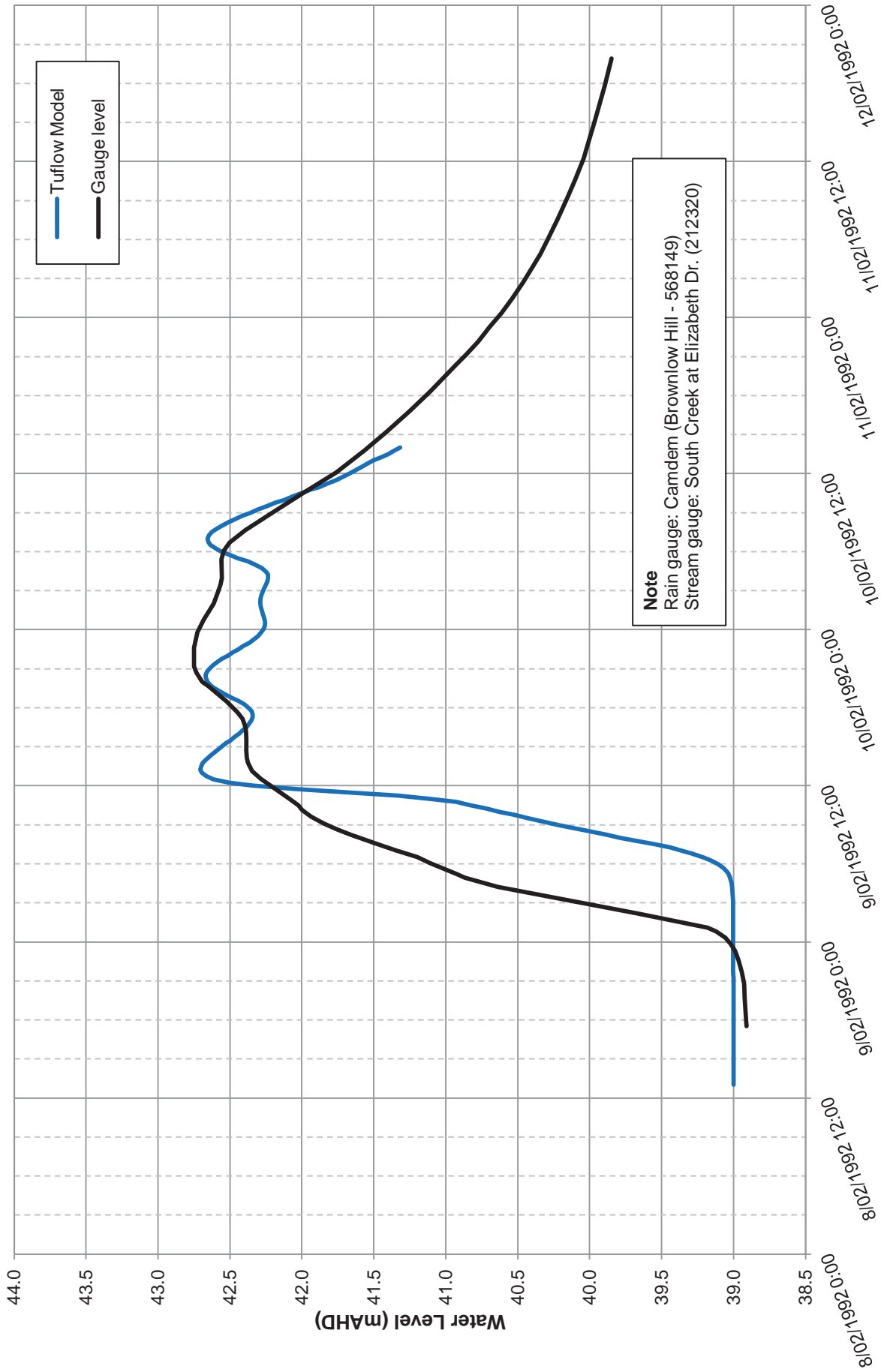
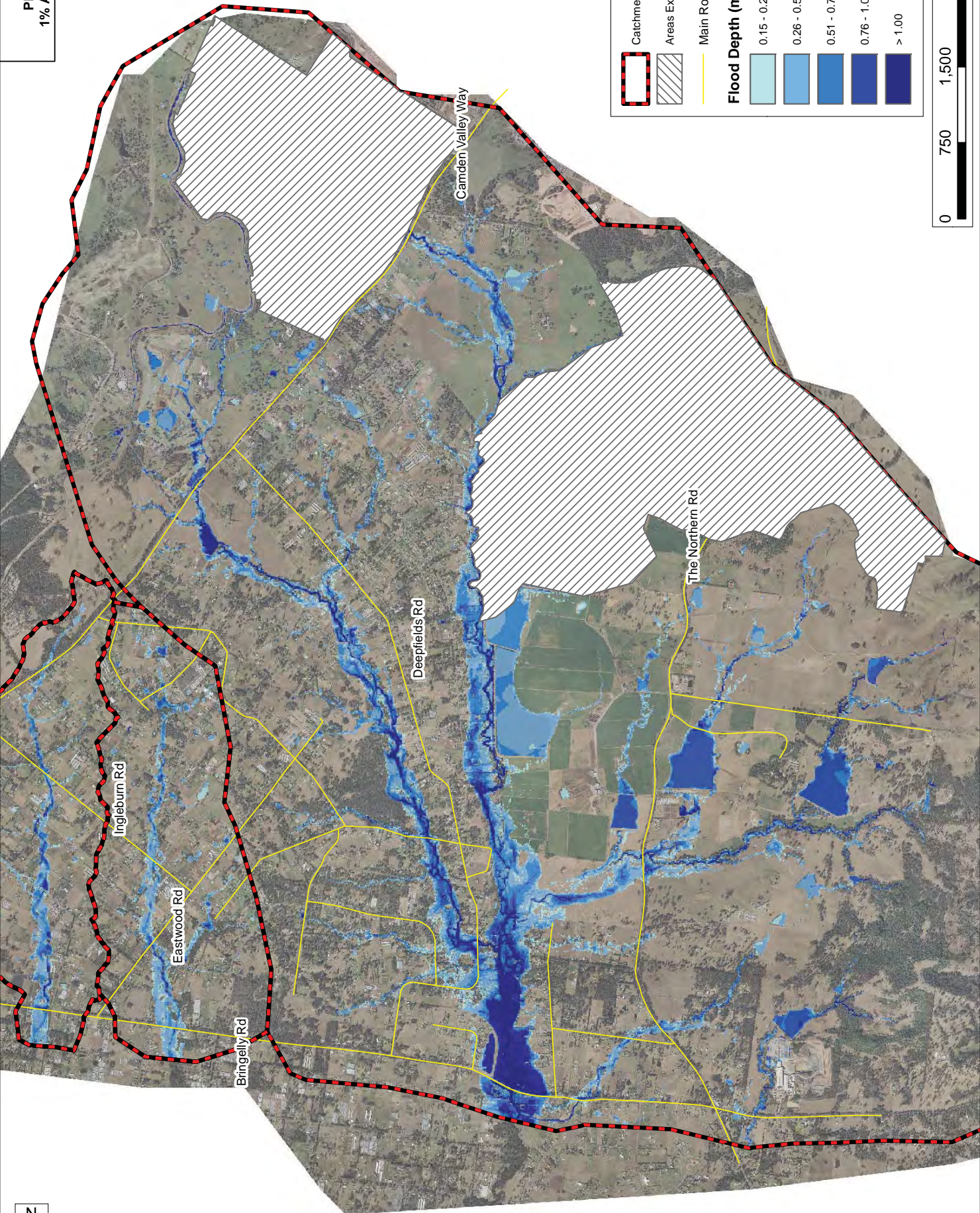




FIGURE 18  
**PEAK FLOOD DEPTH**  
**1% AEP DESIGN EVENT**



**Catchment Boundary**

**Areas Excluded from Modeling**

**Main Roads**

**Flood Depth (m)**

	0.15 - 0.25
	0.26 - 0.50
	0.51 - 0.75
	0.76 - 1.00
	> 1.00

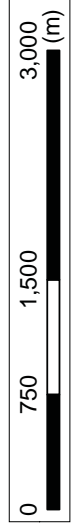
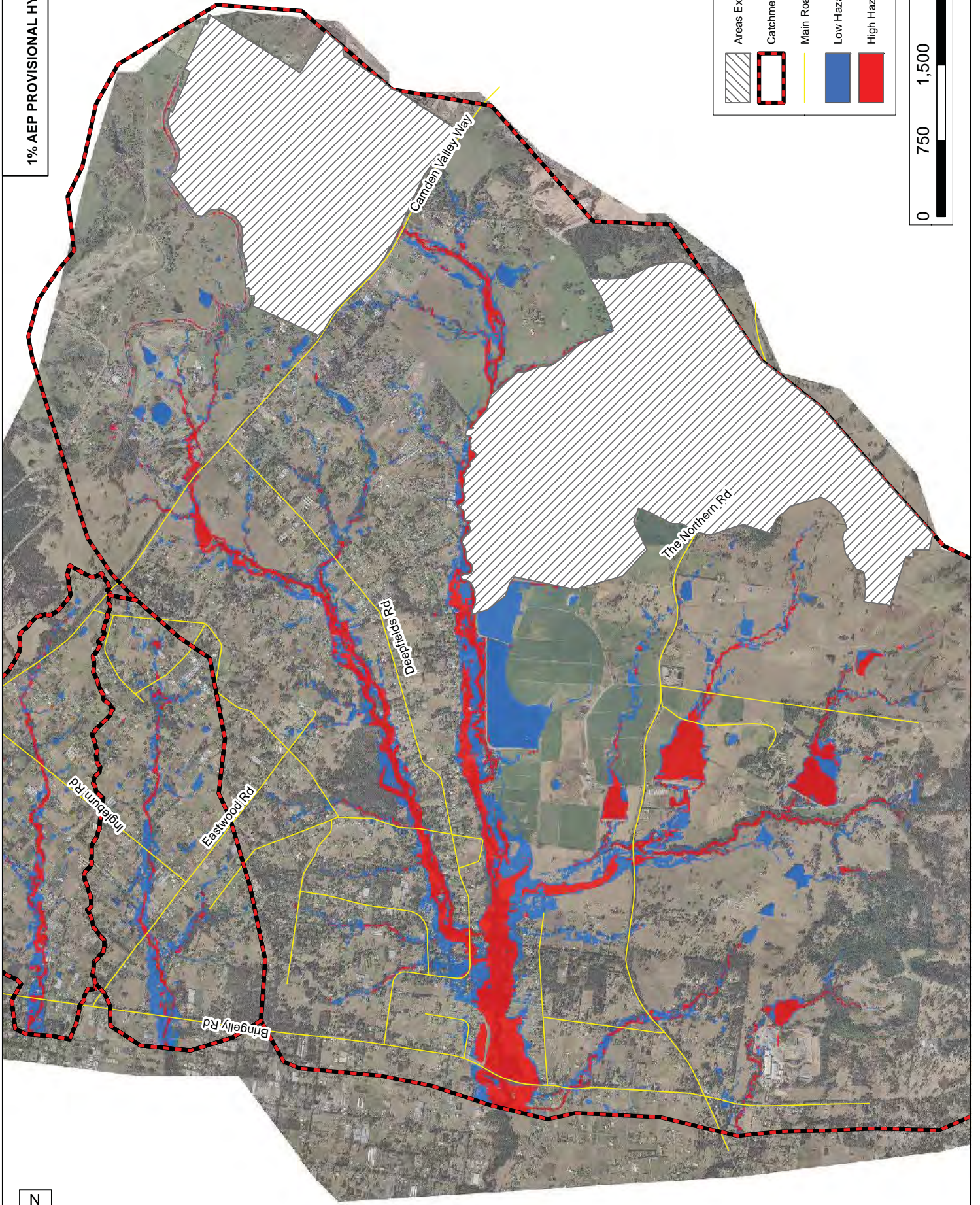




FIGURE 19  
1% AEP PROVISIONAL HYDRAULIC HAZARD



Legend:

- Areas Excluded from Modelling (diagonal hatching)
- Catchment Boundary (dashed red line)
- Main Roads (yellow line)
- Low Hazard (blue fill)
- High Hazard (red fill)

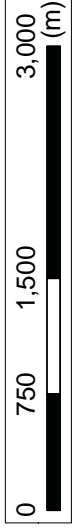
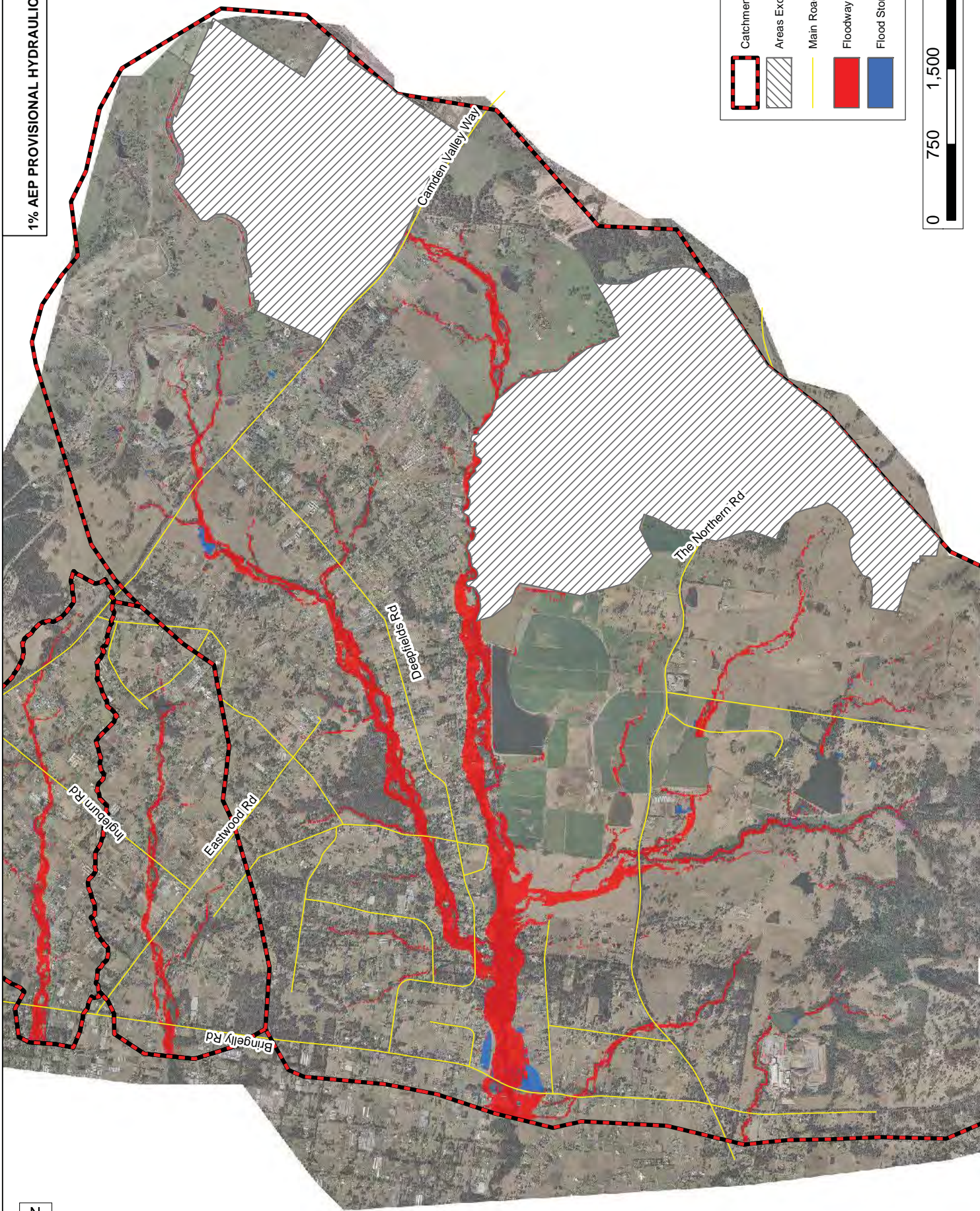




FIGURE 20  
1% AEP PROVISIONAL HYDRAULIC CATEGORISATION



	Catchment Boundary
	Areas Excluded from Modeling
	Main Roads
	Floodway
	Flood Storage

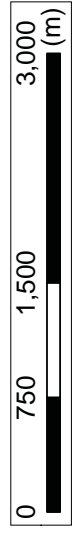
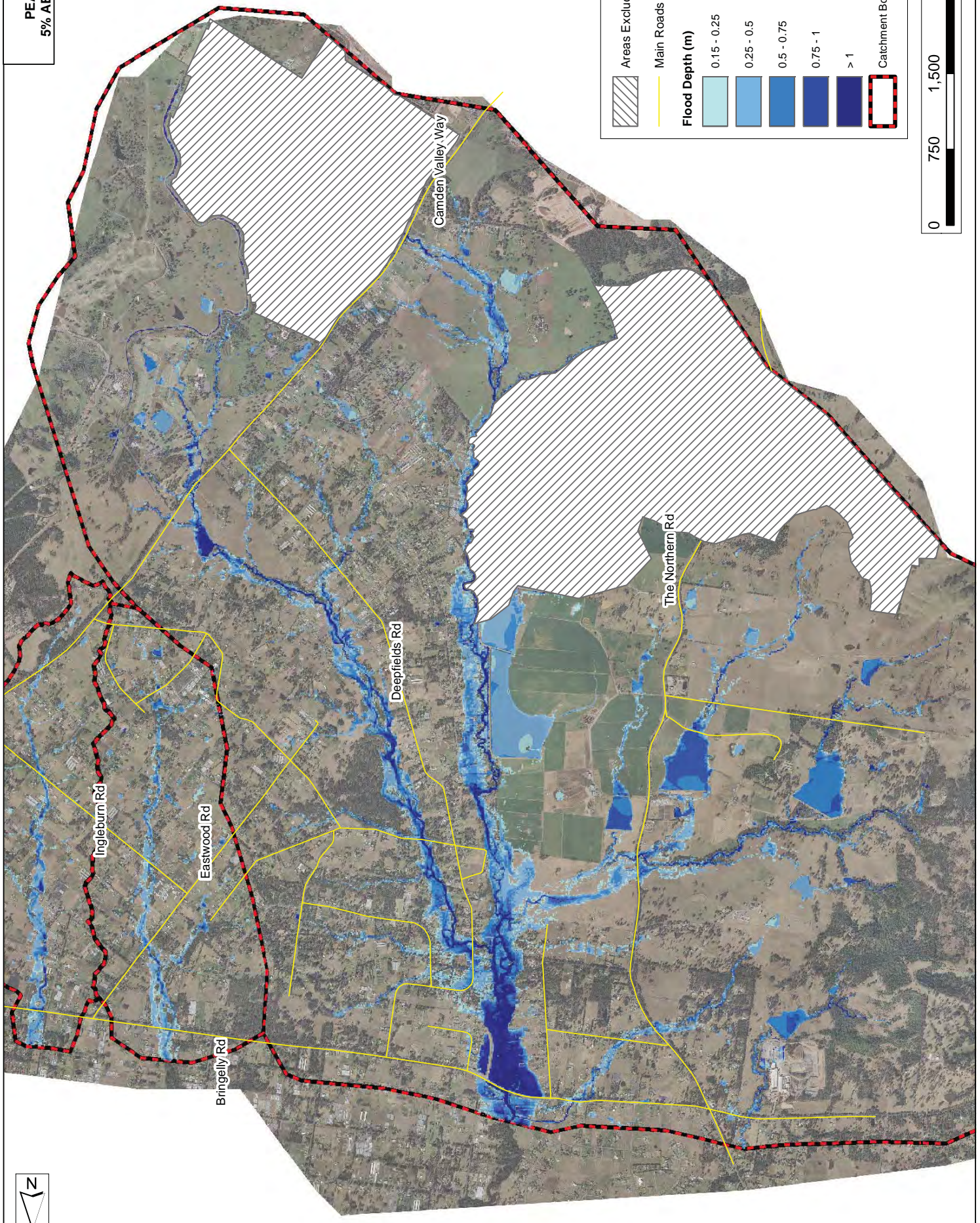




FIGURE 21  
PEAK FLOOD DEPTH  
5% AEP DESIGN EVENT



Areas Excluded from Modeling

Main Roads

Flood Depth (m)

- 0.15 - 0.25
- 0.25 - 0.5
- 0.5 - 0.75
- 0.75 - 1
- > 1

Catchment Boundary

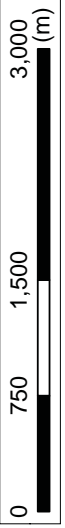
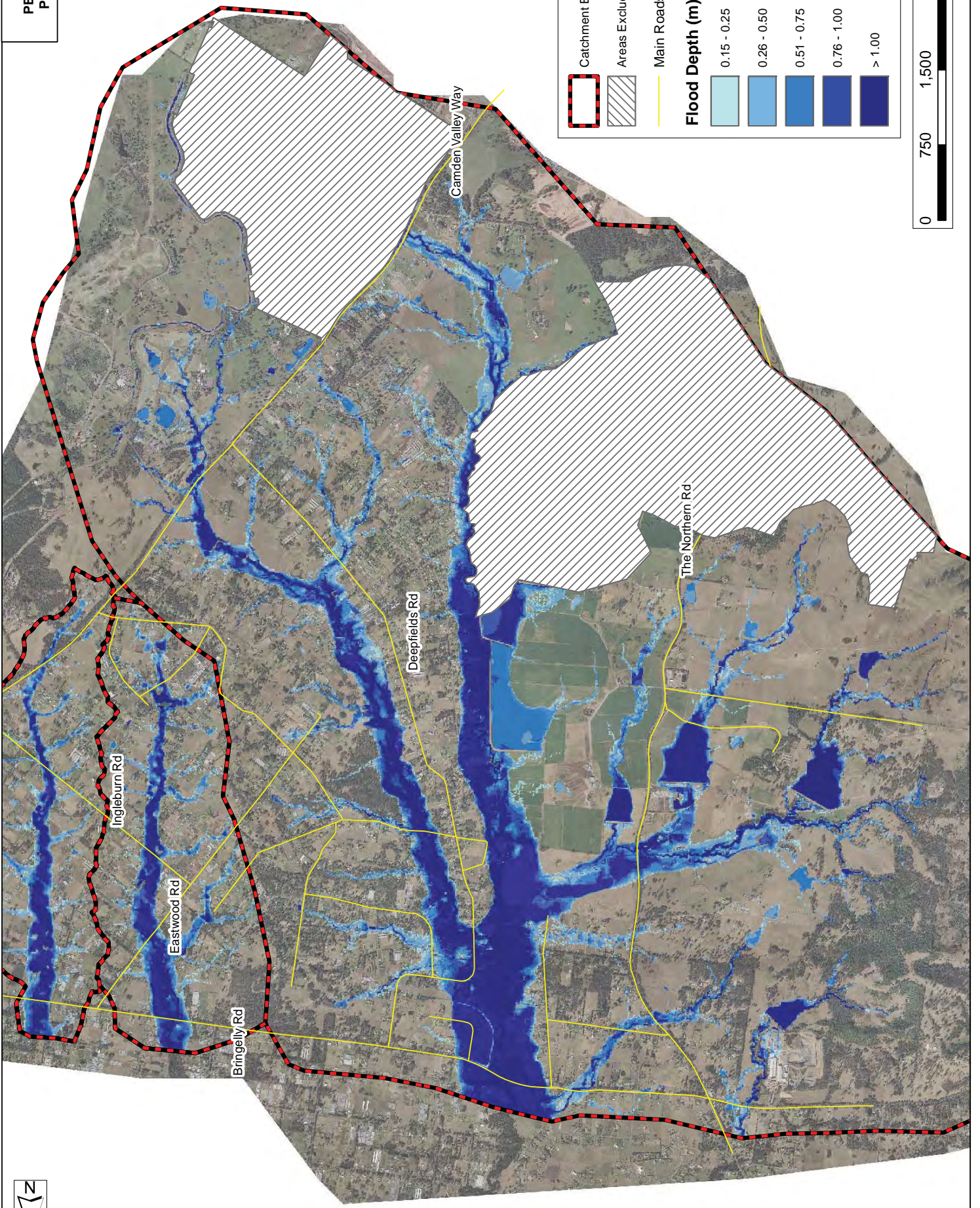




FIGURE 22  
PEAK FLOOD DEPTH  
PMF DESIGN EVENT



**Catchment Boundary**  
 Catchment Boundary

**Areas Excluded from Modeling**  
 Areas Excluded from Modeling

**Main Roads**  
 Main Roads

**Flood Depth (m)**

	0.15 - 0.25
	0.26 - 0.50
	0.51 - 0.75
	0.76 - 1.00
	> 1.00



FIGURE 23  
UPPER SOUTH CREEK  
CROSS-SECTIONAL VELOCITY DISTRIBUTION

