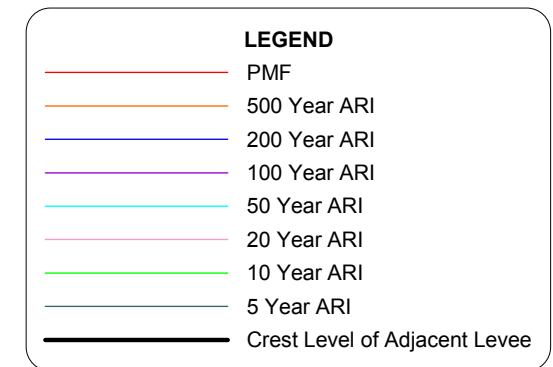
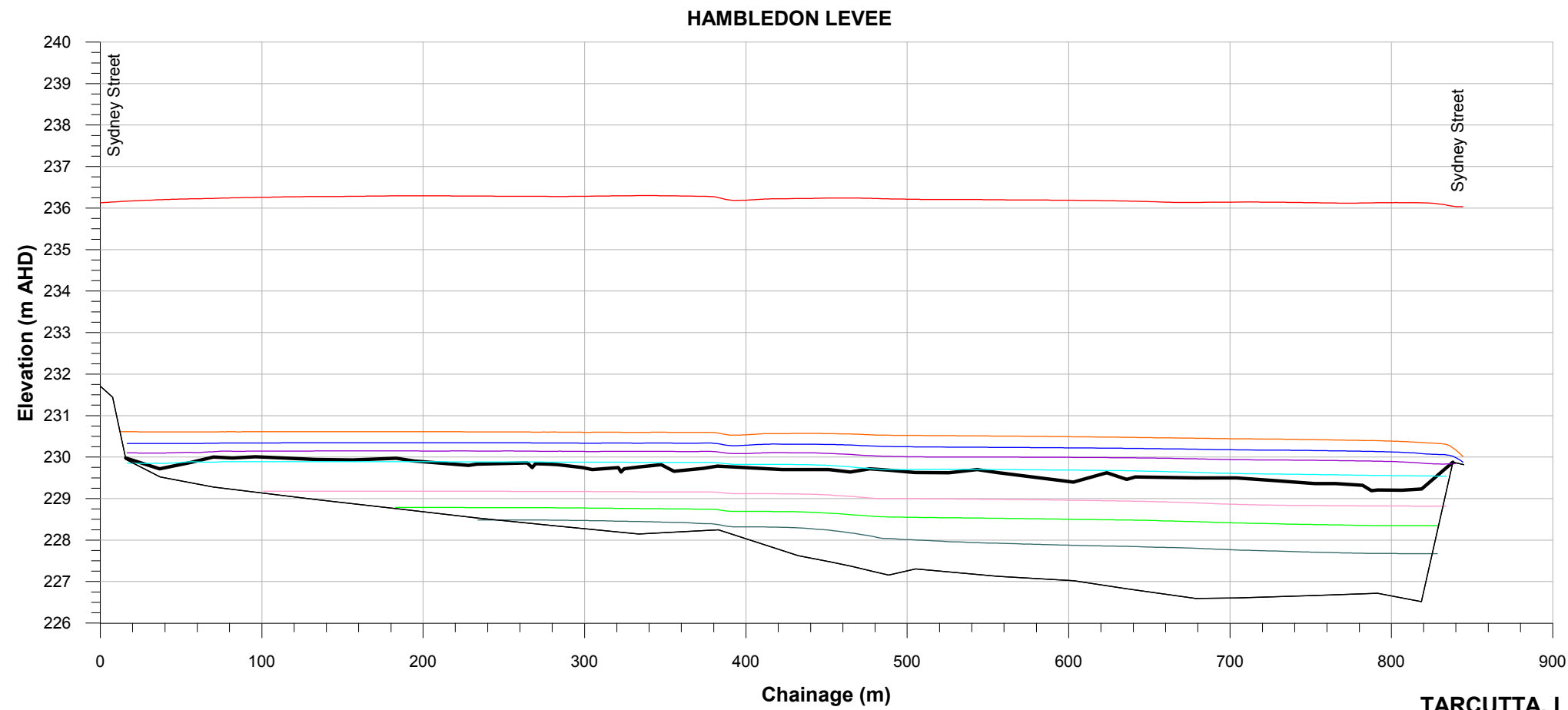
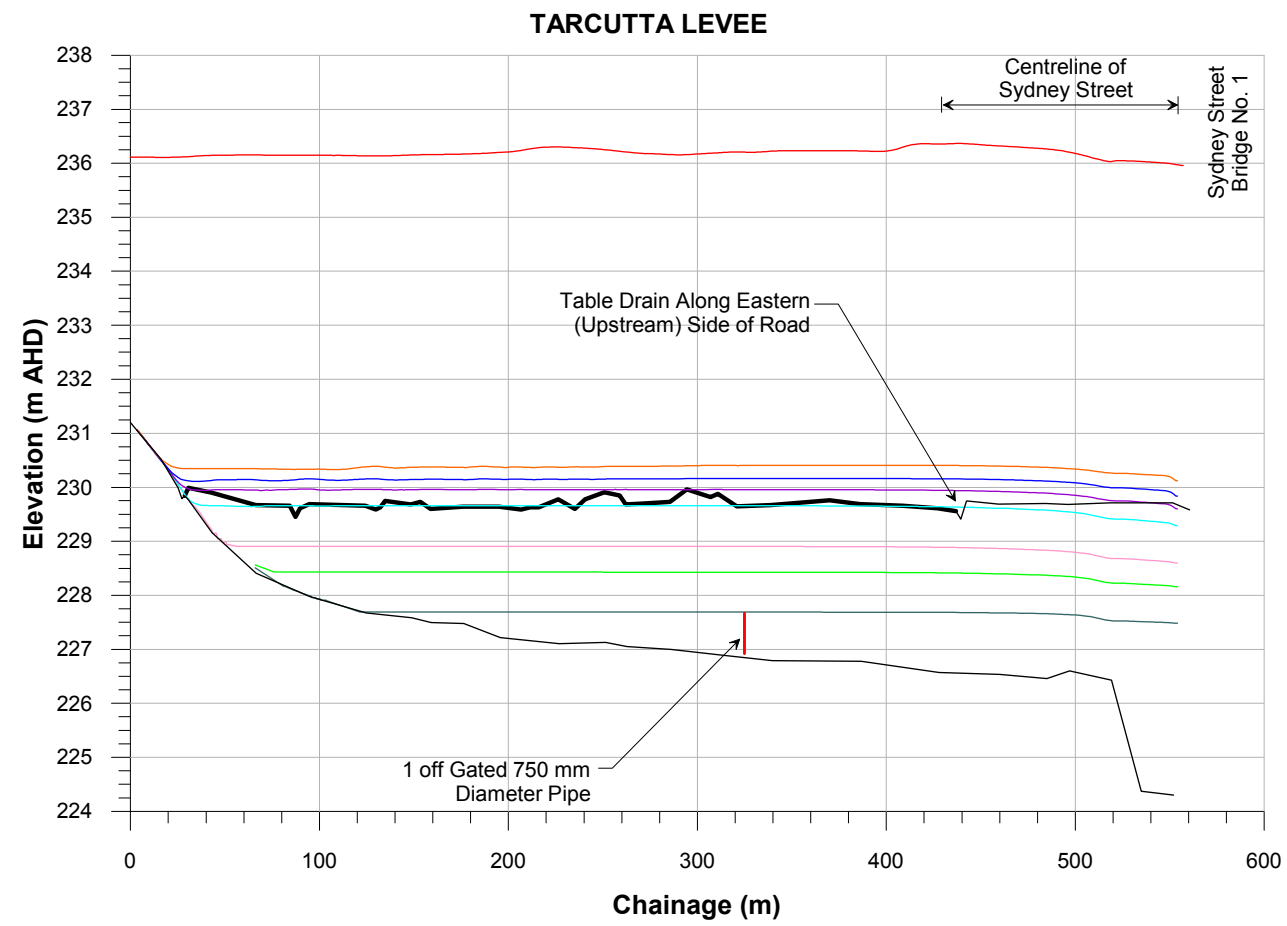
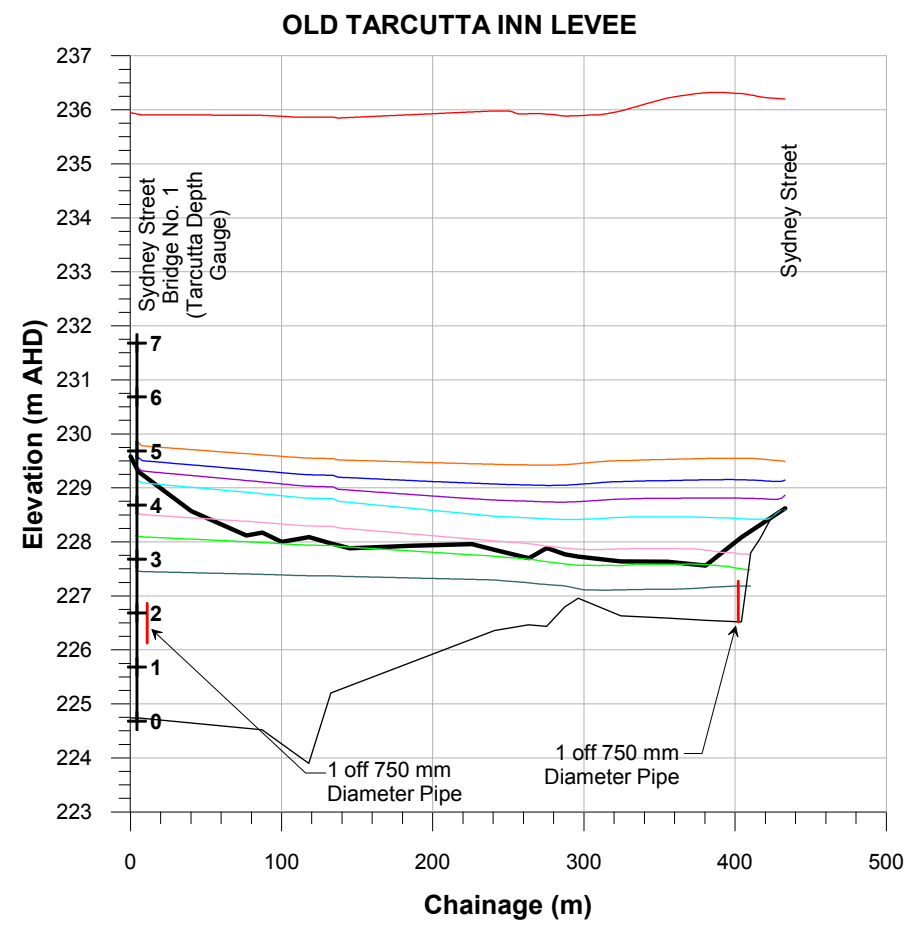


- LEGEND**
- PMF
 - 500 Year ARI
 - 200 Year ARI
 - 100 Year ARI
 - 50 Year ARI
 - 20 Year ARI
 - 10 Year ARI
 - 5 Year ARI

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.1
Sheet 1 of 2
DESIGN WATER SURFACE PROFILES
TARCUTTA CREEK

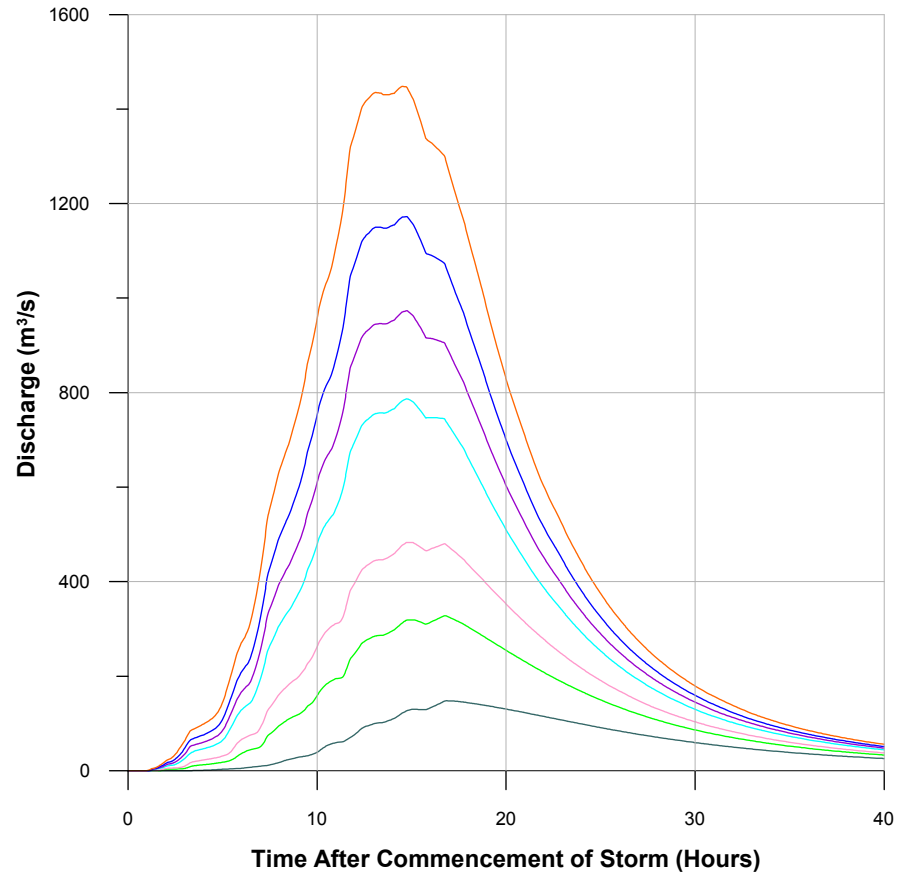




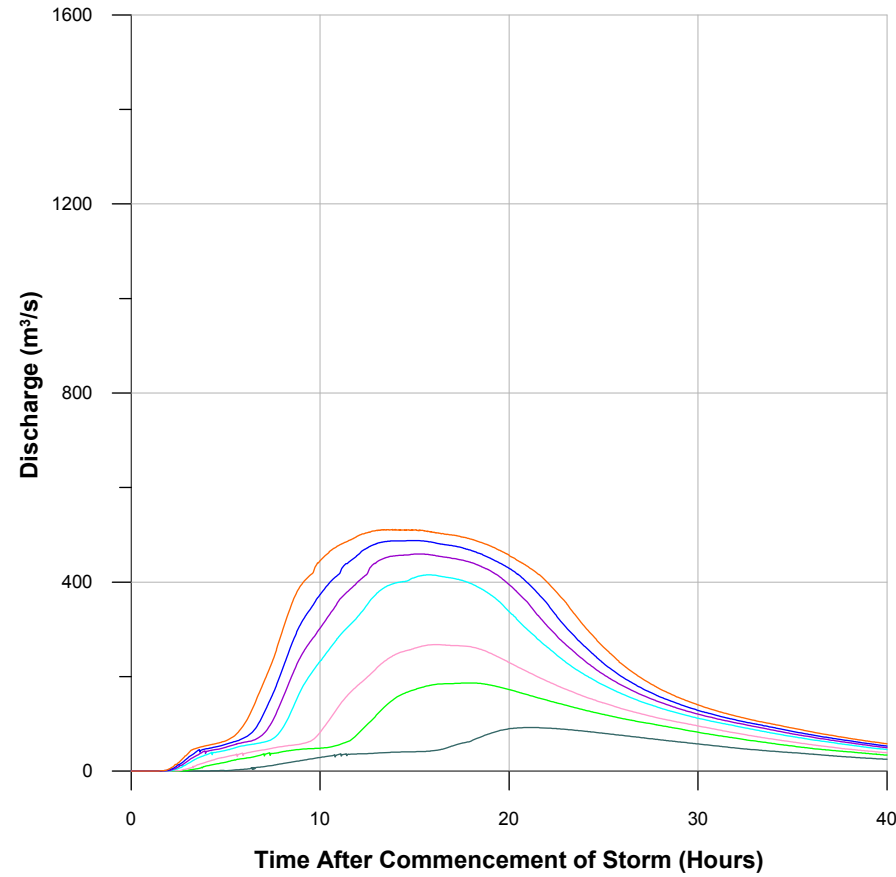
**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.1
Sheet 2 of 2

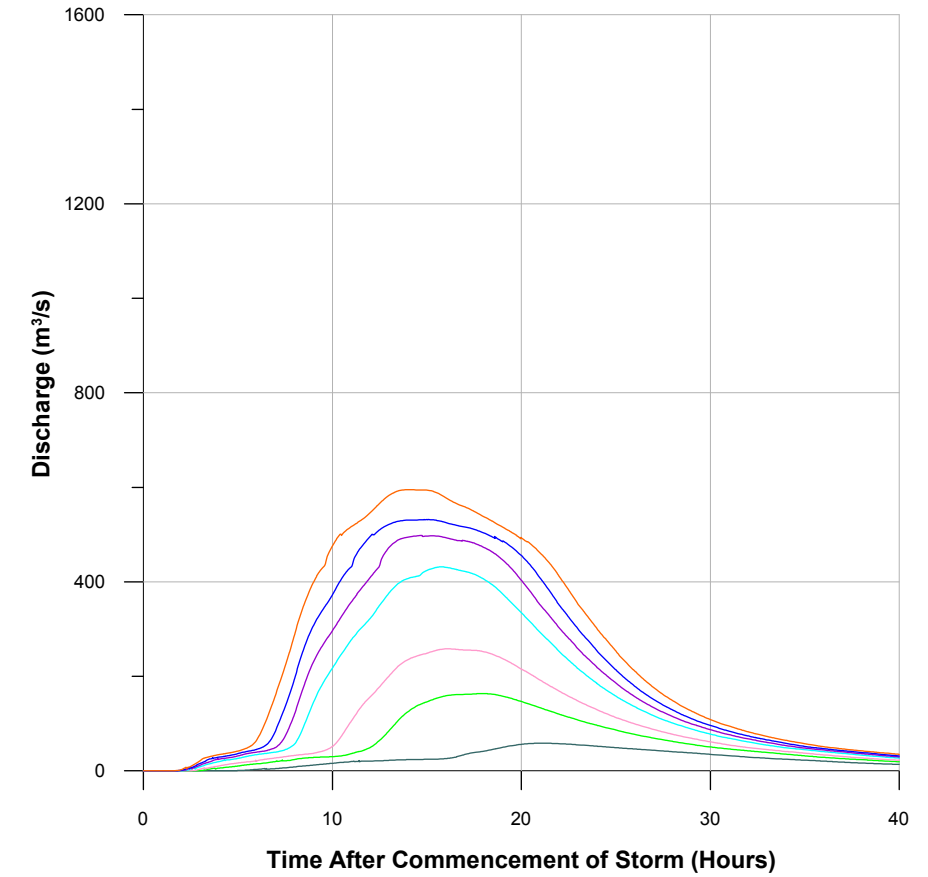
TARCUTTA CREEK UPSTREAM EXTENT OF TUFLOW MODEL (Q1)



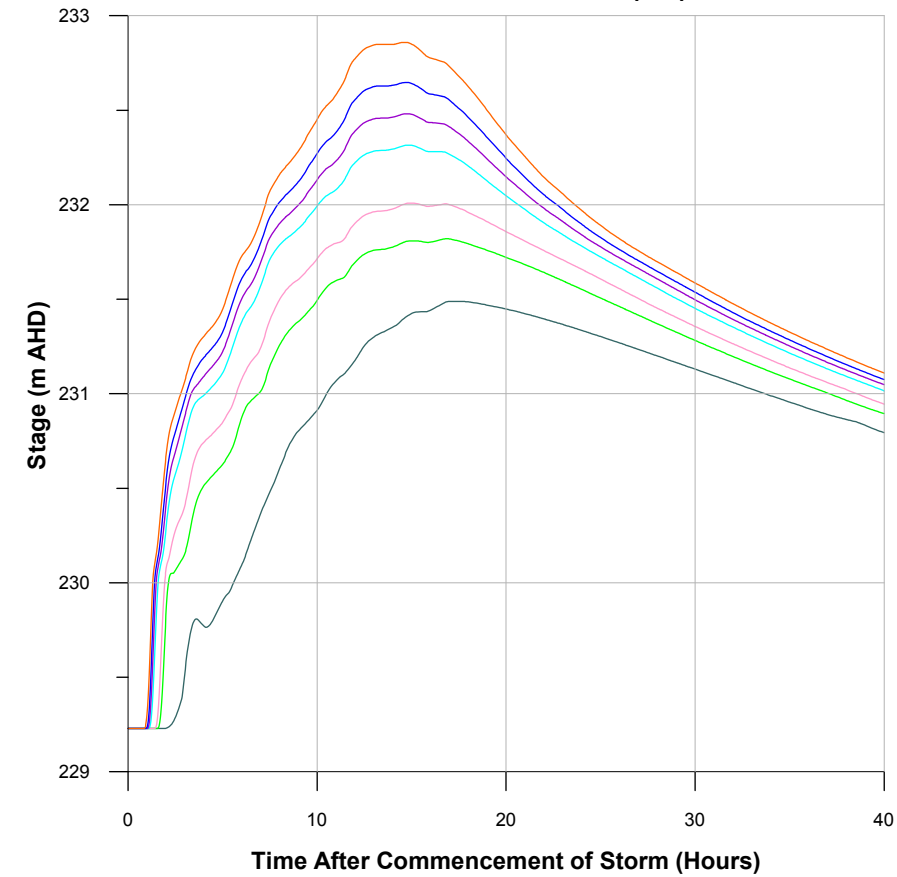
SYDNEY STREET BRIDGE No.1 (Q2)



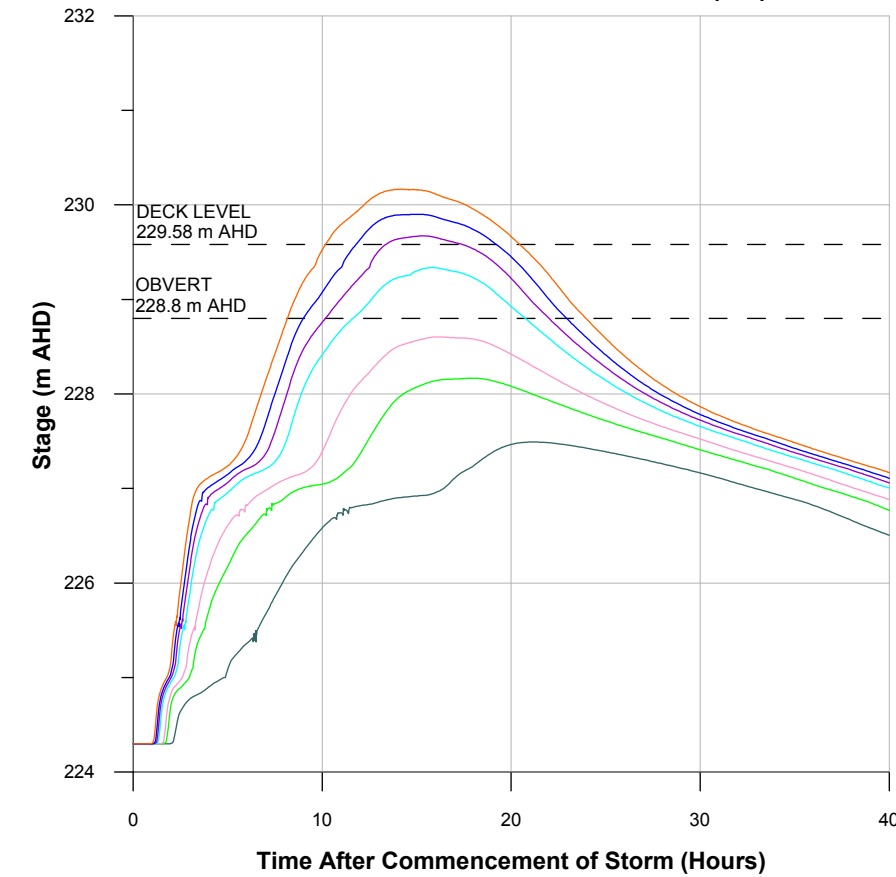
SYDNEY STREET BRIDGE No.2 (Q3)



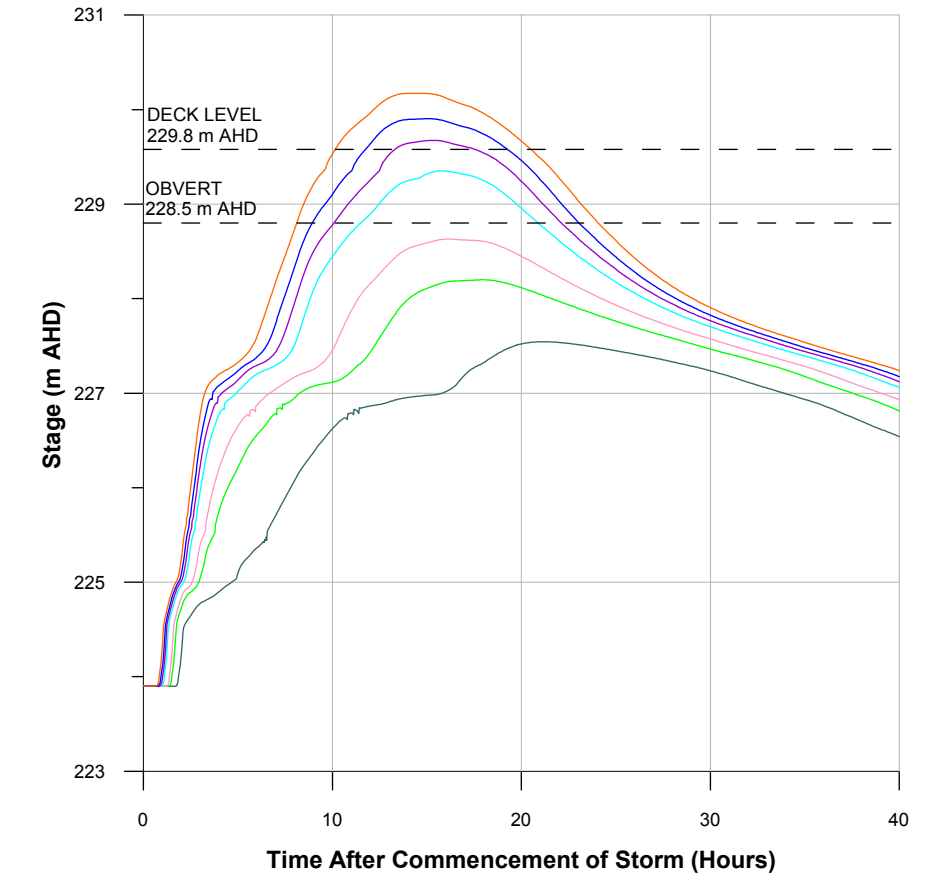
TARCUTTA CREEK UPSTREAM EXTENT OF TUFLOW MODEL (Q1)



SYDNEY STREET BRIDGE No.1 (Q2)



SYDNEY STREET BRIDGE No.2 (Q3)



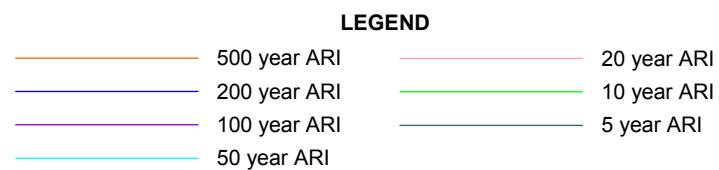
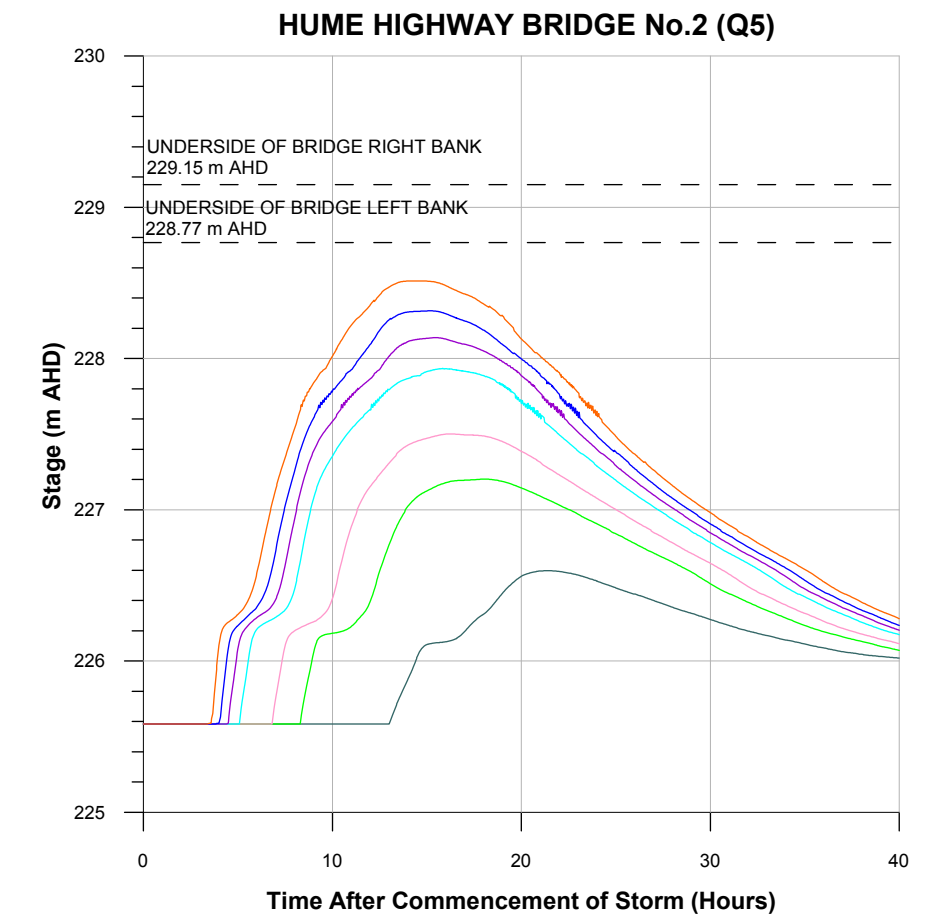
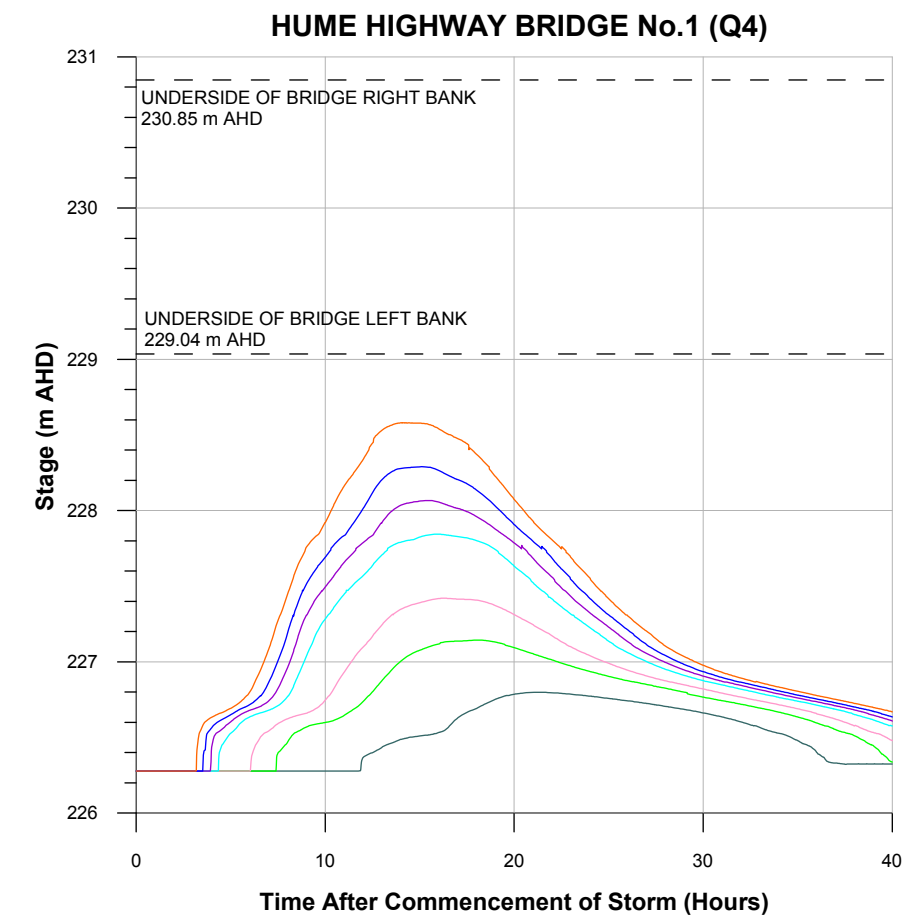
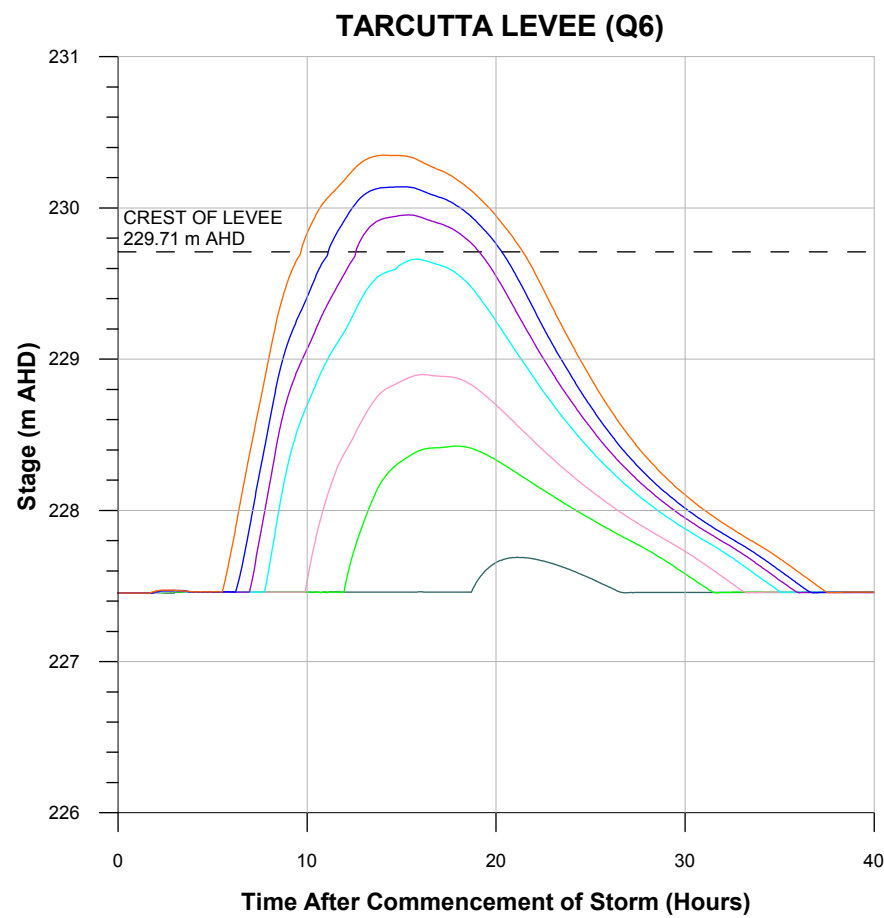
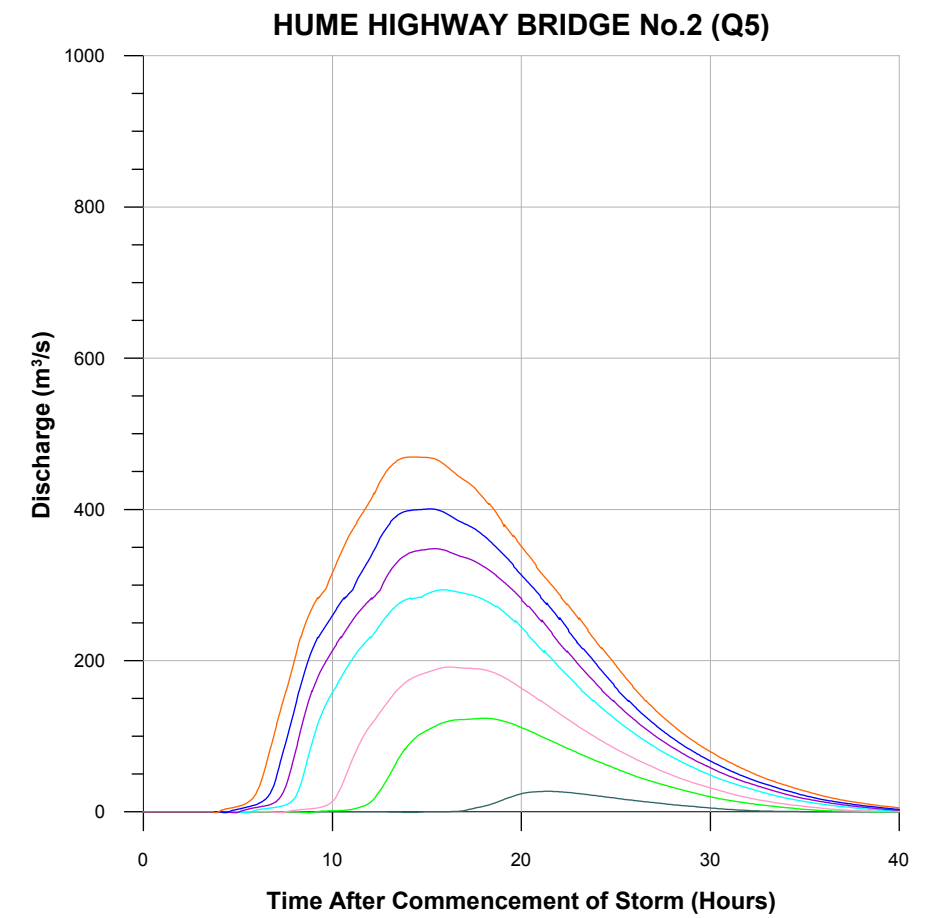
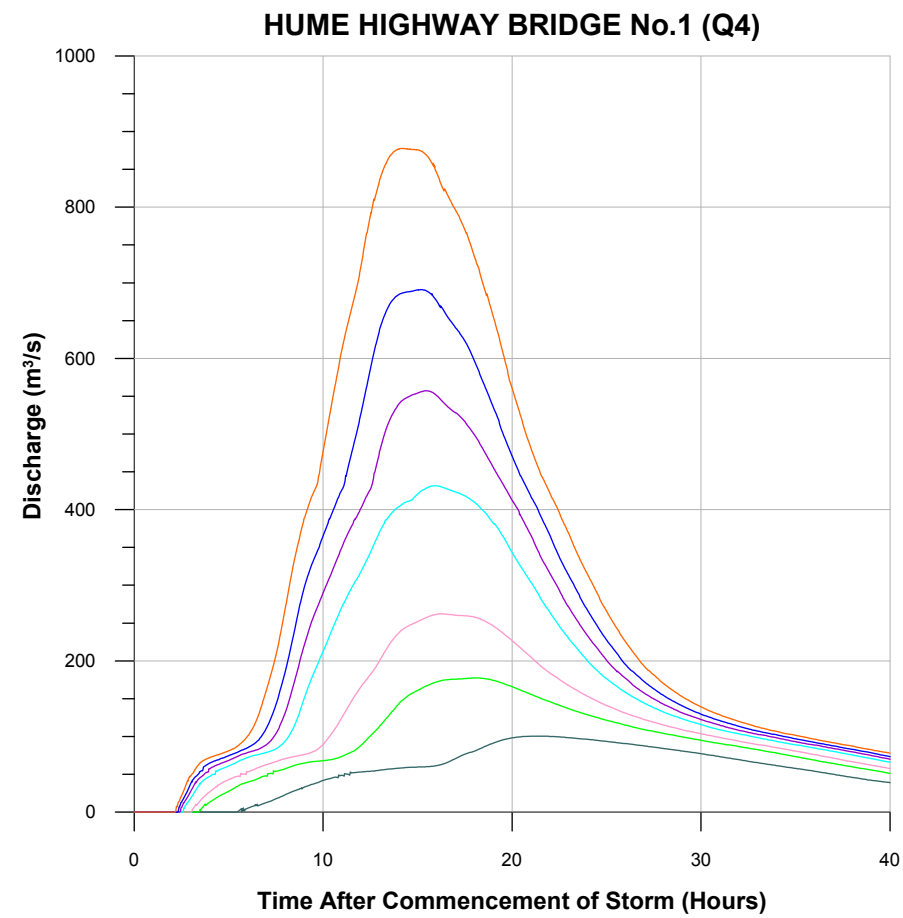
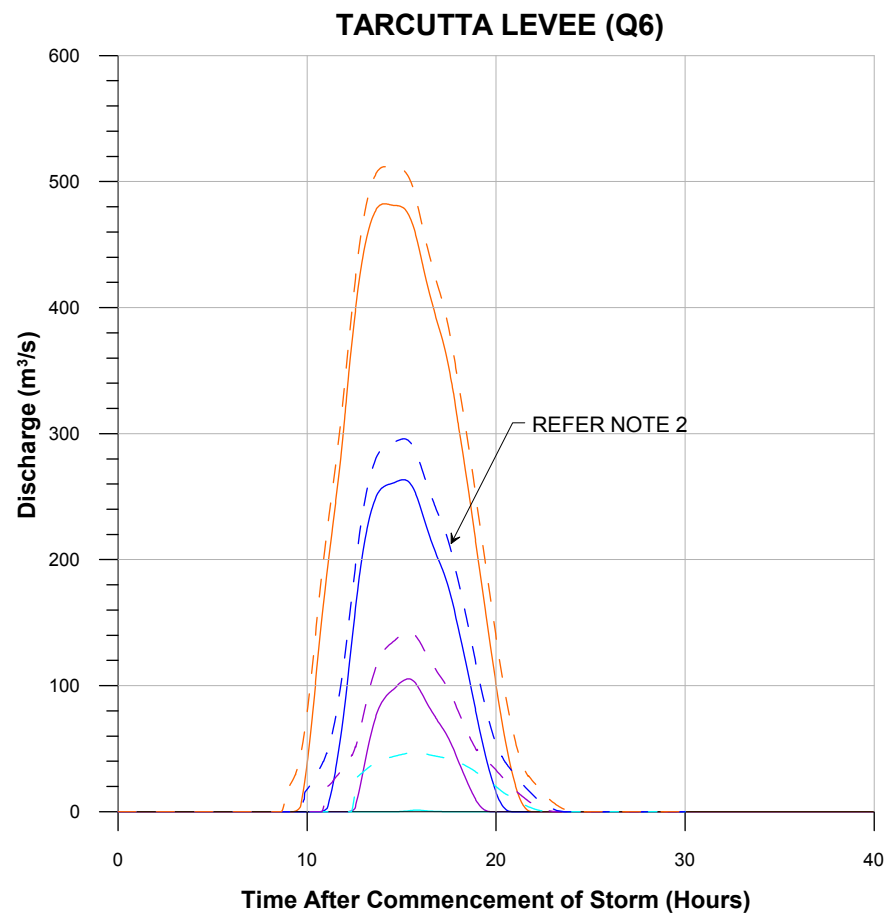
LEGEND

- 500 year ARI
- 200 year ARI
- 100 year ARI
- 50 year ARI
- 20 year ARI
- 10 year ARI
- 5 year ARI

NOTE:
Refer Table A1 of Appendix A for storm durations of hydrographs at selected locations.



TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES DESIGN FLOOD MODELLING

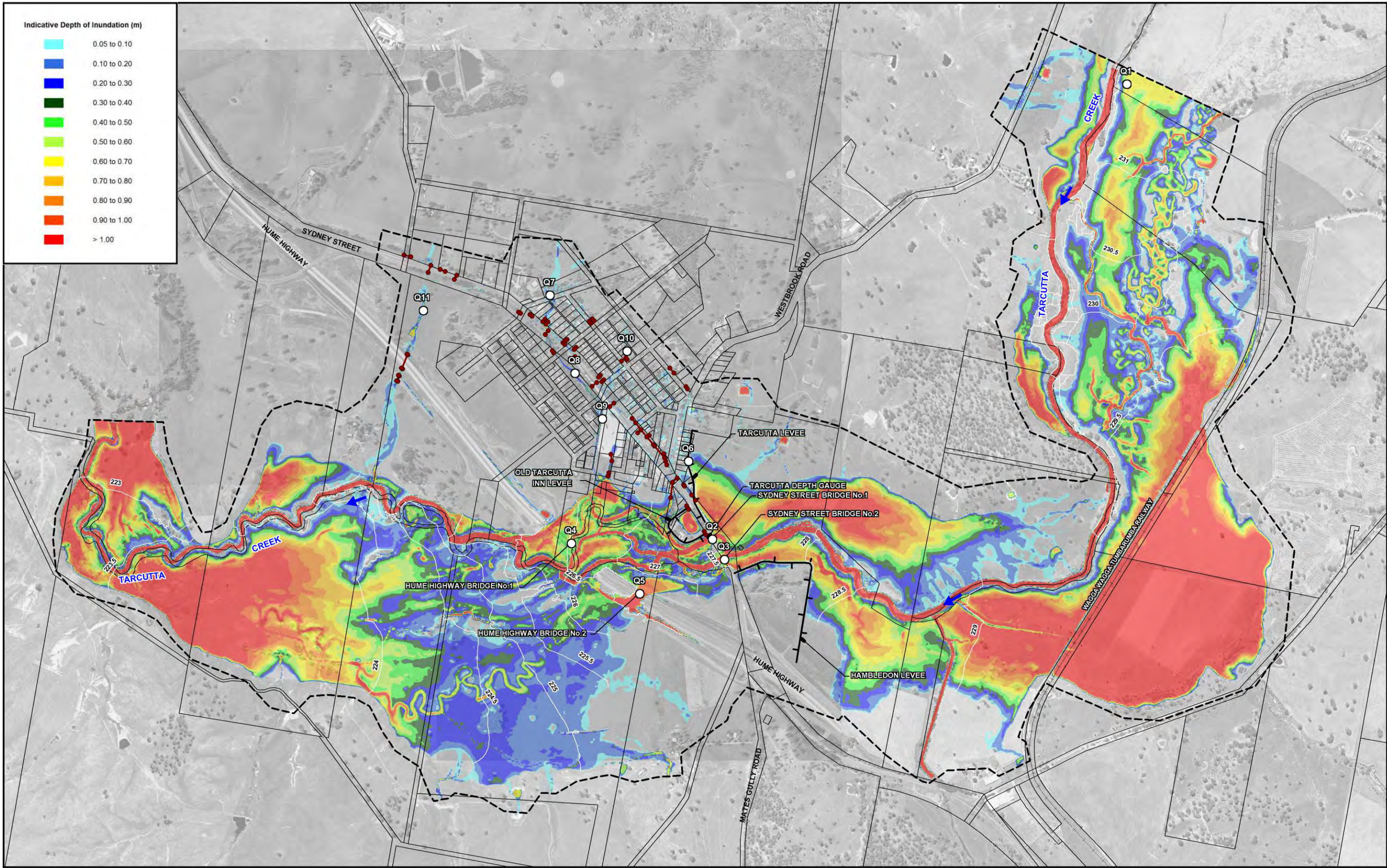


NOTE:

- Refer Table A1 of Appendix A for storm durations of hydrographs at selected locations.
- Dashed lines represent flow over levee when failure occurs.

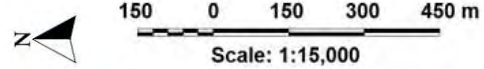


**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**



Indicative Depth of Inundation (m)

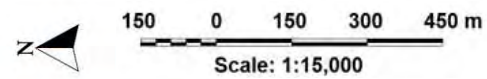
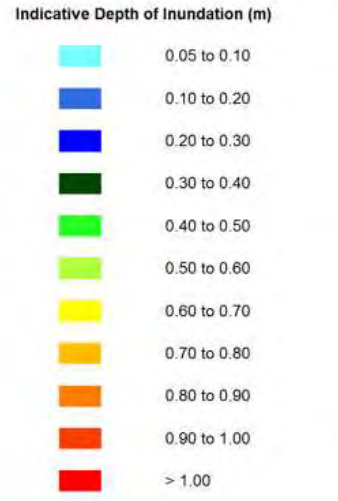
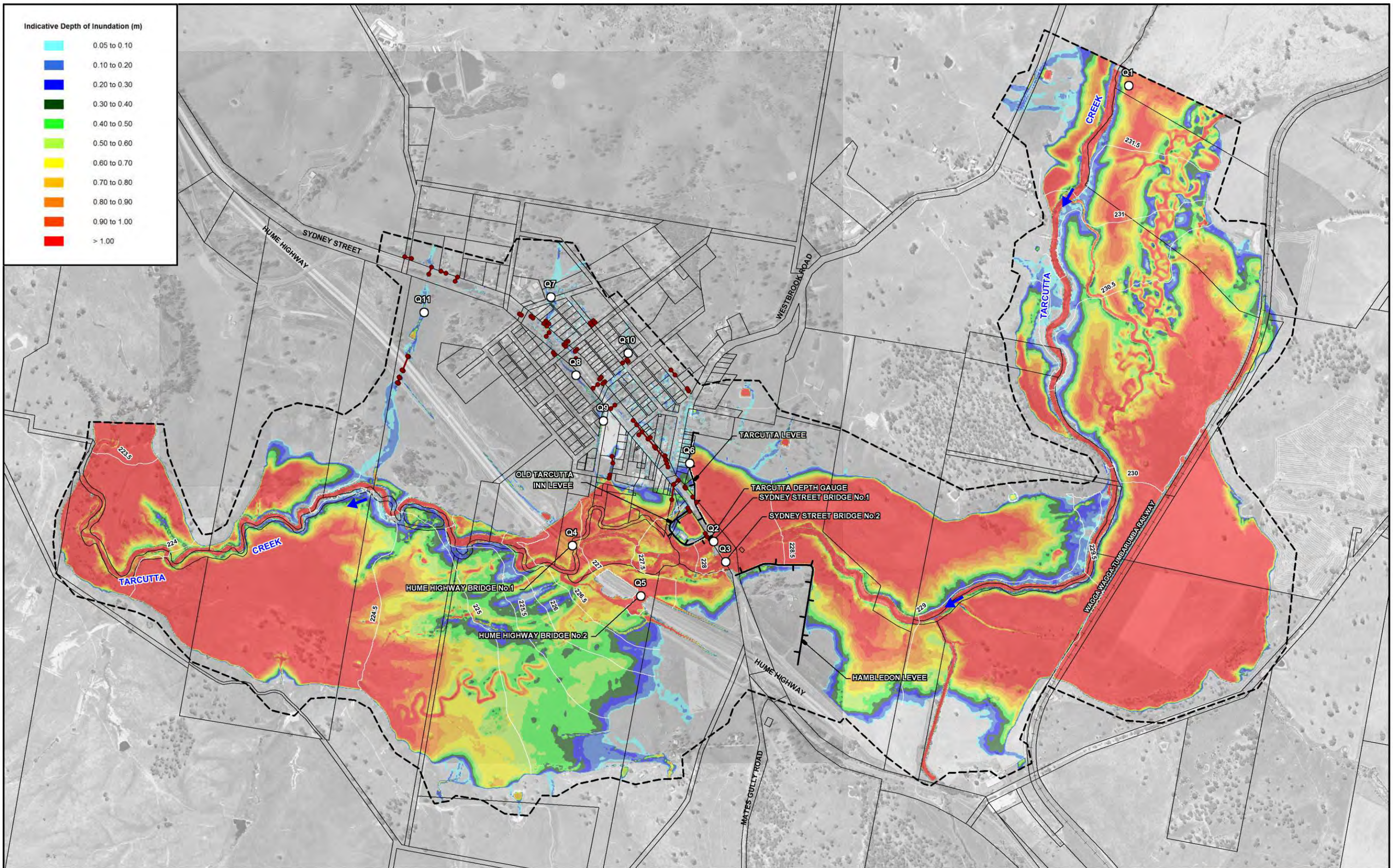
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00



LEGEND

- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Water Surface Contours (m AHD) (Mainstream Flooding Only)
- Alignment of Existing Levee
- Q1 Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)

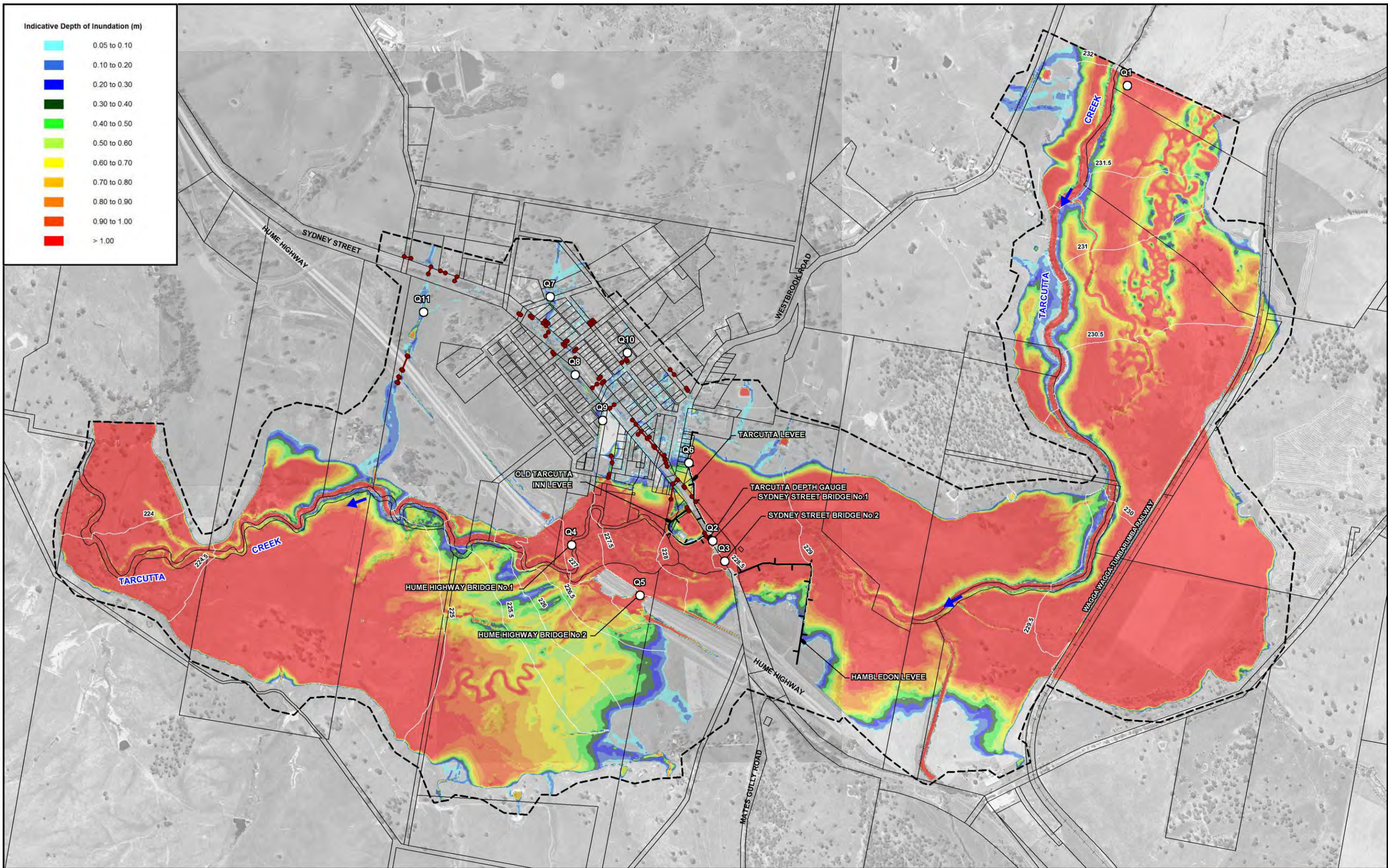
NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



LEGEND

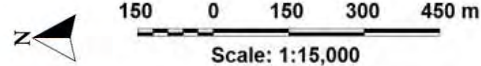
- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Water Surface Contours (m AHD) (Mainstream Flooding Only)
- Alignment of Existing Levee
- Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)

NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



Indicative Depth of Inundation (m)

- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00



LEGEND

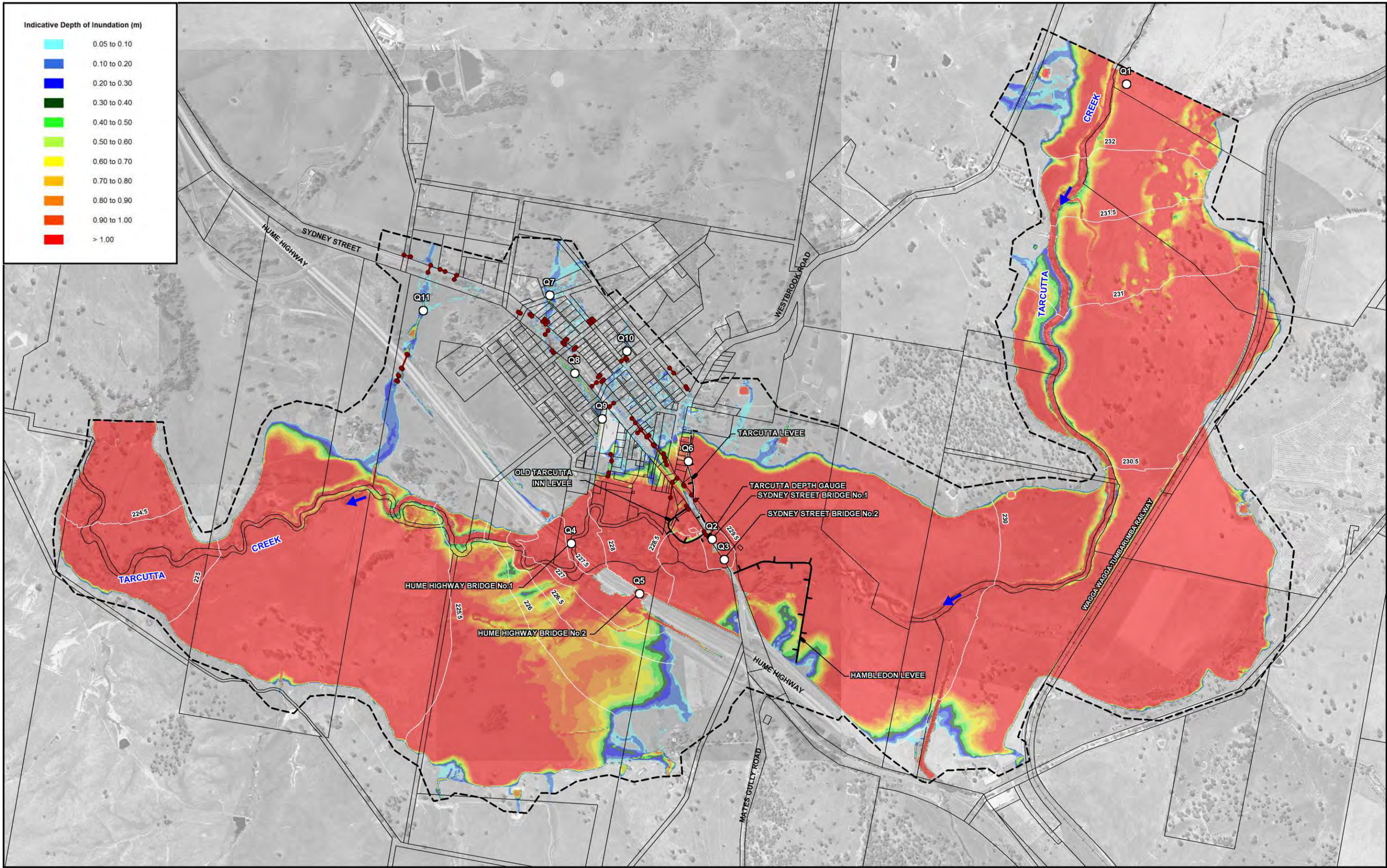
- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Water Surface Contours (m AHD) (Mainstream Flooding Only)
- Alignment of Existing Levee
- Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)

TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING

Figure 3.5

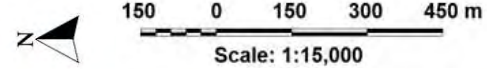
NOTE:

The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



Indicative Depth of Inundation (m)

- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00



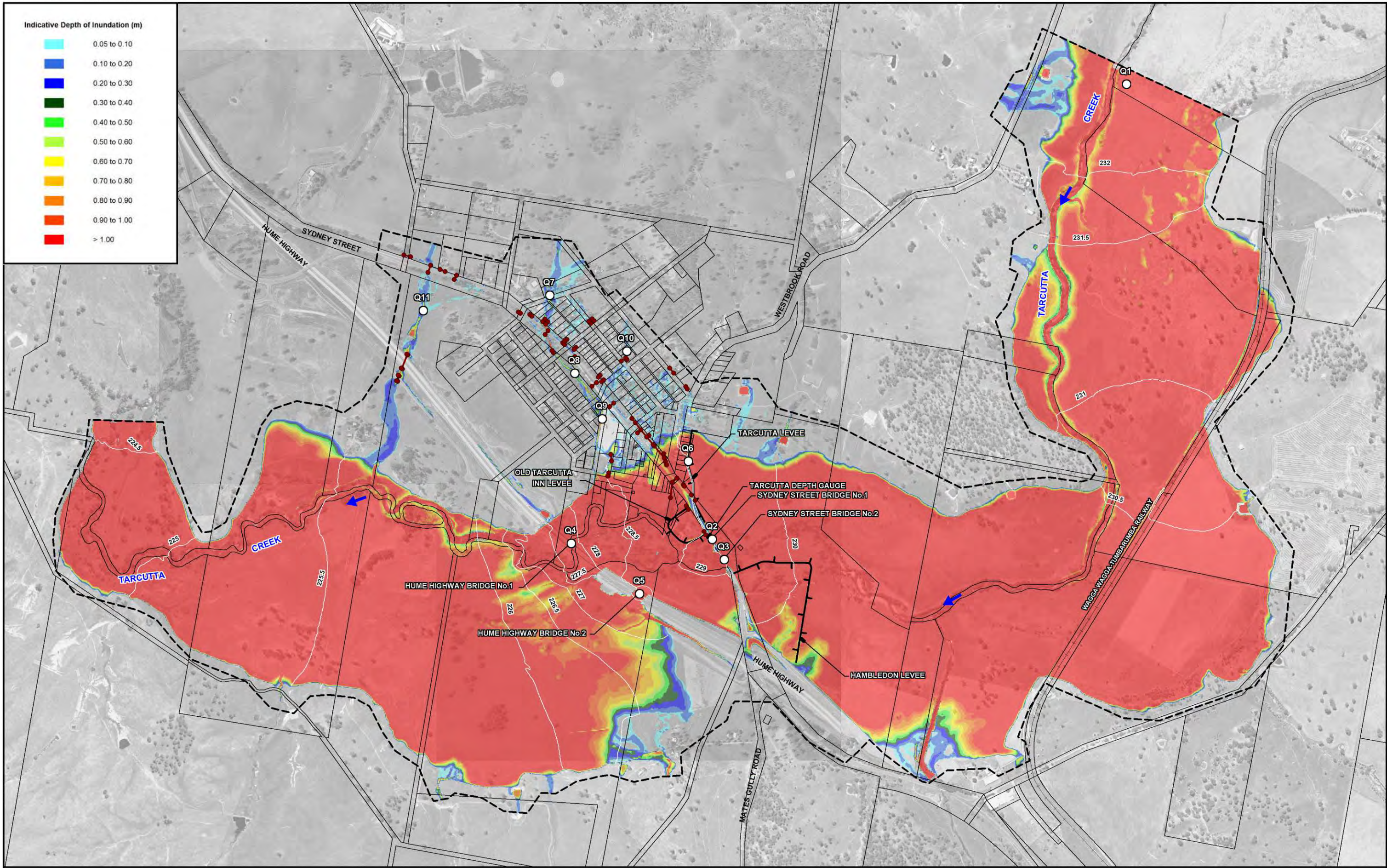
LEGEND

- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Water Surface Contours (m AHD) (Mainstream Flooding Only)
- Alignment of Existing Levee
- Q1 Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)

TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING

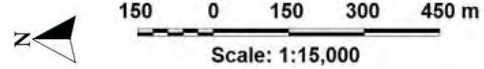
NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

Figure 3.6



Indicative Depth of Inundation (m)

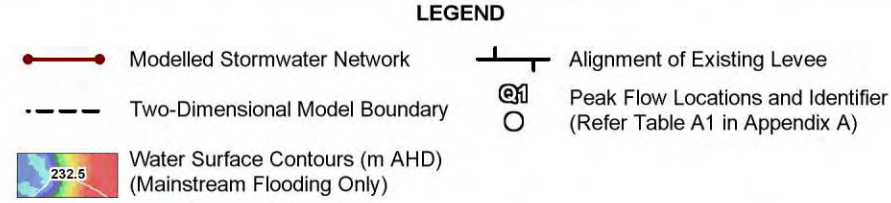
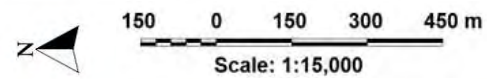
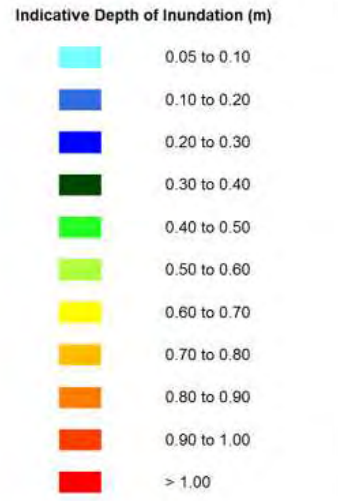
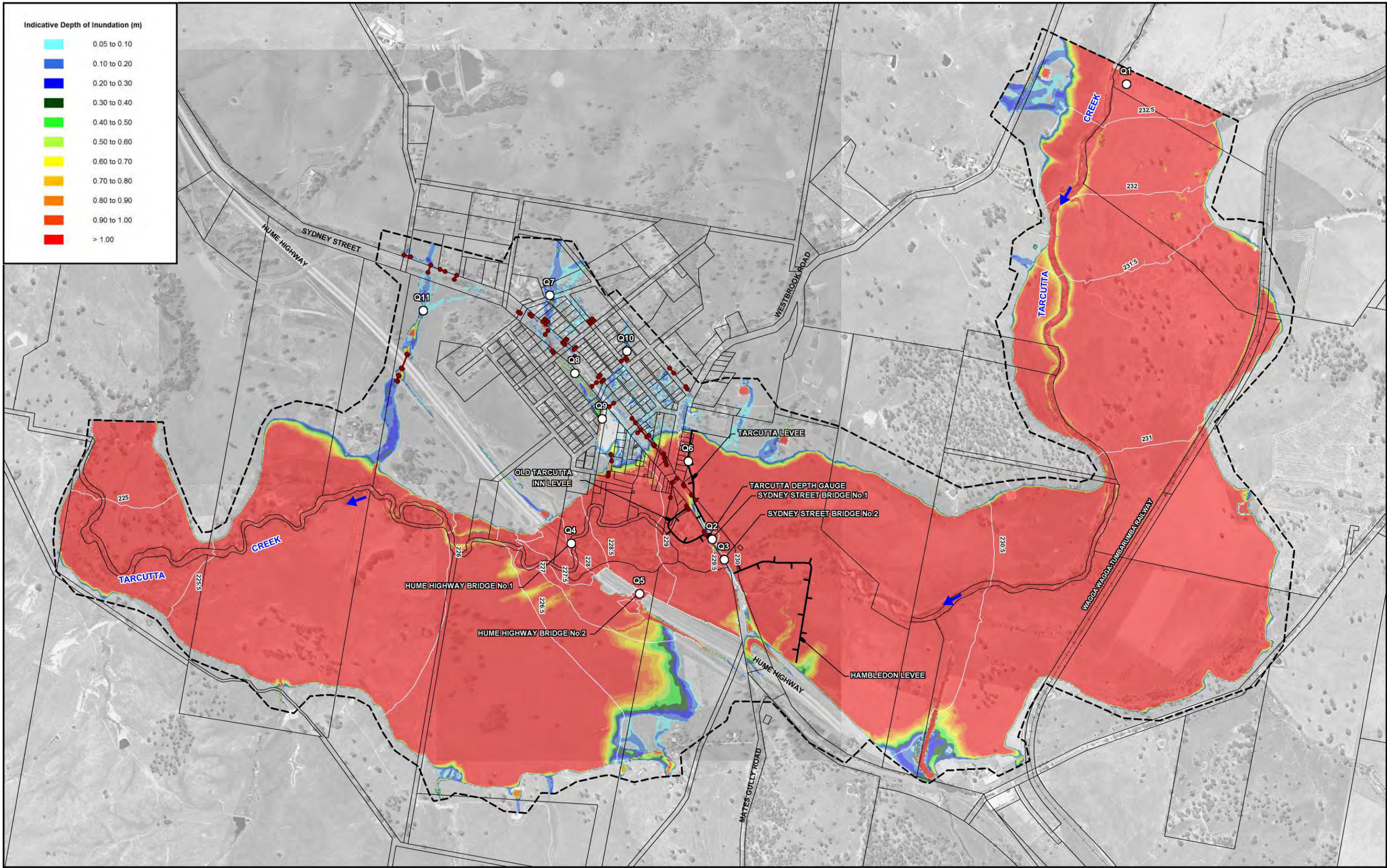
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00



LEGEND

- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Water Surface Contours (m AHD) (Mainstream Flooding Only)
- Alignment of Existing Levee
- Q1 Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)

NOTE:
 The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

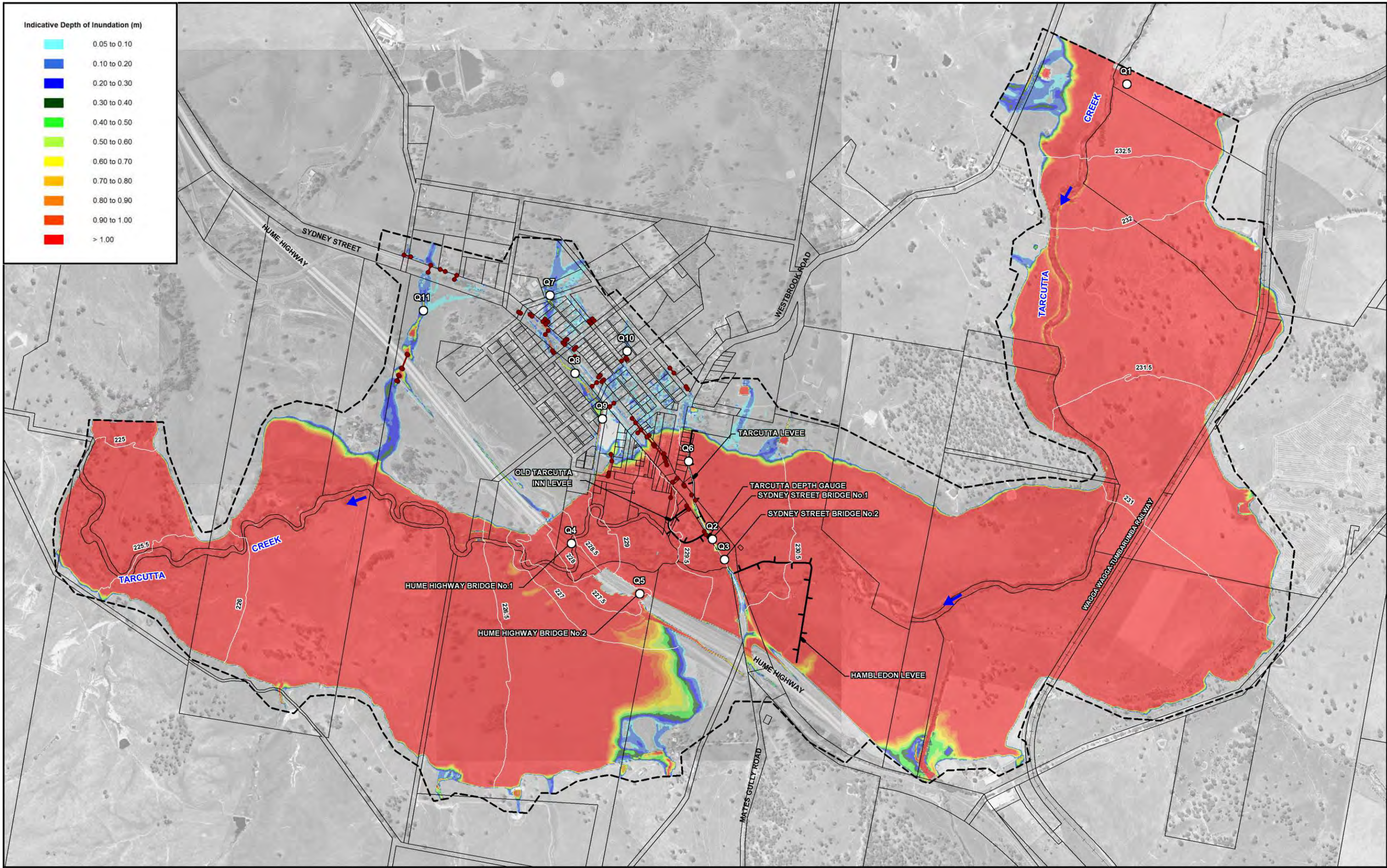


TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING



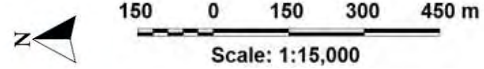
NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

Figure 3.8
TARCUTTA TUFLOW MODEL RESULTS
200 YEAR ARI



Indicative Depth of Inundation (m)

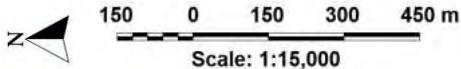
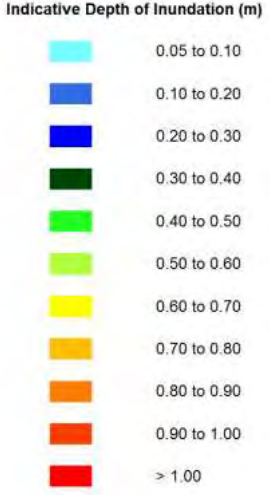
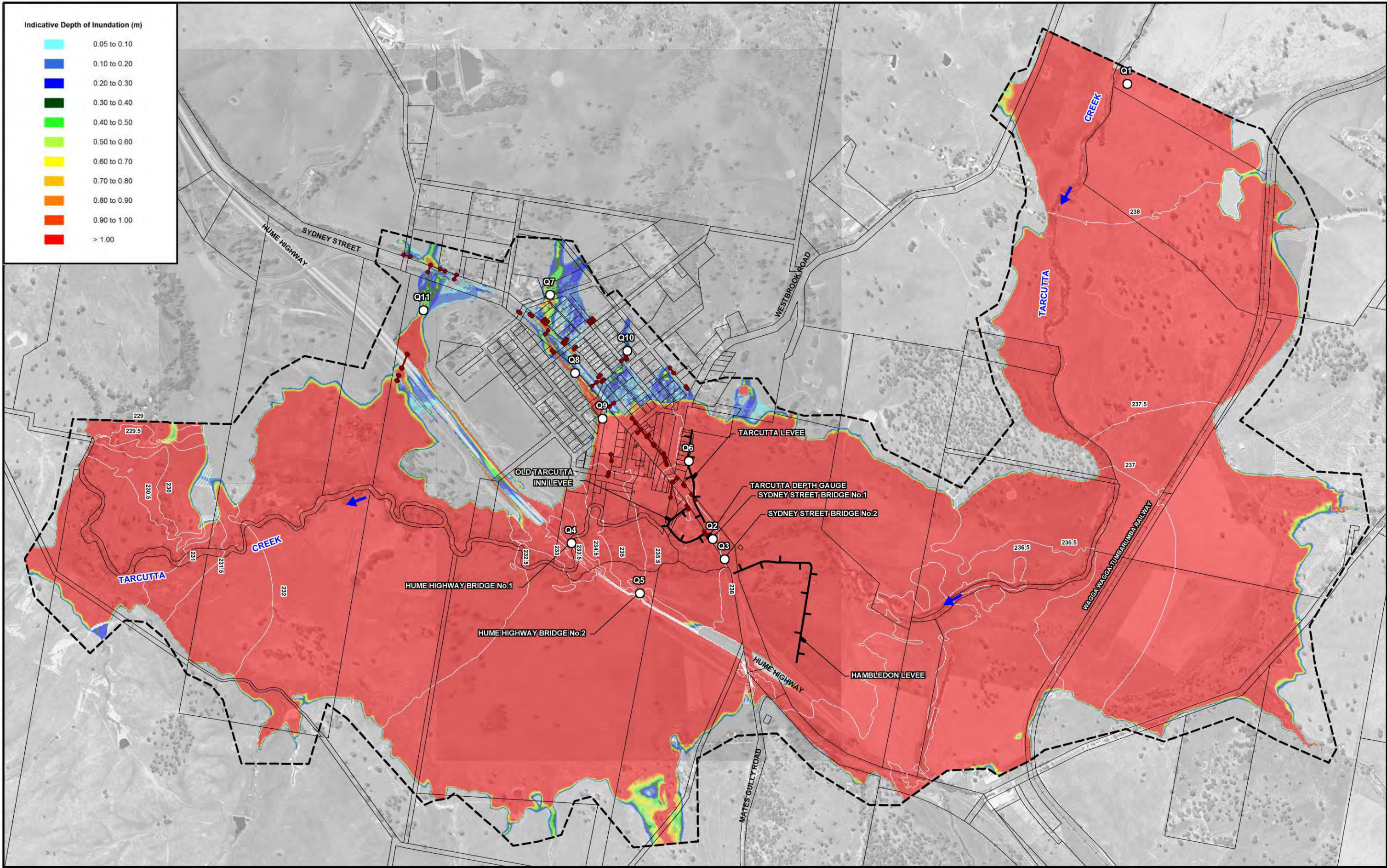
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00



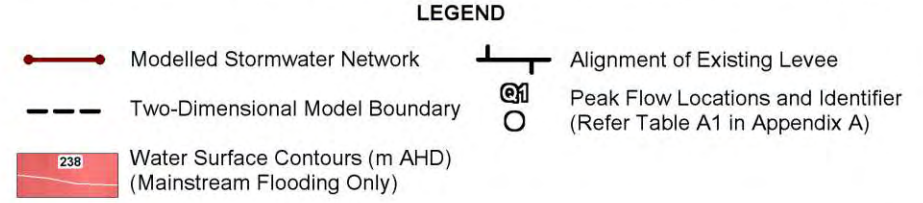
LEGEND

- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Alignment of Existing Levee
- Peak Flow Locations and Identifier (Refer Table A1 in Appendix A)
- Water Surface Contours (m AHD) (Mainstream Flooding Only)

NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

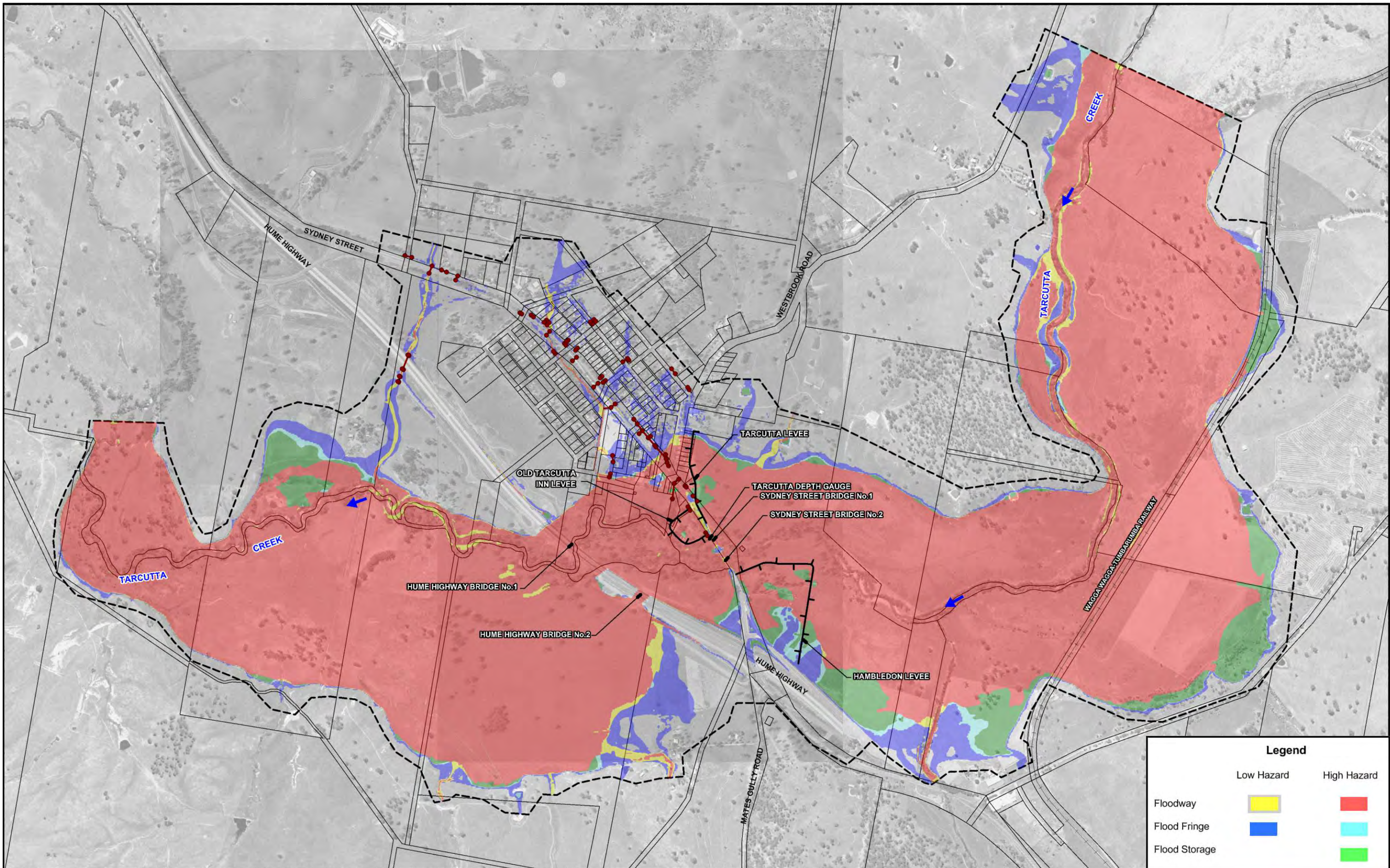


NOTE:
The extent and depths of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.10



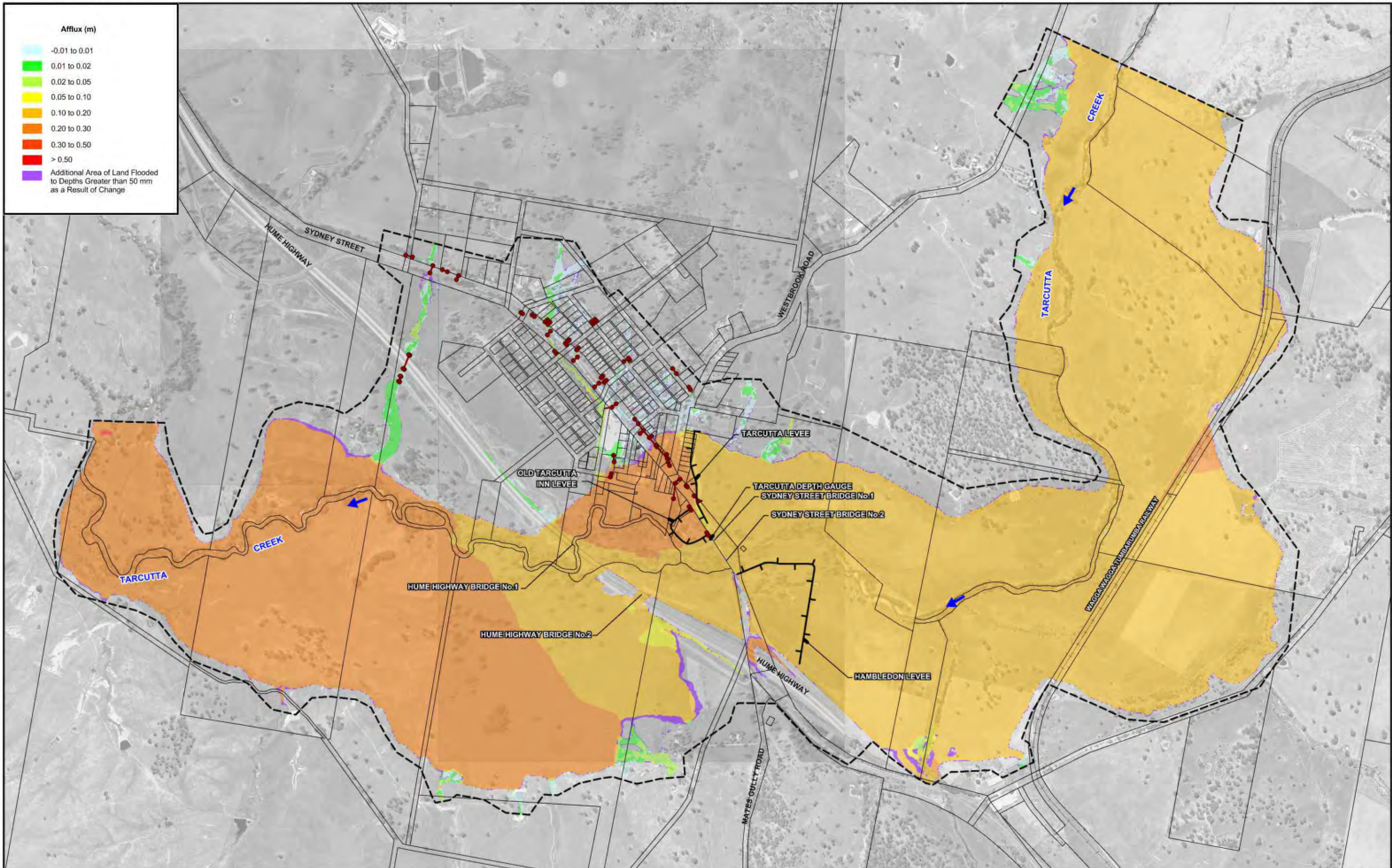
Legend		
	Low Hazard	High Hazard
Floodway	Yellow	Red
Flood Fringe	Blue	Cyan
Flood Storage	Green	Light Green

- LEGEND**
- Modelled Stormwater Network
 - Two-Dimensional Model Boundary
 - Alignment of Existing Levee

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.11

NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



Scale: 1:15,000



NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

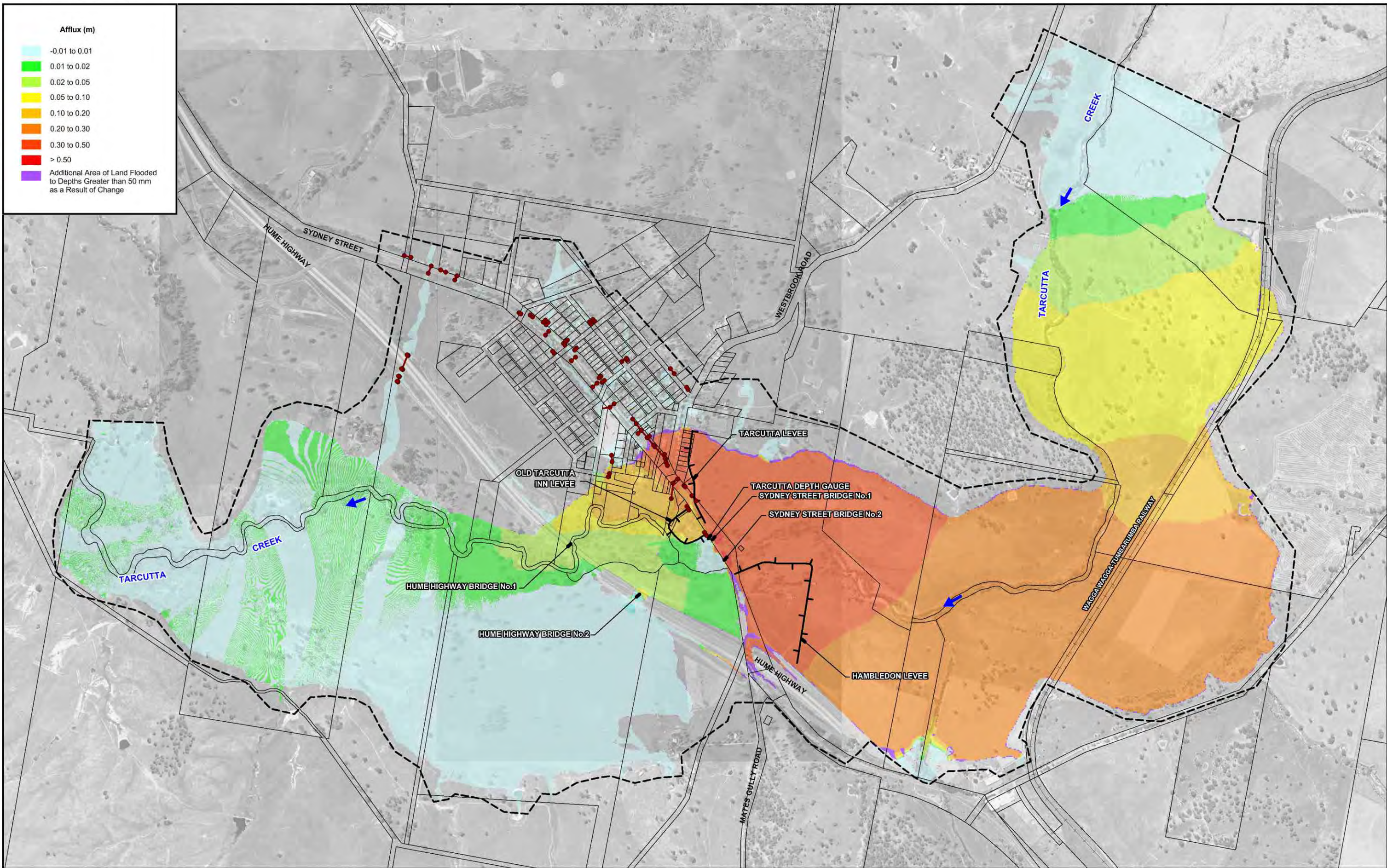
LEGEND

- Modelled Stormwater Network
- |— Alignment of Existing Levee
- - - Two-Dimensional Model Boundary

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.12

**SENSITIVITY OF FLOOD BEHAVIOUR AT TARCUTTA TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
100 YEAR ARI 18 HOUR STORM**



TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING

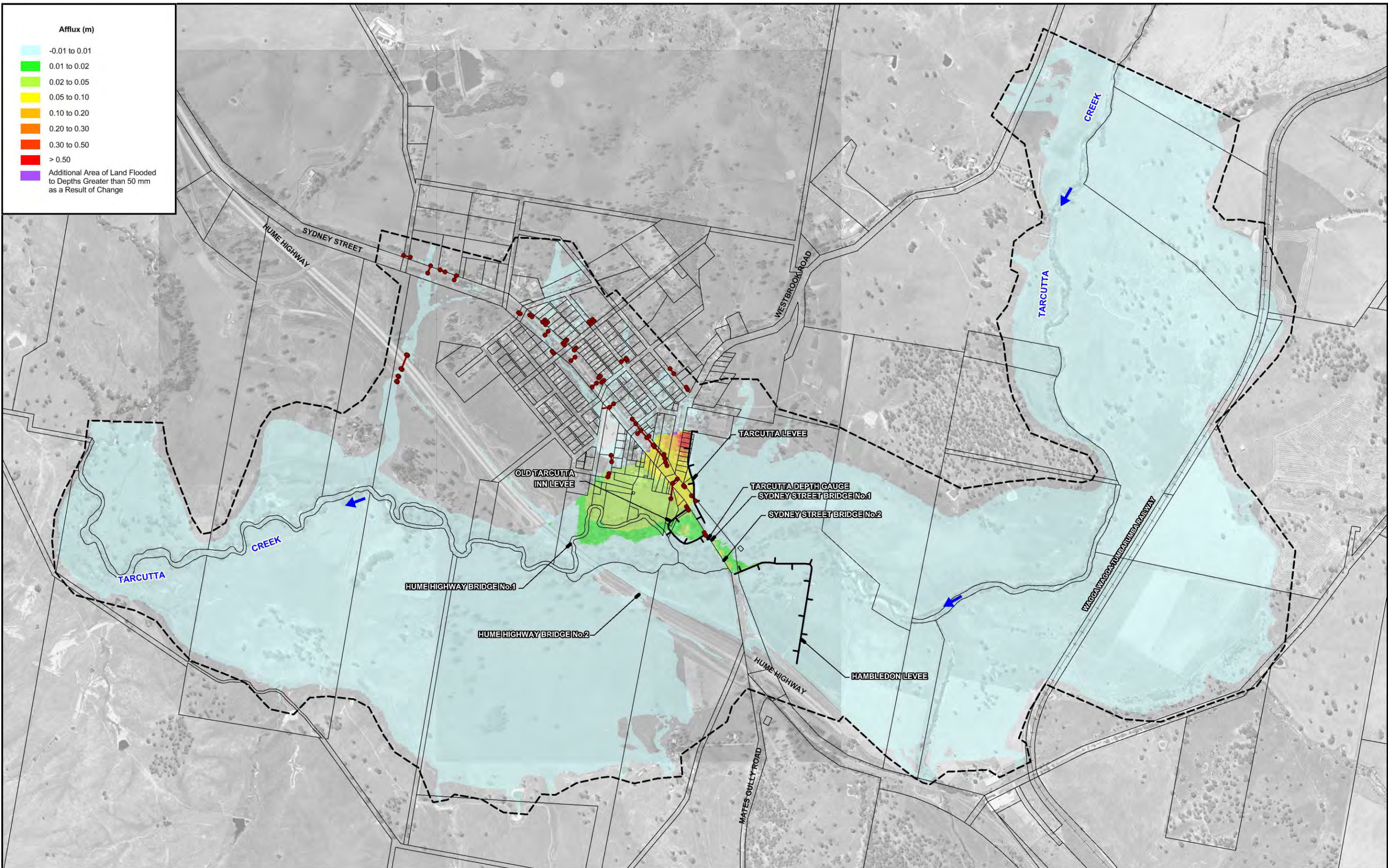
Figure 3.13

LEGEND

- Modelled Stormwater Network
- Alignment of Existing Levee
- - - Two-Dimensional Model Boundary

SENSITIVITY OF FLOOD BEHAVIOUR AT TARCUTTA TO A PARTIAL BLOCKAGE OF MAJOR HYDRAULIC STRUCTURES
100 YEAR ARI 18 HOUR STORM

NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



Afflux (m)

Light Blue	-0.01 to 0.01
Light Green	0.01 to 0.02
Yellow-Green	0.02 to 0.05
Yellow	0.05 to 0.10
Orange	0.10 to 0.20
Red-Orange	0.20 to 0.30
Red	0.30 to 0.50
Dark Red	> 0.50
Purple	Additional Area of Land Flooded to Depths Greater than 50 mm as a Result of Change

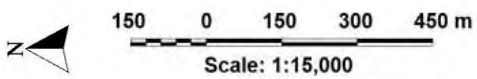
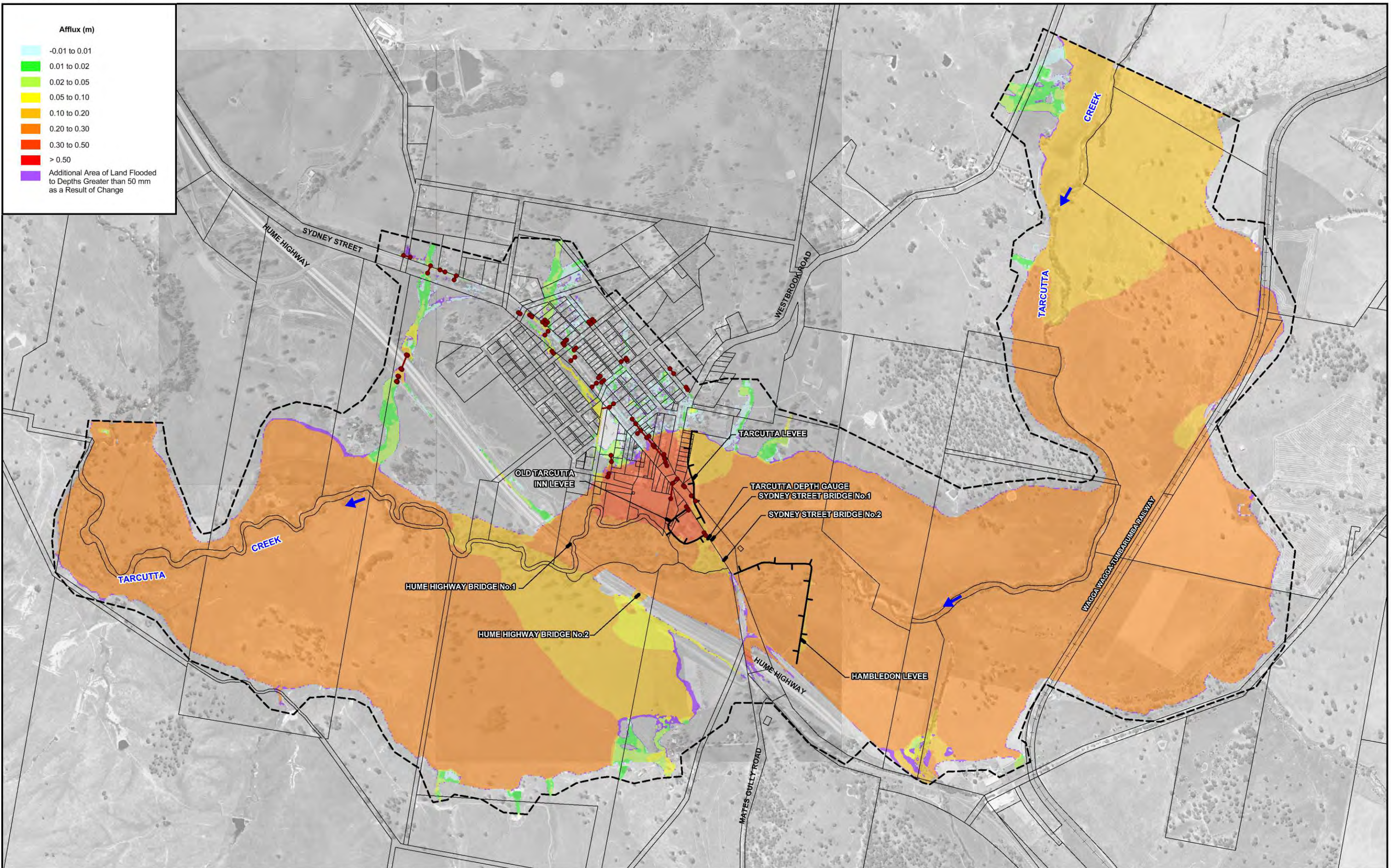
150 0 150 300 450 m
Scale: 1:15,000

- LEGEND**
- Modelled Stormwater Network
 - Alignment of Existing Levee
 - Two-Dimensional Model Boundary

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.14

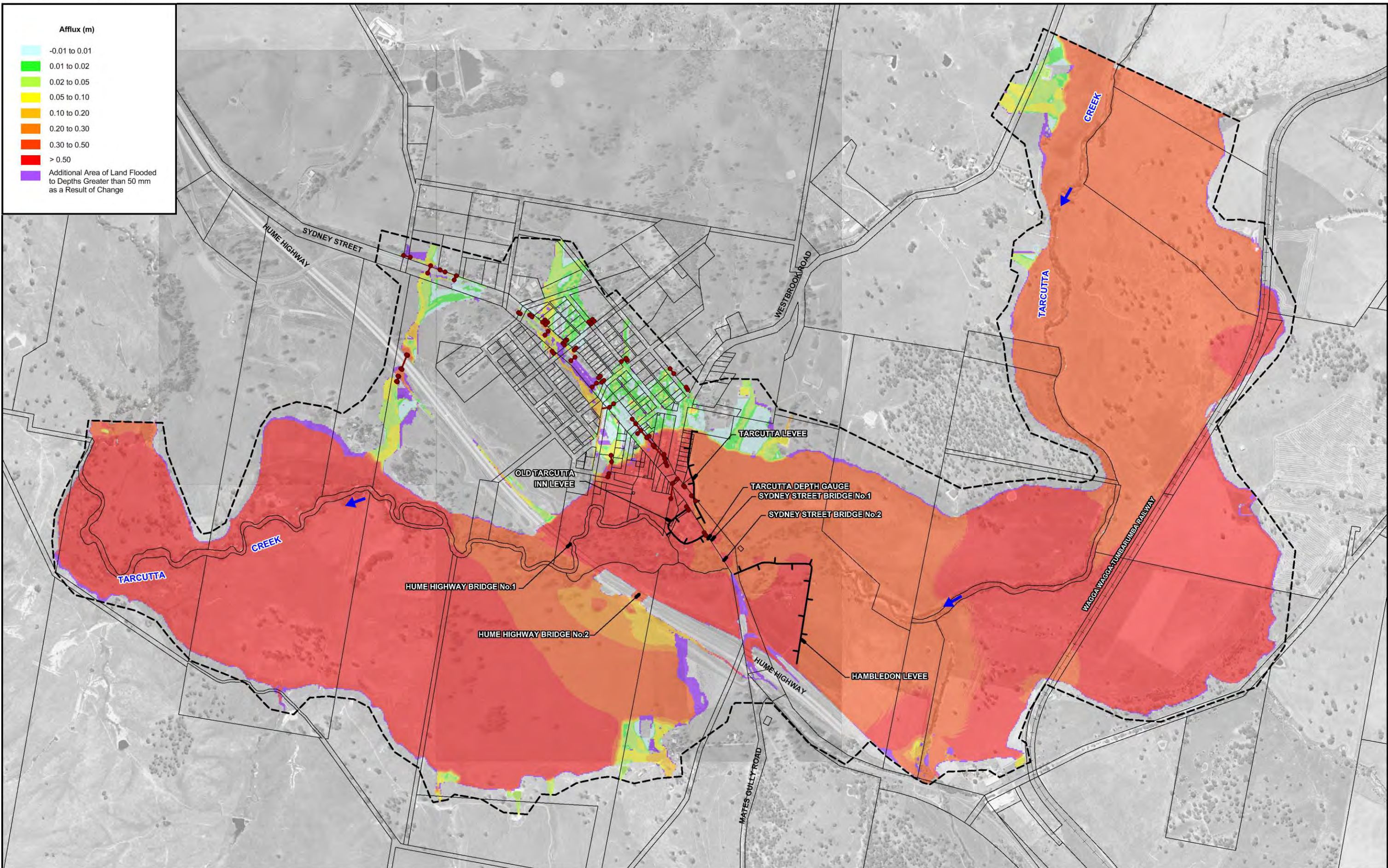
NOTE:
The extent of flooding shown were determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



NOTE:
 The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

- LEGEND**
- Modelled Stormwater Network
 - Two-Dimensional Model Boundary
 - Alignment of Existing Levee

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
 DESIGN FLOOD MODELLING**



150 0 150 300 450 m
Scale: 1:15,000

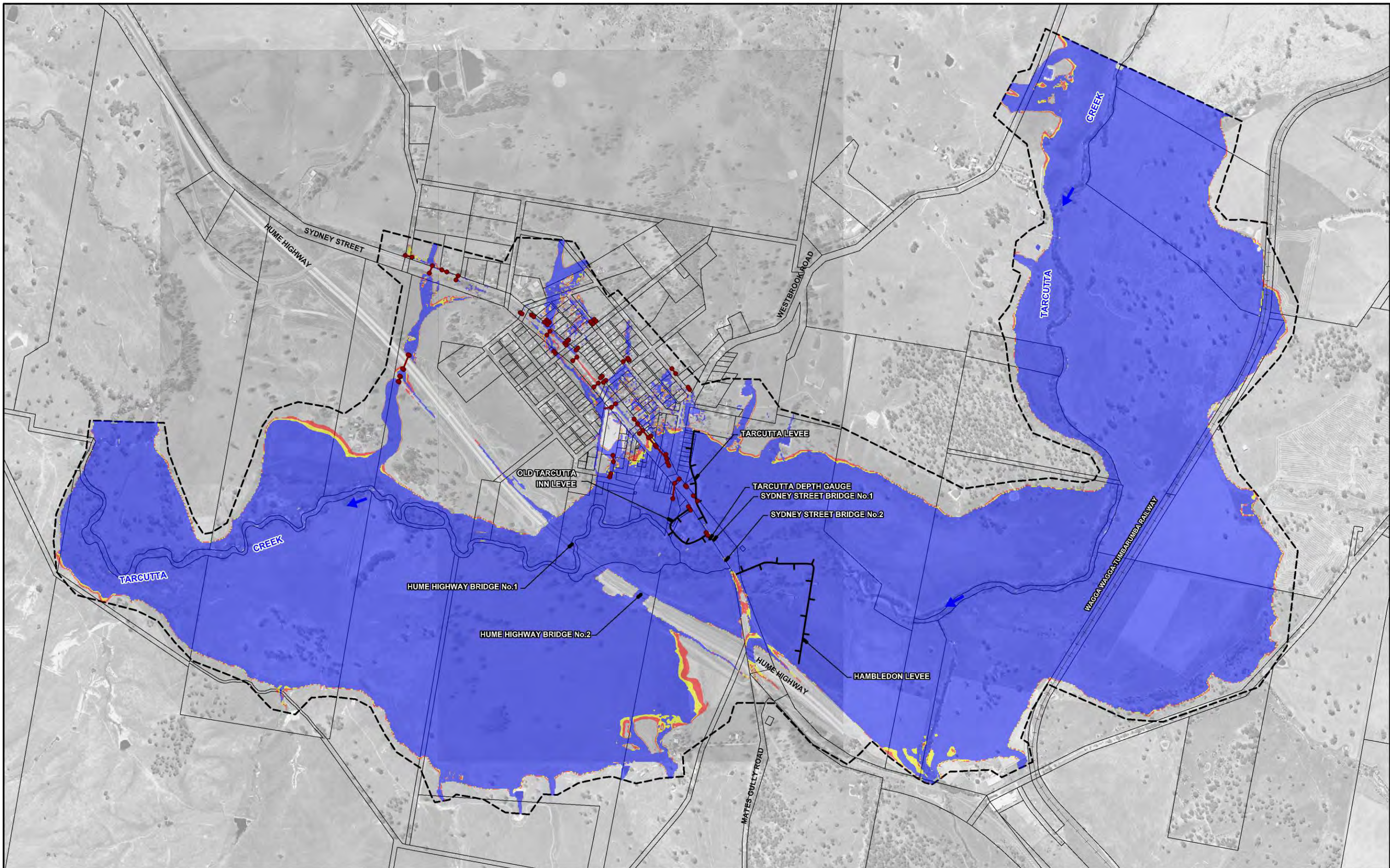
LEGEND

- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Alignment of Existing Levee

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

Figure 3.16

NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.



LEGEND

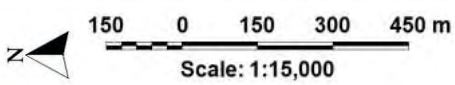
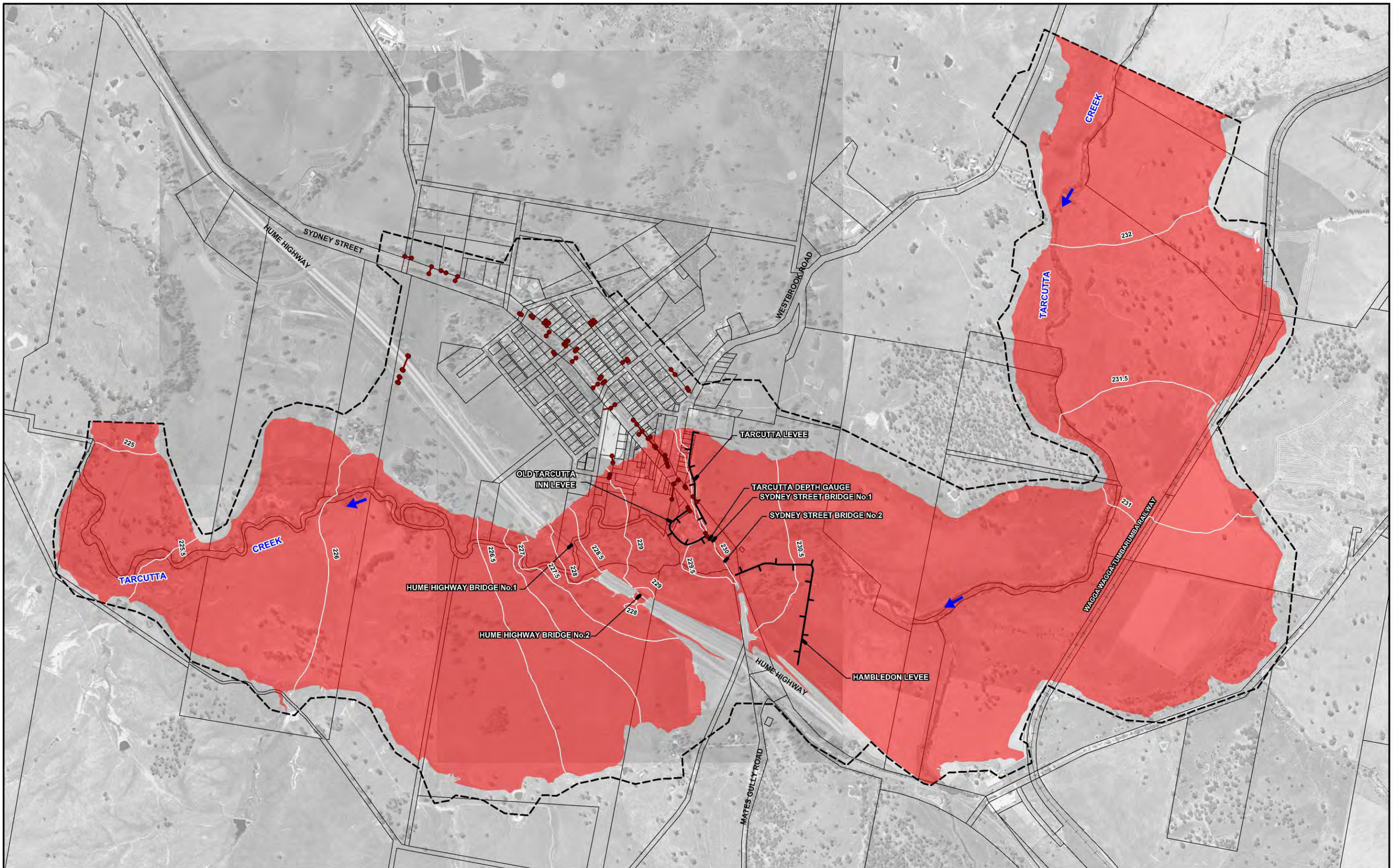
- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Alignment of Existing Levee
- 100 Year ARI
- 100 Year ARI Rainfall Increased by 10%
- 100 Year ARI Rainfall Increased by 30%

TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING





Figure 3.17

NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.

IMPACT OF INCREASED RAINFALL INTENSITIES ON EXTENT OF FLOODING AT TARCUTTA
100 YEAR ARI



LEGEND

-  Modelled Stormwater Network
-  Two-Dimensional Model Boundary
-  Alignment of Existing Levee
-  Interim Flood Planning Area (FPA) and resulting Flood Planning Level (FPL) (m AHD)

**TARCUTTA, LADYSMITH AND URANQUINTY FLOOD STUDIES
DESIGN FLOOD MODELLING**

NOTE:
The extent of flooding shown was determined from airborne laser scanning survey and are approximate only. The extent of inundation in individual allotments near the flood fringe should be confirmed by site specific survey.