



LACHLAN SHIRE COUNCIL

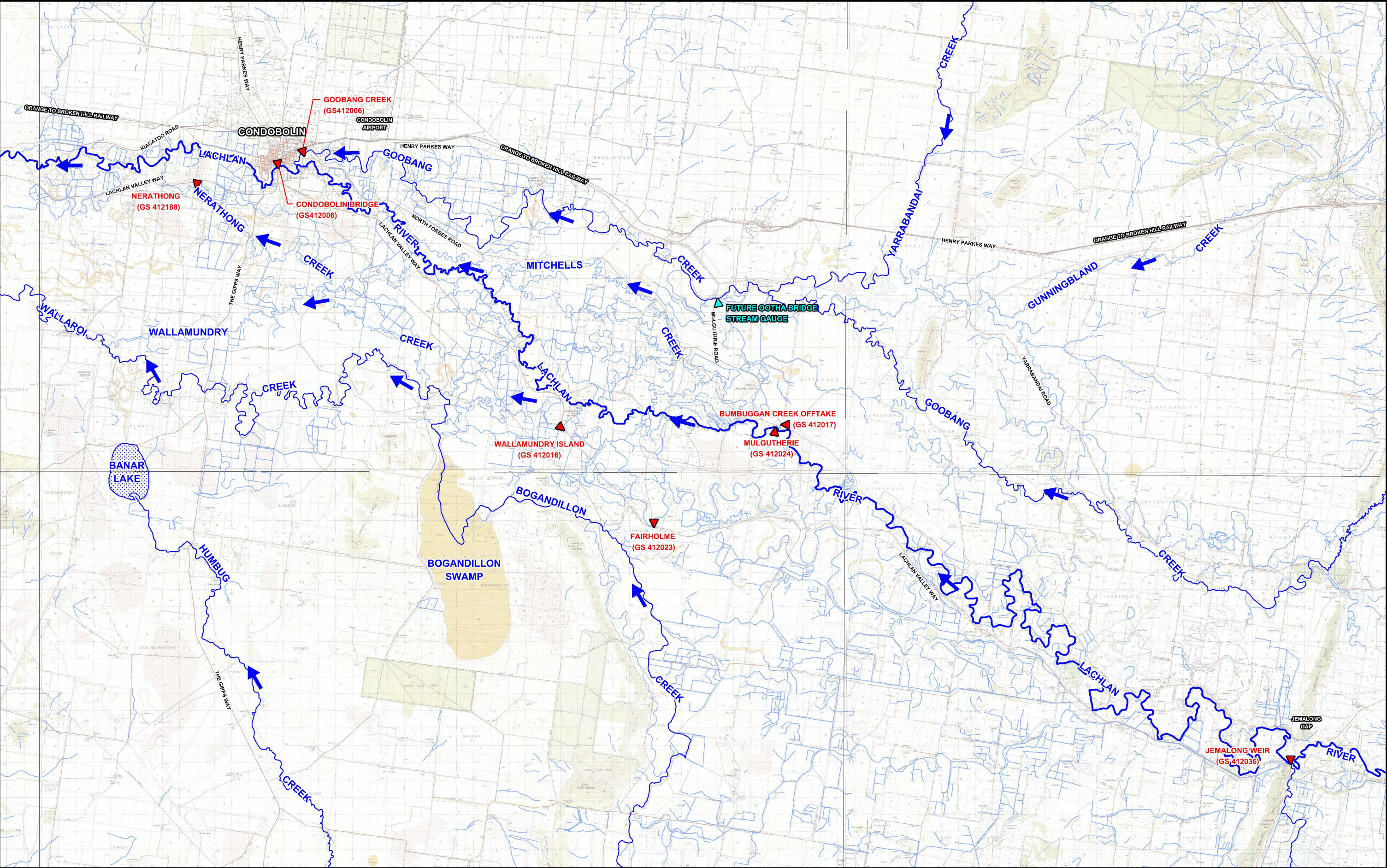
LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN


NOVEMBER 2018

VOLUME 2 – FIGURES AND APPENDICES

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2024

02




2

4

6

km

Scale: 1:200,000



Direction of Flow

WaterNSW Stream Gauge

Recommended Telemetered Stream Gauge Site

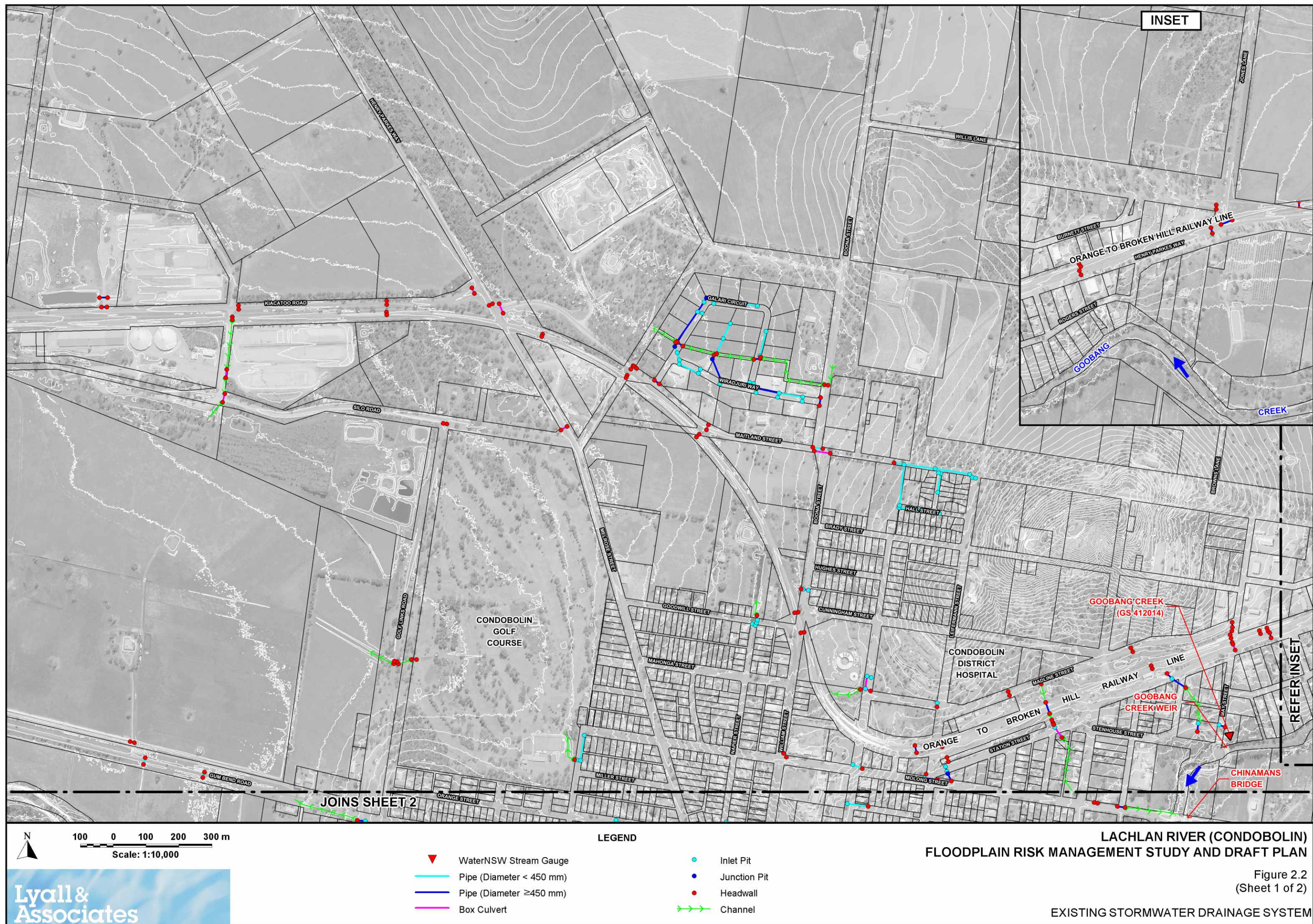
LACHLAN RIVER (CONDOBOLIN)

FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

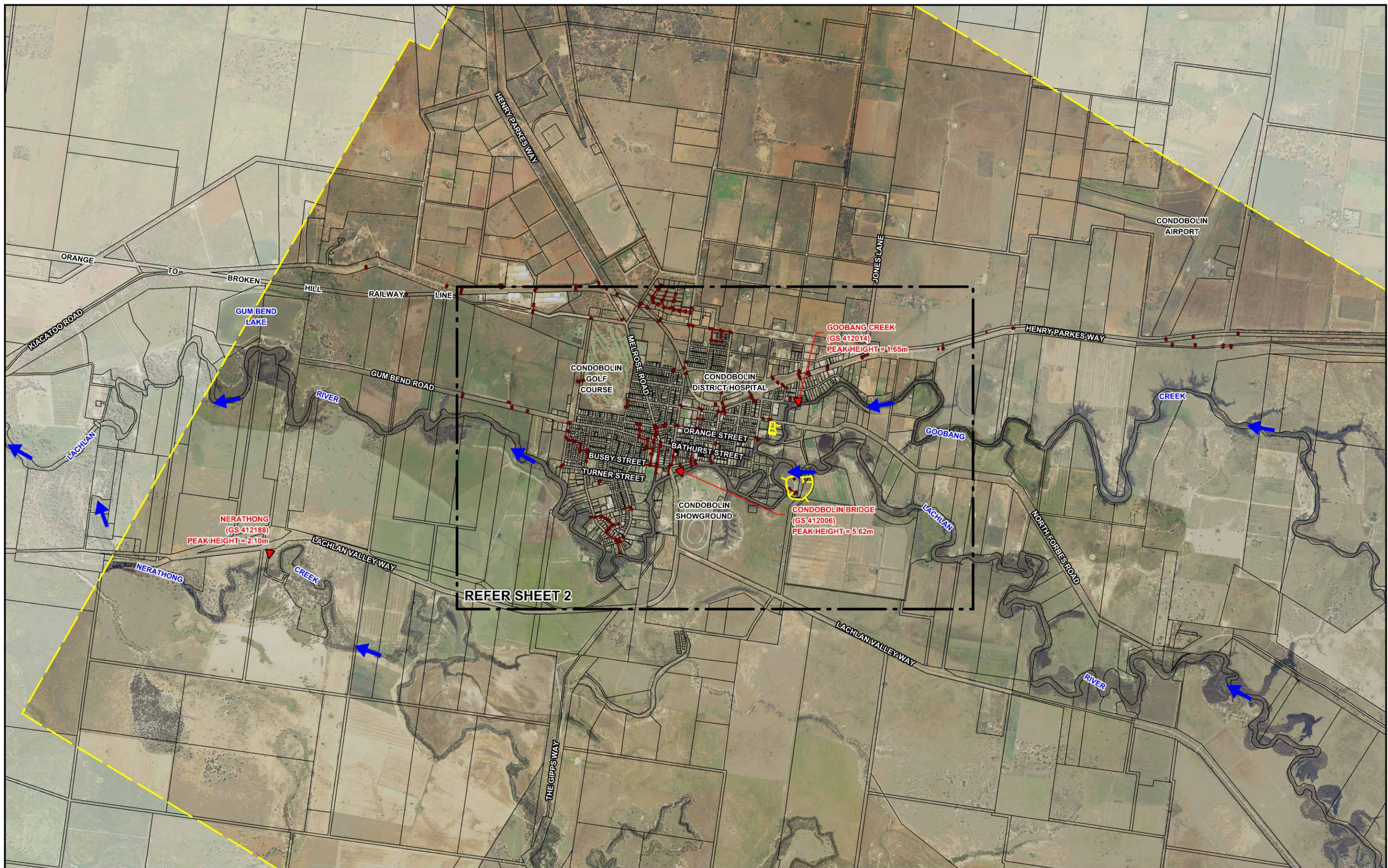
Figure 1.1

LOCATION PLAN

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Scale: 1:40,000

NOTE:
Aerial photography taken during flood on 17 December 2010, when flood levels were about 250 mm lower than the peak level reached on 22 December 2010.

LEGEND

- Modelled Stormwater Network
- Ring Levee
- WaterNSW Stream Gauge
- Extent of Flood Photography

LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.3
(Sheet 1 of 3)

HISTORIC FLOOD DATA
DECEMBER 2010 FLOOD



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

LEGEND
 Modelled Stormwater Network
 Ring Levee
 WaterNSW Stream Gauge

NOTE:
 Aerial photography taken during flood on 17 December 2010, when flood levels were about 250 mm lower than the peak level reached on 22 December 2010.

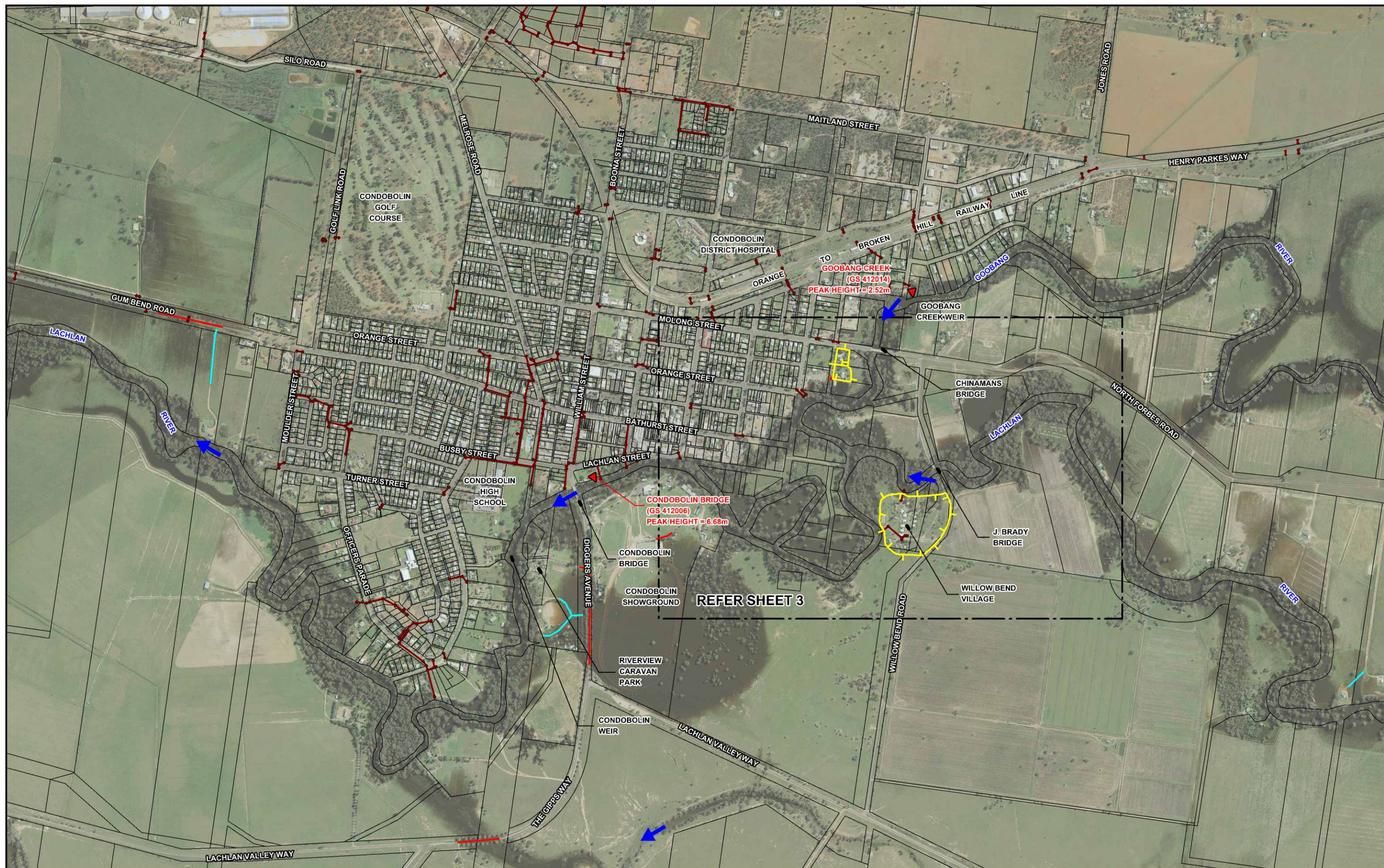
Lyall & Associates

**LACHLAN RIVER (CONDOBOLIN)
 FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.3
 (Sheet 2 of 3)

**HISTORIC FLOOD DATA
 DECEMBER 2010 FLOOD**





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

Lyll & Associates

NOTE:

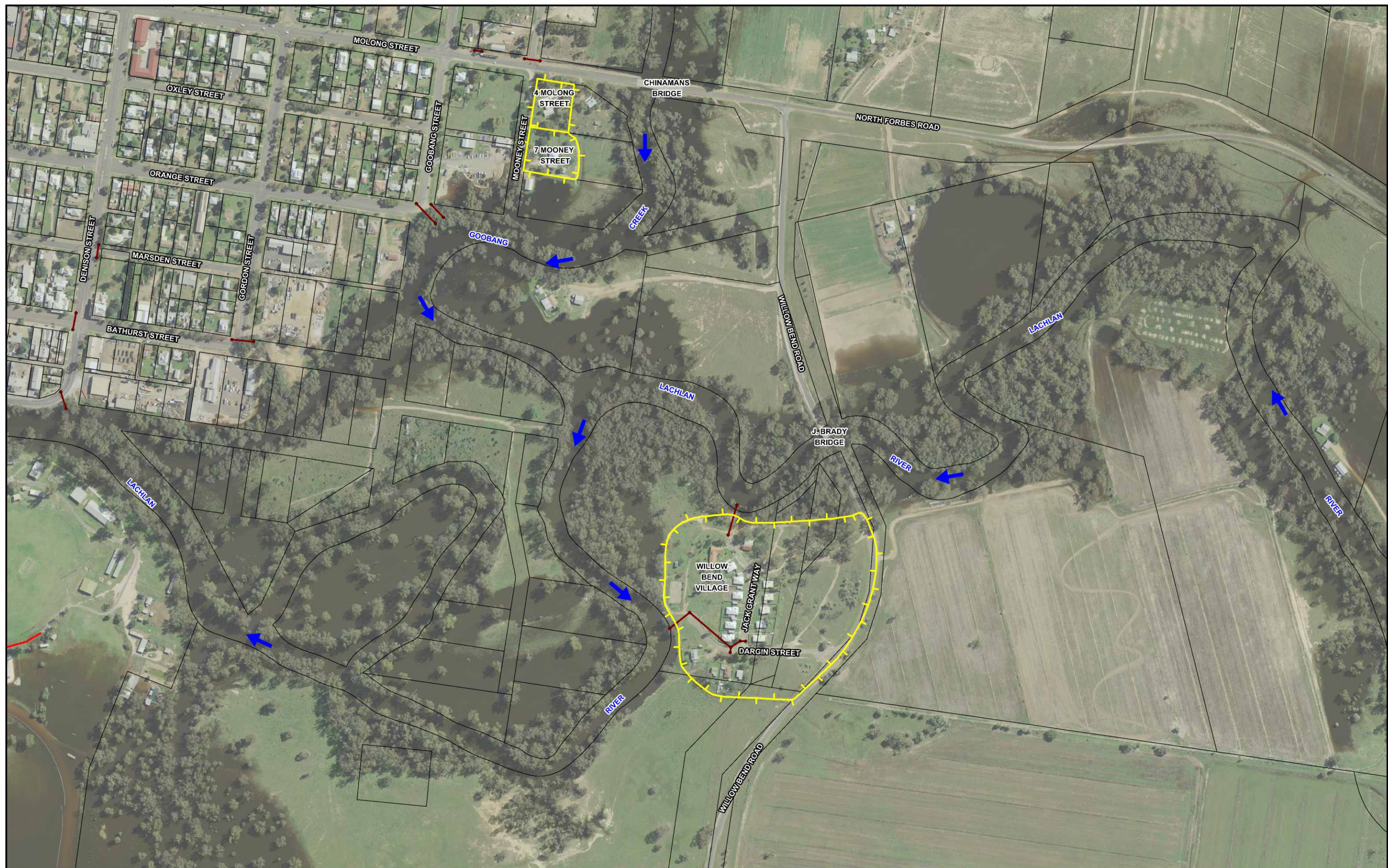
Aerial photography taken on 8 March 2012, when flood levels were between 340 - 760 mm below the peak levels recorded on 18 March 2012.

LEGEND

- Modelled Stormwater Network
- Ring Levee
- Section of Sealed Road Inundated at Time of Aerial Photography
- Section of Unsealed Road Inundated at Time of Aerial Photography
- ▼ WaterNSW Stream Gauge

**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.4
(Sheet 2 of 3)
HISTORIC FLOOD DATA
MARCH 2012 FLOOD







50 0 50 100 150 m
Scale: 1:5,000

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NOTE:

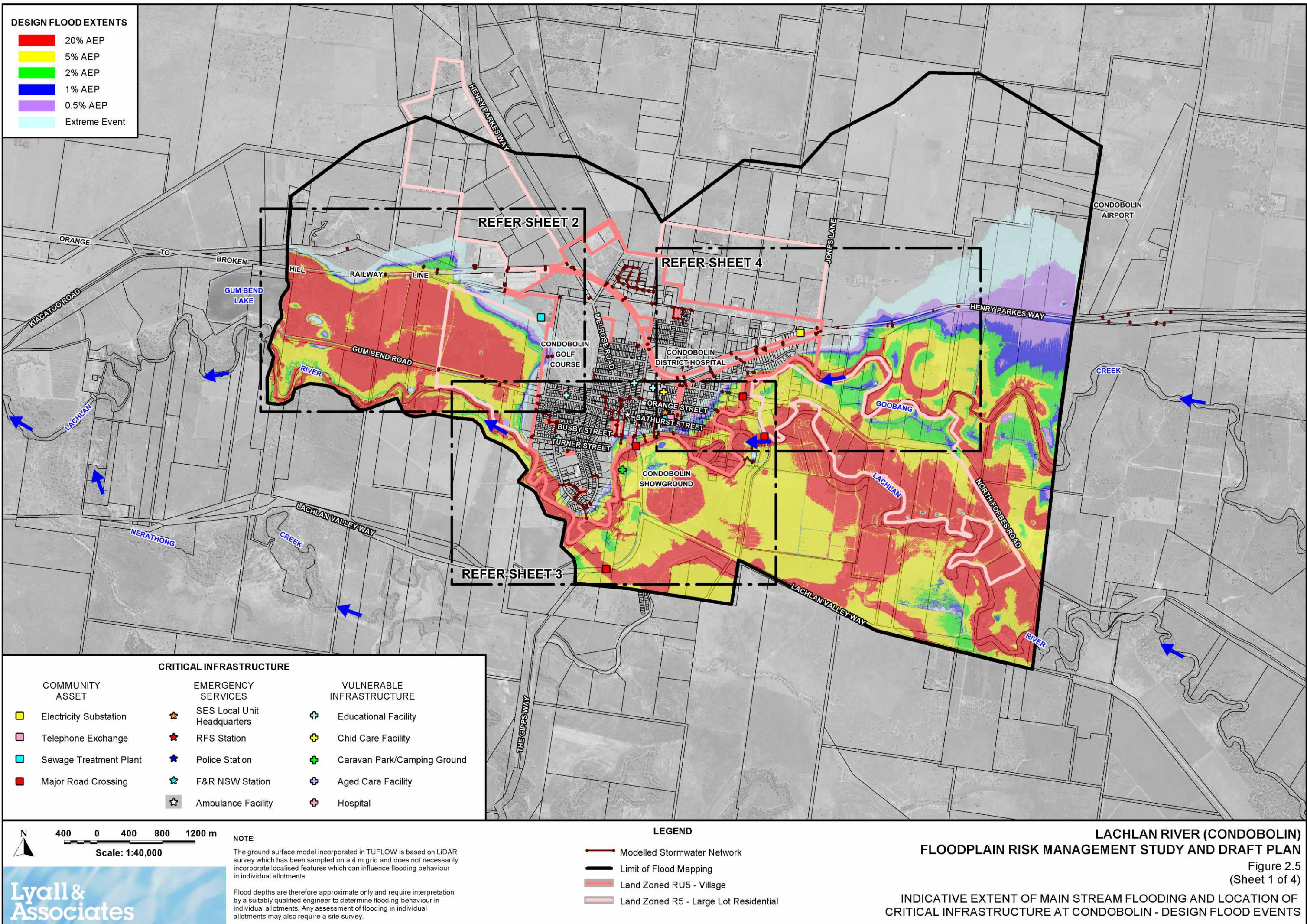
Aerial photography taken on 8 March 2012, when flood levels were between 340 - 760 mm below the peak levels recorded on 18 March 2012.

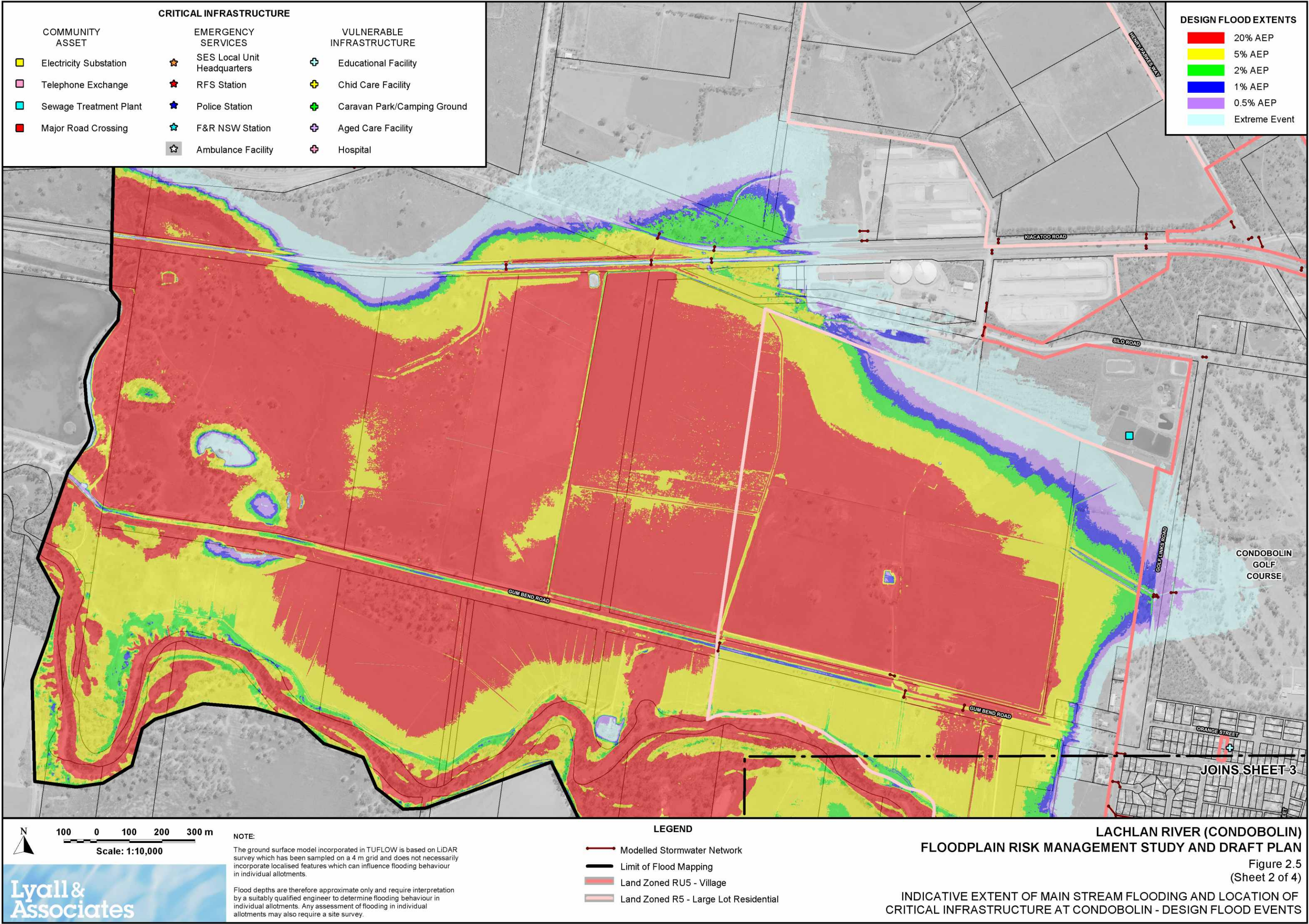
LEGEND

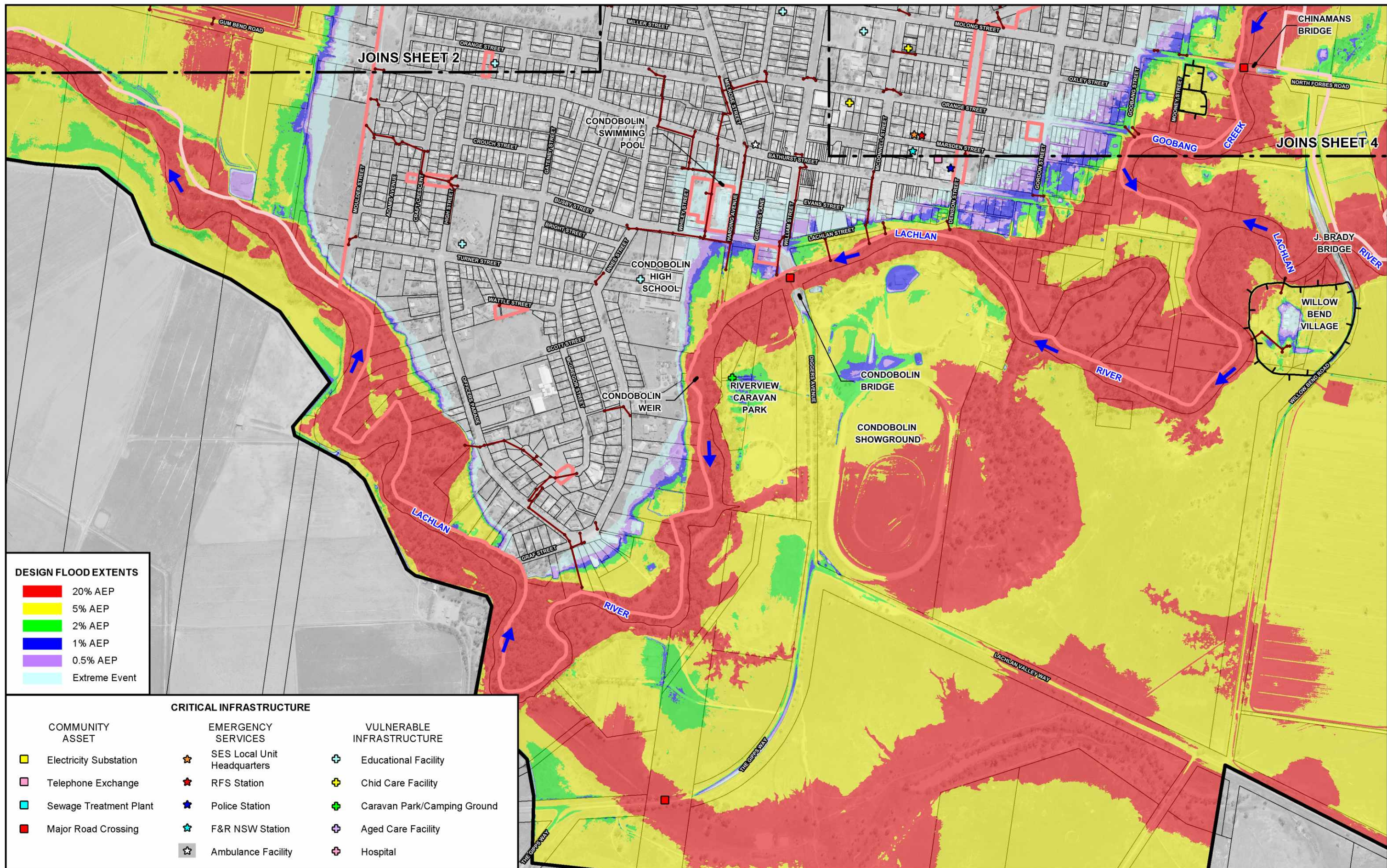
-  Modelled Stormwater Network
-  Ring Levee
-  Section of Sealed Road Inundated at Time of Aerial Photography
-  Section of Unsealed Road Inundated at Time of Aerial Photography

**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.4
(Sheet 3 of 3)
HISTORIC FLOOD DATA
MARCH 2012 FLOOD







DESIGN FLOOD EXTENTS

- 20% AEP
- 5% AEP
- 2% AEP
- 1% AEP
- 0.5% AEP
- Extreme Event

CRITICAL INFRASTRUCTURE

COMMUNITY ASSET	EMERGENCY SERVICES	VULNERABLE INFRASTRUCTURE
Electricity Substation	SES Local Unit Headquarters	Educational Facility
Telephone Exchange	RFS Station	Child Care Facility
Sewage Treatment Plant	Police Station	Caravan Park/Camping Ground
Major Road Crossing	F&R NSW Station	Aged Care Facility
	Ambulance Facility	Hospital

Scale: 1:10,000

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NOTE:

The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

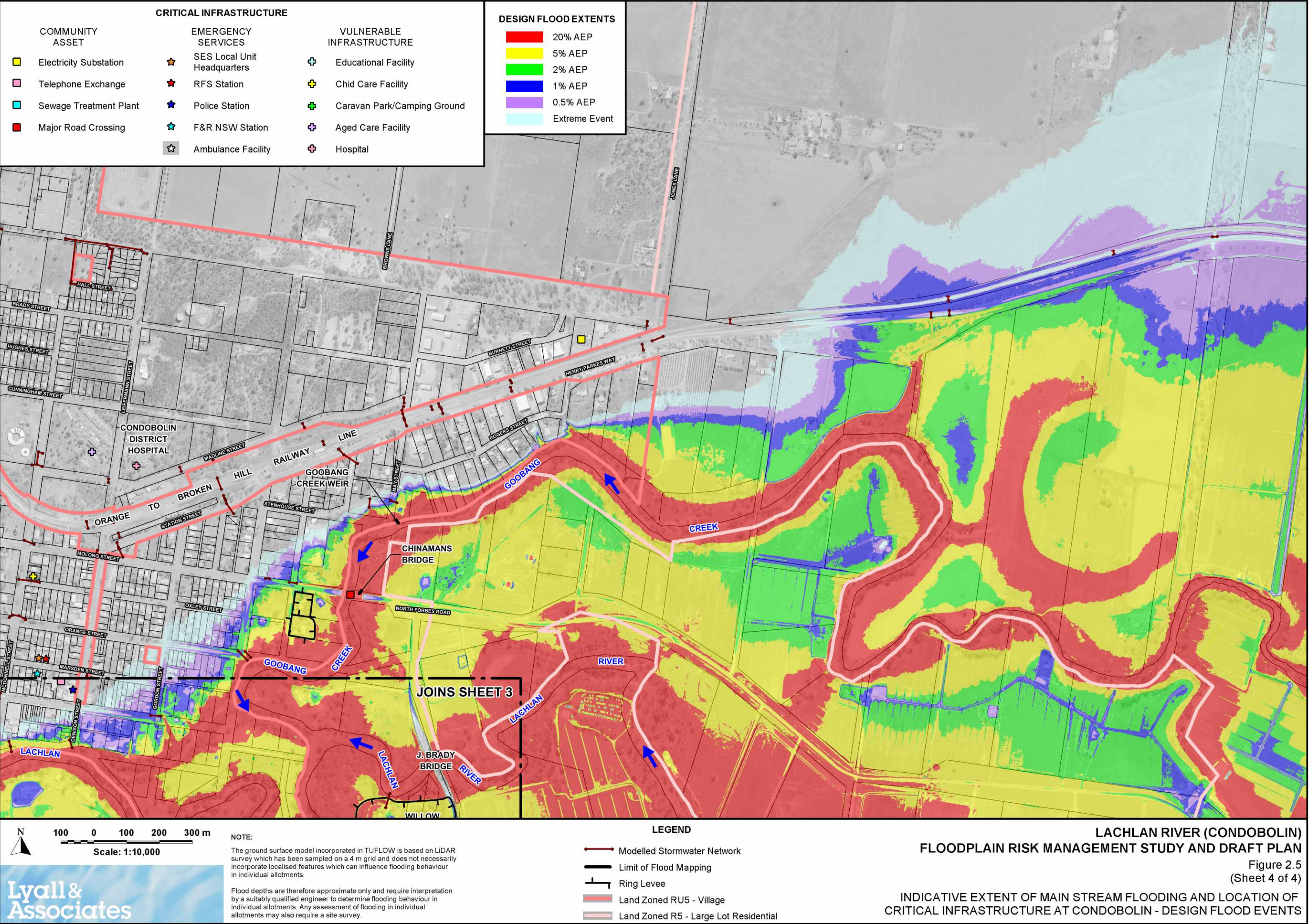
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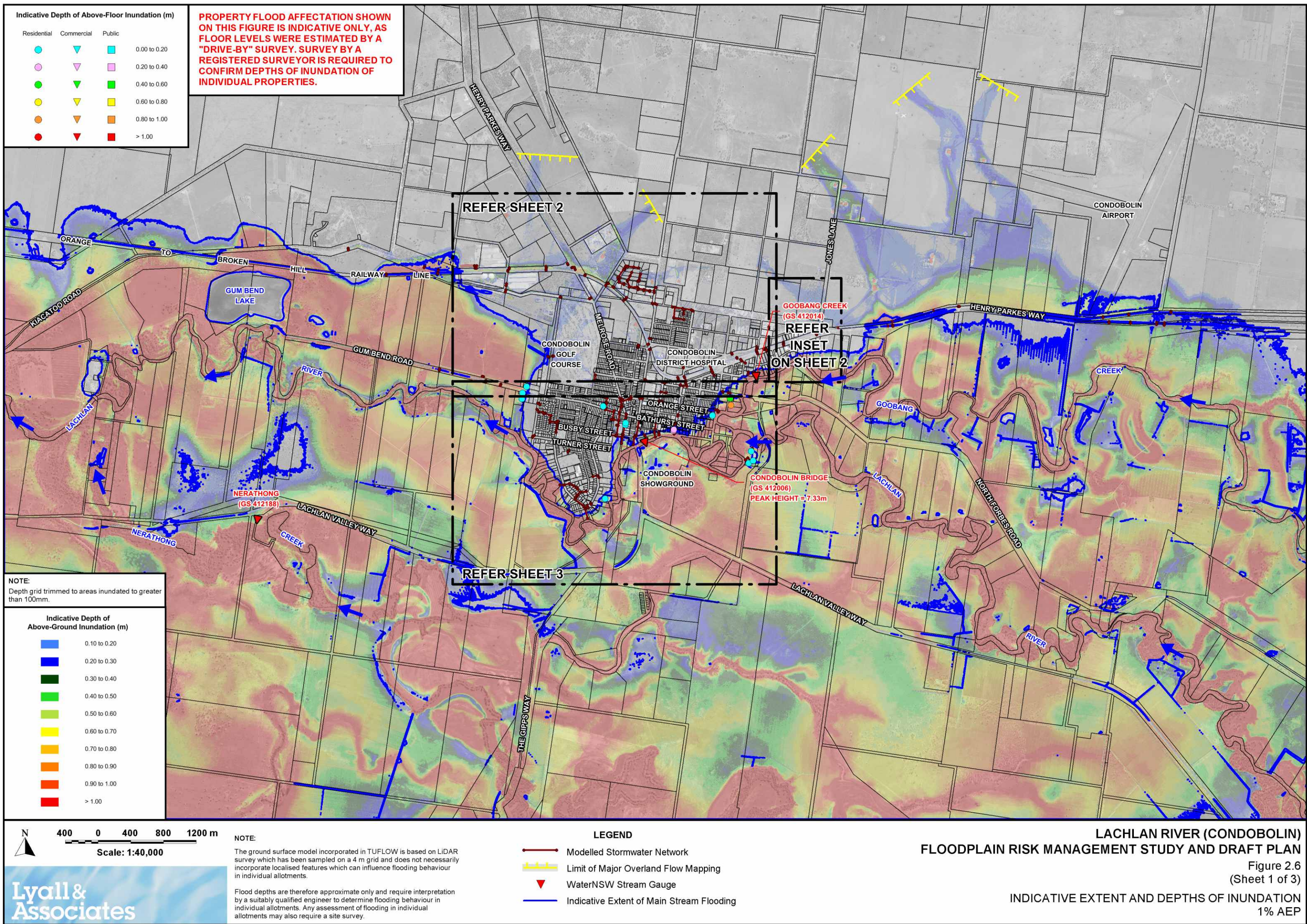
- Modelled Stormwater Network
- Limit of Flood Mapping
- Ring Levee
- Land Zoned RU5 - Village
- Land Zoned R5 - Large Lot Residential

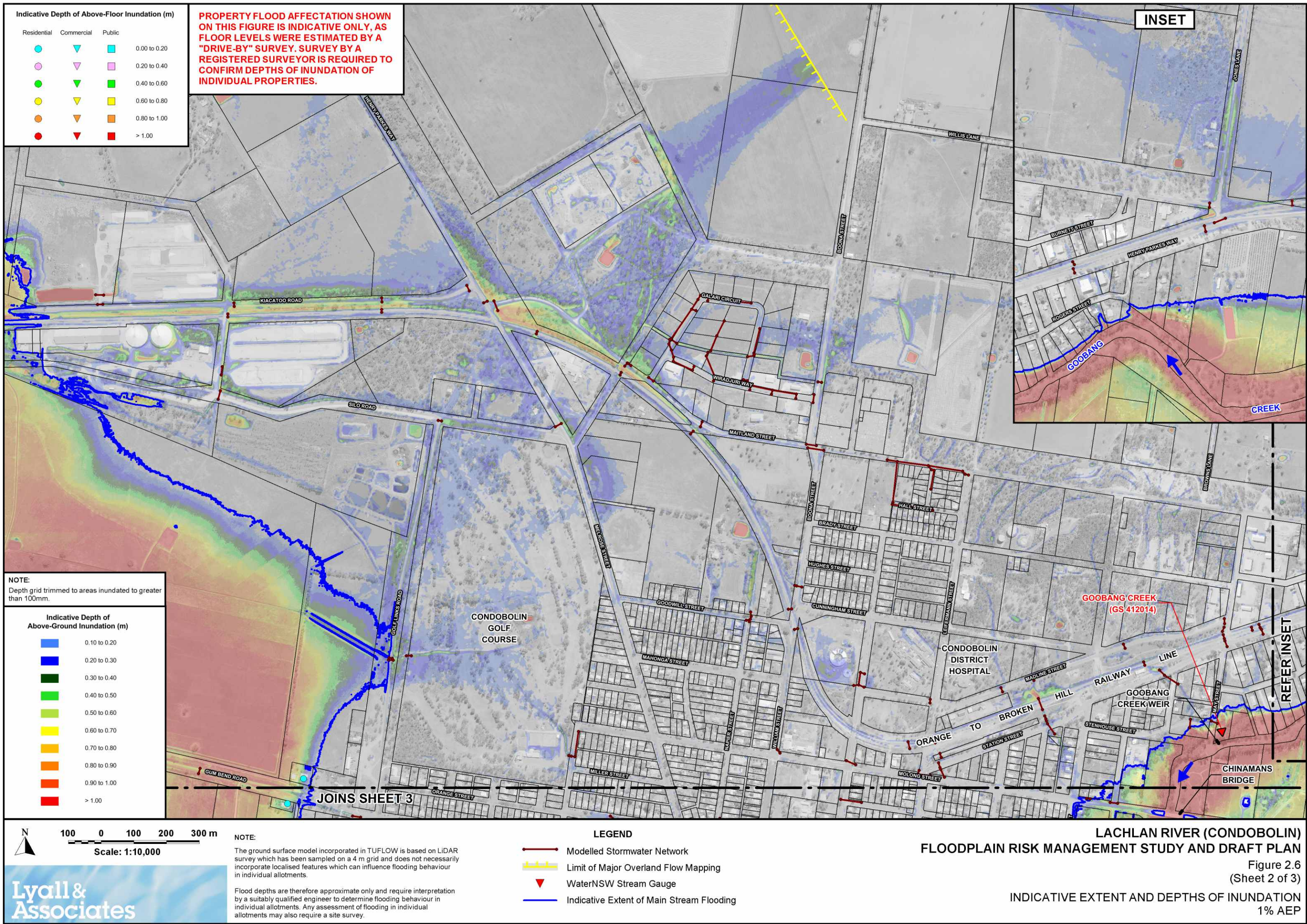
LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

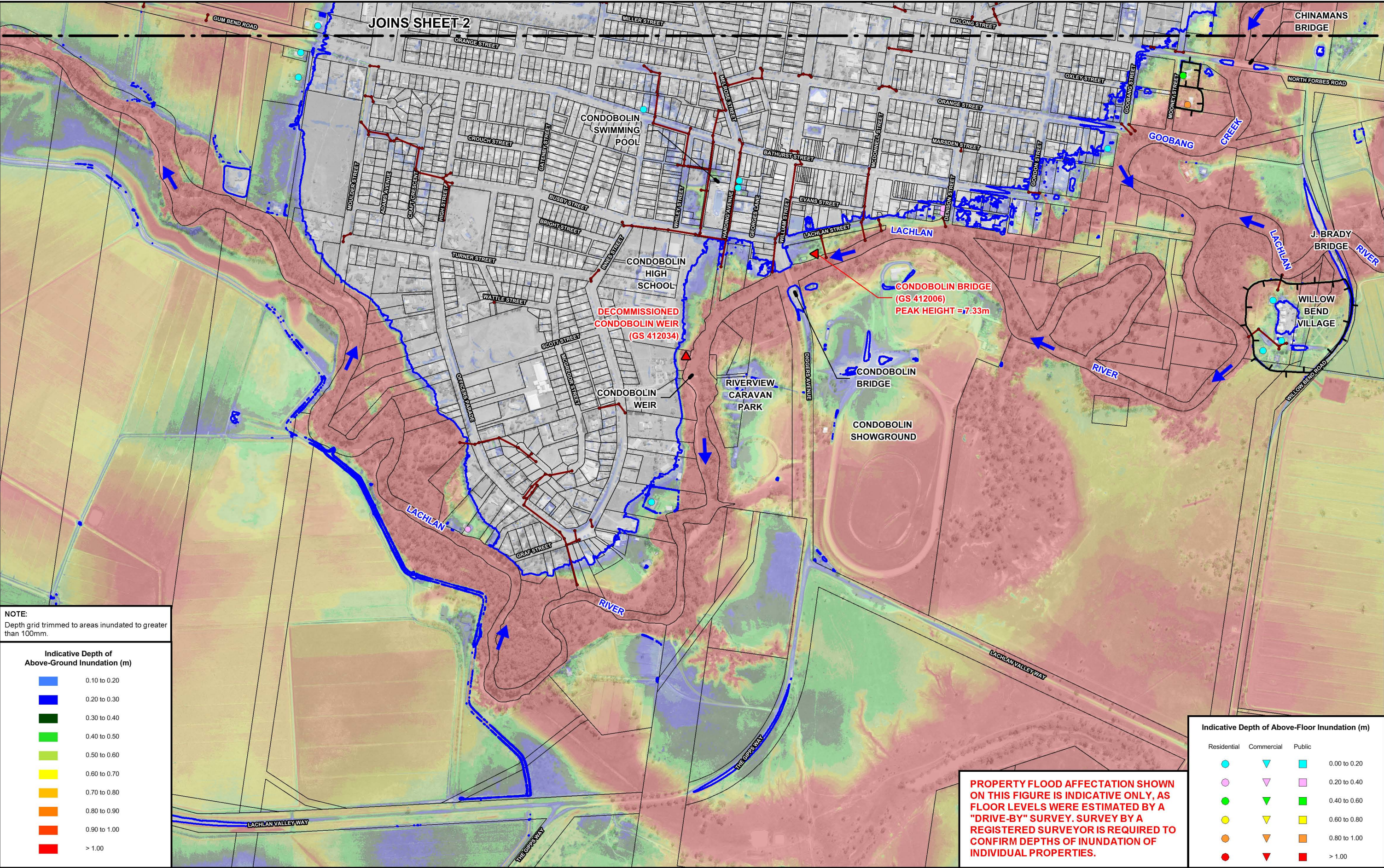
Figure 2.5
 (Sheet 3 of 4)

INDICATIVE EXTENT OF MAIN STREAM FLOODING AND LOCATION OF CRITICAL INFRASTRUCTURE AT CONDOBOLIN - DESIGN FLOOD EVENTS



























NOTE:
Depth grid trimmed to areas inundated to greater than 100mm.

Indicative Depth of Above-Ground Inundation (m)

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

Indicative Depth of Above-Floor Inundation (m)

Residential	Commercial	Public	
			0.00 to 0.20
			0.20 to 0.40
			0.40 to 0.60
			0.60 to 0.80
			0.80 to 1.00
			> 1.00

PROPERTY FLOOD AFFECTATION SHOWN ON THIS FIGURE IS INDICATIVE ONLY, AS FLOOR LEVELS WERE ESTIMATED BY A "DRIVE-BY" SURVEY. SURVEY BY A REGISTERED SURVEYOR IS REQUIRED TO CONFIRM DEPTHS OF INUNDATION OF INDIVIDUAL PROPERTIES.

Scale: 1:10,000

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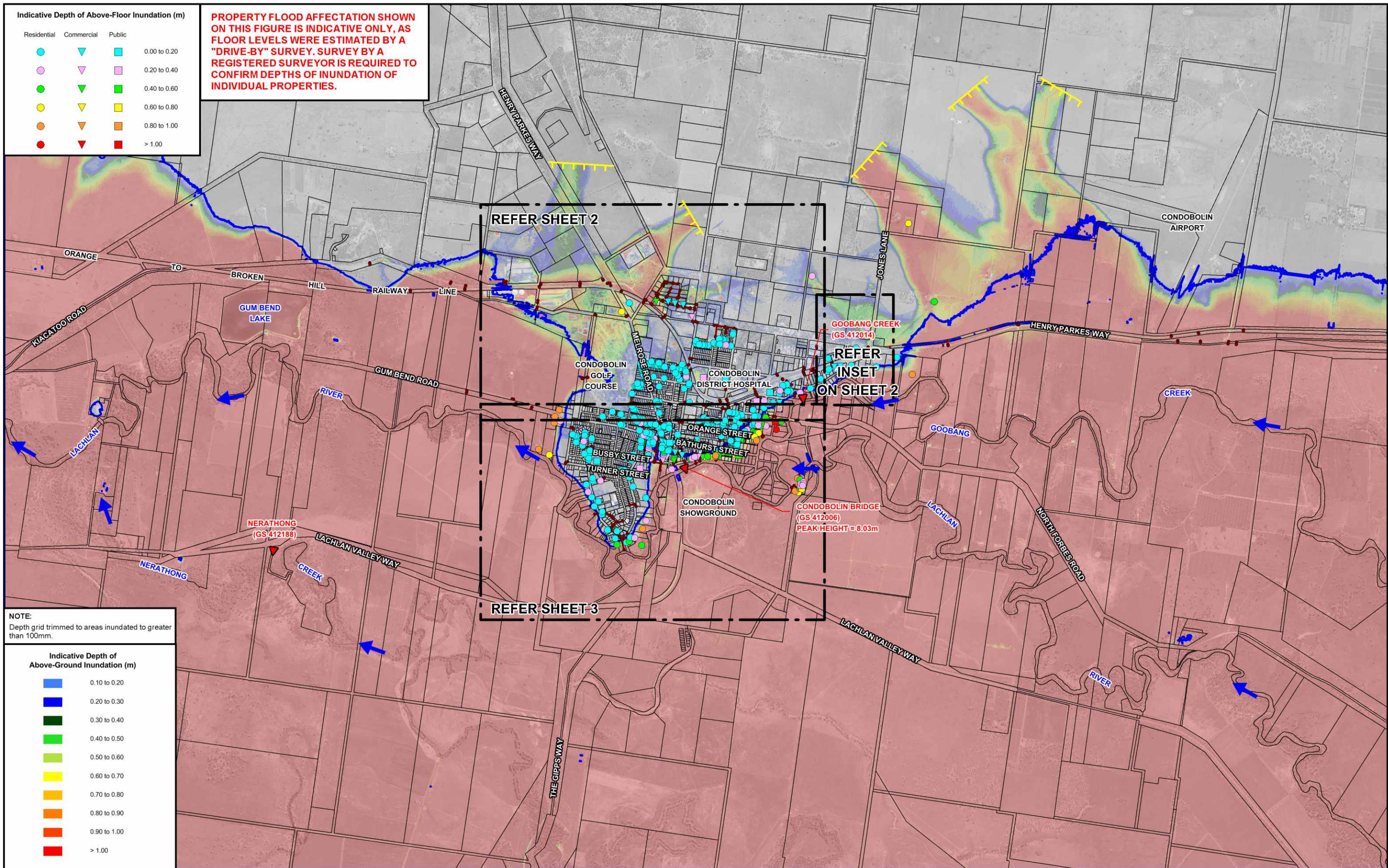
LEGEND

- Modelled Stormwater Network
- Ring Levee
- WaterNSW Stream Gauge
- Indicative Extent of Main Stream Flooding

LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.6
(Sheet 3 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
1% AEP



**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.7
(Sheet 1 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
EXTREME FLOOD

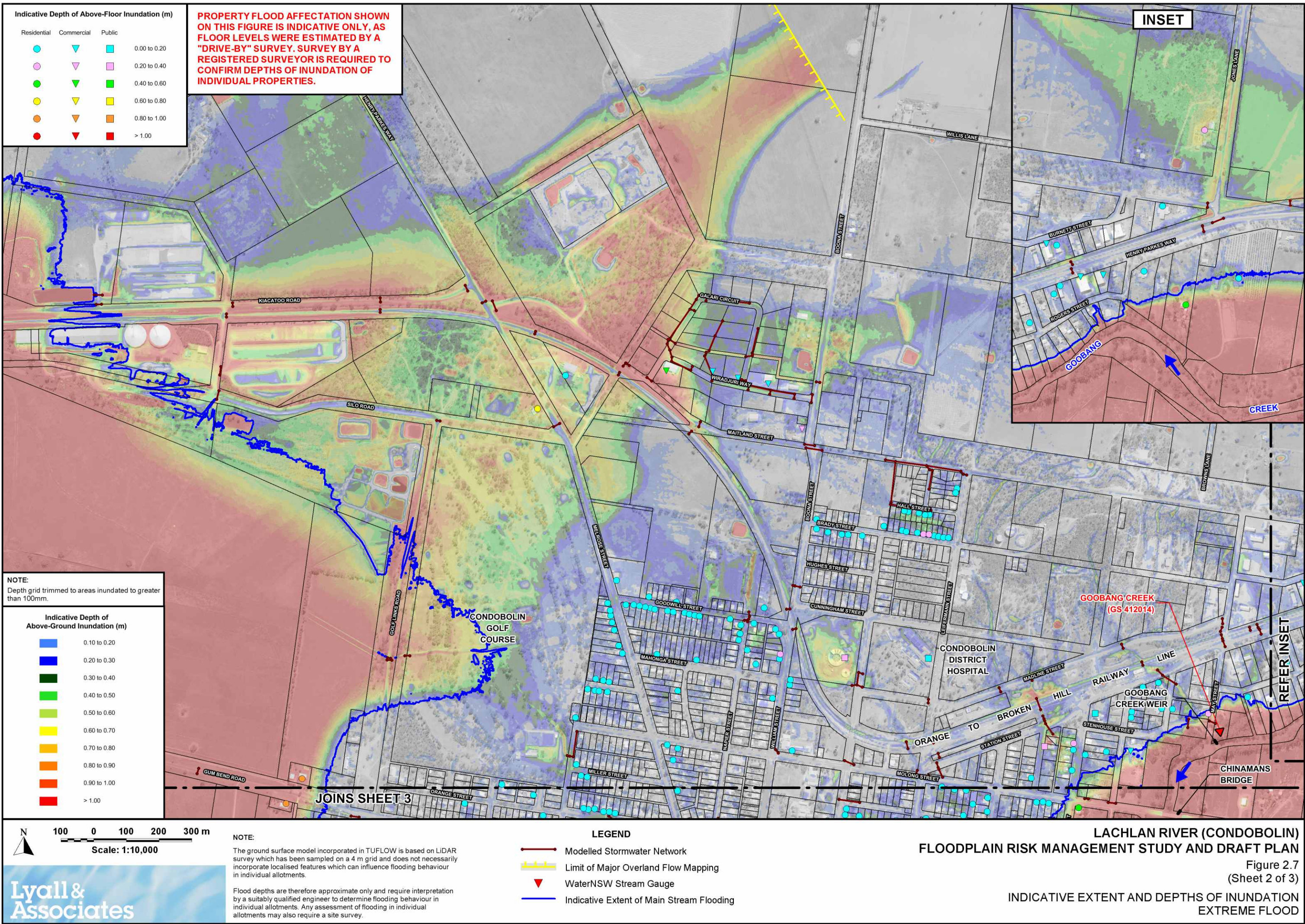
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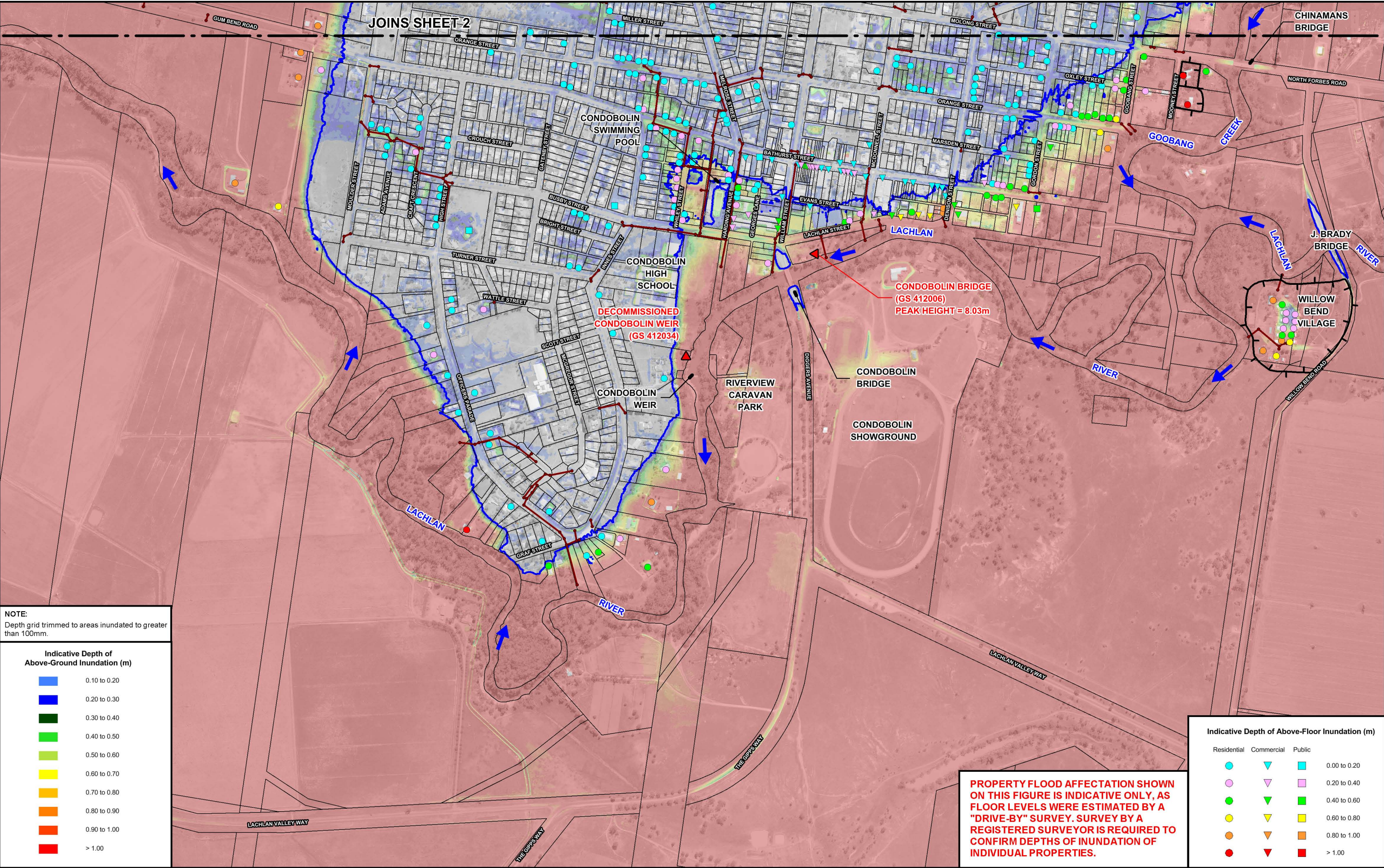
Lyall & Associates

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NOTE:
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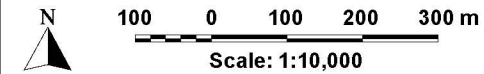
Indicative Depth of Above-Ground Inundation (m)

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

Indicative Depth of Above-Floor Inundation (m)

Residential	Commercial	Public	
0.00 to 0.20	0.00 to 0.20	0.00 to 0.20	
0.20 to 0.40	0.20 to 0.40	0.20 to 0.40	
0.40 to 0.60	0.40 to 0.60	0.40 to 0.60	
0.60 to 0.80	0.60 to 0.80	0.60 to 0.80	
0.80 to 1.00	0.80 to 1.00	0.80 to 1.00	
> 1.00	> 1.00	> 1.00	

PROPERTY FLOOD AFFECTATION SHOWN ON THIS FIGURE IS INDICATIVE ONLY, AS FLOOR LEVELS WERE ESTIMATED BY A "DRIVE-BY" SURVEY. SURVEY BY A REGISTERED SURVEYOR IS REQUIRED TO CONFIRM DEPTHS OF INUNDATION OF INDIVIDUAL PROPERTIES.



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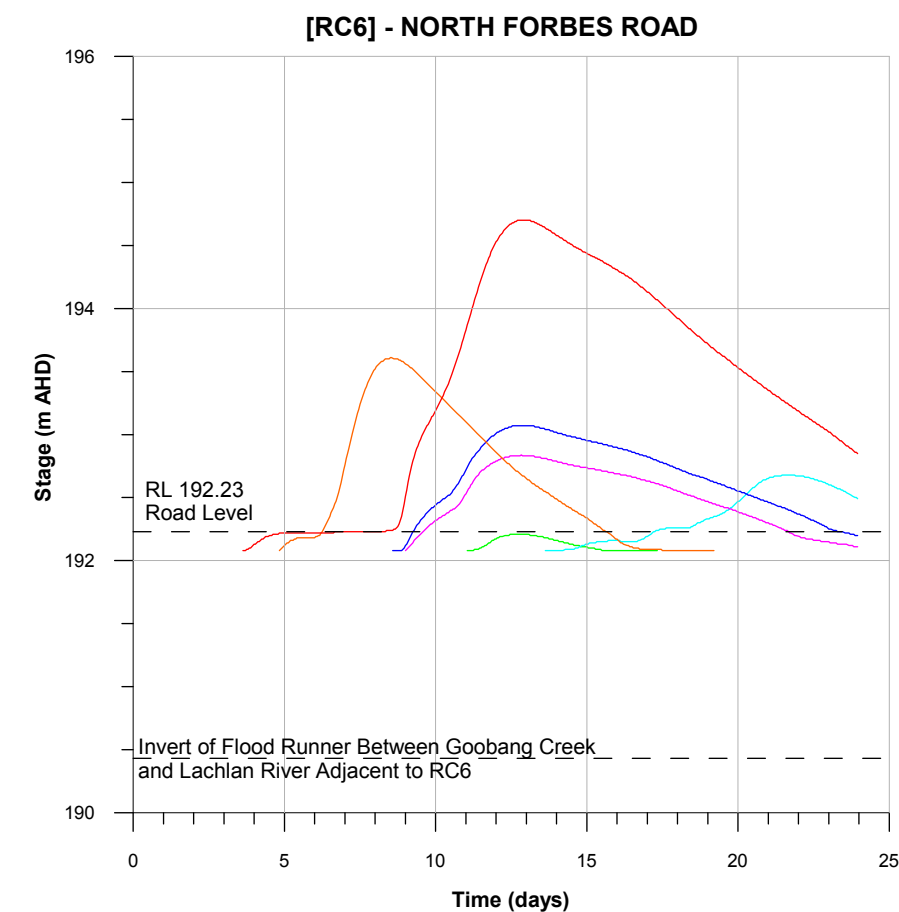
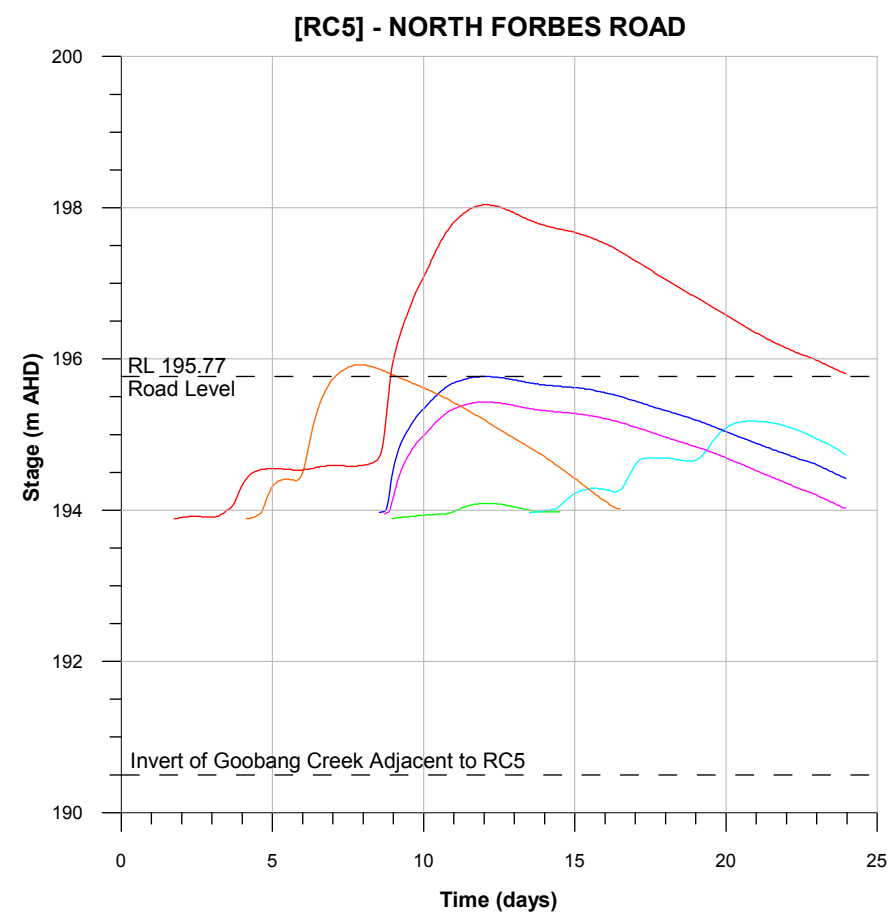
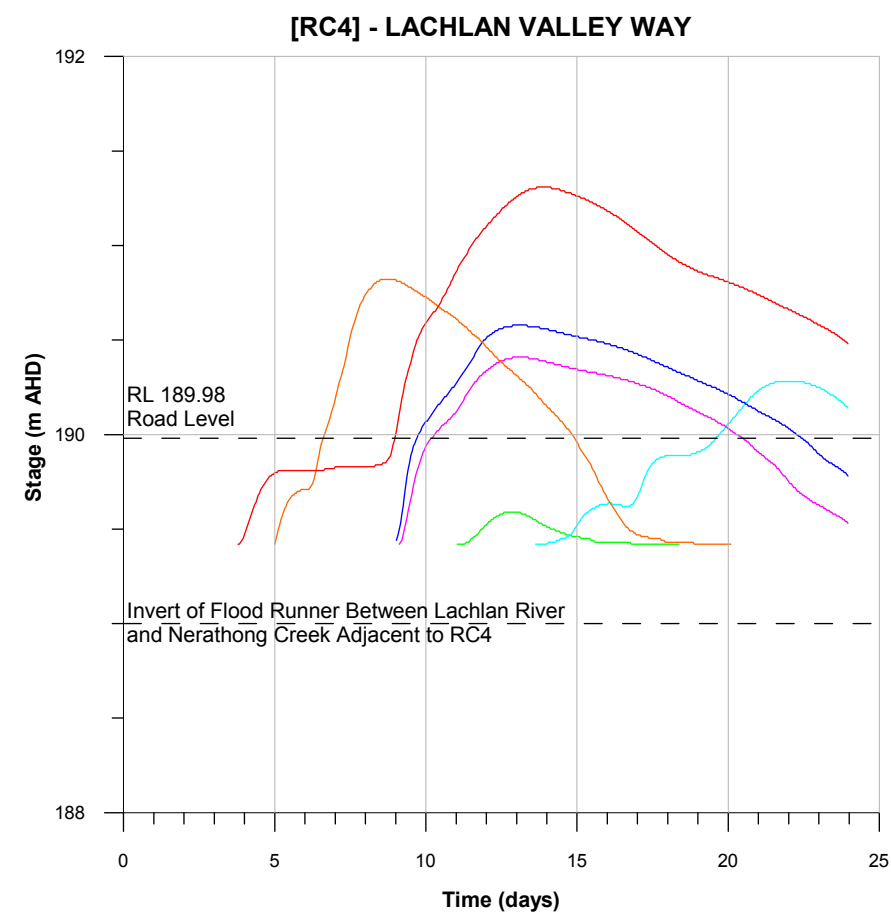
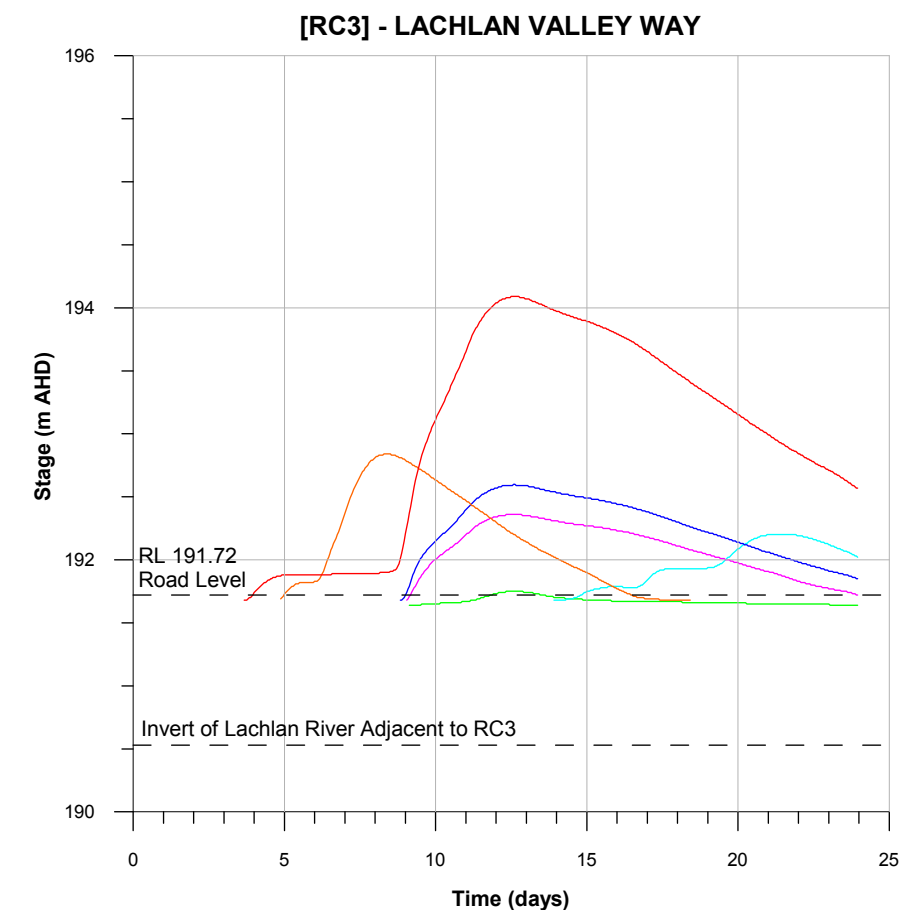
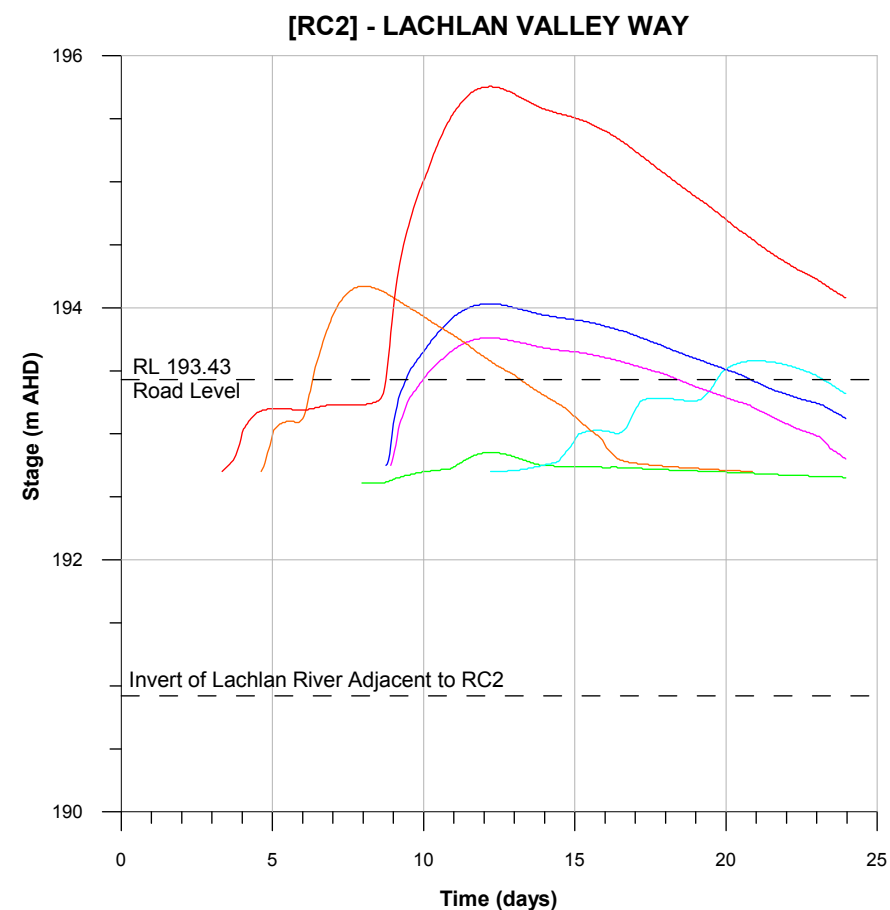
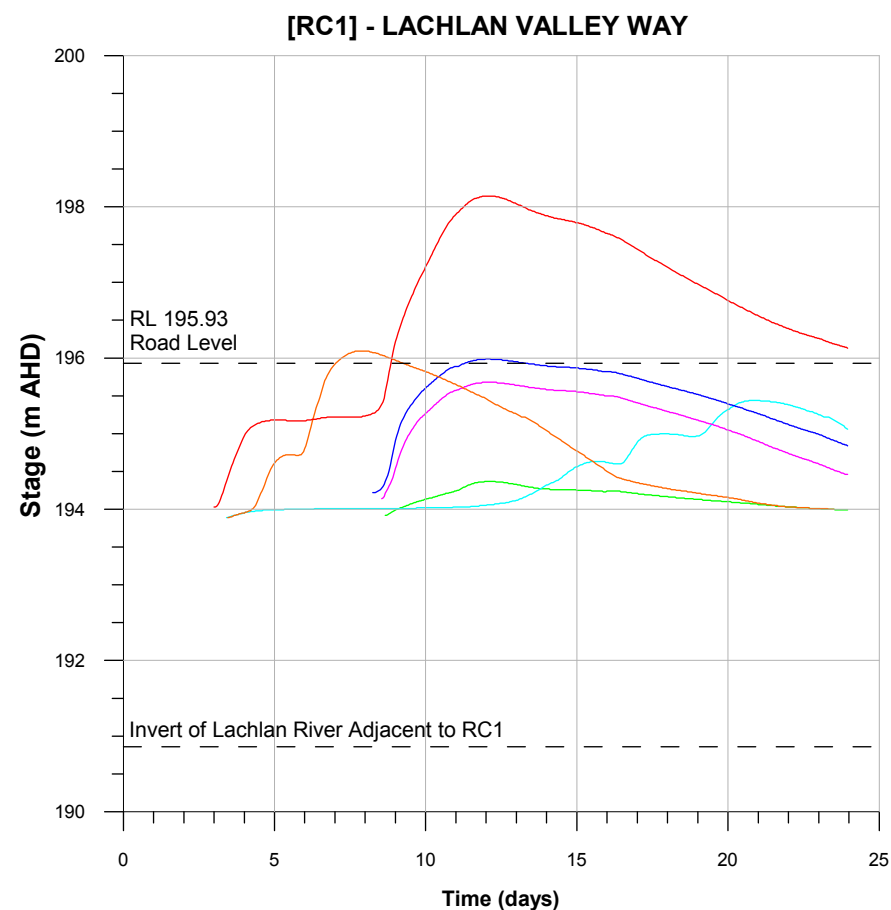
LEGEND

- Modelled Stormwater Network
- Ring Levee
- WaterNSW Stream Gauge
- Indicative Extent of Main Stream Flooding

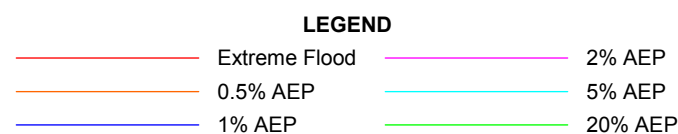
LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.7
(Sheet 3 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
EXTREME FLOOD



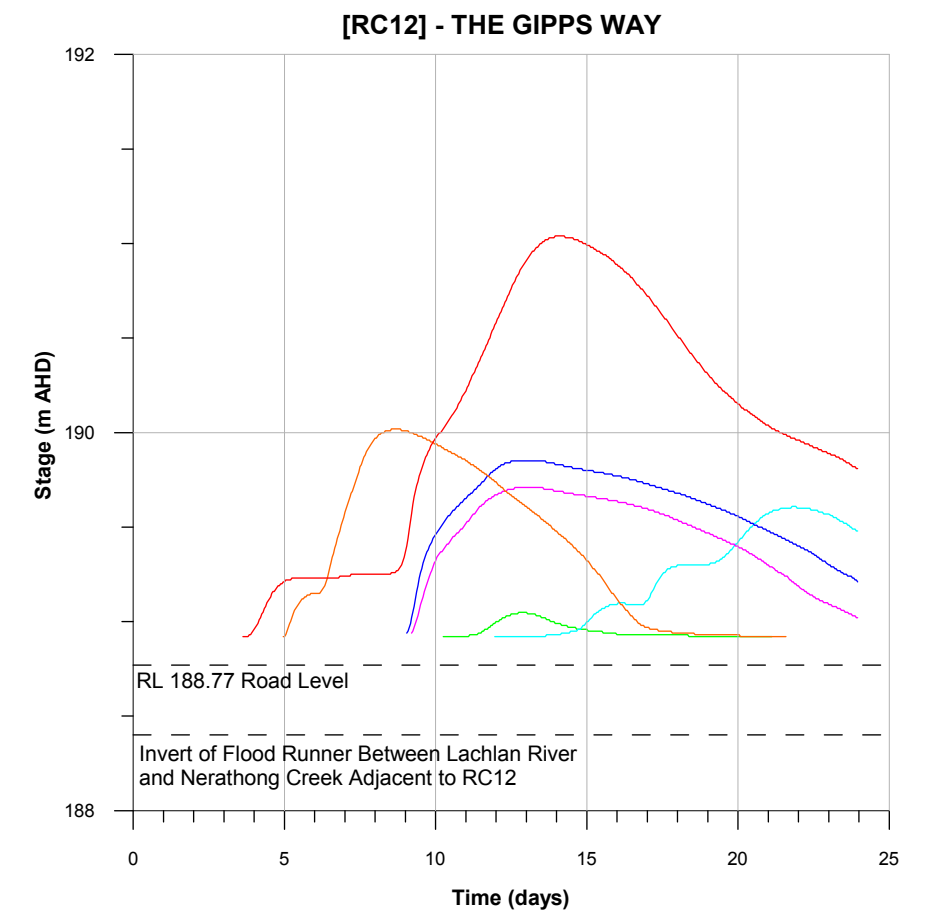
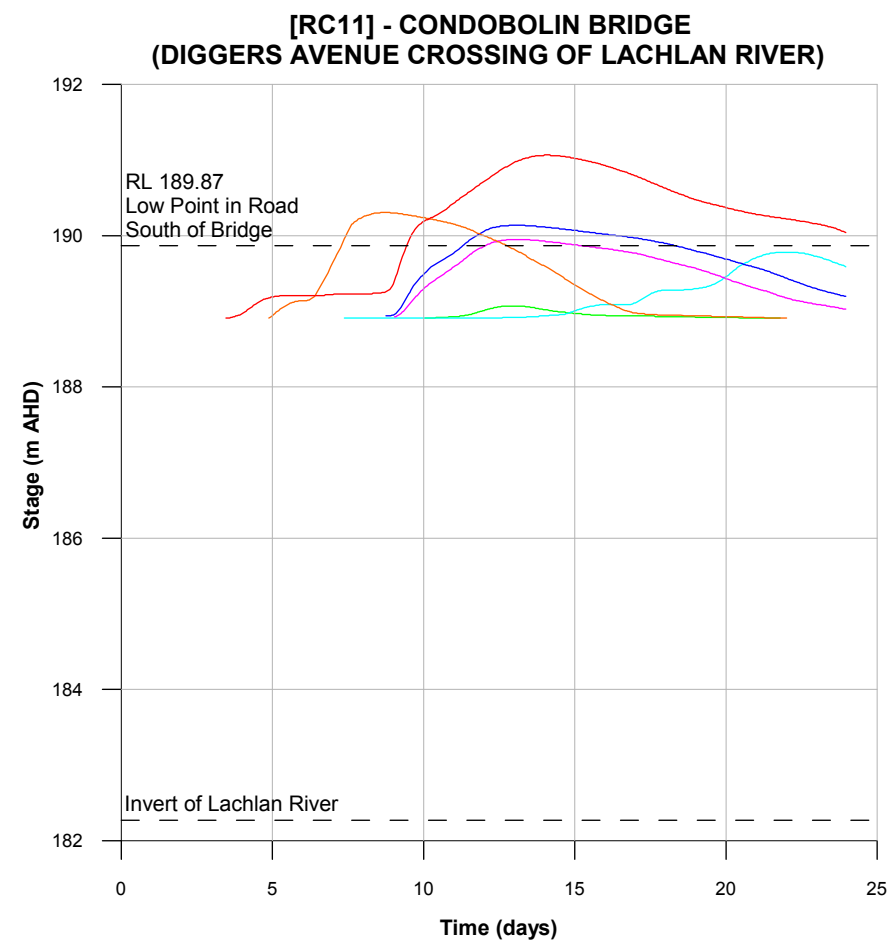
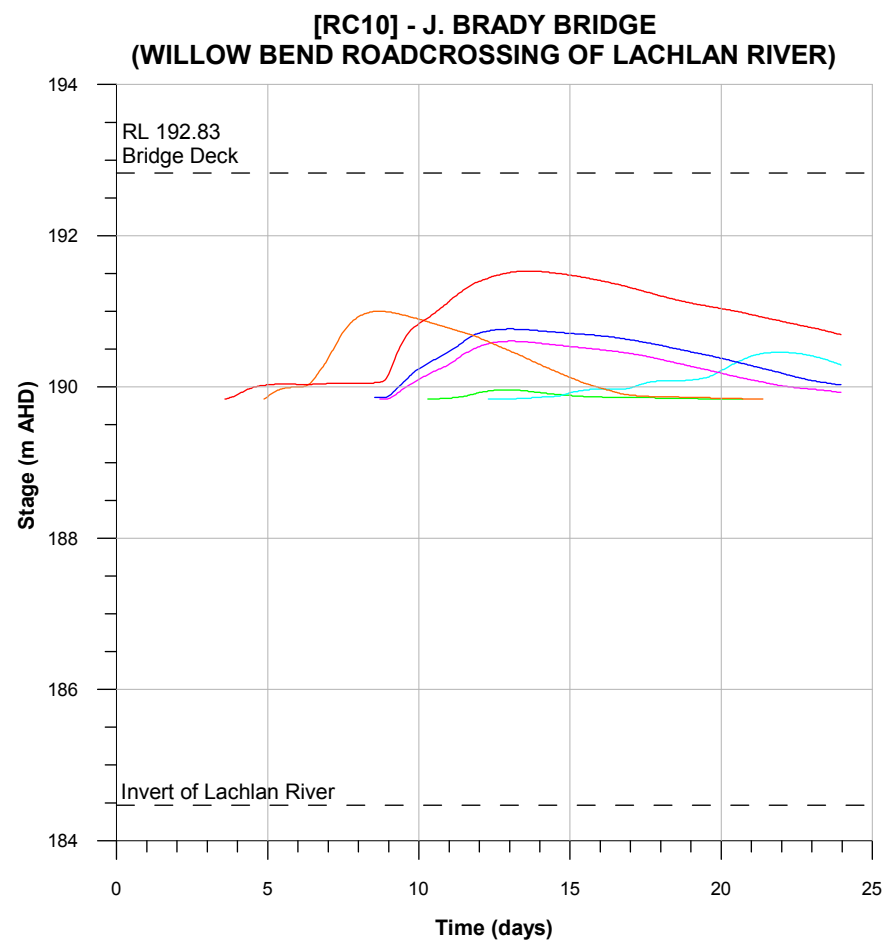
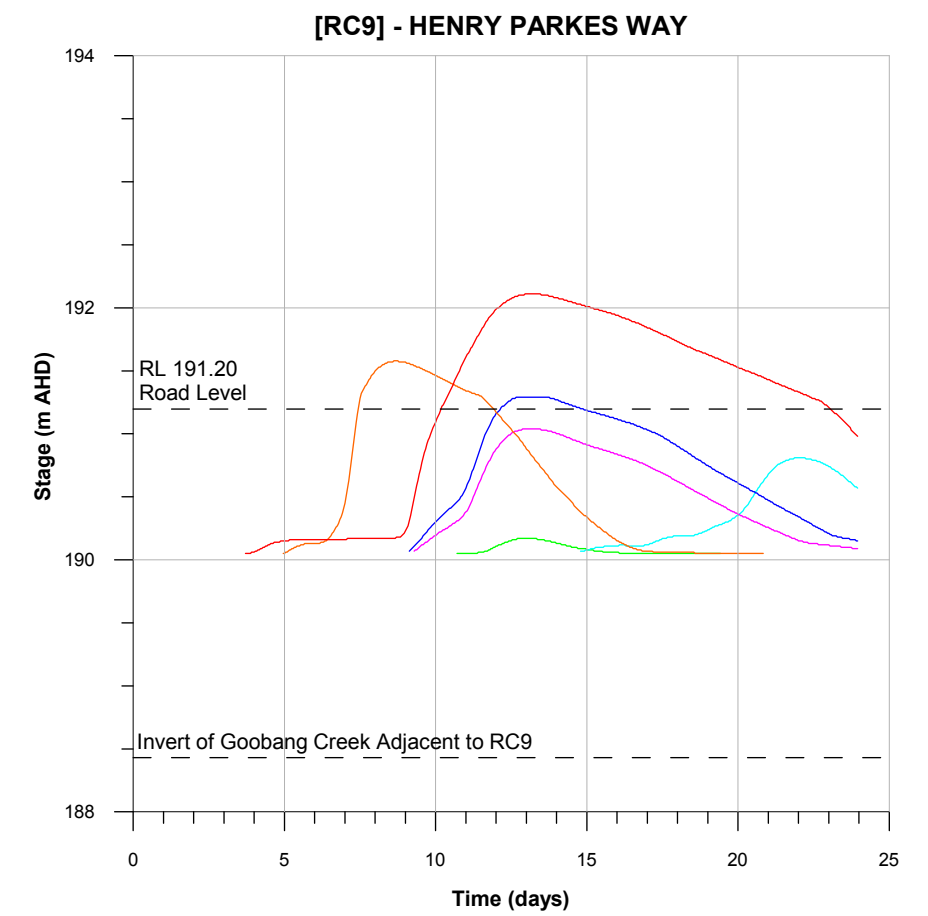
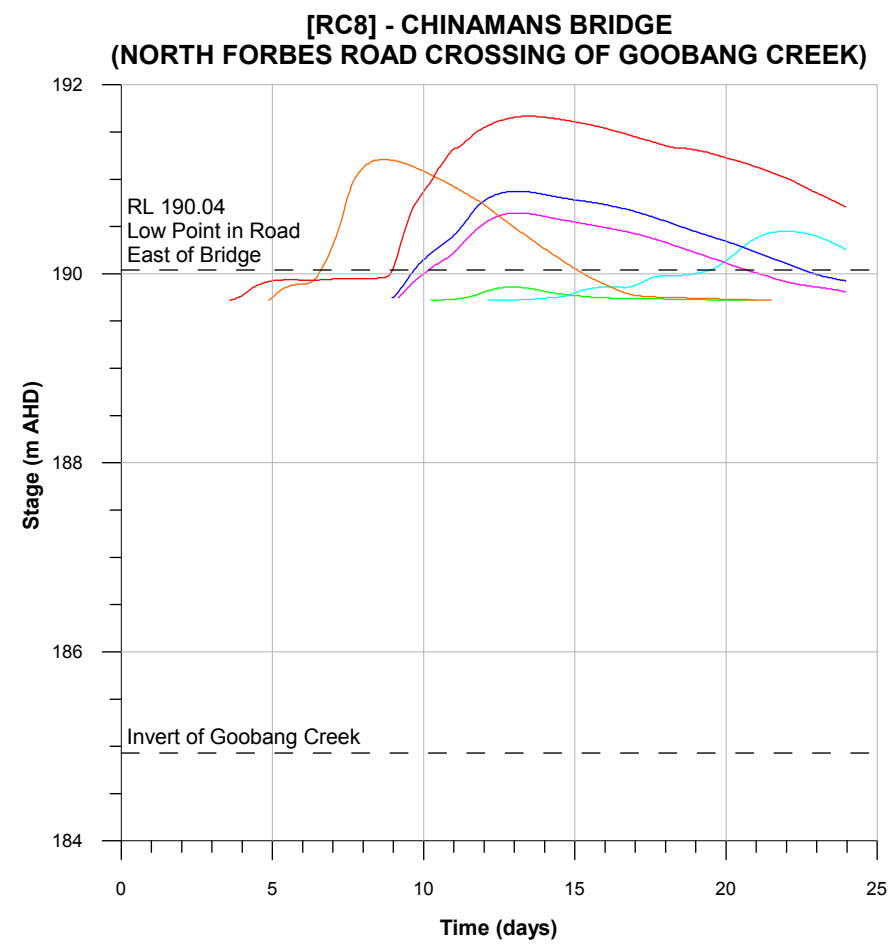
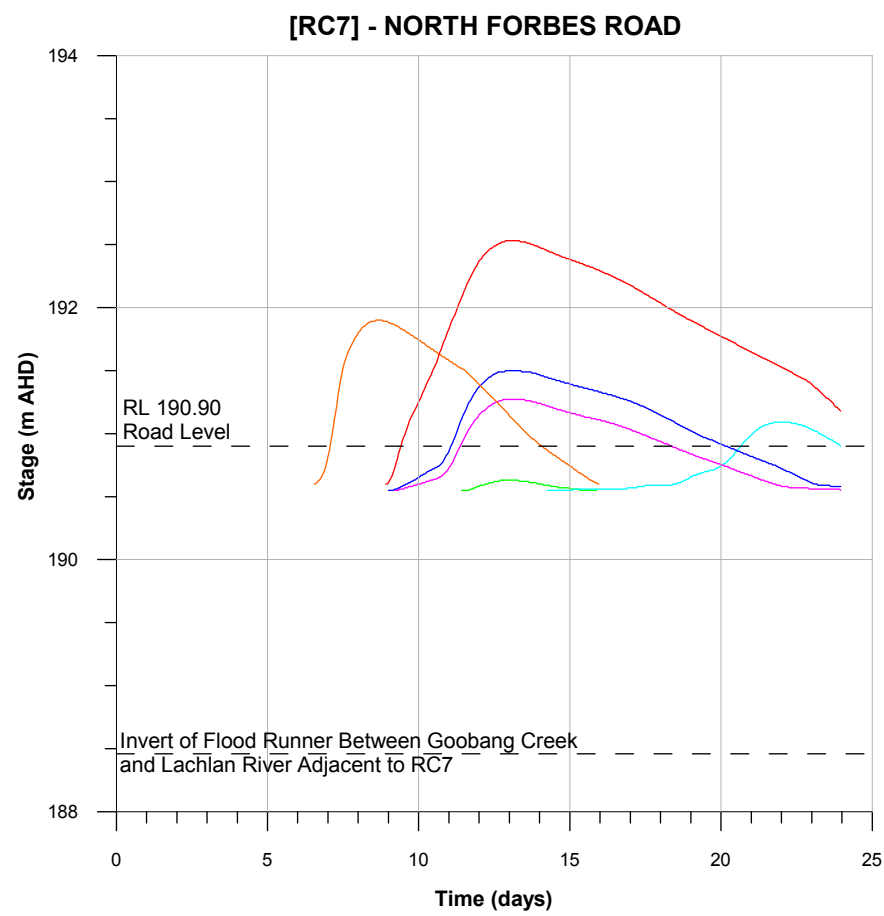
NOTE:
Refer to Figure 2.1 for locations of hydrographs.



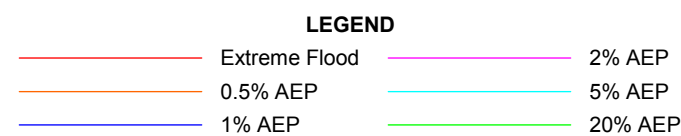
**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.8
(Sheet 1 of 3)

STAGE HYDROGRAPHS AT LOW POINTS IN MAJOR ROADS



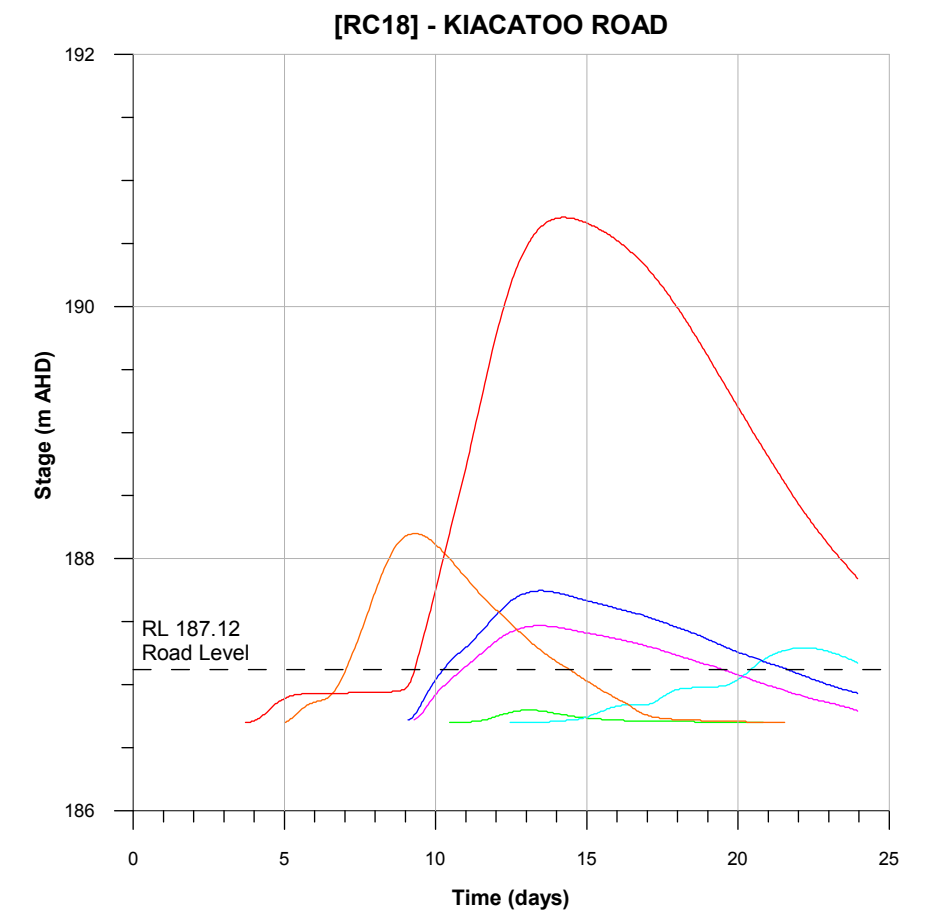
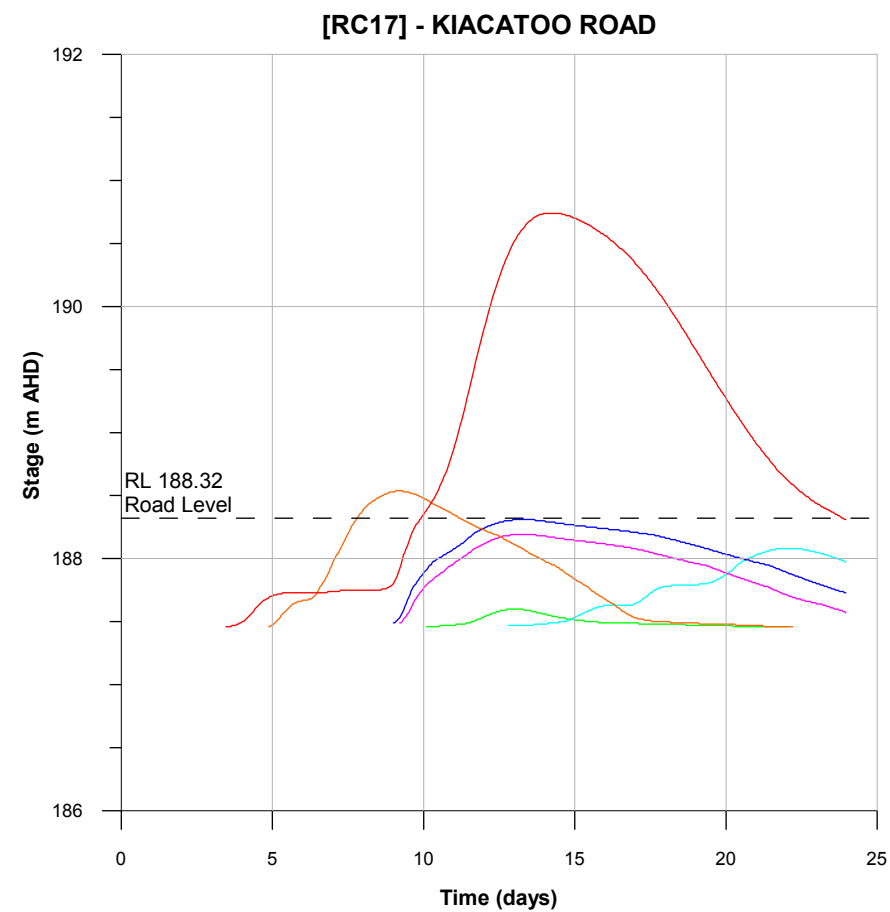
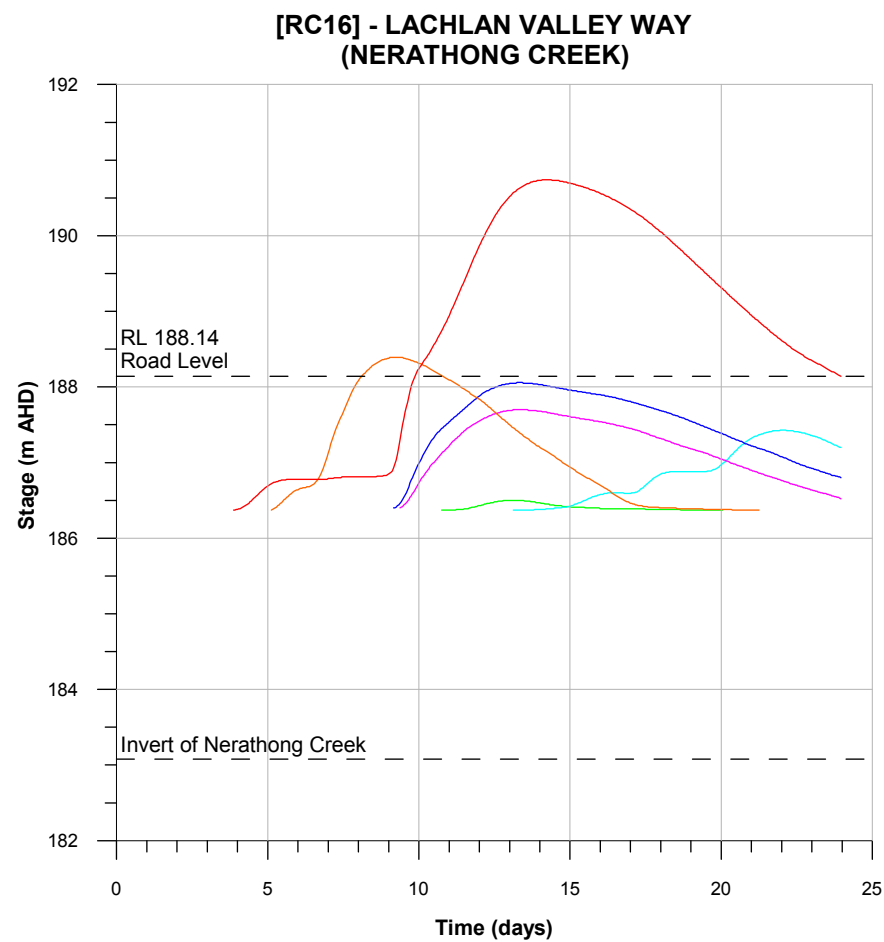
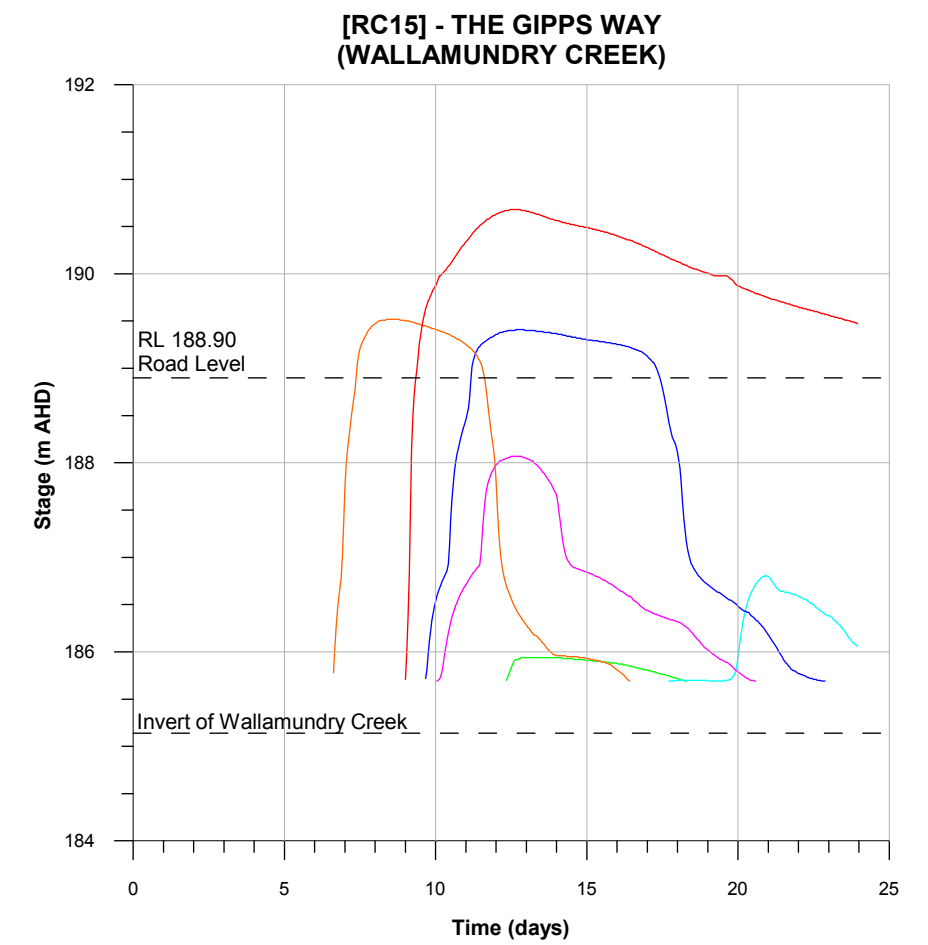
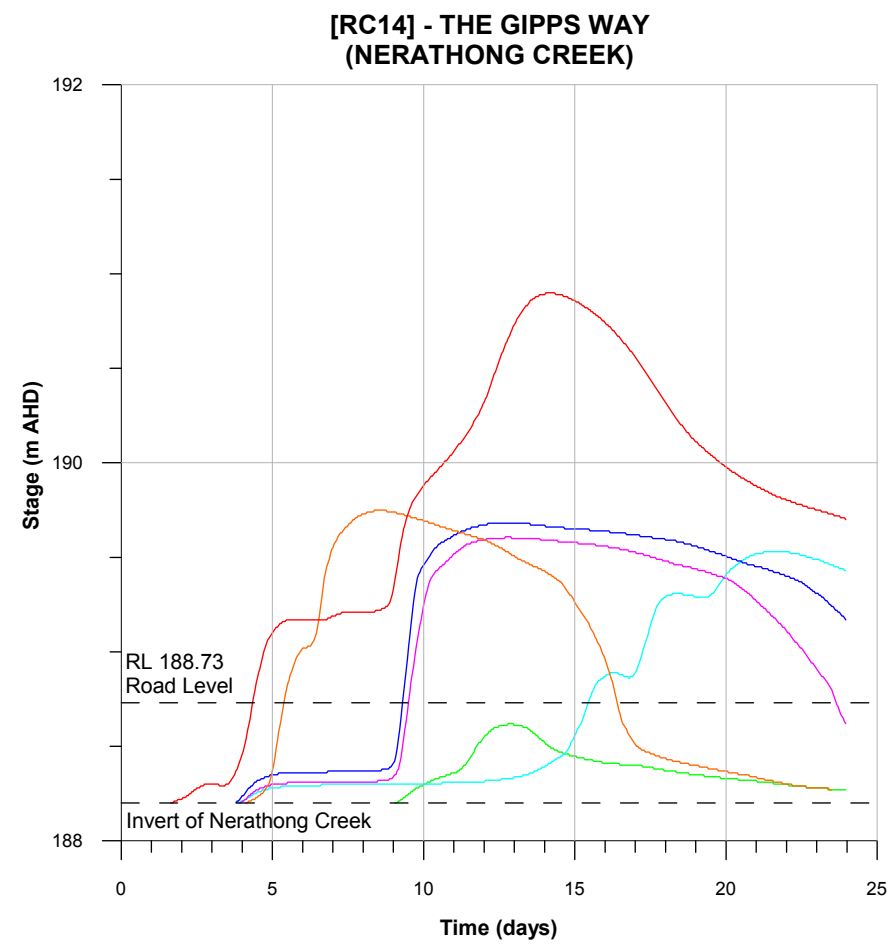
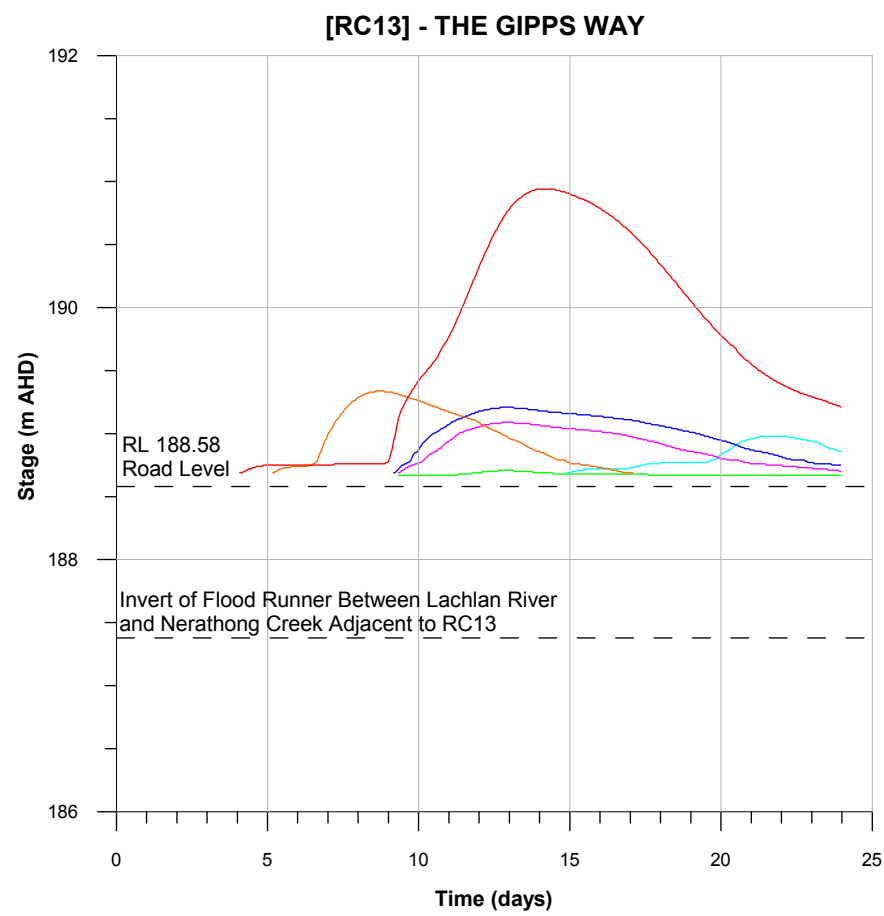
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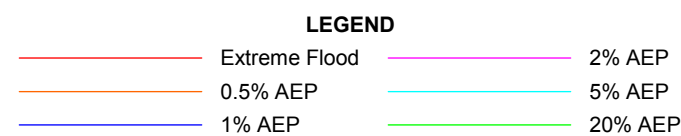
LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.8
(Sheet 2 of 3)

STAGE HYDROGRAPHS AT LOW POINTS IN MAJOR ROADS



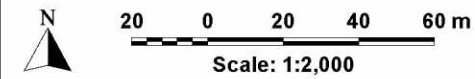
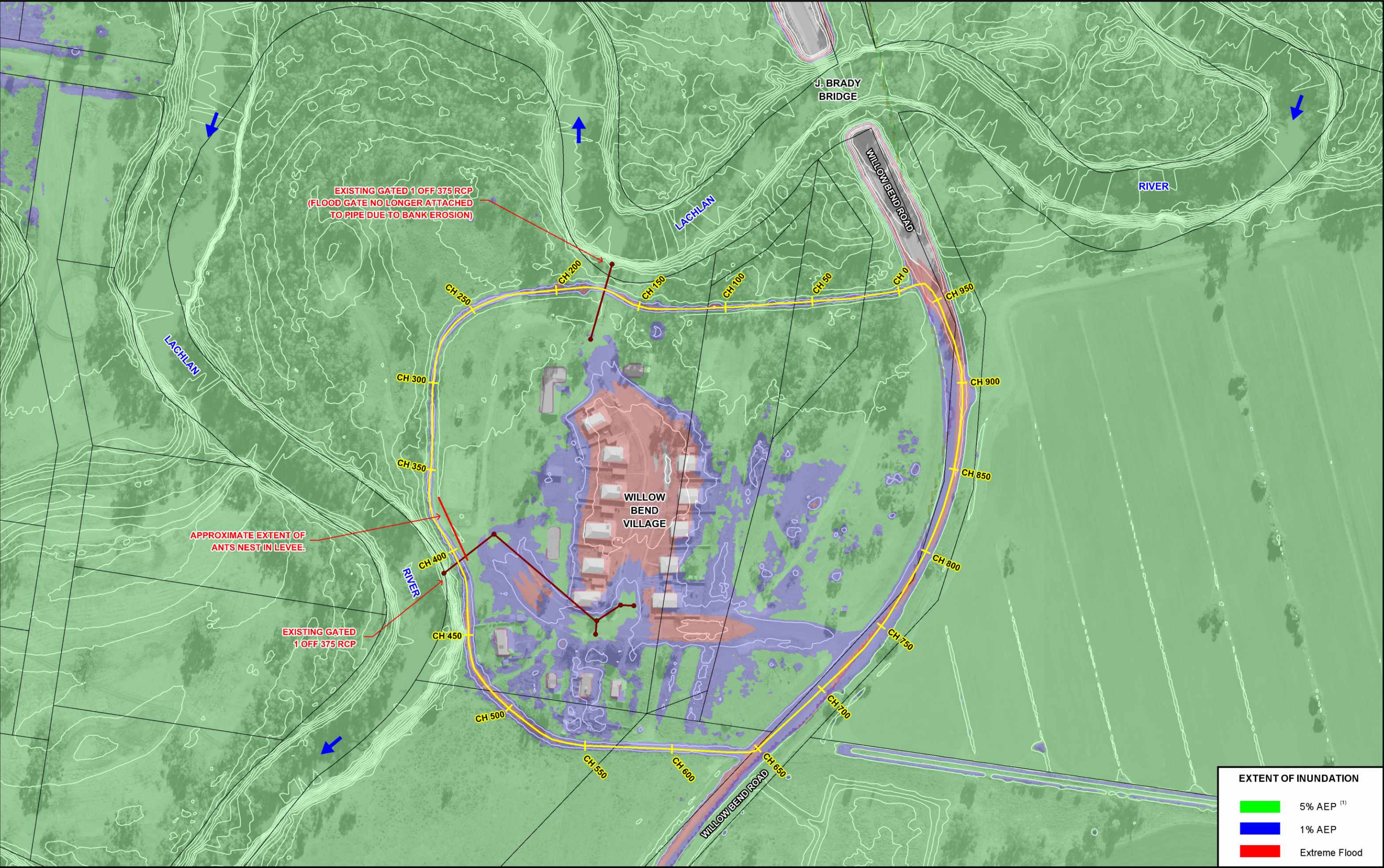
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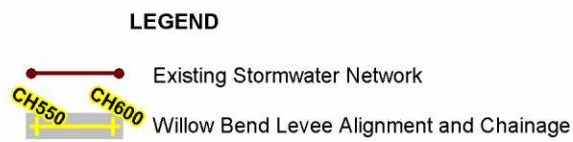
LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.8
(Sheet 3 of 3)

STAGE HYDROGRAPHS AT LOW POINTS IN MAJOR ROADS



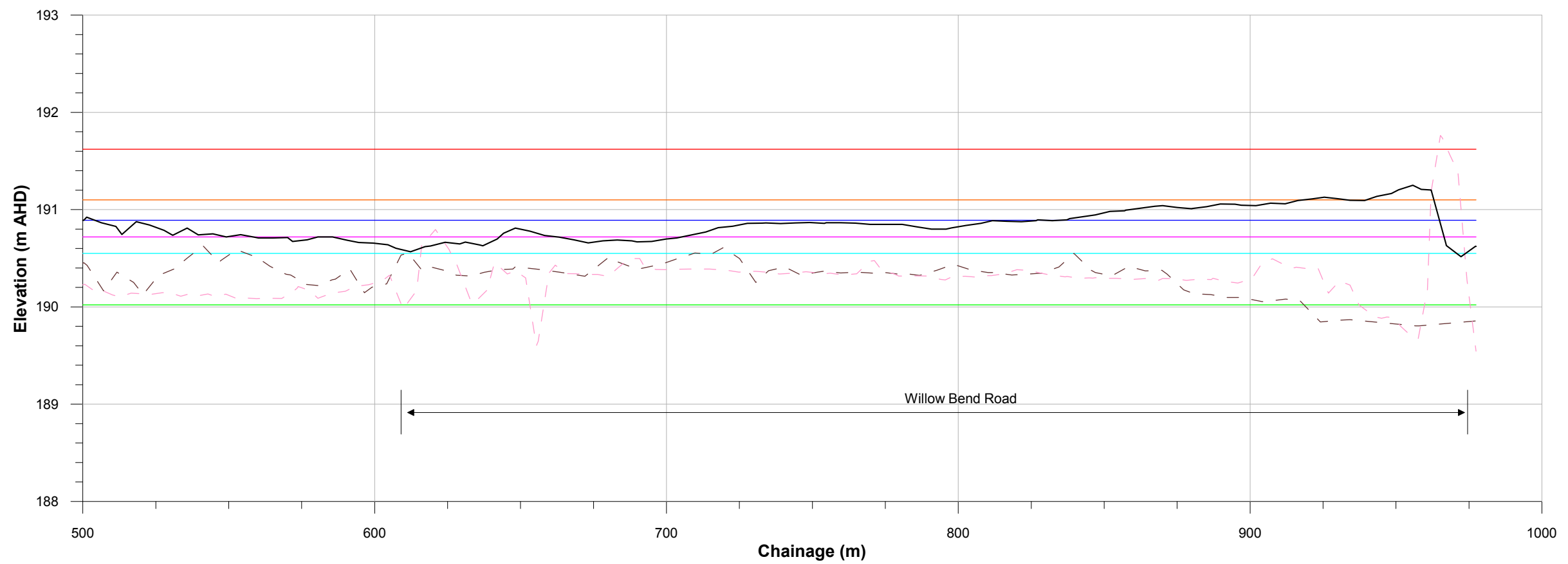
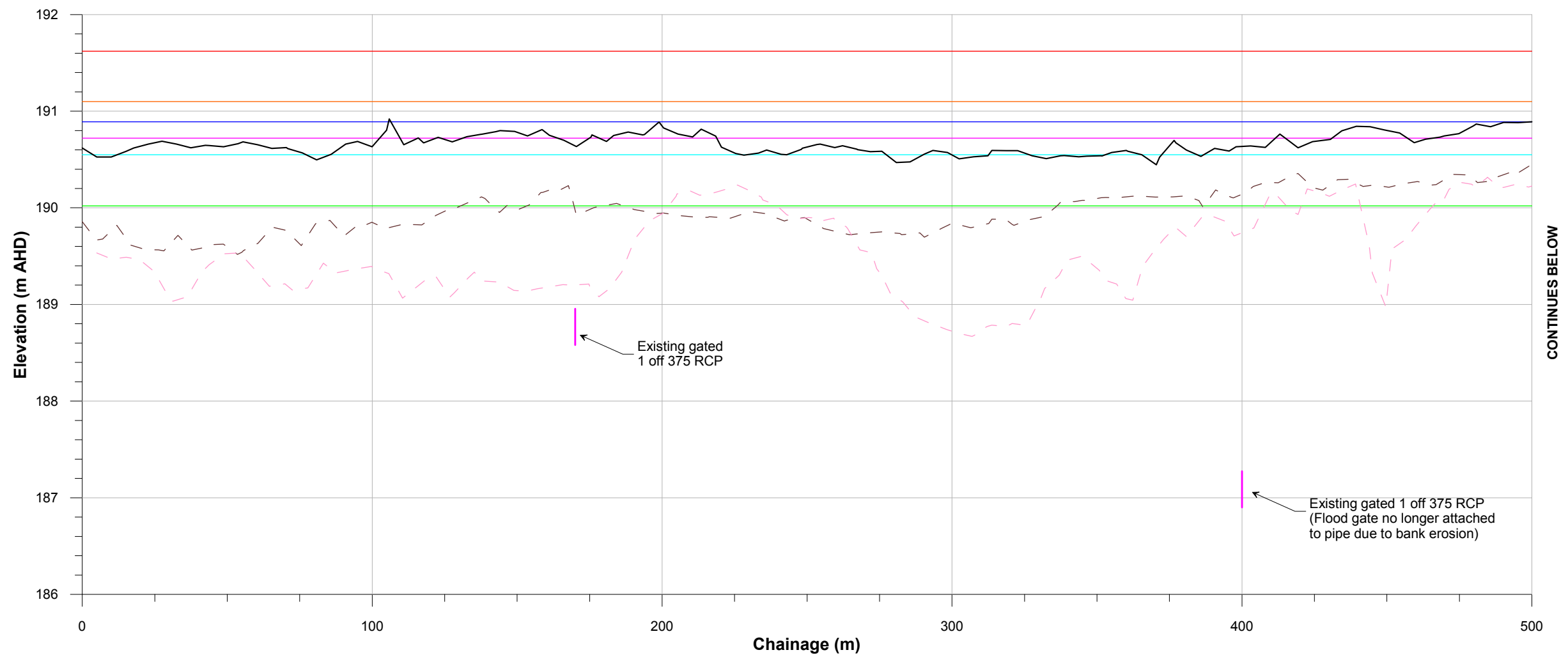
NOTE:
 1. Extent of inundation resulting from the 5% AEP event assumes a partial failure of the levee, which would cause equalisation of water levels, noting several low points in the structure approximate this level (refer Figure 2.10 which shows crest levels relative to peak design flood levels).

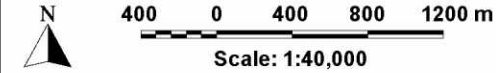
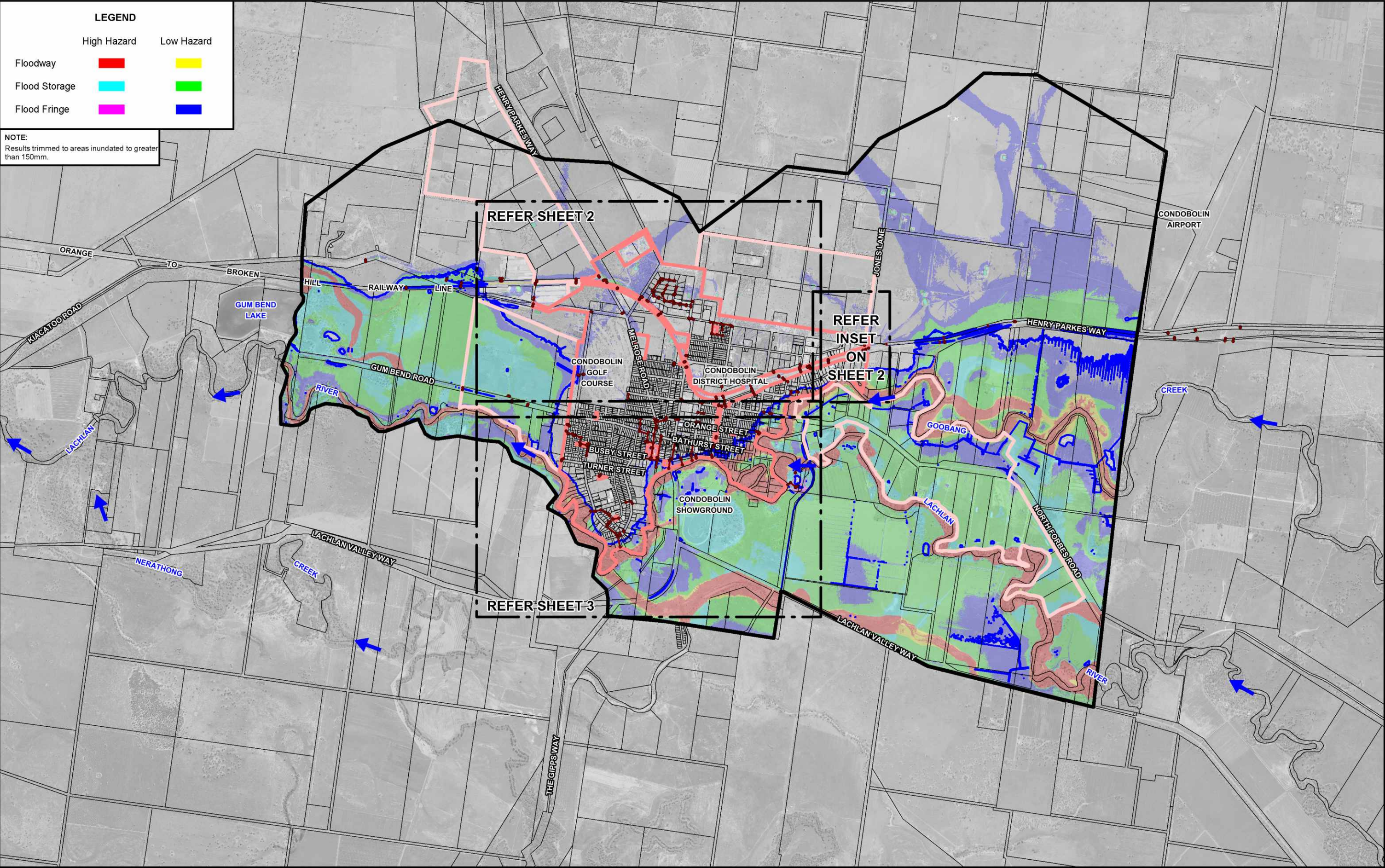


LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

LAYOUT OF WILLOW BEND VILLAGE RING LEVEE

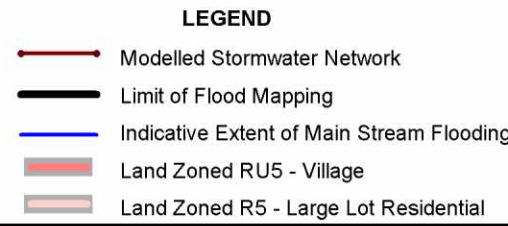
Figure 2.9





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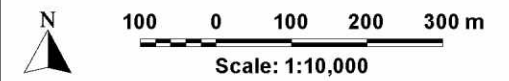
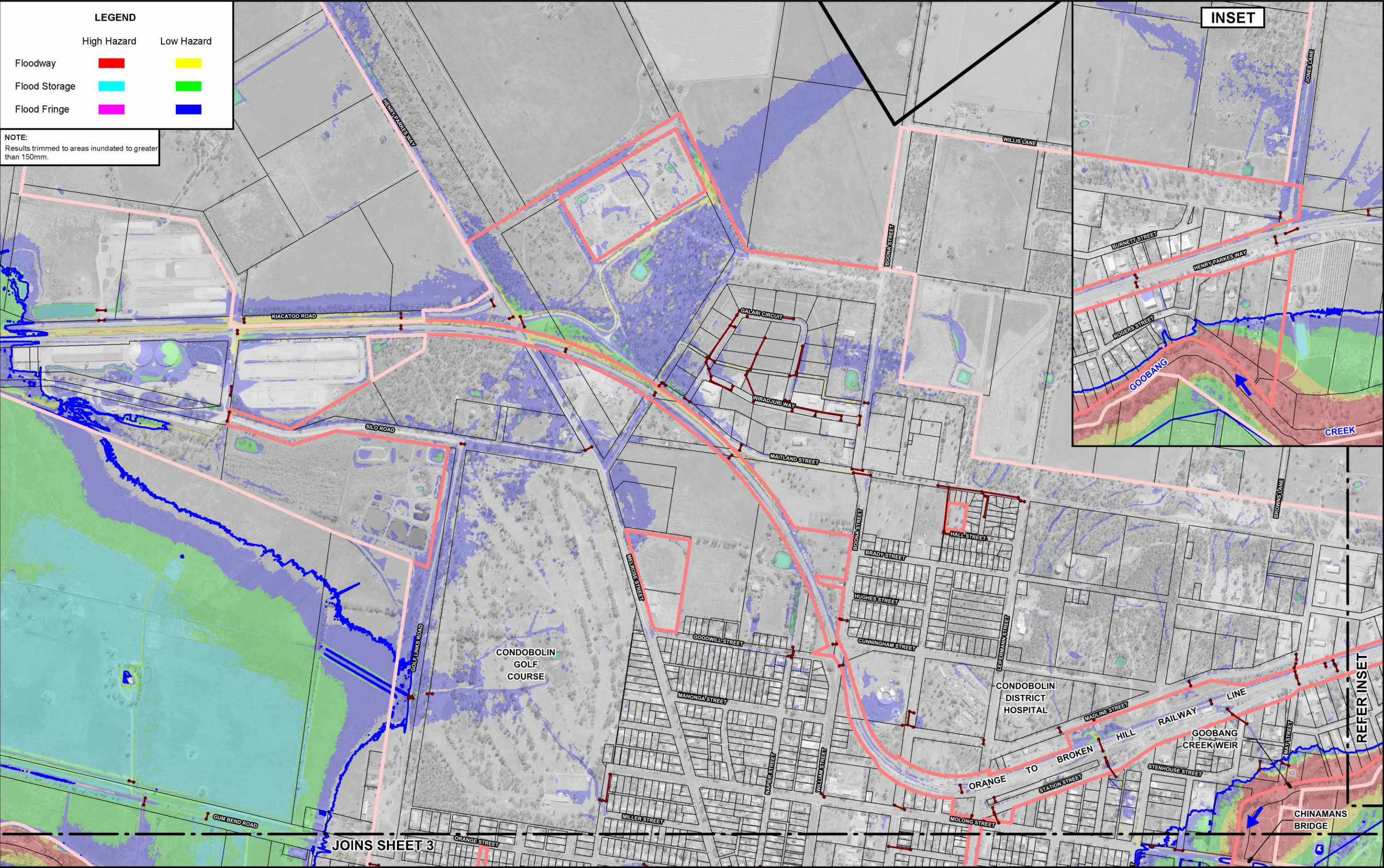
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**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

Figure 2.11
(Sheet 1 of 3)

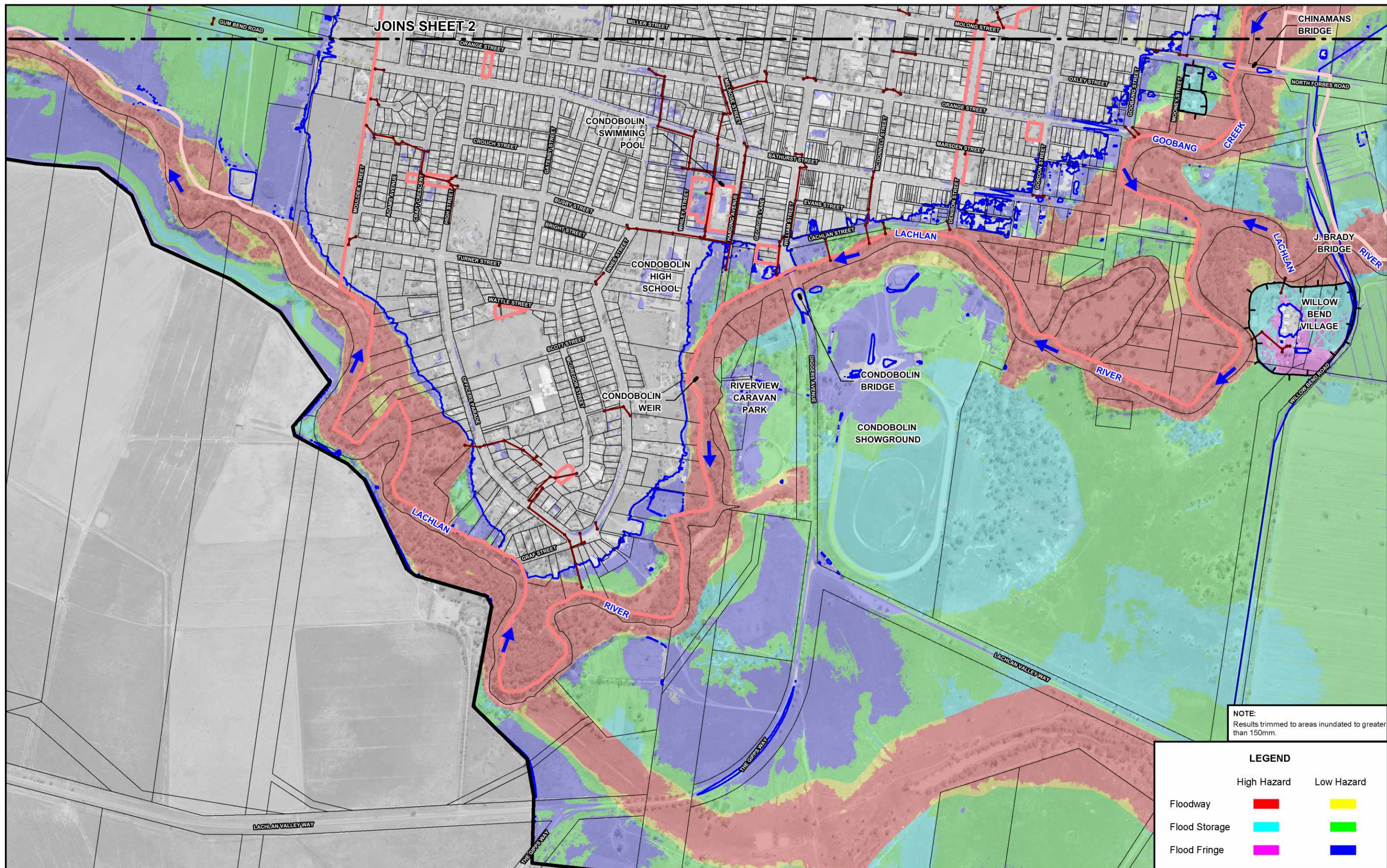
FLOOD HAZARD AND HYDRAULIC CATEGORISATION OF FLOODPLAIN
1% AEP

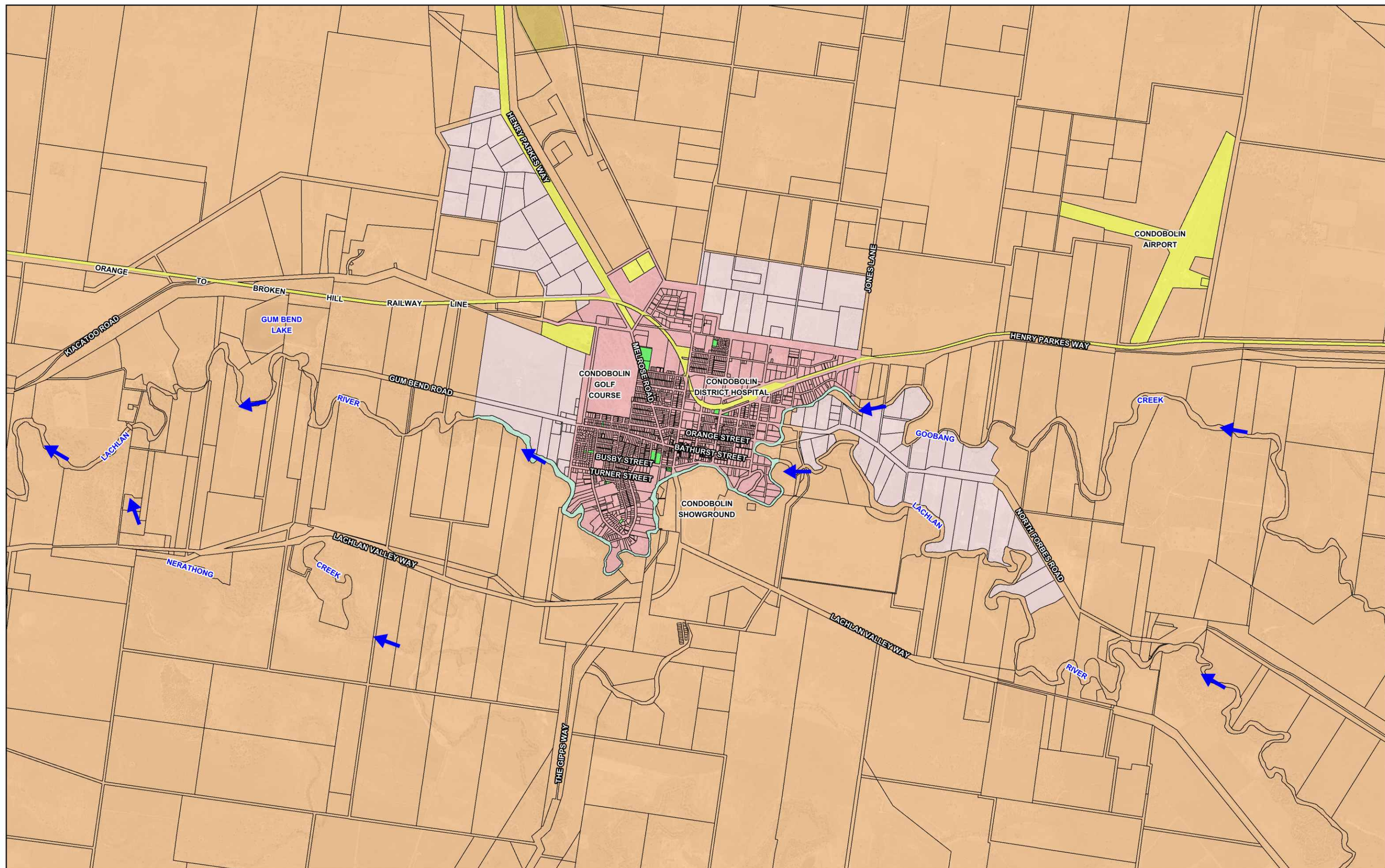


Lyall & Associates

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- LEGEND**
- Modelled Stormwater Network
 - Limit of Flood Mapping
 - Indicative Extent of Main Stream Flooding
 - Land Zoned RU5 - Village
 - Land Zoned R5 - Large Lot Residential





N
400 0 400 800 1200 m
Scale: 1:40,000

Lyall & Associates

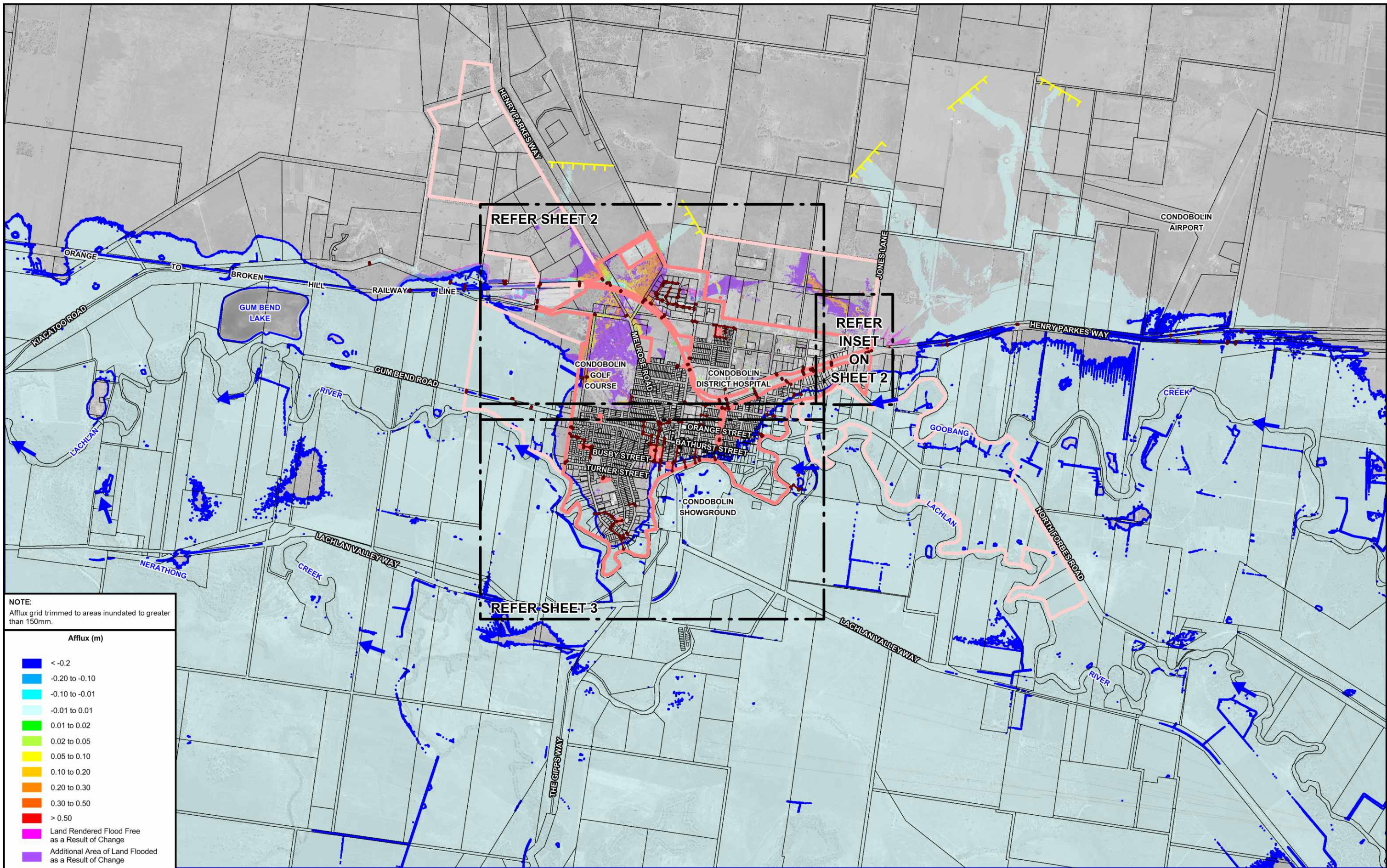
LEGEND

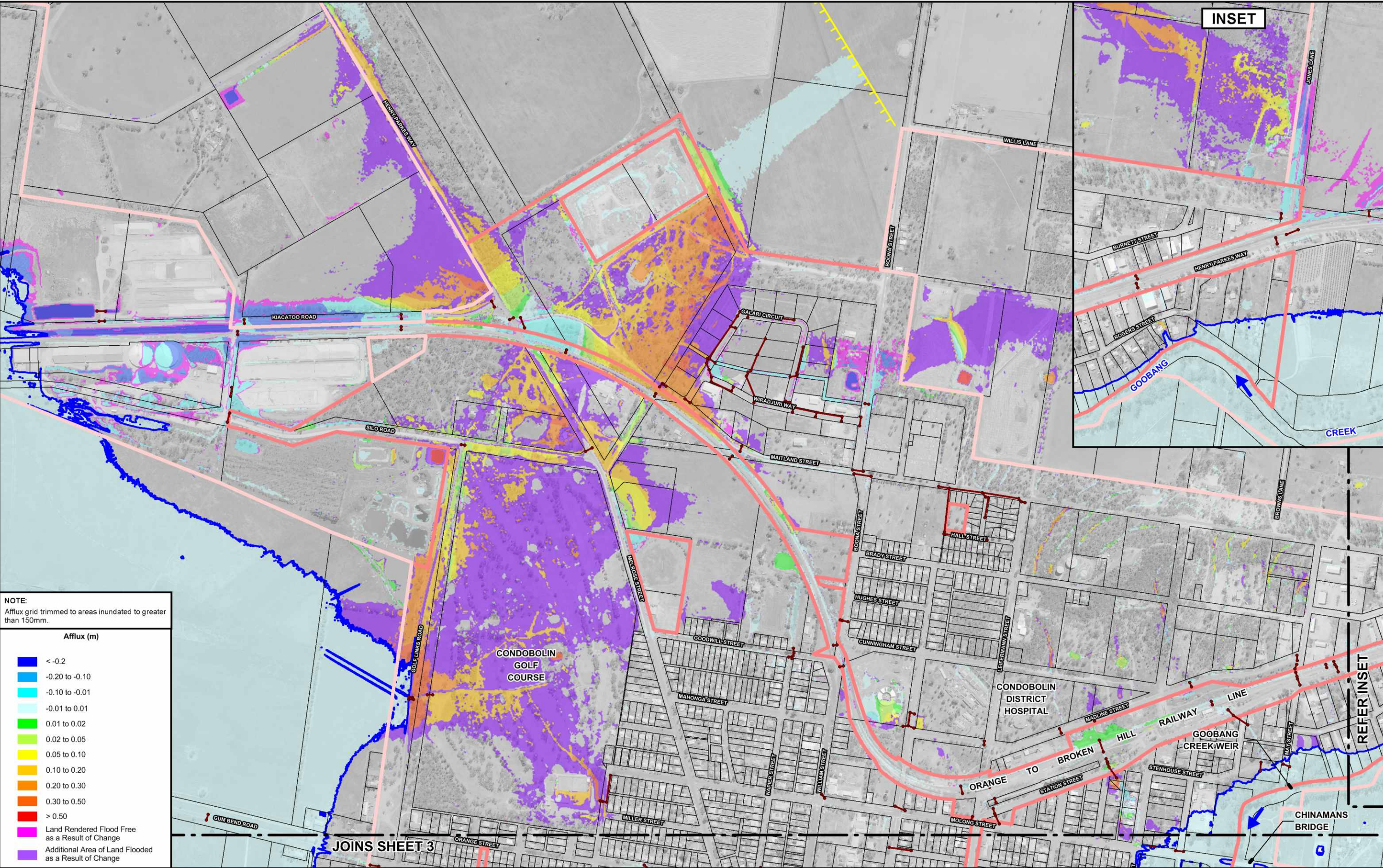
R5	Large Lot Residential	RU5	Village
RE1	Public Recreation	SP2	Infrastructure
RU1	Primary Production	W2	Recreational Waterways
RU3	Forestry		

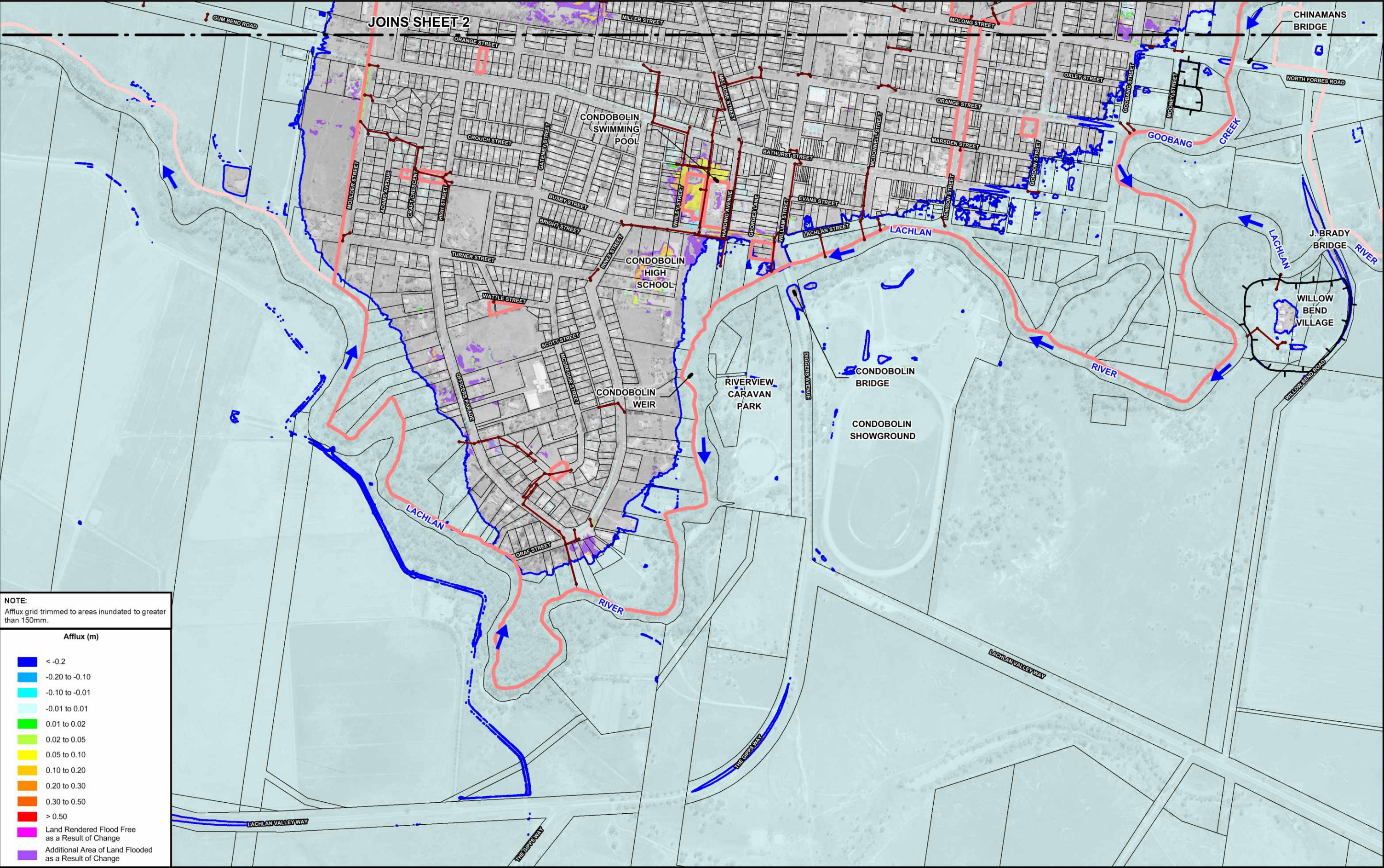
LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure 2.12

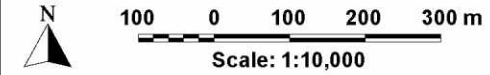
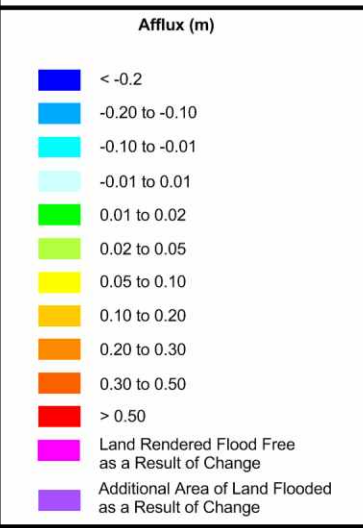
LACHLAN LEP 2013 ZONING
AT CONDOBOLIN





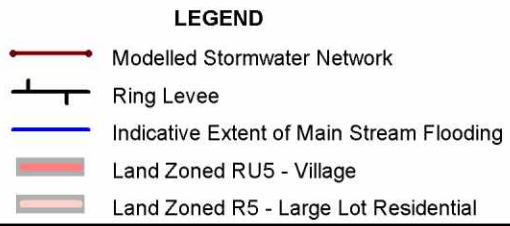


NOTE:
Afflux grid trimmed to areas inundated to greater than 150mm.

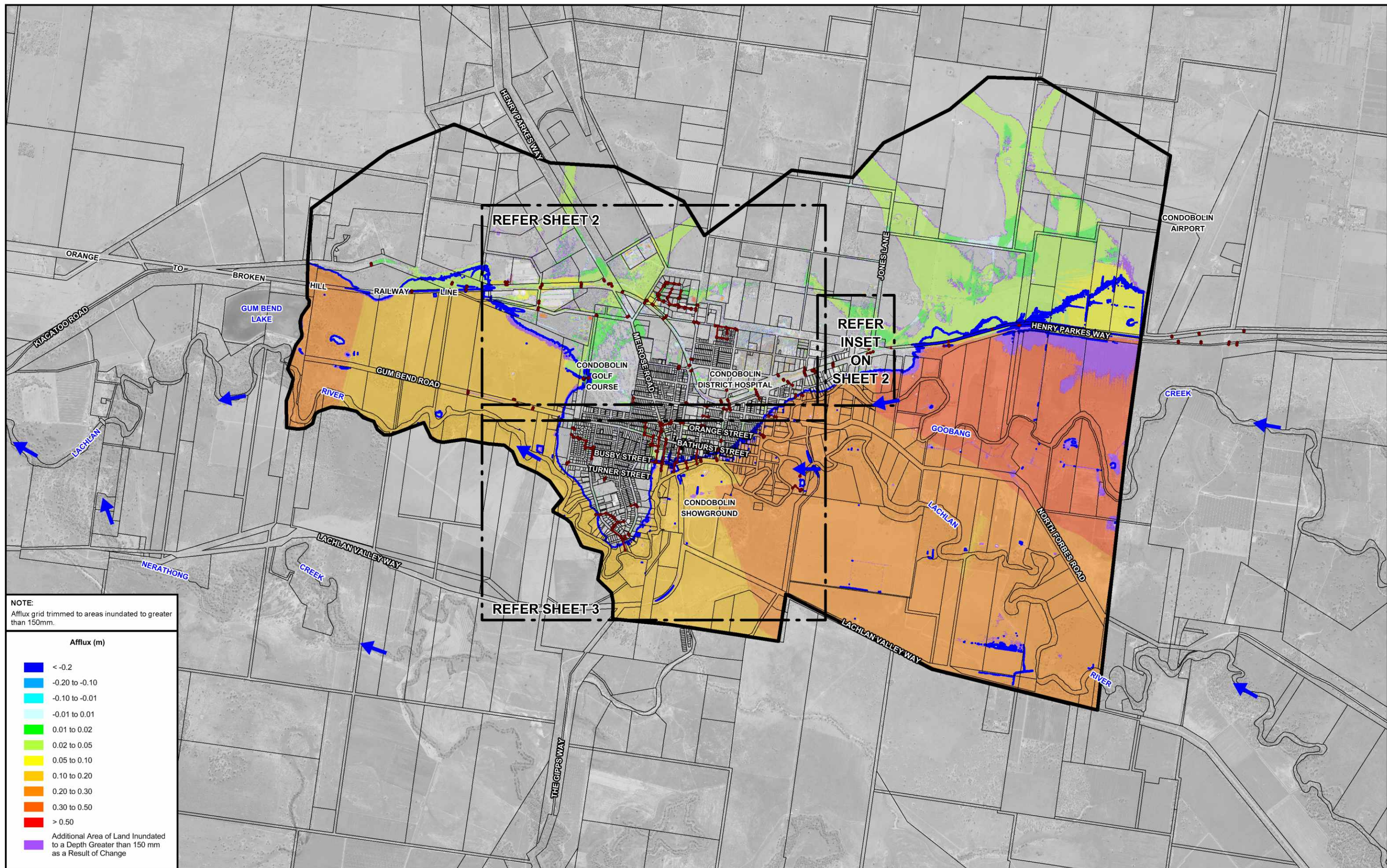


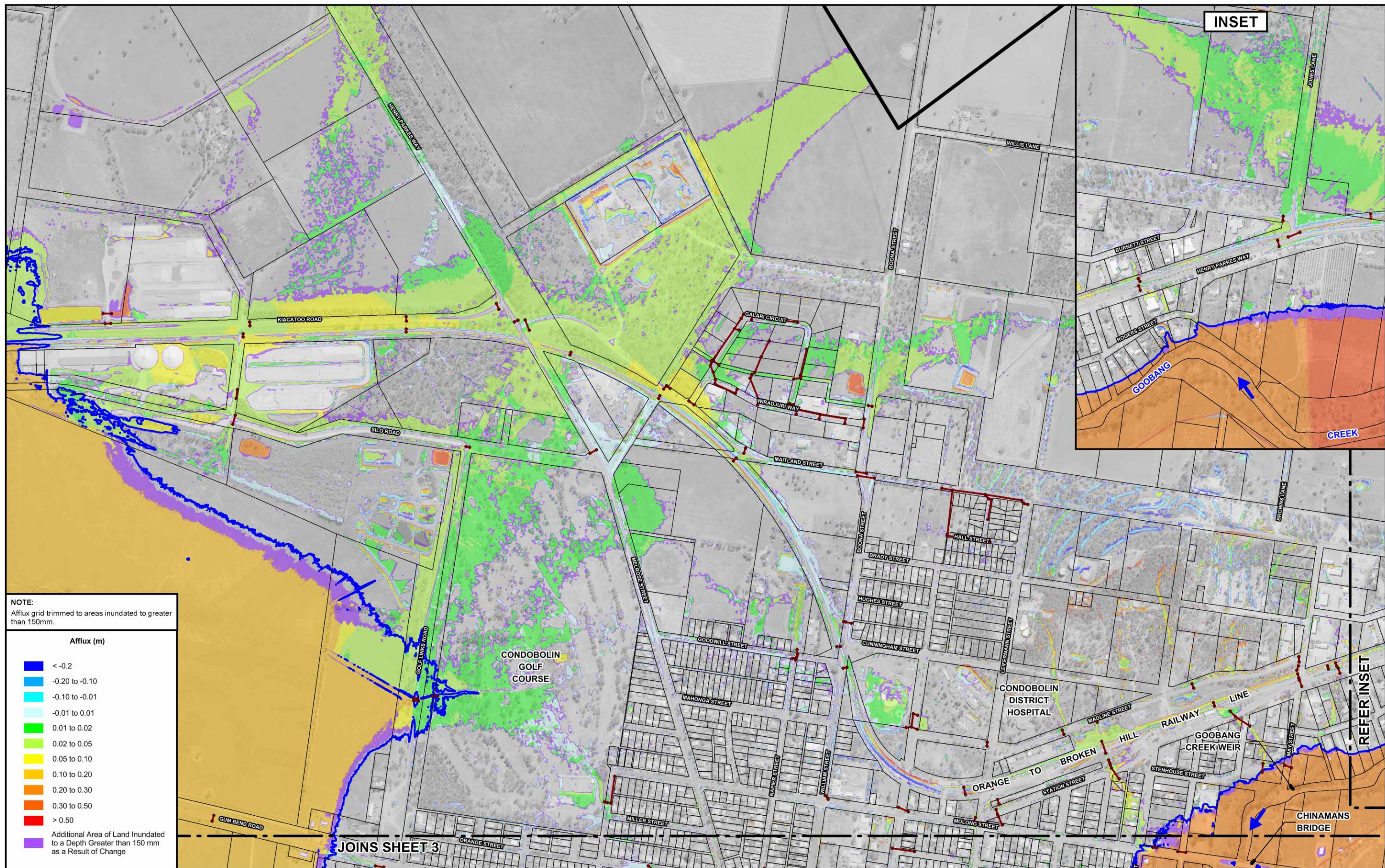
Lyll & Associates

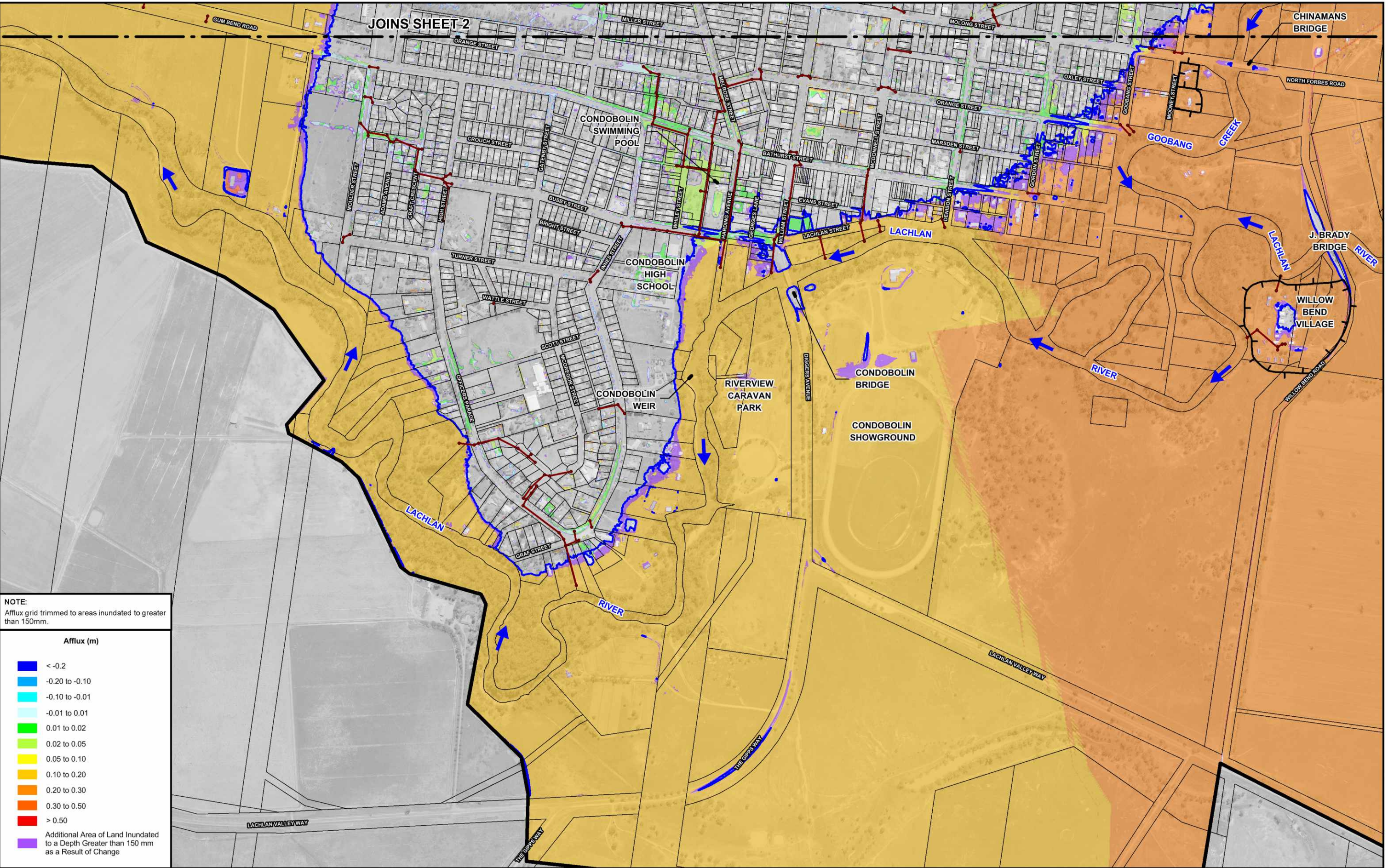
NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.



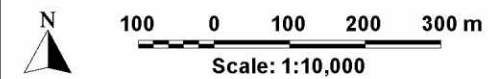
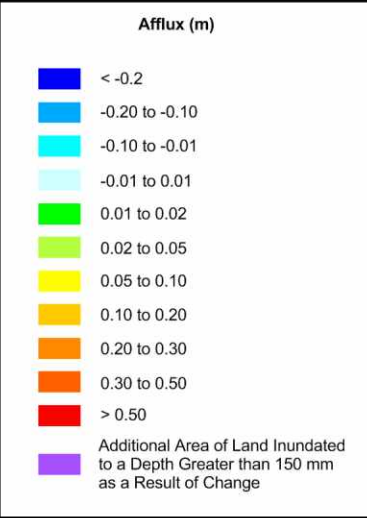
LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN
Figure 2.13
(Sheet 3 of 3)
POTENTIAL IMPACT OF FUTURE URBANISATION ON FLOODING AND DRAINAGE PATTERNS
1% AEP





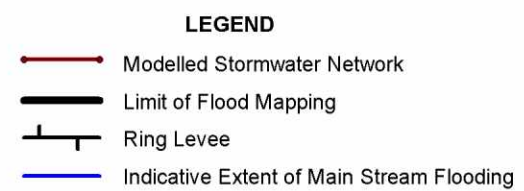


NOTE:
Afflux grid trimmed to areas inundated to greater than 150mm.

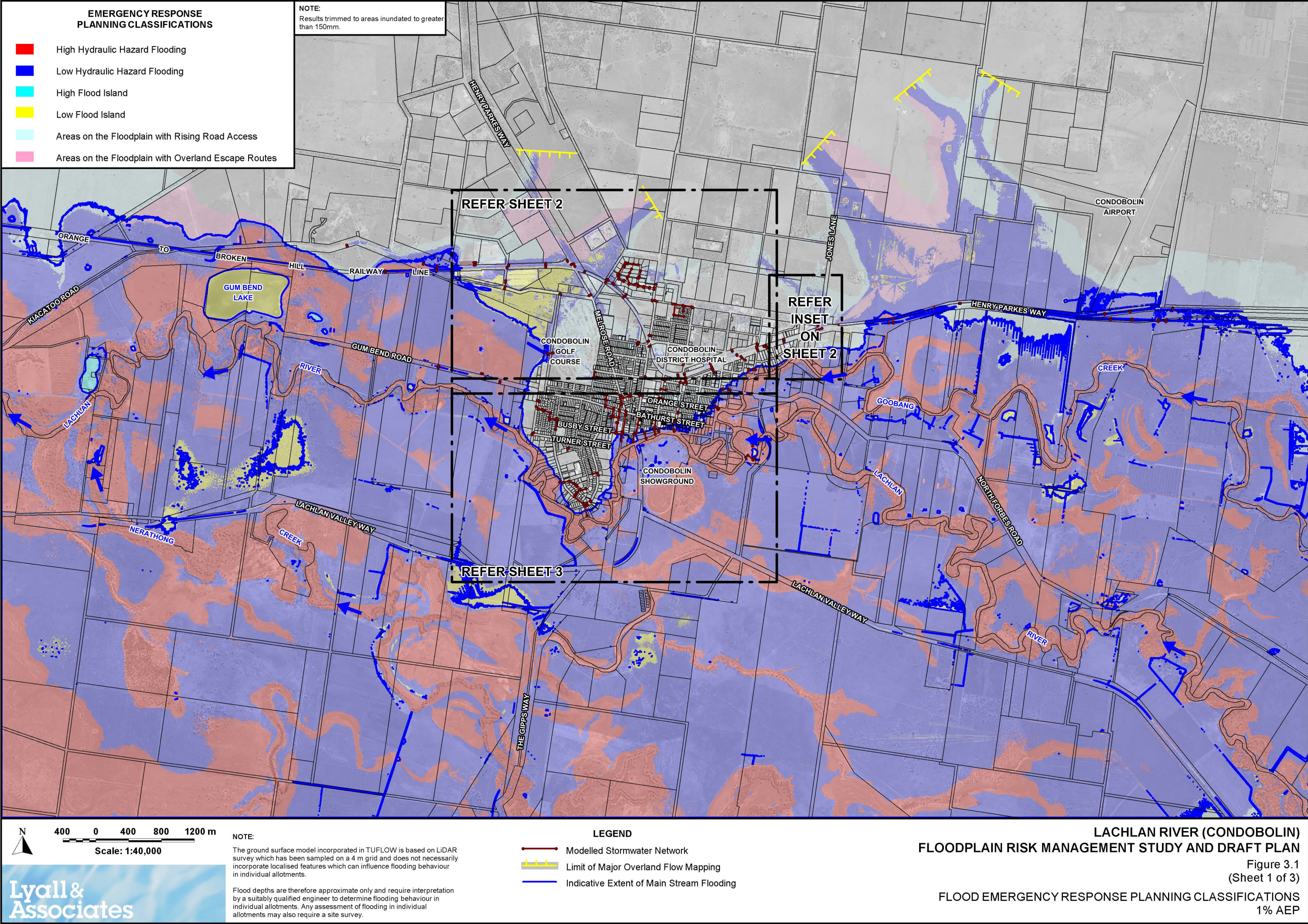


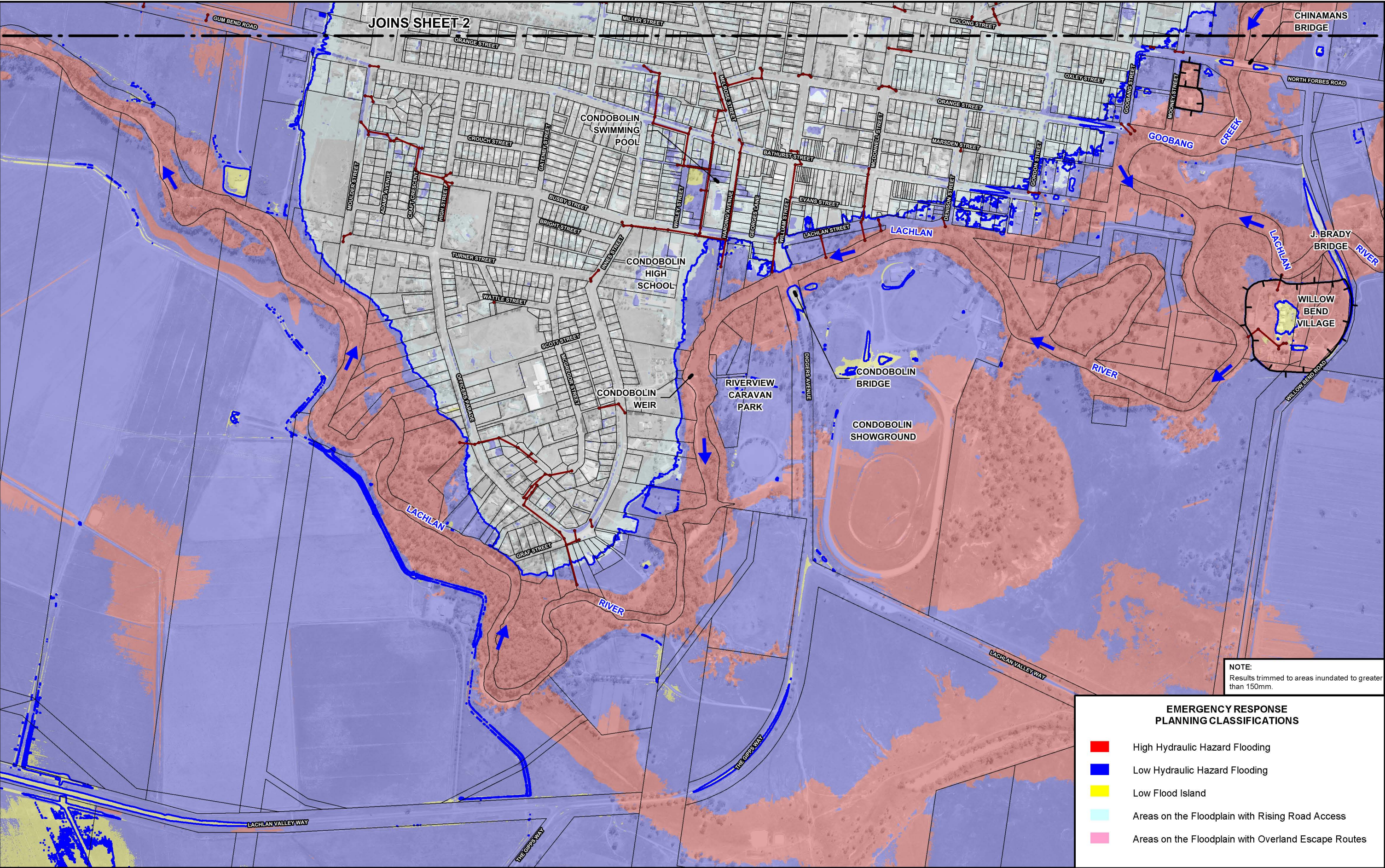
Lyall & Associates

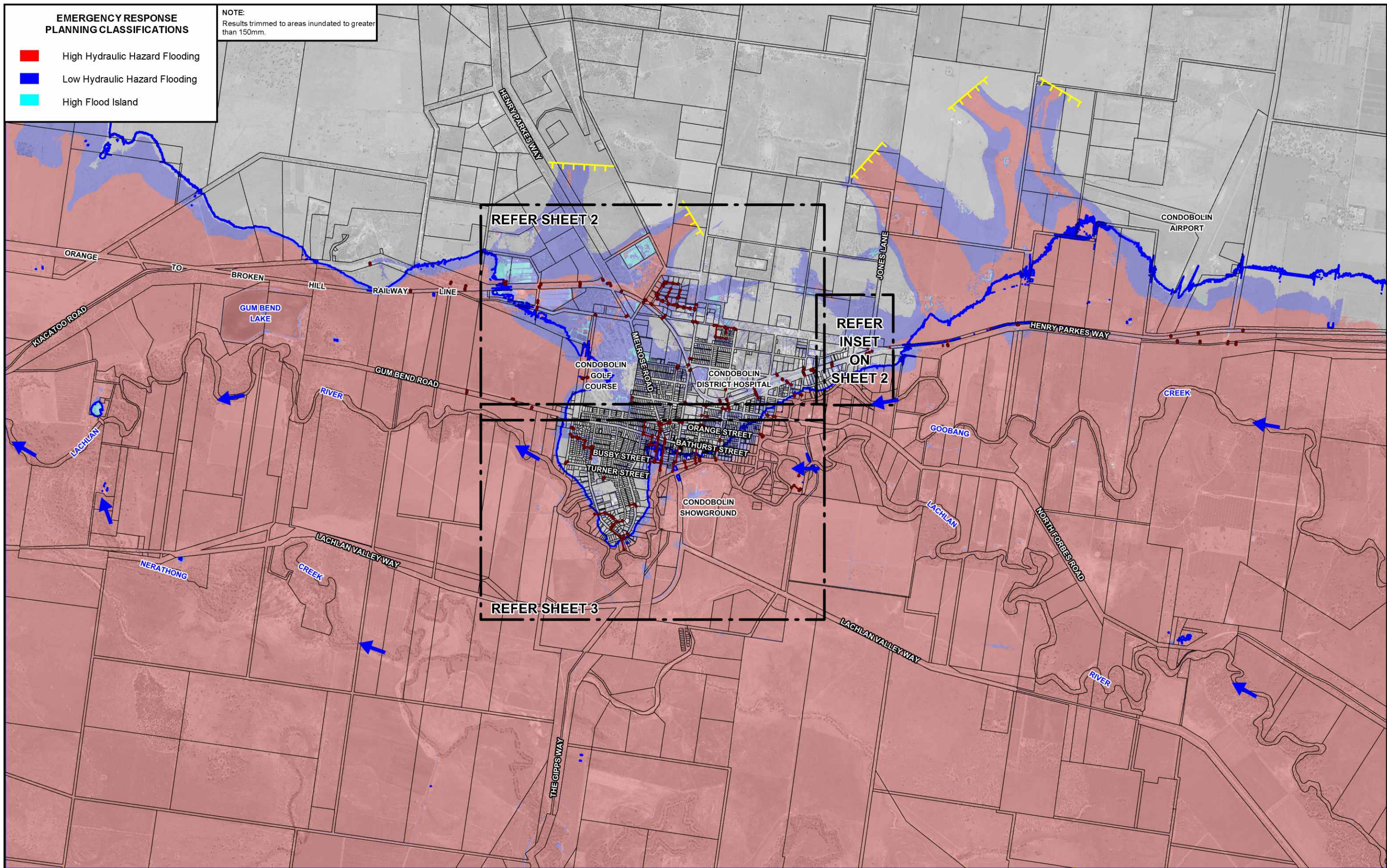
NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.
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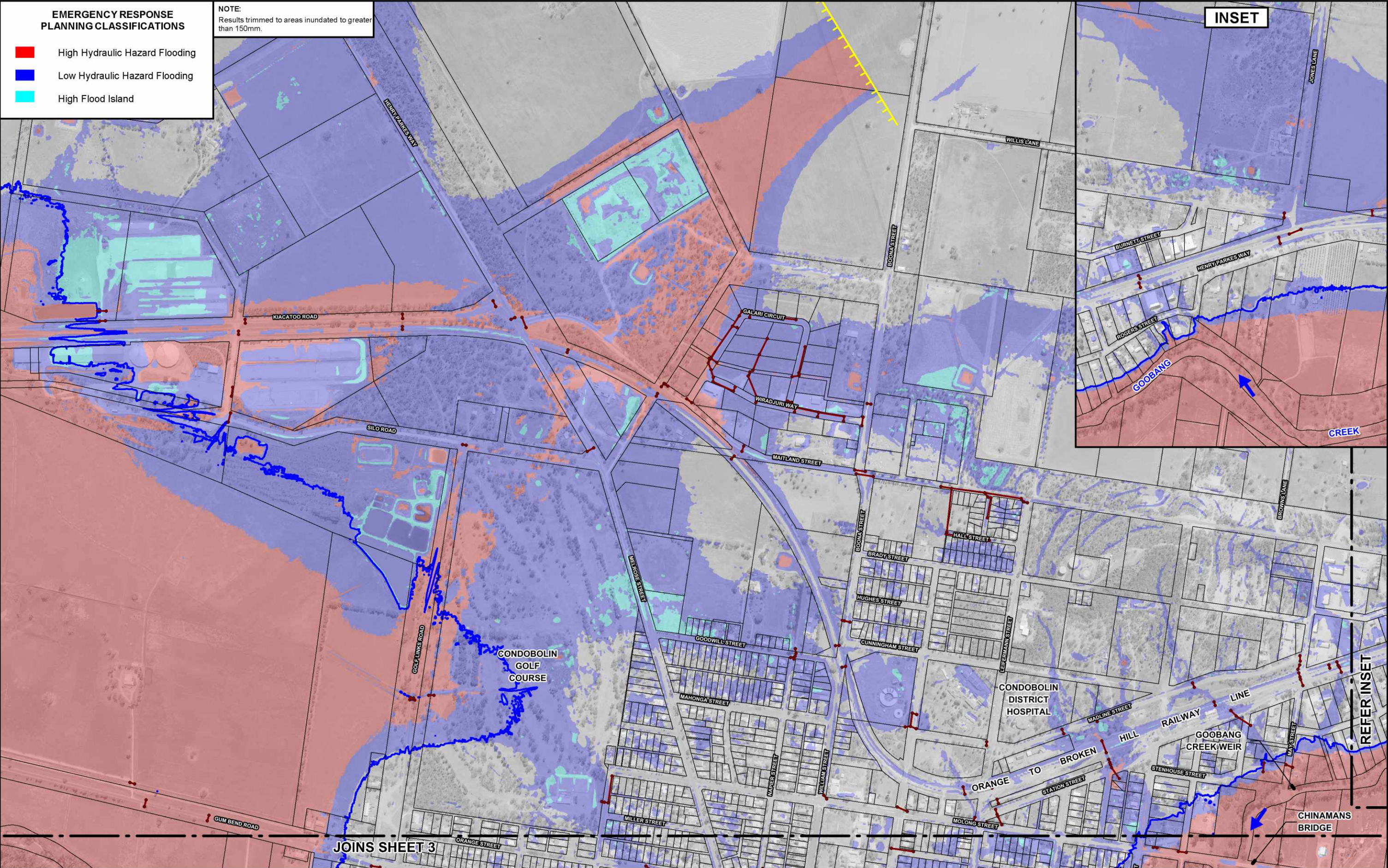


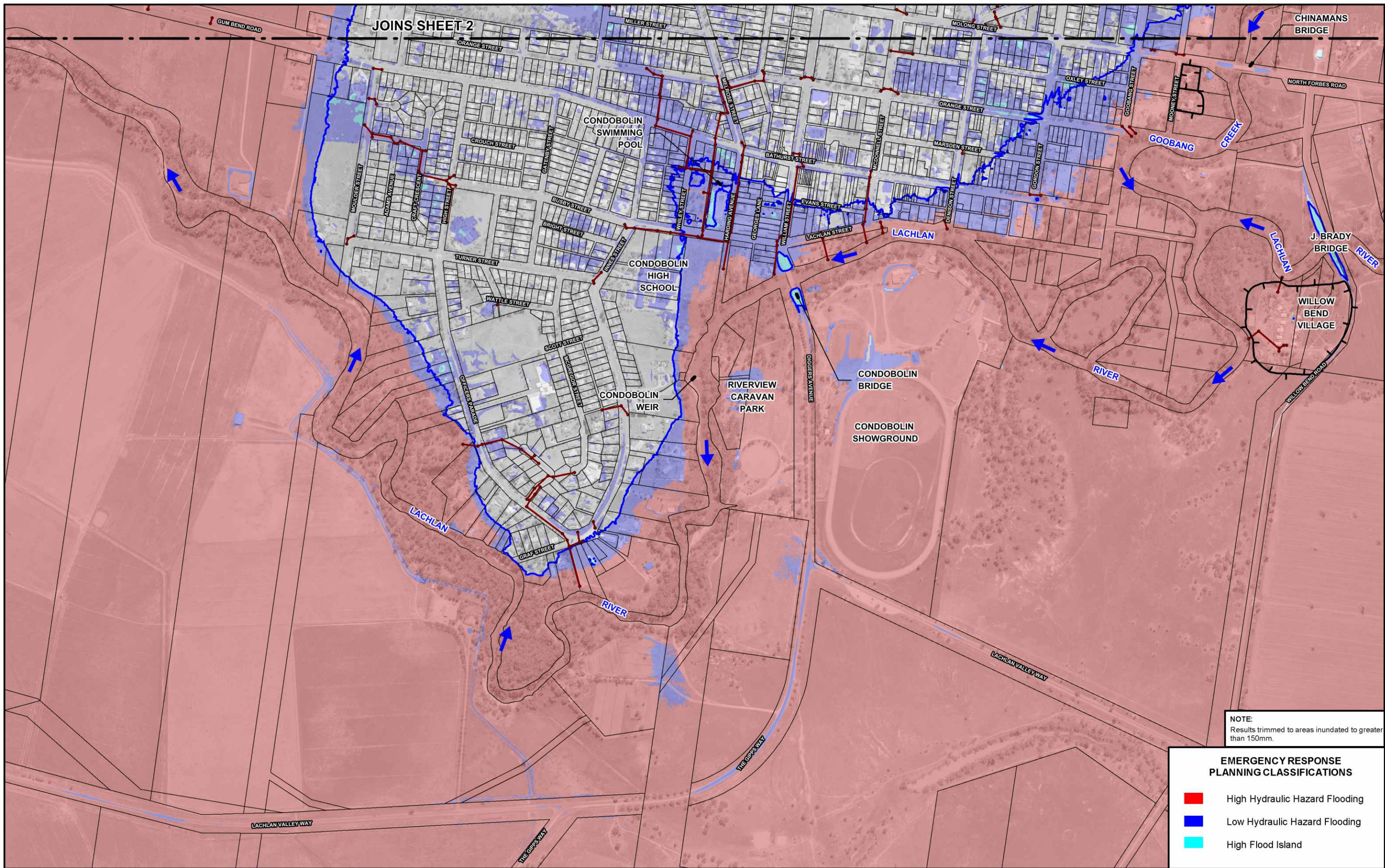
LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN
Figure 2.14
(Sheet 3 of 3)
POTENTIAL IMPACT OF CLIMATE CHANGE ON FLOODING AND DRAINAGE PATTERNS
1% AEP











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NOTE:
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LEGEND
 Modelled Stormwater Network
 Ring Levee
 Indicative Extent of Main Stream Flooding

LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN
 Figure 3.2
 (Sheet 3 of 3)
FLOOD EMERGENCY RESPONSE PLANNING CLASSIFICATIONS
EXTREME FLOOD

APPENDIX B

HYDROLOGIC AND HYDRAULIC MODELLING

LIST OF FIGURES (APPENDIX B)

B2.1 Main Stream Hydraulic Model Layout

B3.1 Major Overland Flow Hydrologic Model Layout

B4.1 Major Overland Flow TUFLOW Model Layout (3 Sheets)

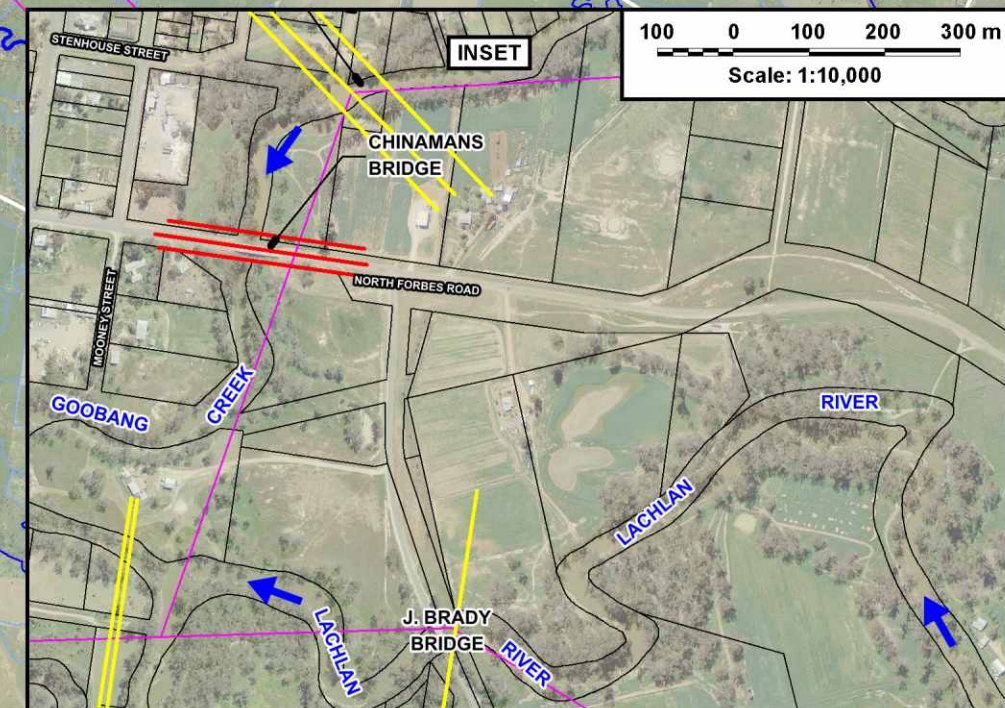
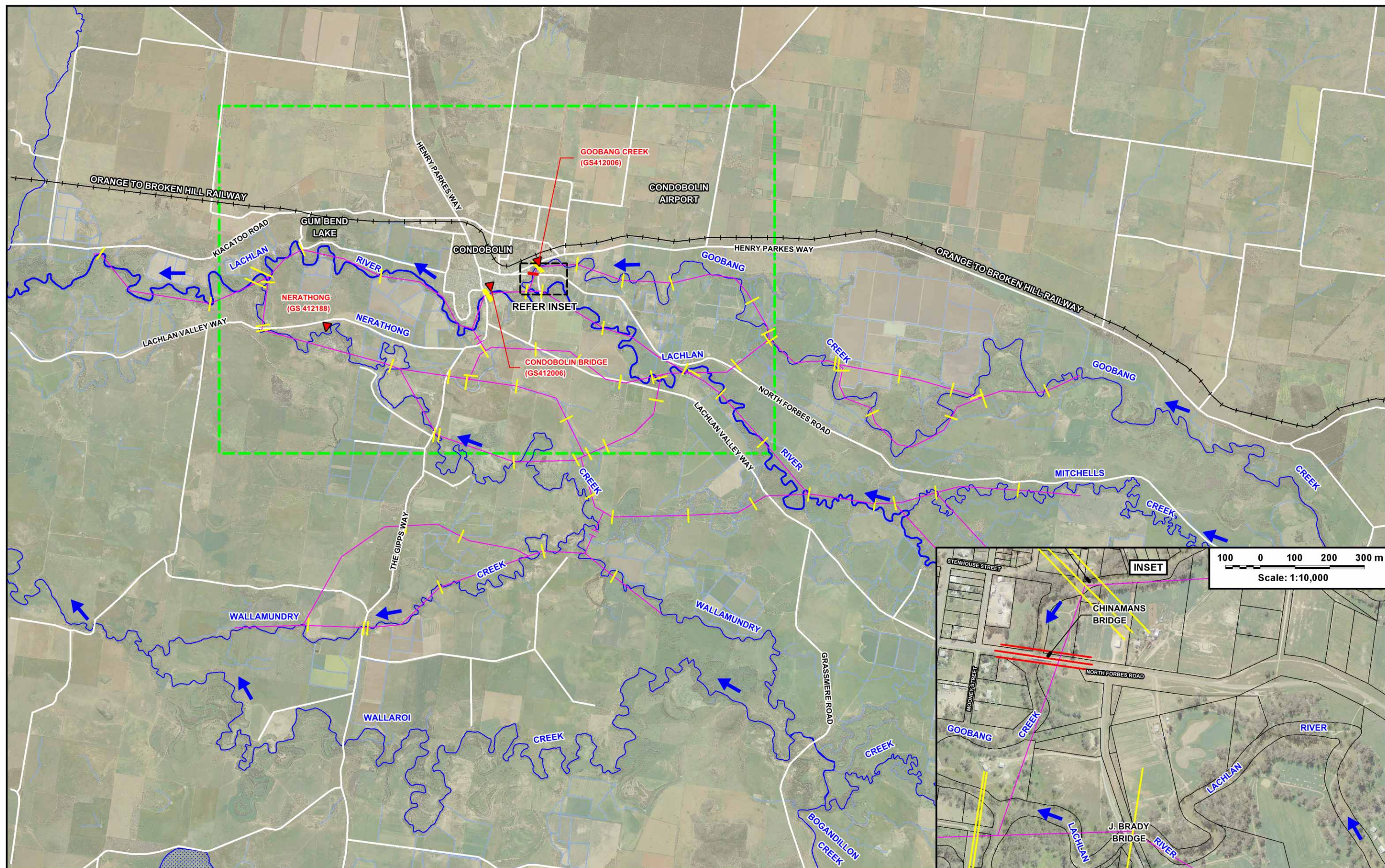
B4.2 TUFLOW Schematisation of Floodplain

B4.3 Indicative Extent and Depths of Inundation – 20% AEP (3 Sheets)

B4.4 Indicative Extent and Depths of Inundation – 5% AEP (3 Sheets)

B4.5 Indicative Extent and Depths of Inundation – 2% AEP (3 Sheets)

B4.6 Indicative Extent and Depths of Inundation – 0.5% AEP (3 Sheets)



Scale: 1:100,000



LEGEND



Extent of Available LiDAR Data

WaterNSW Stream Gauge



HEC-RAS River Reach



Cross Sections Included in L&A, 2008 HEC-RAS Model

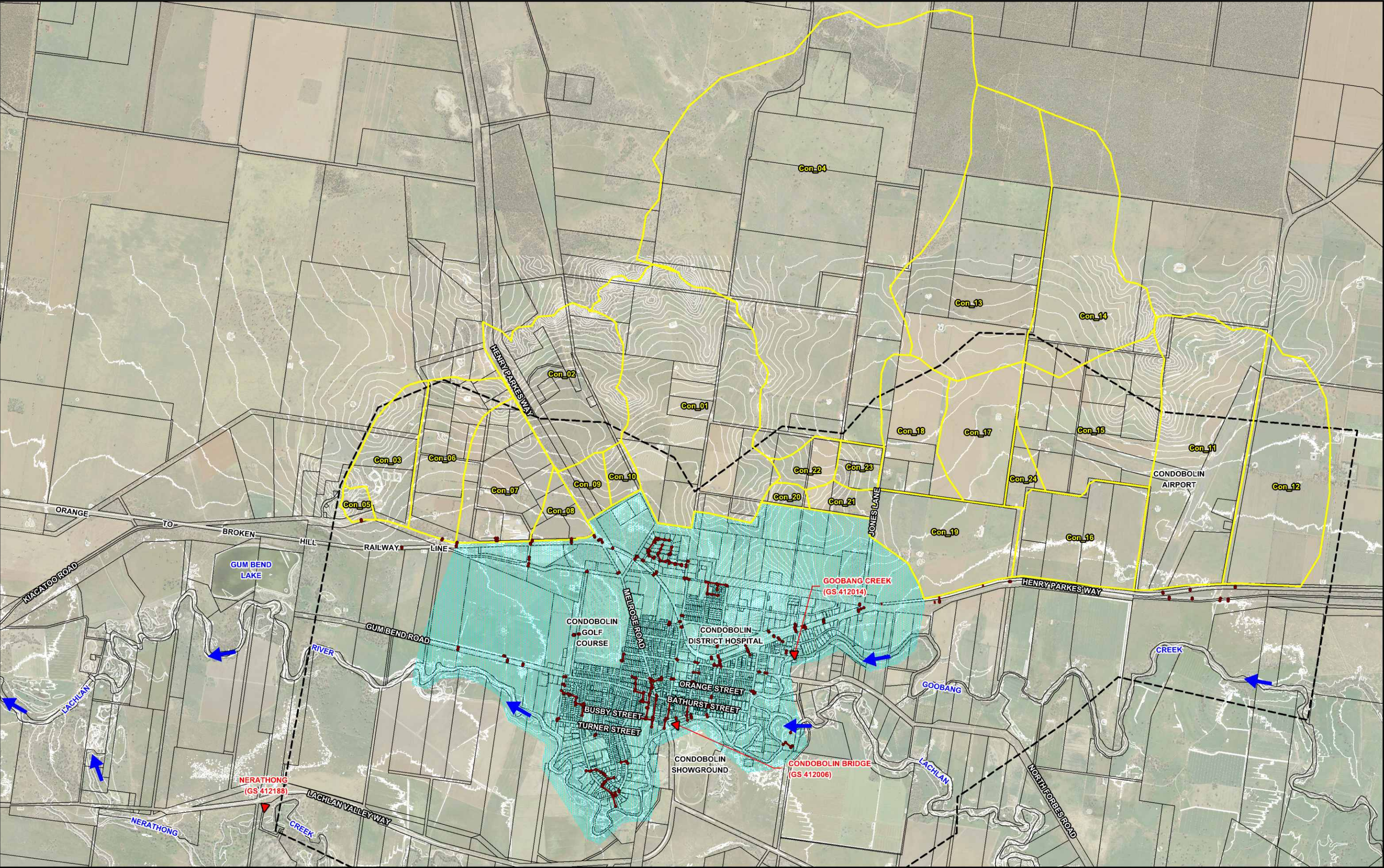


Cross Section Added to L&A, 2017 HEC-RAS Model

LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure B2.1

MAIN STREAM HYDRAULIC MODEL LAYOUT



N

400 0 400 800 1200 m

Scale: 1:40,000

Modelled Stormwater Network

WaterNSW Stream Gauge

Con_08

RAFTS Sub-Catchment Boundary and Identifier

Two-Dimensional Model Boundary

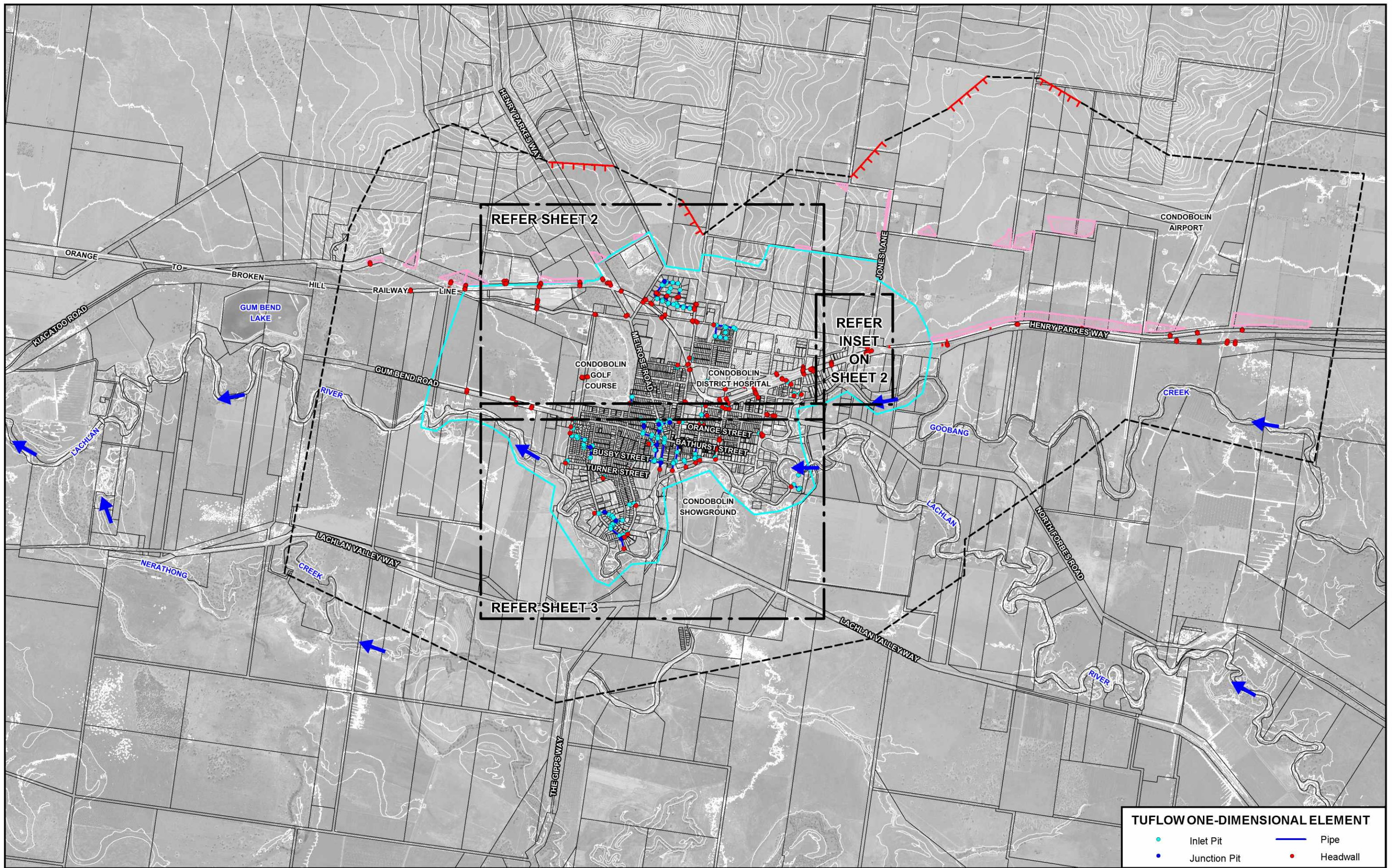
Extent of Direct Rainfall on Grid

LACHLAN RIVER (CONDOBOLIN)

FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure B3.1

MAJOR OVERLAND FLOW HYDROLOGIC MODEL LAYOUT



Scale: 1:40,000

400 0 400 800 1200 m

Lyall & Associates

TUFLOW BOUNDARY CONDITIONS

Inflow - Rain Boundary	Inflow Boundary
Inflow - Rainfall on Grid	Two-Dimensional Model Boundary

TUFLOW ONE-DIMENSIONAL ELEMENT

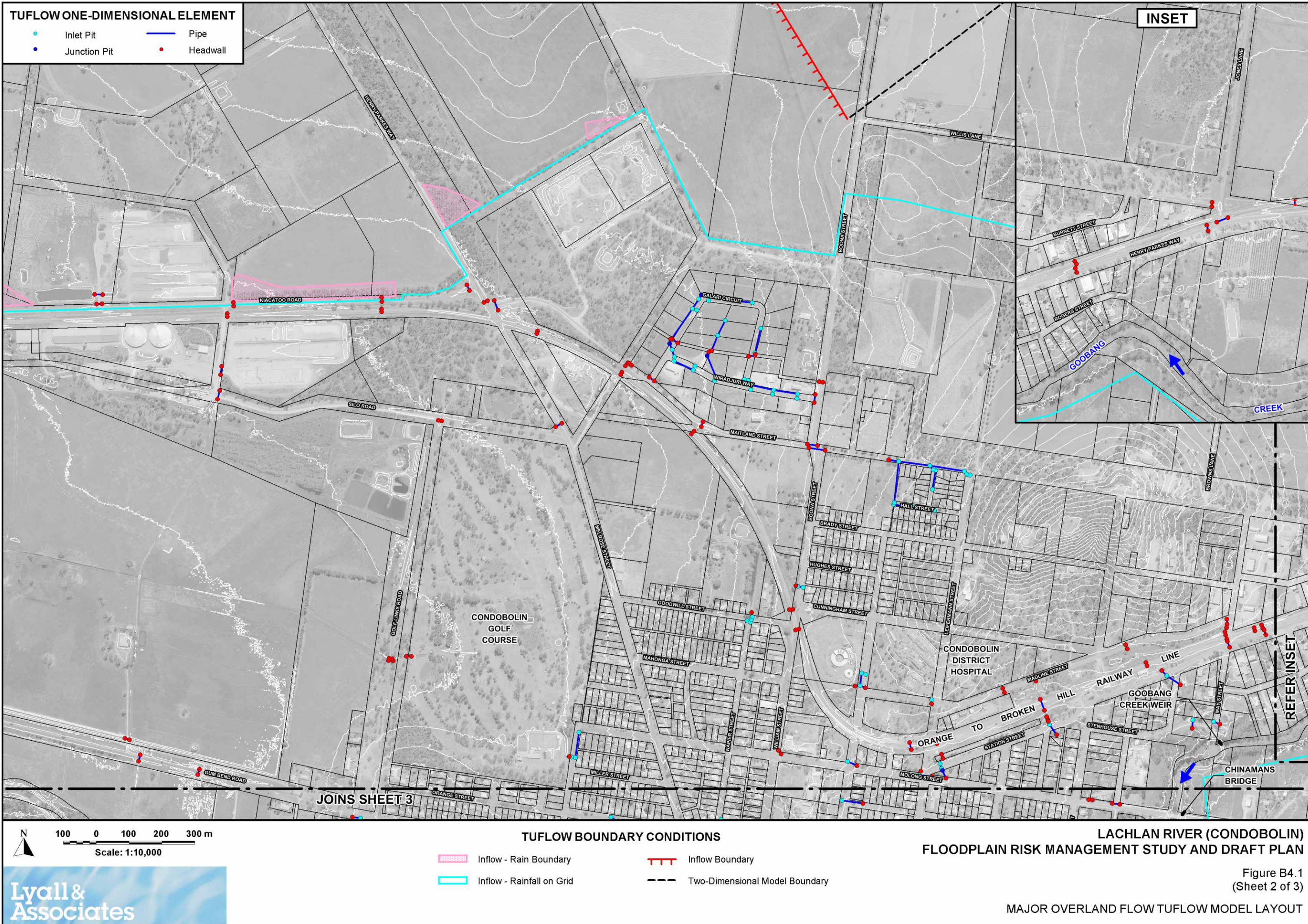
Inlet Pit	Pipe
Junction Pit	Headwall

LACHLAN RIVER (CONDOBOLIN)

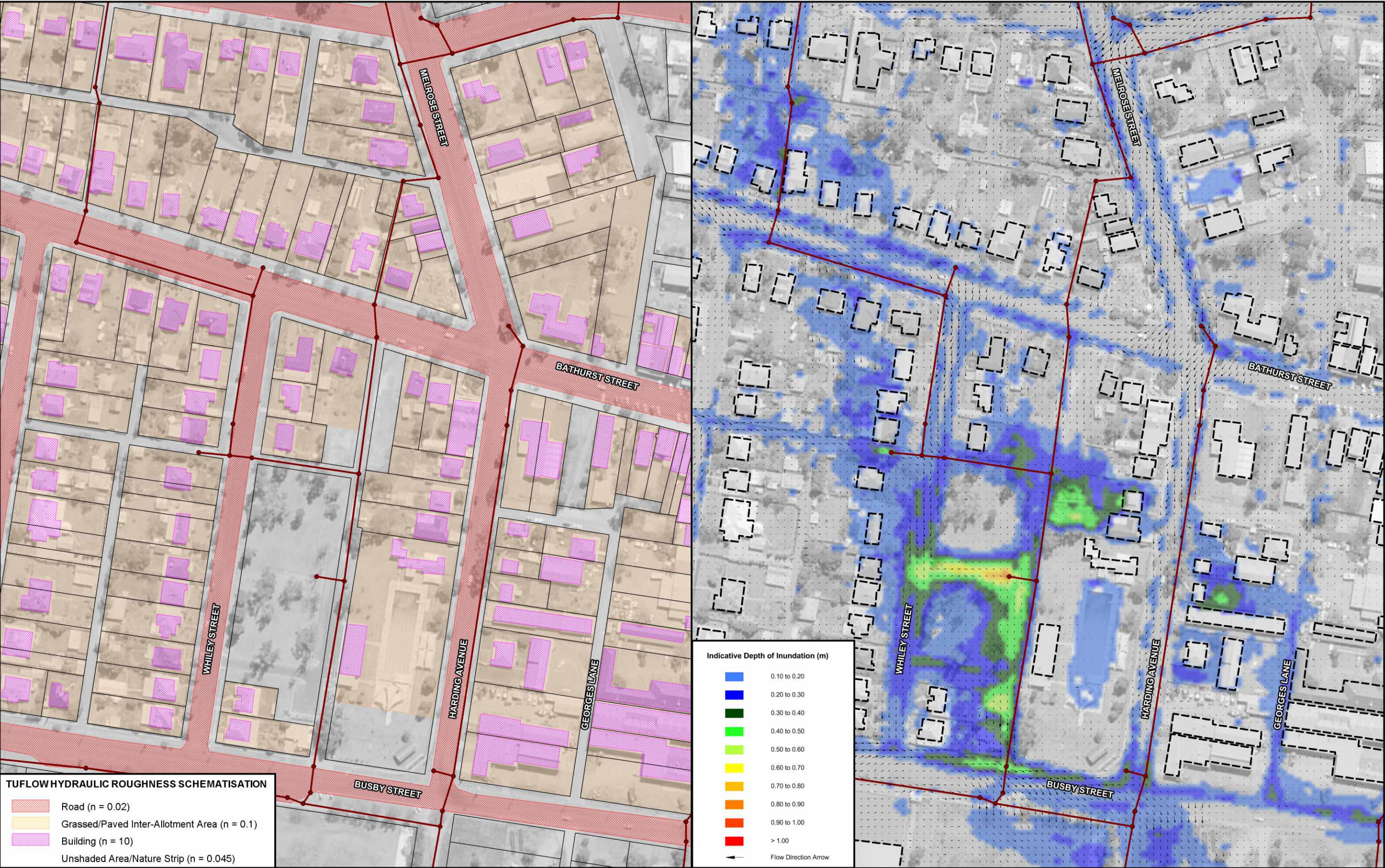
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure B4.1
(Sheet 1 of 3)

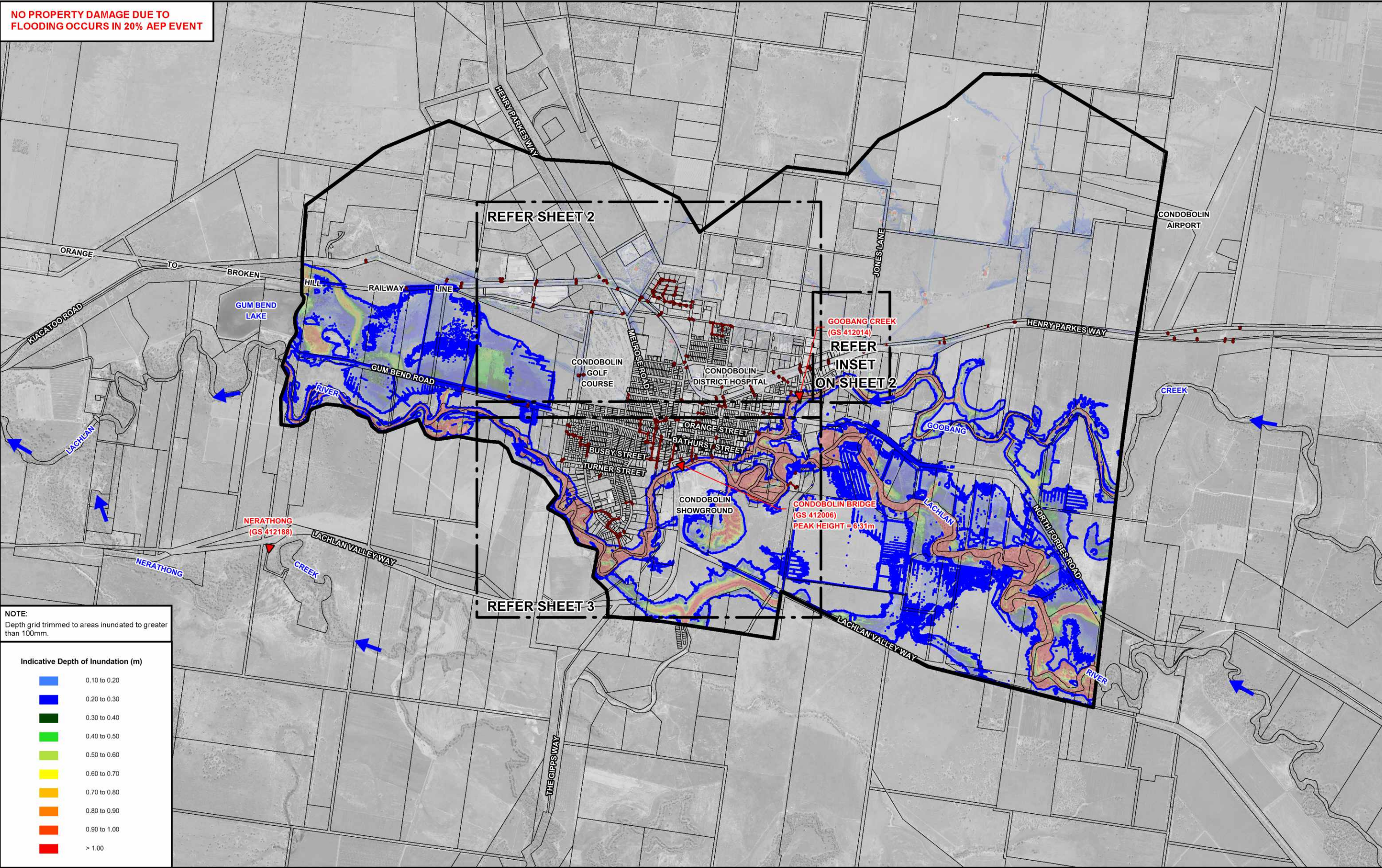
MAJOR OVERLAND FLOW TUFLOW MODEL LAYOUT







NO PROPERTY DAMAGE DUE TO
FLOODING OCCURS IN 20% AEP EVENT



NOTE:
Depth grid trimmed to areas inundated to greater than 100mm.

Scale: 1:40,000

Lycall & Associates

NOTE:
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure B4.3
(Sheet 1 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
20% AEP

NO PROPERTY DAMAGE DUE TO FLOODING OCCURS IN 20% AEP EVENT

INSET

NOTE:
Depth grid trimmed to areas inundated to greater than 100mm.

Indicative Depth of Inundation (m)

Blue	0.10 to 0.20
Dark Blue	0.20 to 0.30
Green	0.30 to 0.40
Light Green	0.40 to 0.50
Yellow	0.50 to 0.60
Orange	0.60 to 0.70
Dark Orange	0.70 to 0.80
Red	0.80 to 0.90
Dark Red	0.90 to 1.00
Black	> 1.00

GOOBANG CREEK (GS 412014)

CHINAMANS BRIDGE

GOOBANG CREEK WEIR

CONDOLIN DISTRICT HOSPITAL

CONDOLIN GOLF COURSE

GOOBANG CREEK

RAILWAY LINE

ORANGE TO BROKEN HILL

STATION STREET

MOLONG STREET

STENHOUSE STREET

MAY STREET

WILLIS LANE

BOOKA STREET

BRADY STREET

HUGHES STREET

CUNNINGHAM STREET

GOODWILL STREET

MAHONGA STREET

MILLER STREET

WILLIAM STREET

MAPLE STREET

MAITLAND STREET

WIRADJURI WAY

GALARI CIRCUIT

SILO ROAD

KIACATOO ROAD

HENRY PARKES WAY

RODGERS STREET

BURNETT STREET

JONES LANE

BROWNS LANE

GOLF LINKS ROAD

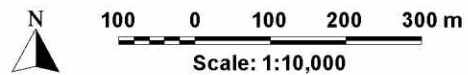
GUM BEND ROAD

JOINS SHEET 3

REFER INSET



JOINS SHEET 3




Lyall & Associates

NOTE:

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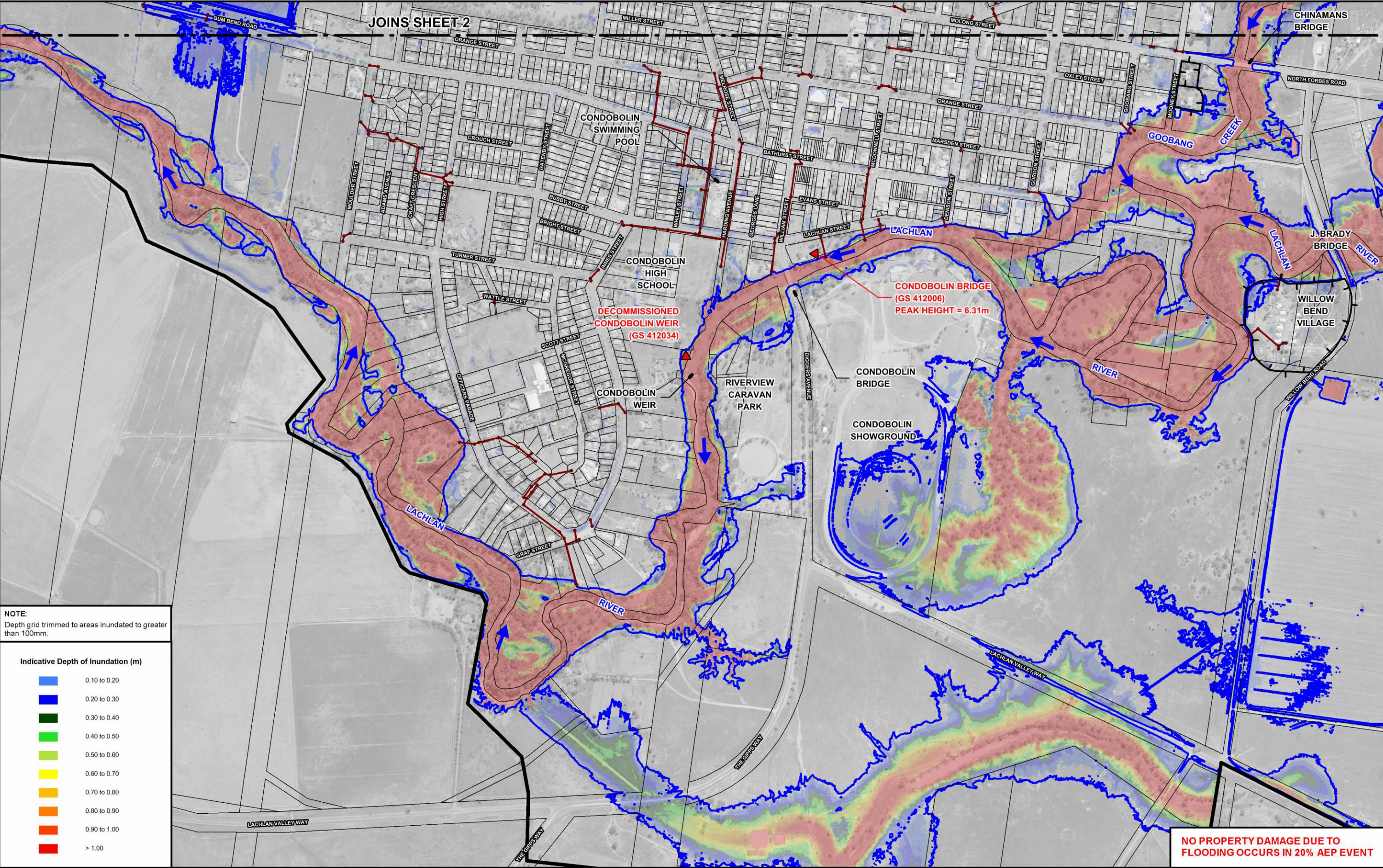
LEGEND

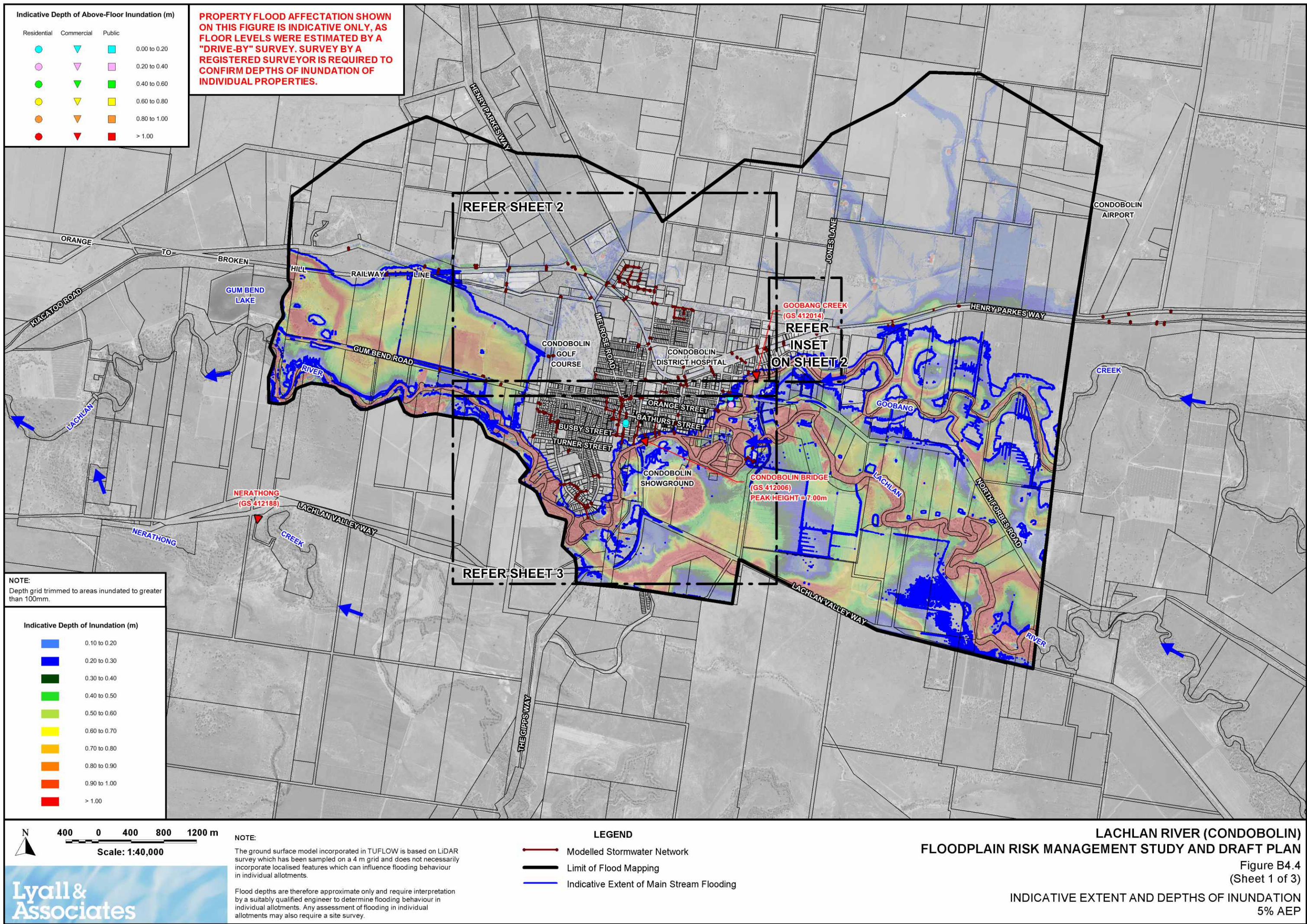
-  Modelled Stormwater Network
- Limit of Flood Mapping
- Indicative Extent of Main Stream Flooding

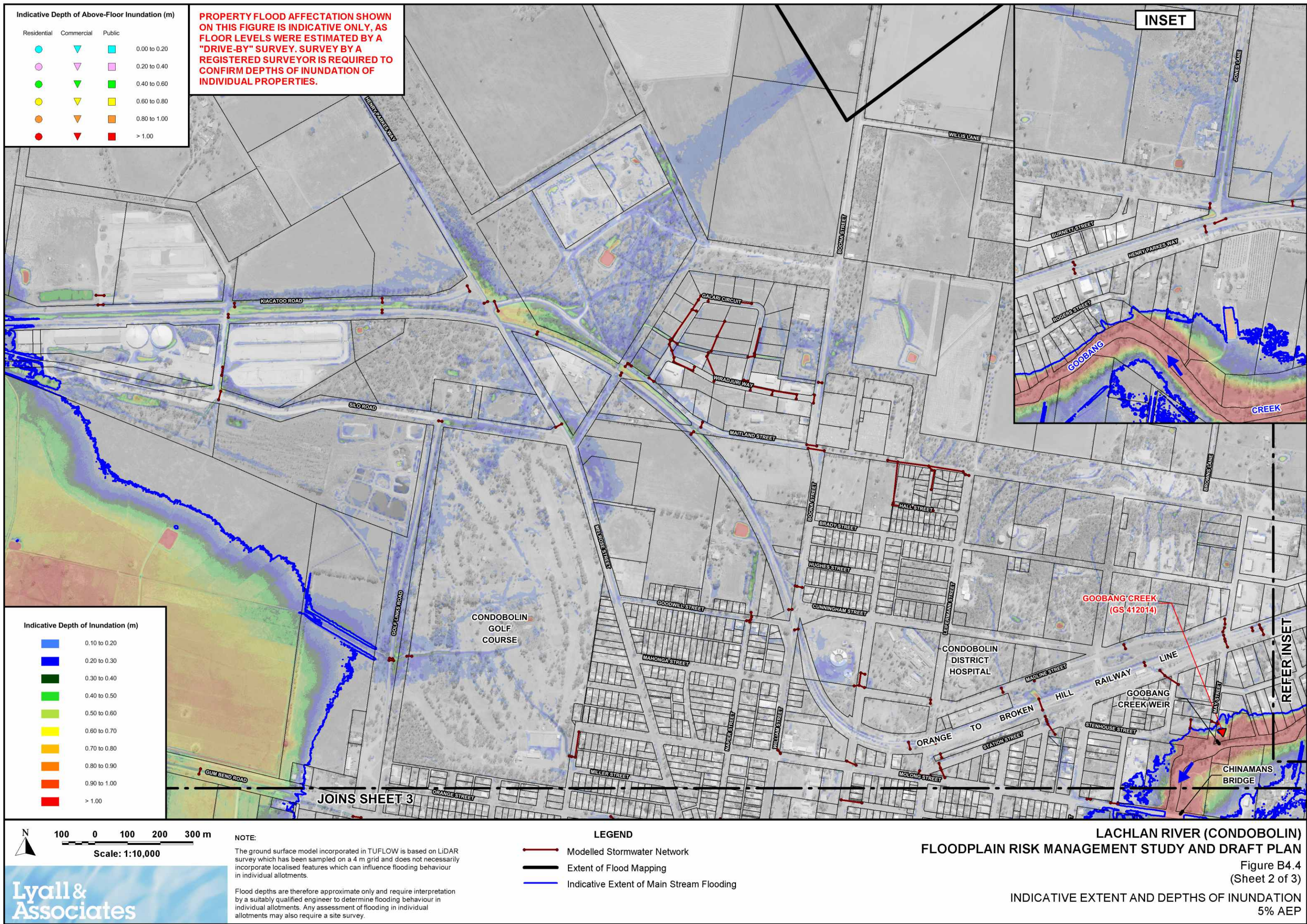
**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**

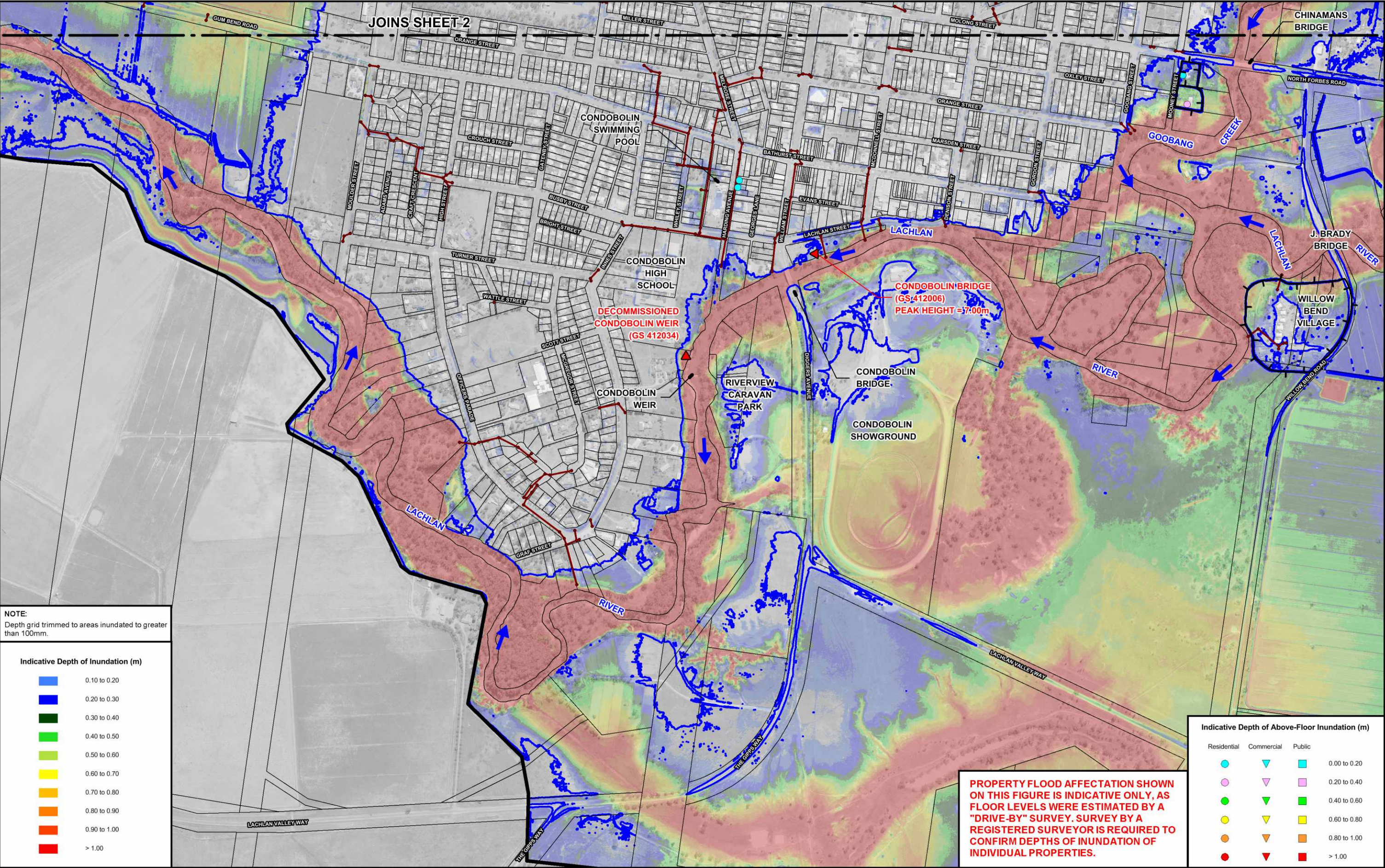
Figure B4.3
(Sheet 2 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
20% AEP









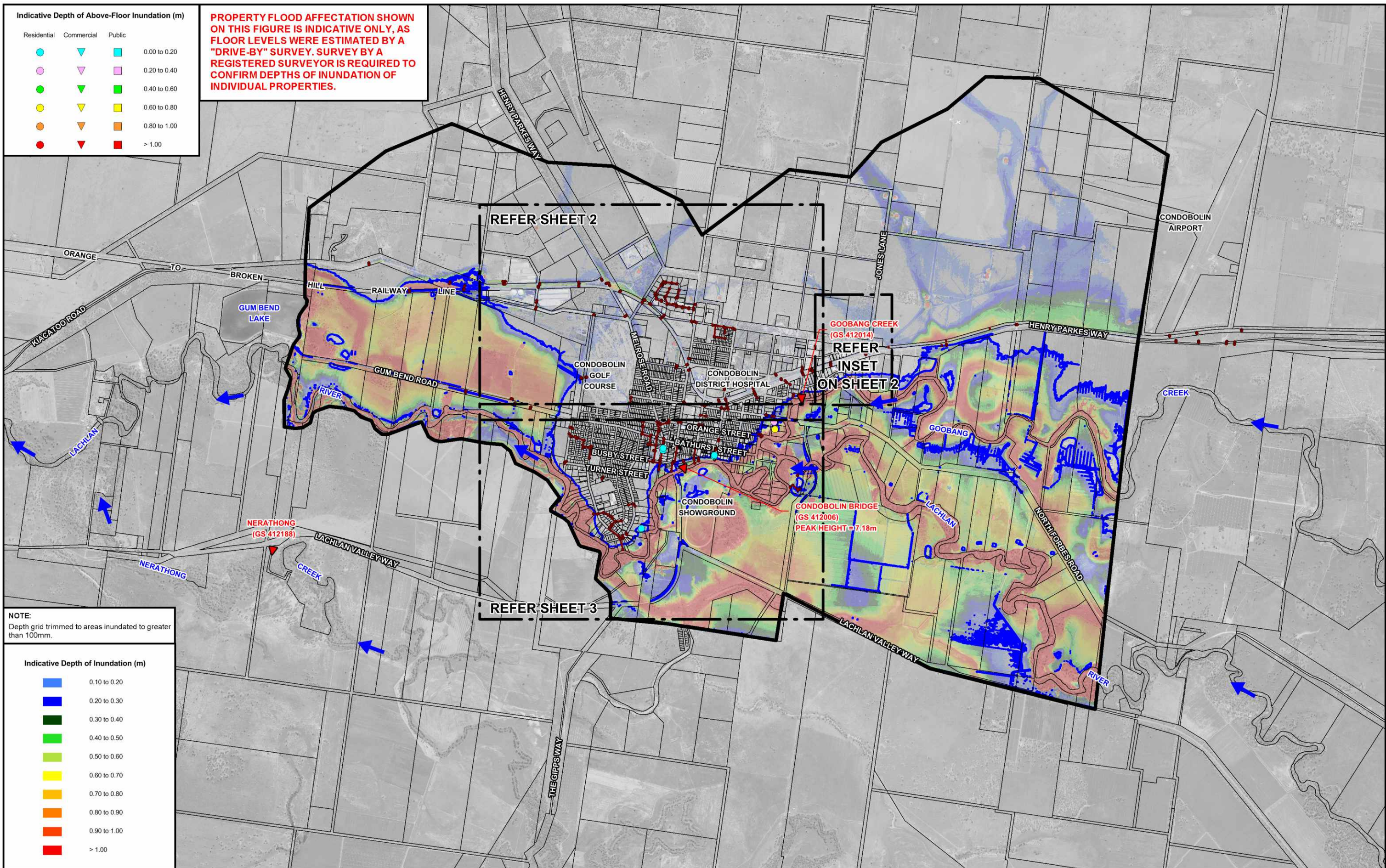
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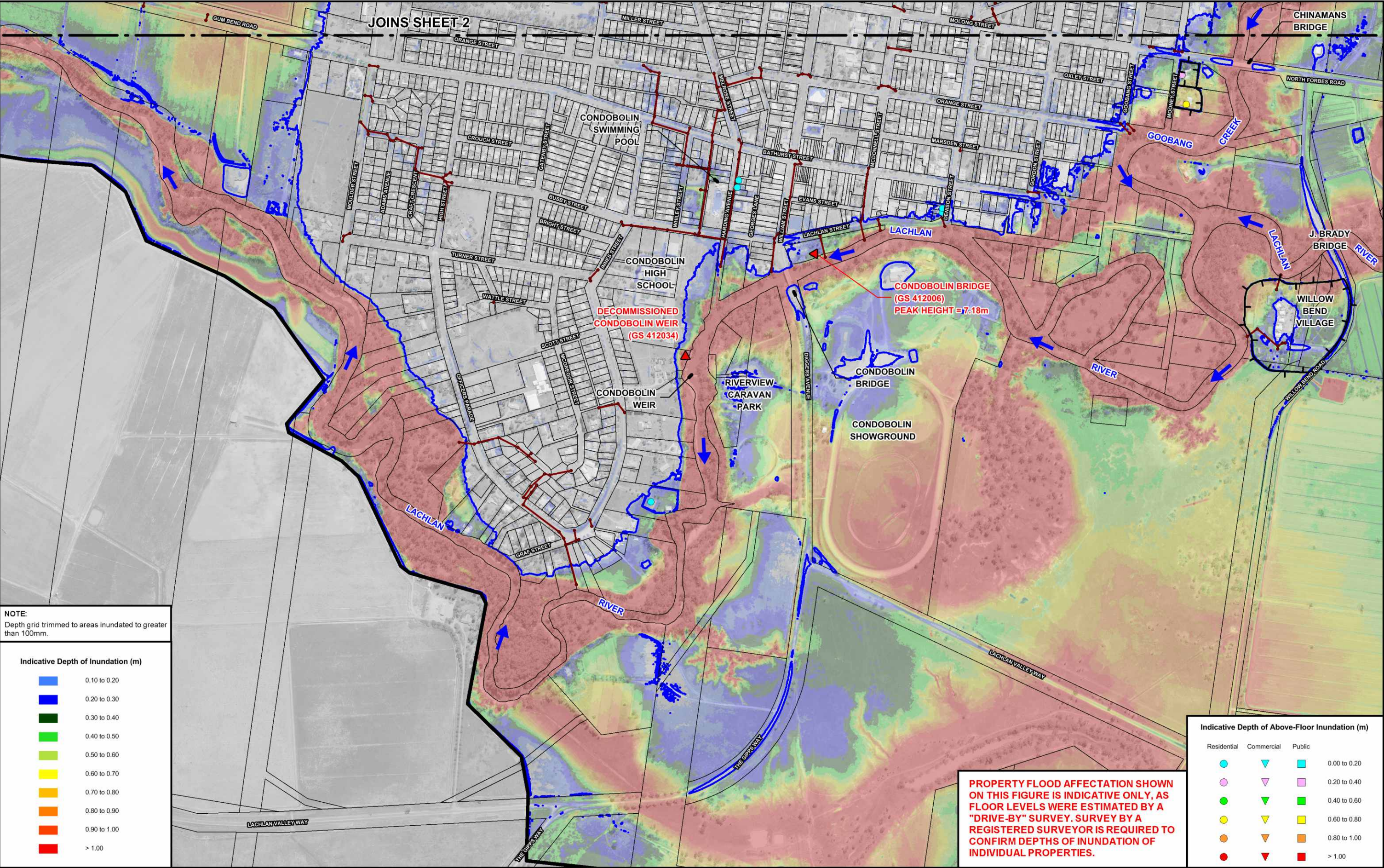
Lyall & Associates

NOTE:
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Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

- LEGEND**
- Modelled Stormwater Network
 - Extent of Flood Mapping
 - Ring Levee
 - Indicative Extent of Main Stream Flooding

LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN
Figure B4.4
(Sheet 3 of 3)
INDICATIVE EXTENT AND DEPTHS OF INUNDATION
5% AEP



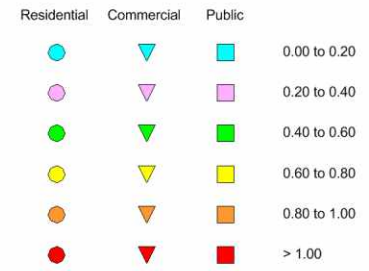


NOTE:
Depth grid trimmed to areas inundated to greater than 100mm.

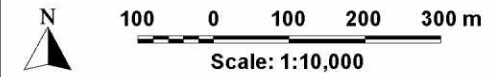
Indicative Depth of Inundation (m)



Indicative Depth of Above-Floor Inundation (m)

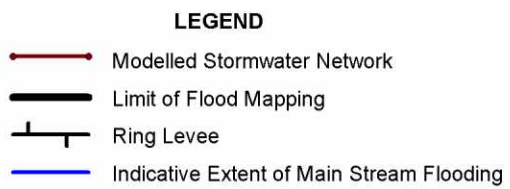


PROPERTY FLOOD AFFECTATION SHOWN ON THIS FIGURE IS INDICATIVE ONLY, AS FLOOR LEVELS WERE ESTIMATED BY A "DRIVE-BY" SURVEY. SURVEY BY A REGISTERED SURVEYOR IS REQUIRED TO CONFIRM DEPTHS OF INUNDATION OF INDIVIDUAL PROPERTIES.

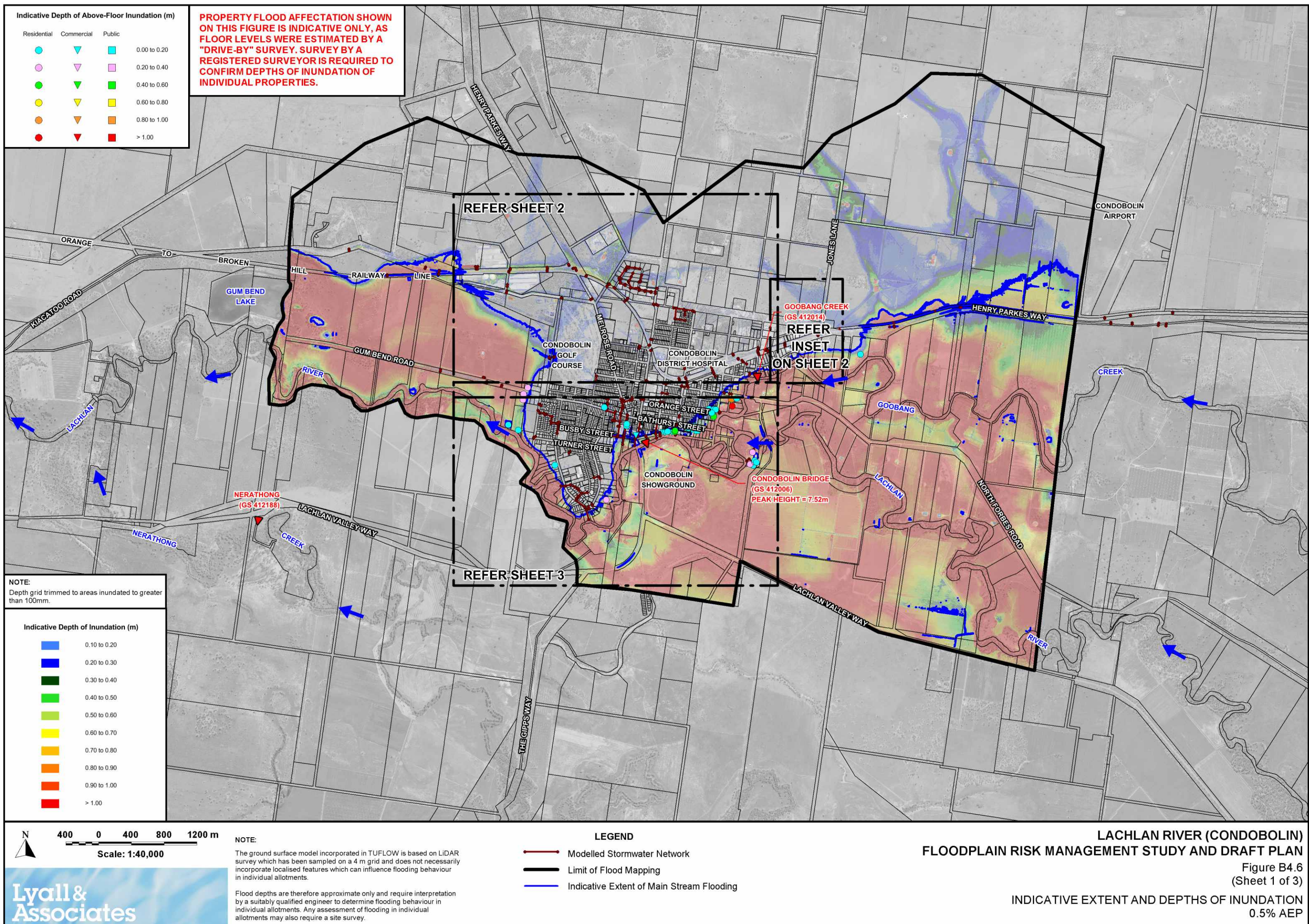


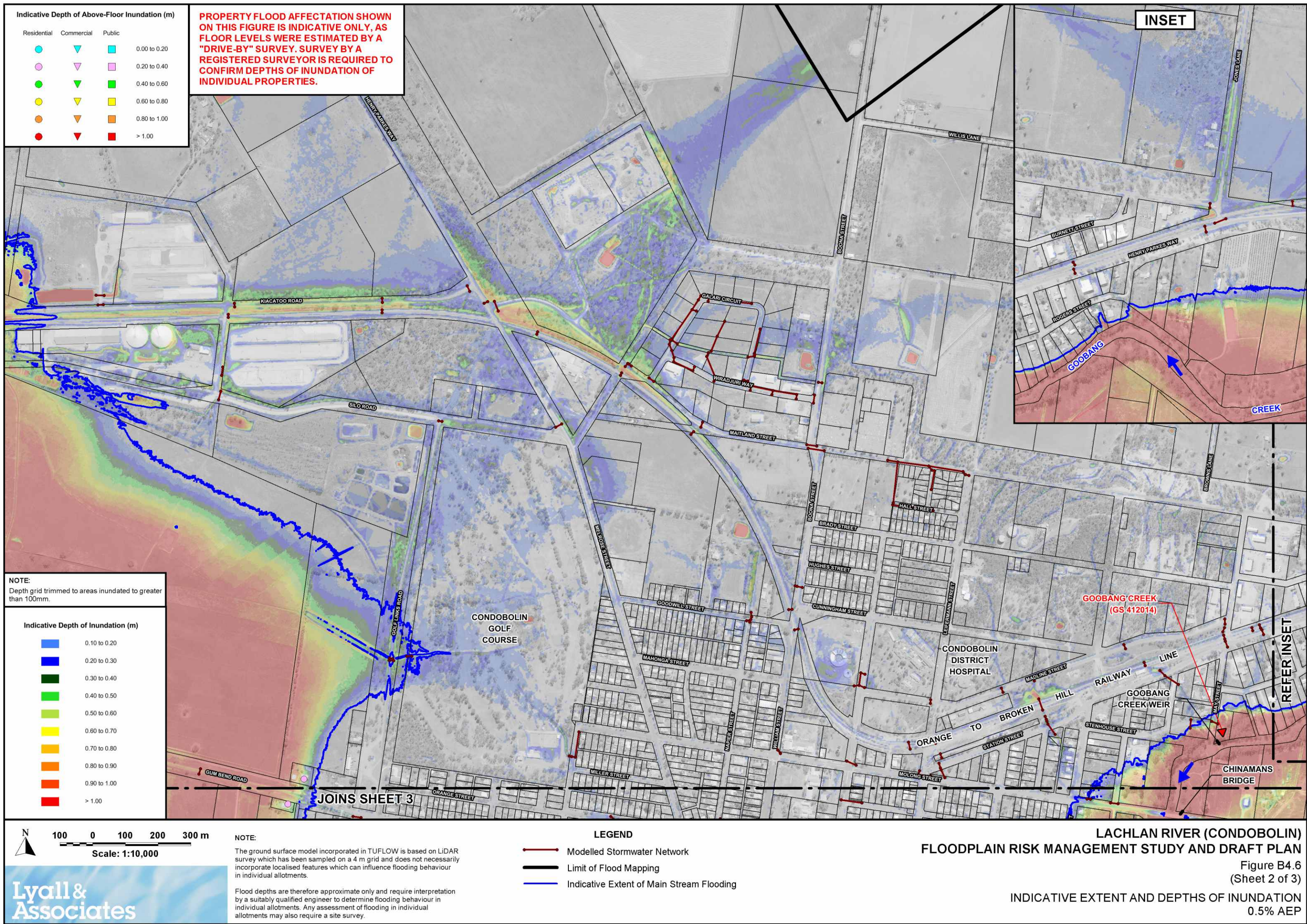
Lyall & Associates

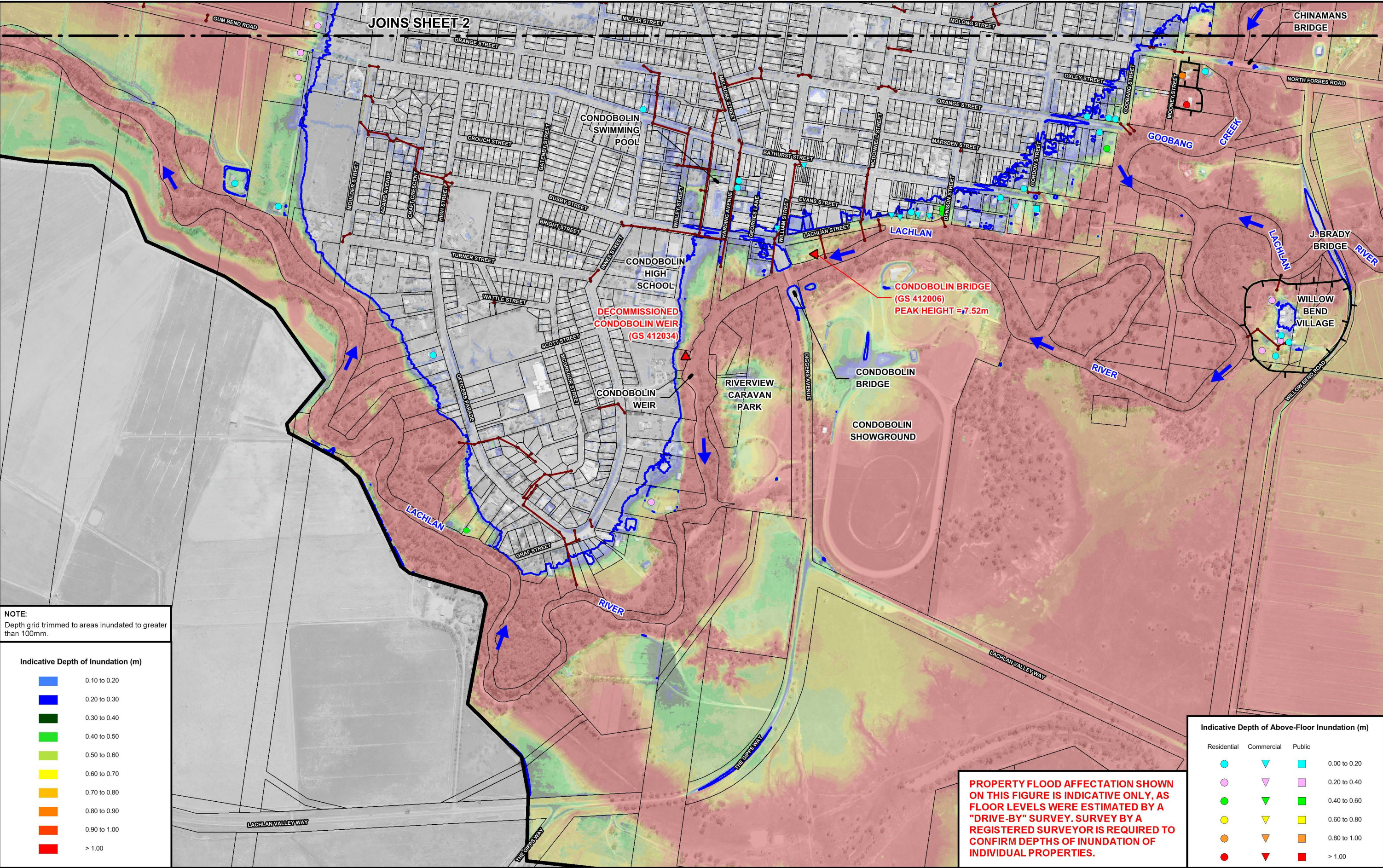
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LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN
Figure B4.5
(Sheet 3 of 3)
INDICATIVE EXTENT AND DEPTHS OF INUNDATION
2% AEP





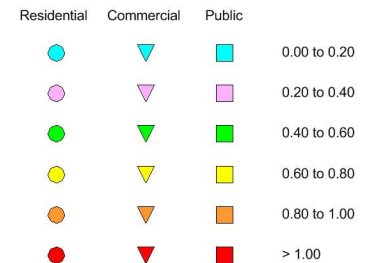


NOTE:
Depth grid trimmed to areas inundated to greater than 100mm.

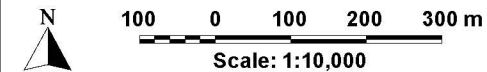
Indicative Depth of Inundation (m)



Indicative Depth of Above-Floor Inundation (m)



PROPERTY FLOOD AFFECTATION SHOWN ON THIS FIGURE IS INDICATIVE ONLY, AS FLOOR LEVELS WERE ESTIMATED BY A "DRIVE-BY" SURVEY. SURVEY BY A REGISTERED SURVEYOR IS REQUIRED TO CONFIRM DEPTHS OF INUNDATION OF INDIVIDUAL PROPERTIES.



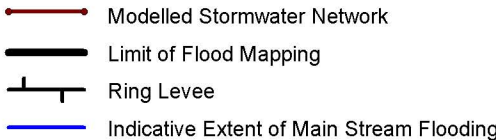
Lyall & Associates

NOTE:

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LEGEND



LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

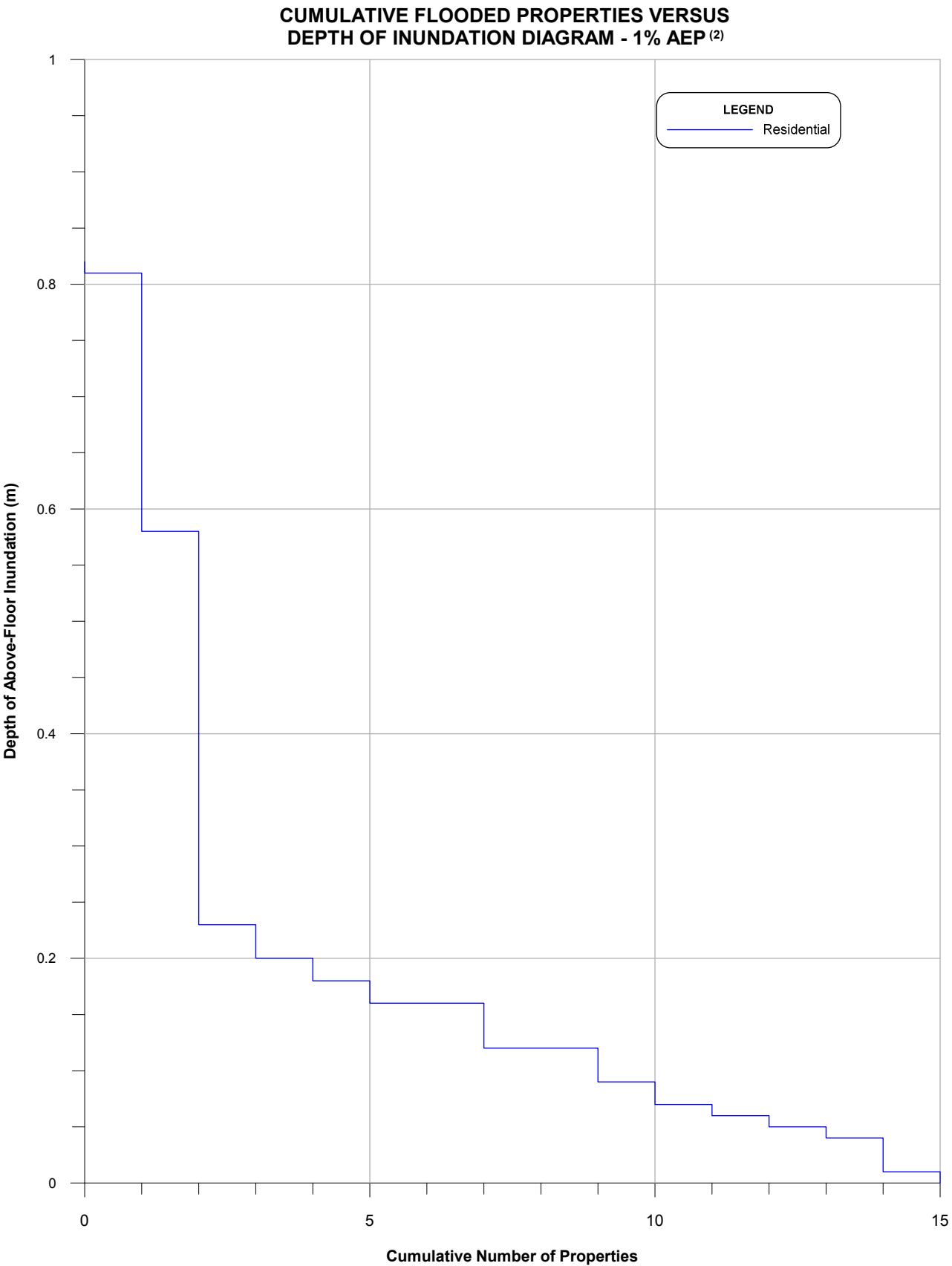
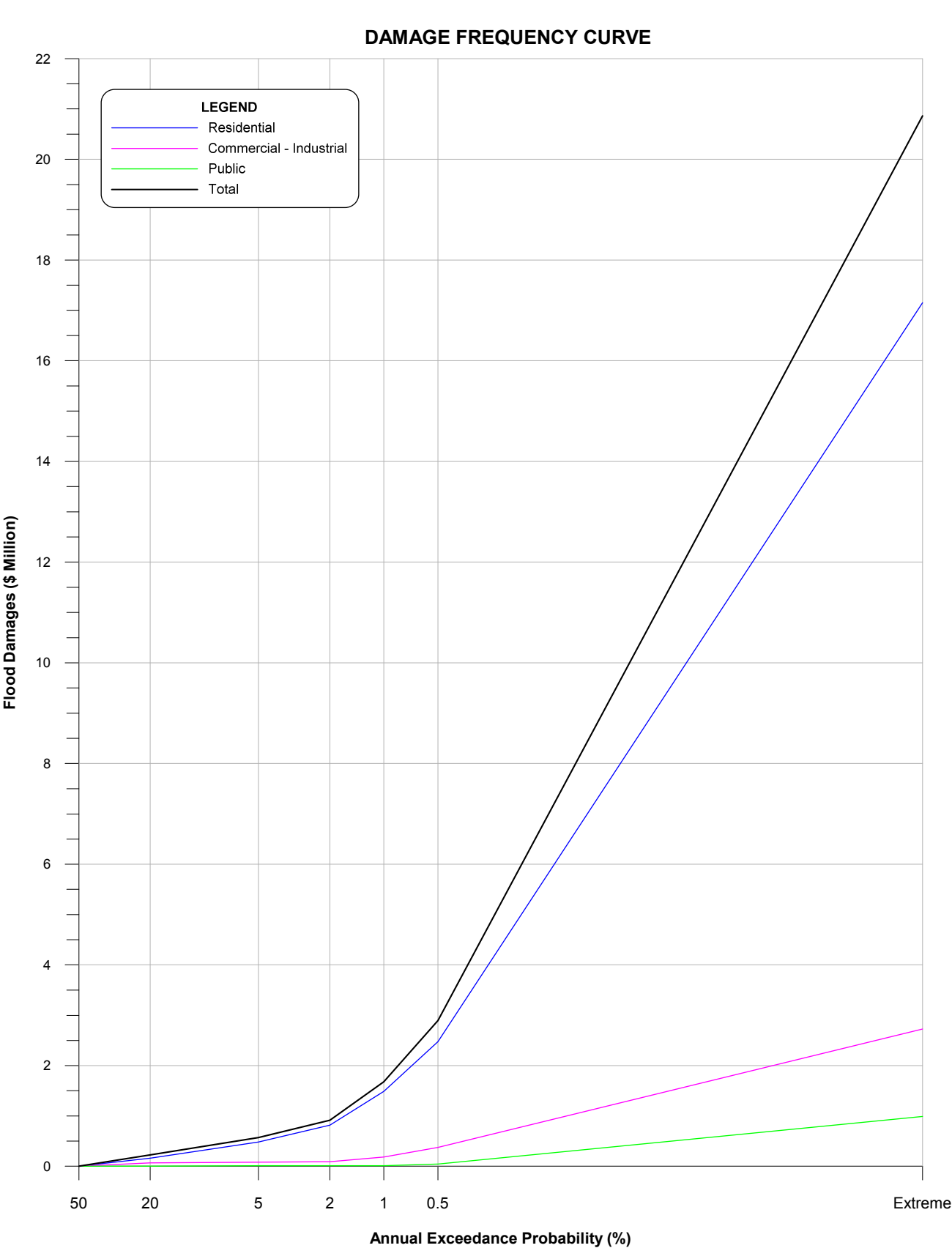
Figure B4.6
(Sheet 3 of 3)

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
0.5% AEP

APPENDIX C
FLOOD DAMAGES

LIST OF FIGURES (APPENDIX C)

C8.1 Damage - Frequency Curves and Cumulative Flooded Properties versus Depth of Inundation Diagram (Nominal 1% AEP Design Flood Level Case)

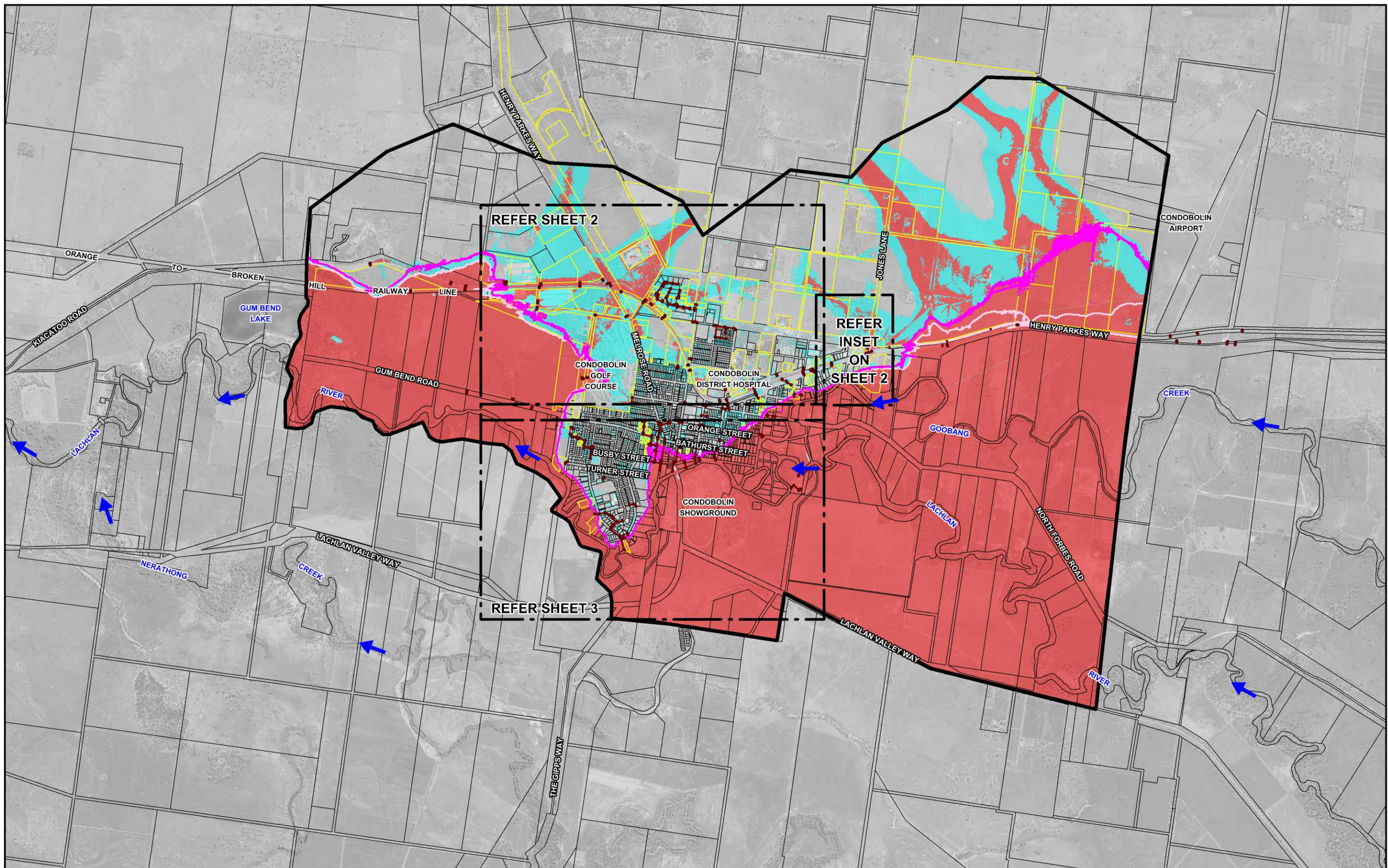


APPENDIX D

DRAFT FLOOD POLICY

LIST OF FIGURES (APPENDIX D)

- D1.1 Extract of Flood Planning Map Showing Extent of Flood Planning Area at Condobolin (3 Sheets)
- D1.2 Condobolin Development Controls Matrix Map (3 Sheets)
- D1.3 Condobolin Flood Hazard Map (3 Sheets)



Scale: 1:40,000

400 0 400 800 1200 m

Lyall & Associates

NOTE:

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LEGEND

— Modelled Stormwater Network	 Limit of Flood Mapping
 Major Overland Flow Affected Properties (1% AEP)	 Flood Planning Area
— Northern Limit of Main Stream Flooding Outer Floodplain	 Outer Floodplain
 Northern Limit of Main Stream Flooding Flood Planning Area	

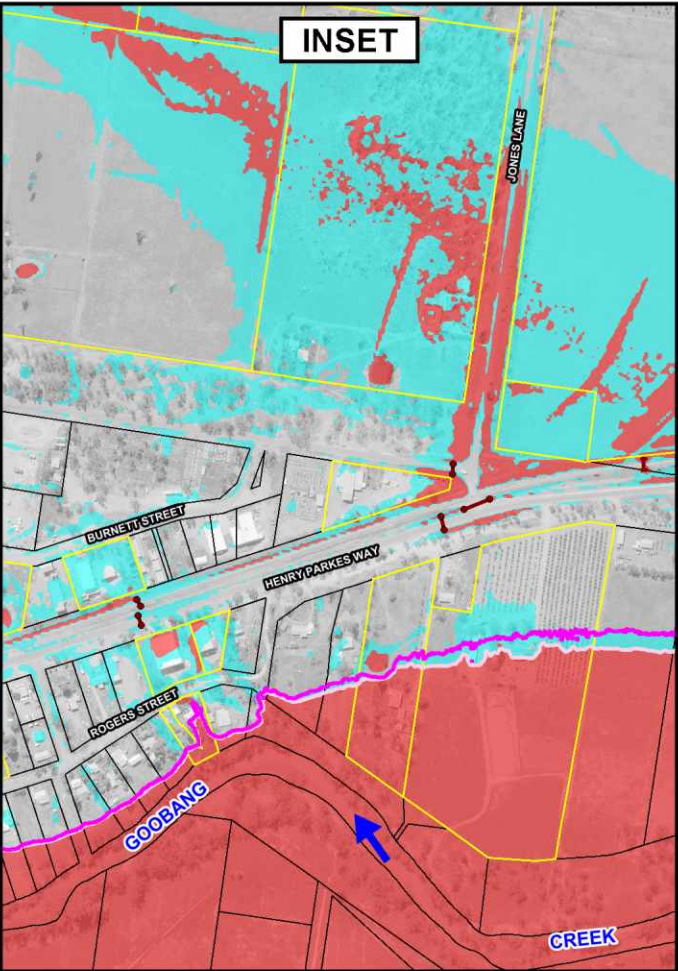
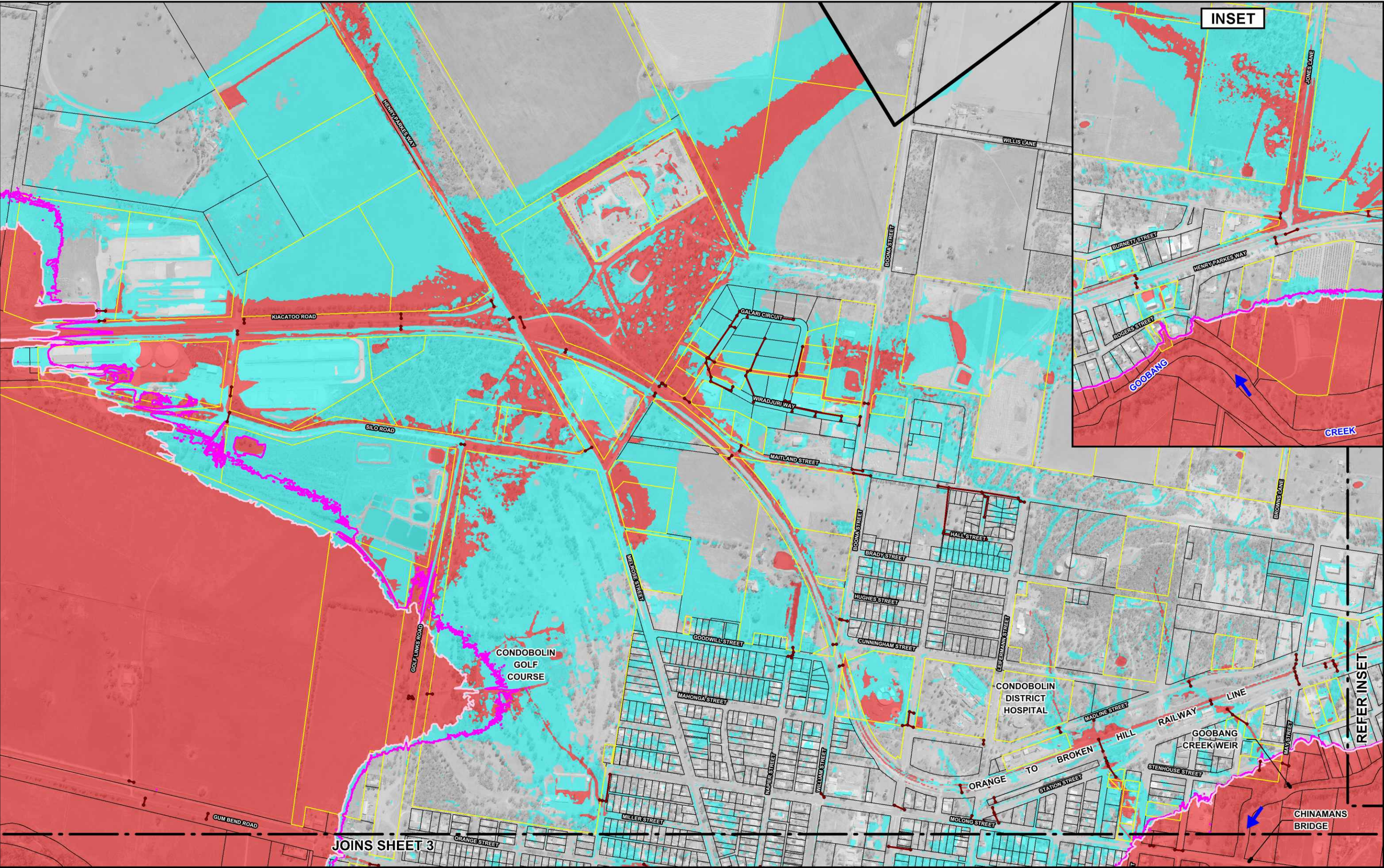
LACHLAN RIVER (CONDOBOLIN)

FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure D1.1
(Sheet 1 of 3)

EXTRACT OF FLOOD PLANNING MAP

SHOWING EXTENT OF FLOOD PLANNING AREA AT CONDOBOLIN



Lyall & Associates

Scale: 1:10,000

100 0 100 200 300 m

NOTE:

The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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LEGEND

- Modelled Stormwater Network
- Major Overland Flow Affected Properties (1% AEP)
- Northern Limit of Main Stream Flooding Outer Floodplain
- Northern Limit of Main Stream Flooding Flood Planning Area
- Limit of Flood Mapping
- Flood Planning Area
- Outer Floodplain

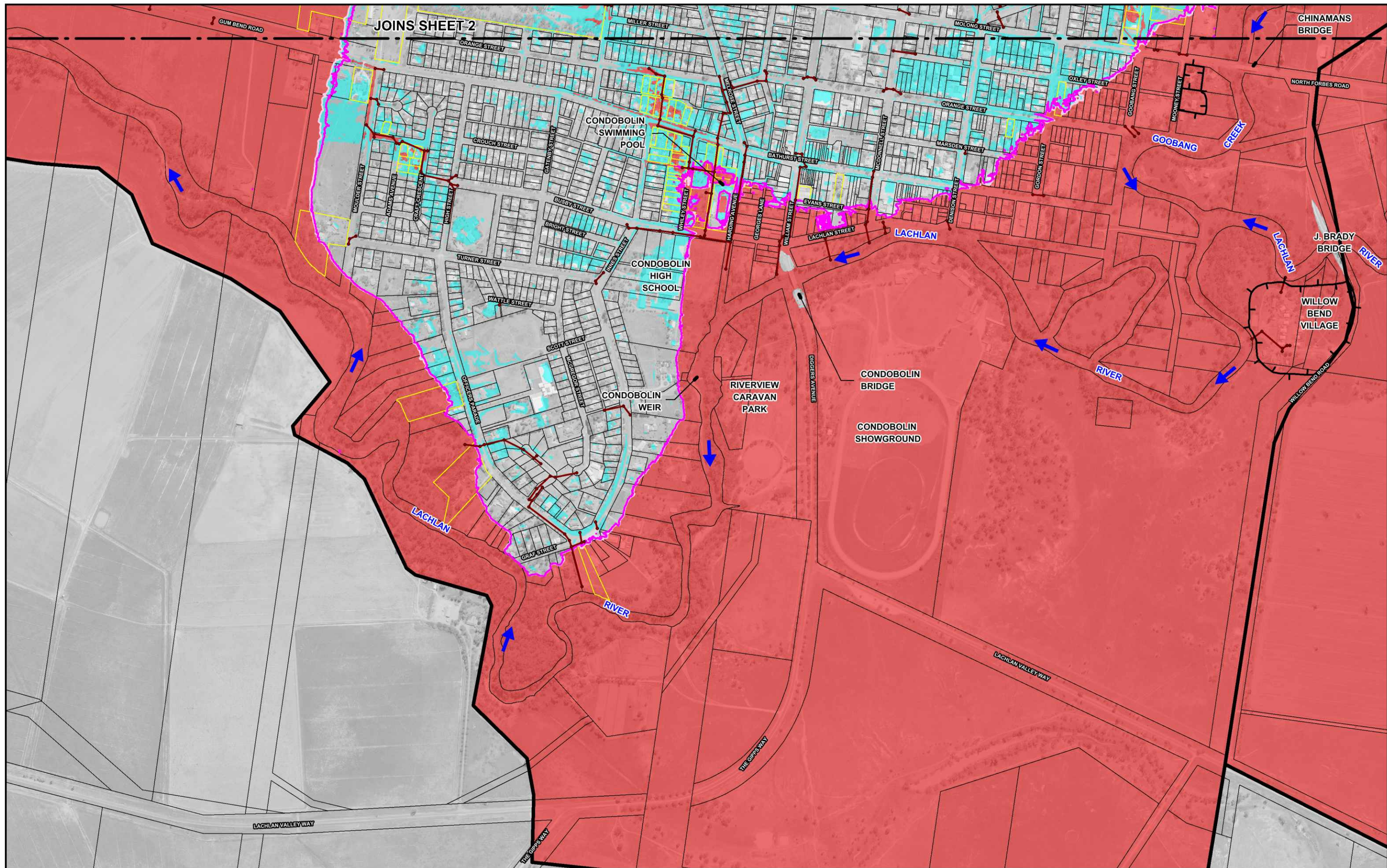
LACHLAN RIVER (CONDOBOLIN)

FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure D1.1
(Sheet 2 of 3)

EXTRACT OF FLOOD PLANNING MAP

SHOWING EXTENT OF FLOOD PLANNING AREA AT CONDOBOLIN



Lyall & Associates

NOTE:

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LEGEND

- Modelled Stormwater Network
- Major Overland Flow Affected Properties (1% AEP)
- Northern Limit of Main Stream Flooding Outer Floodplain
- Northern Limit of Main Stream Flooding Flood Planning Area
- Limit of Flood Mapping
- Flood Planning Area
- Outer Floodplain
- Ring Levee

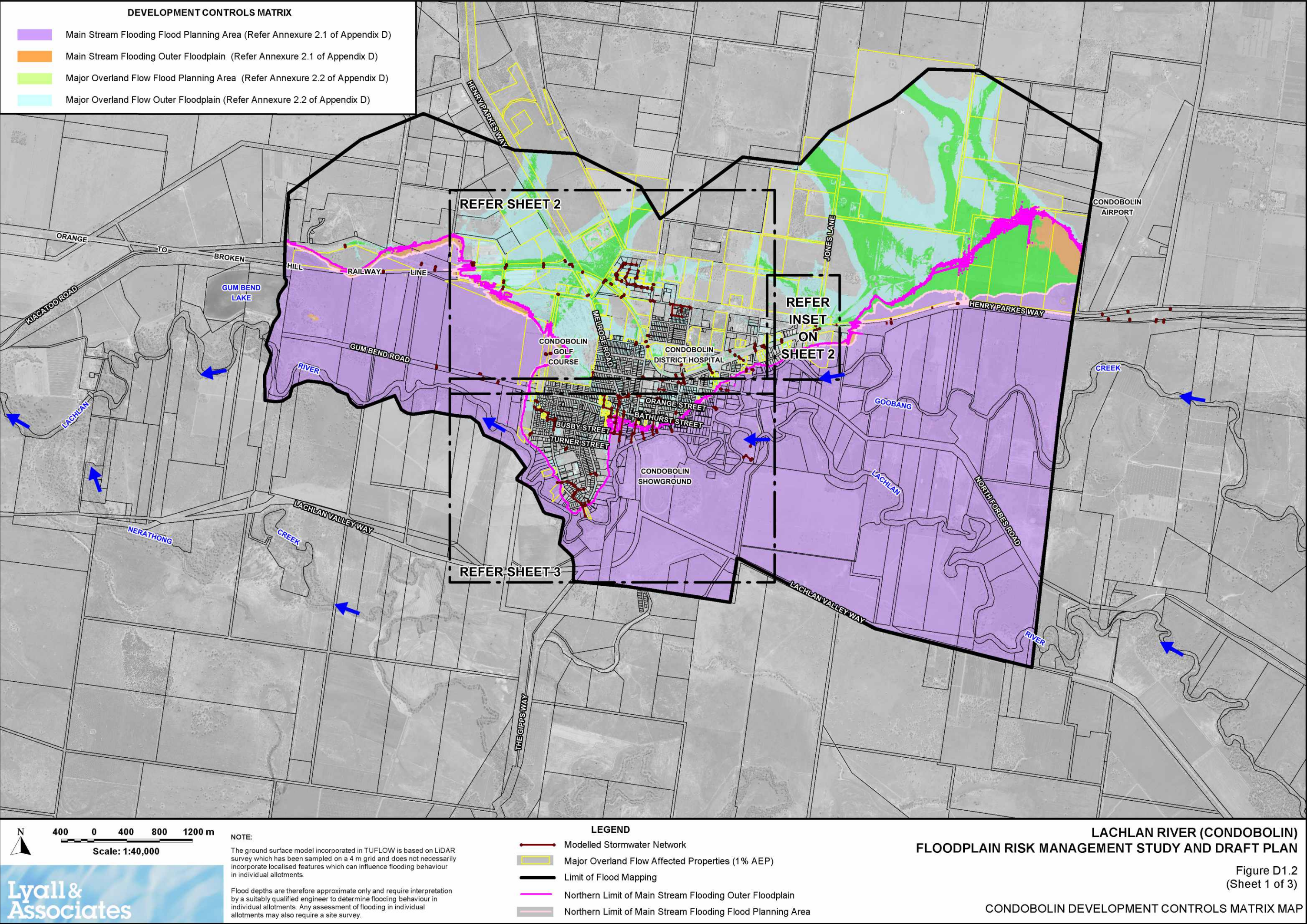
LACHLAN RIVER (CONDOBOLIN)

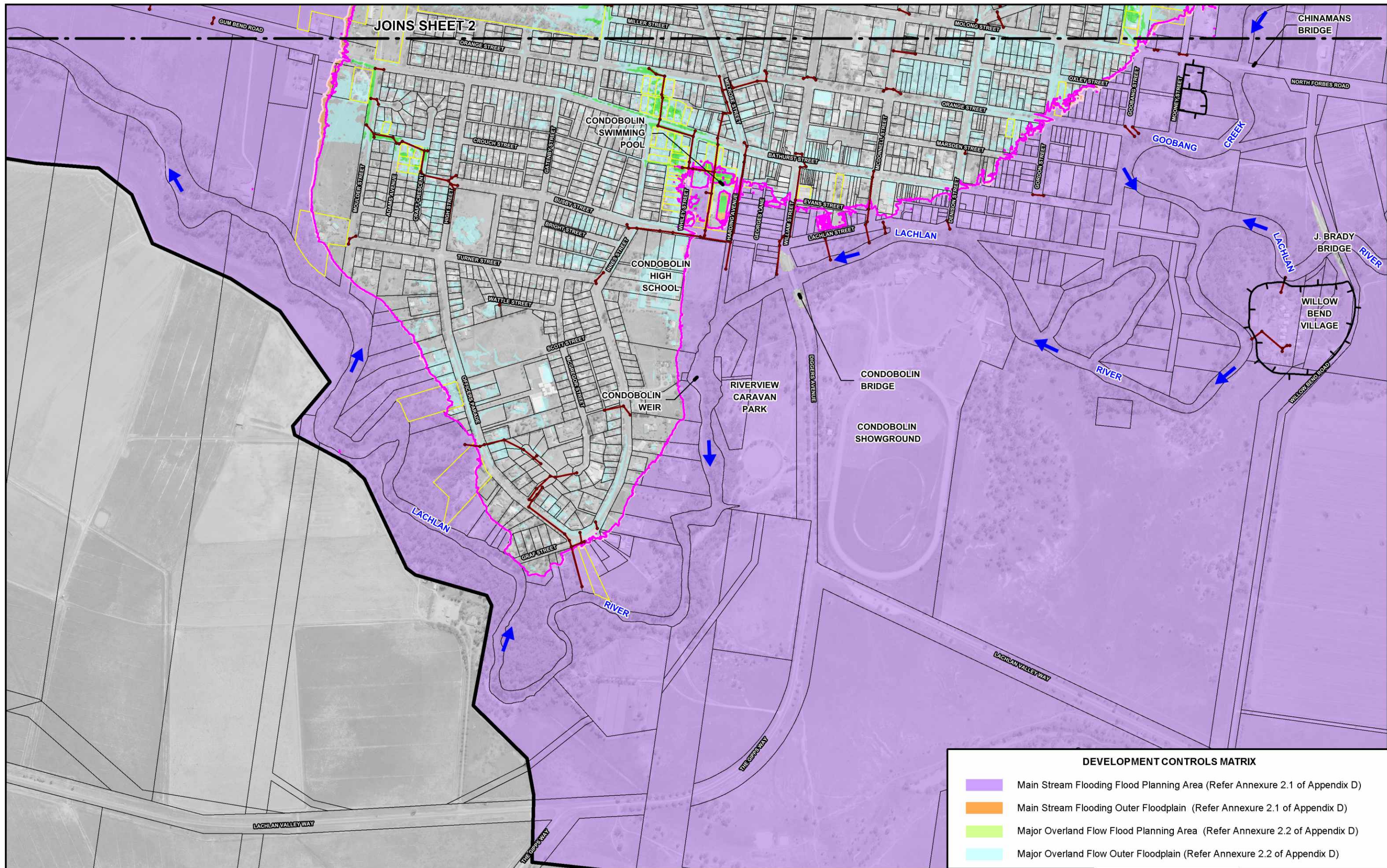
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure D1.1
(Sheet 3 of 3)

EXTRACT OF FLOOD PLANNING MAP

SHOWING EXTENT OF FLOOD PLANNING AREA AT CONDOBOLIN





DEVELOPMENT CONTROLS MATRIX

- Main Stream Flooding Flood Planning Area (Refer Annexure 2.1 of Appendix D)
- Main Stream Flooding Outer Floodplain (Refer Annexure 2.1 of Appendix D)
- Major Overland Flow Flood Planning Area (Refer Annexure 2.2 of Appendix D)
- Major Overland Flow Outer Floodplain (Refer Annexure 2.2 of Appendix D)

LEGEND

- Modelled Stormwater Network
- Limit of Flood Mapping
- Ring Levee
- Major Overland Flow Affected Properties (1% AEP)
- Northern Limit of Main Stream Flooding Outer Floodplain
- Northern Limit of Main Stream Flooding Flood Planning Area

LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure D1.2
(Sheet 3 of 3)

CONDOBOLIN DEVELOPMENT CONTROLS MATRIX MAP

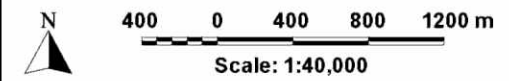
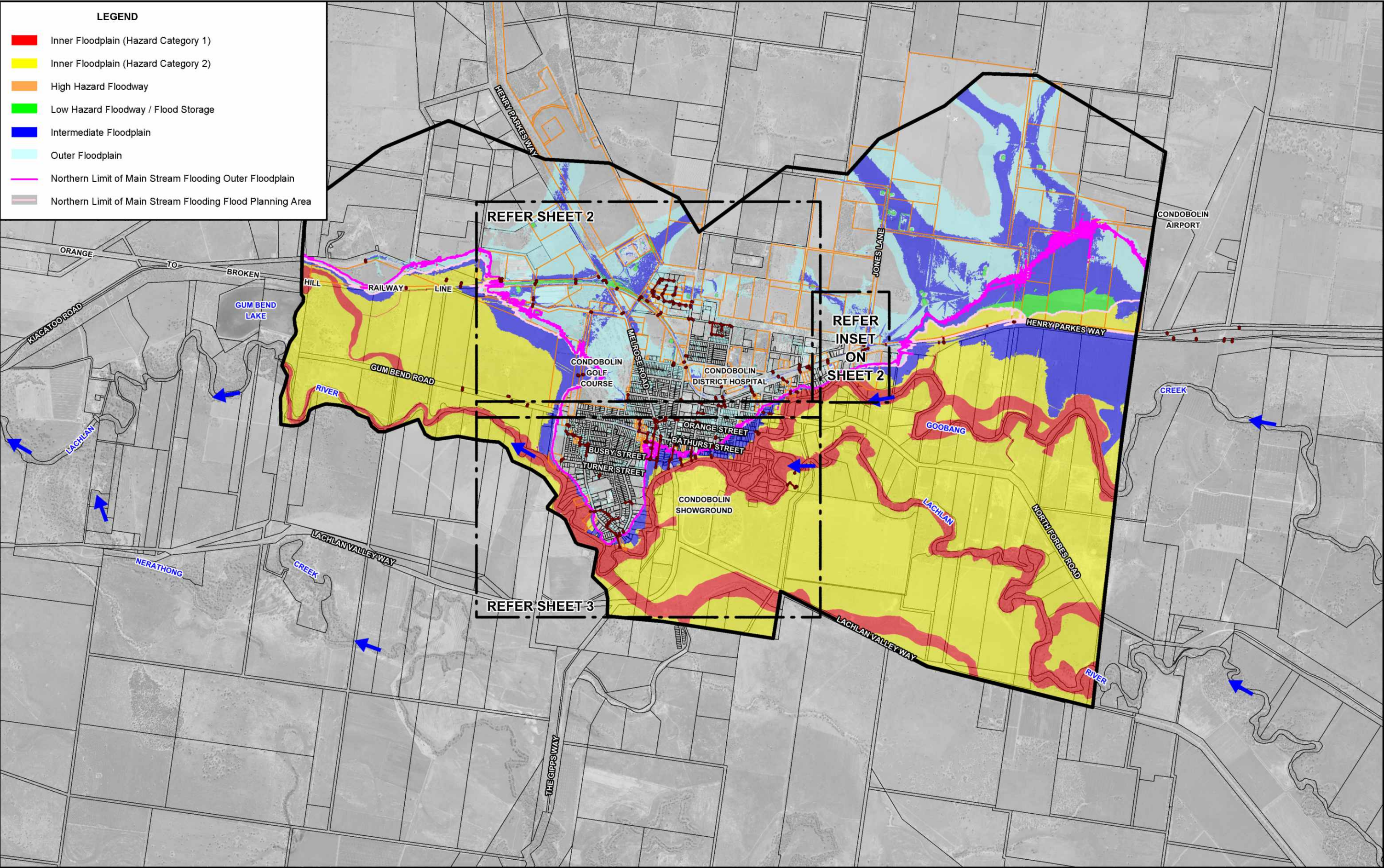
100 0 100 200 300 m
Scale: 1:10,000

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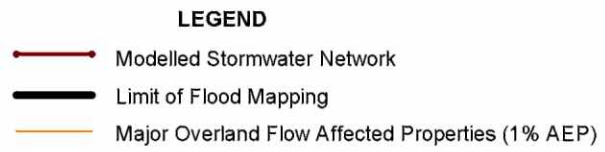
NOTE:

The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

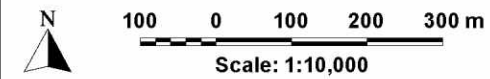
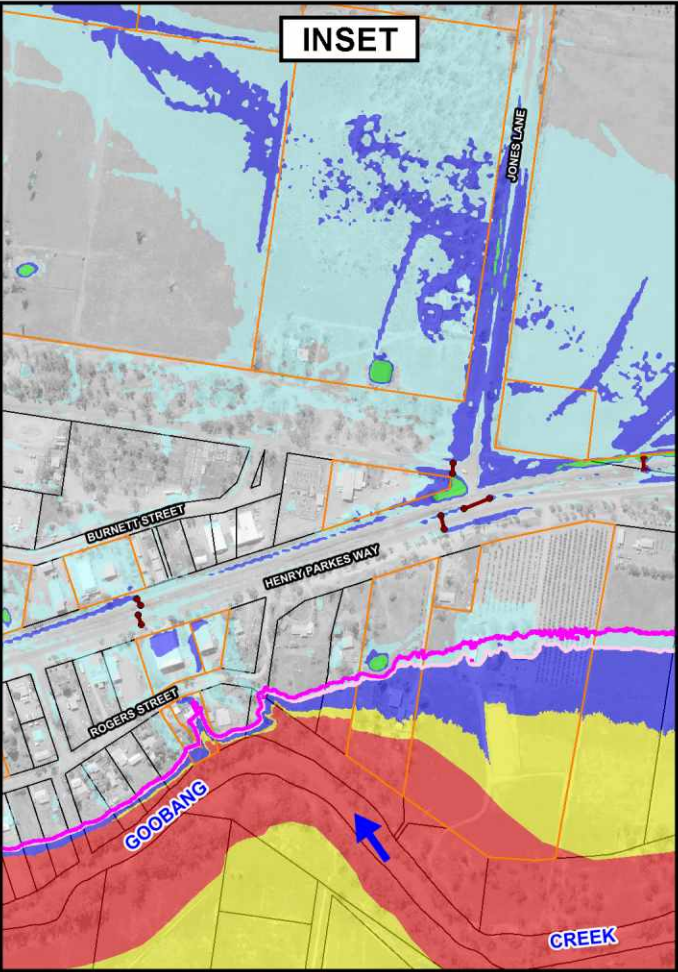
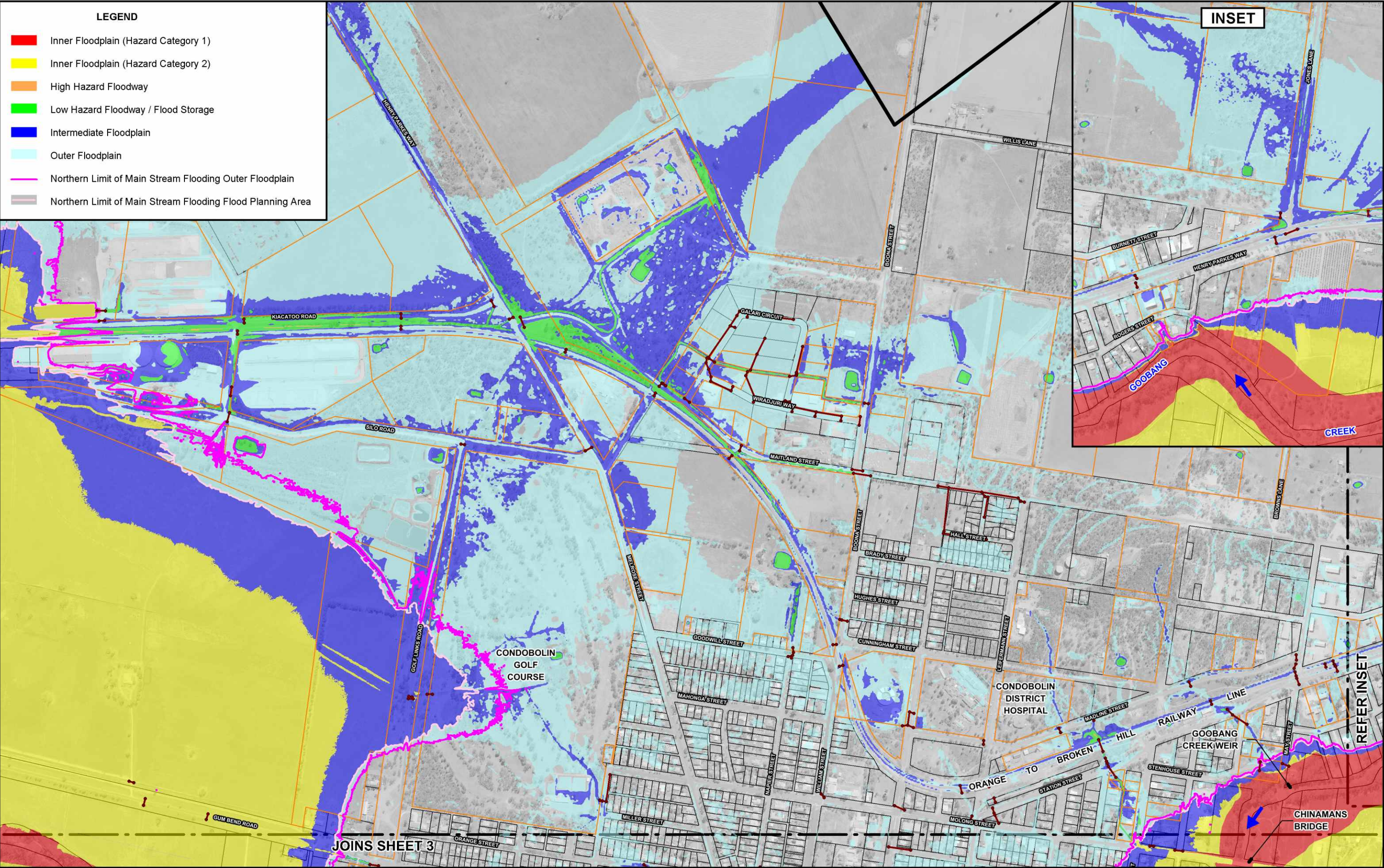
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.



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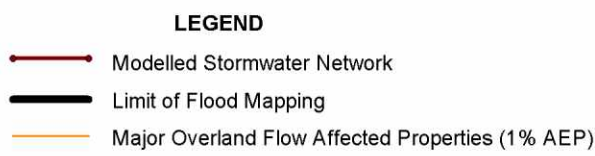


LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

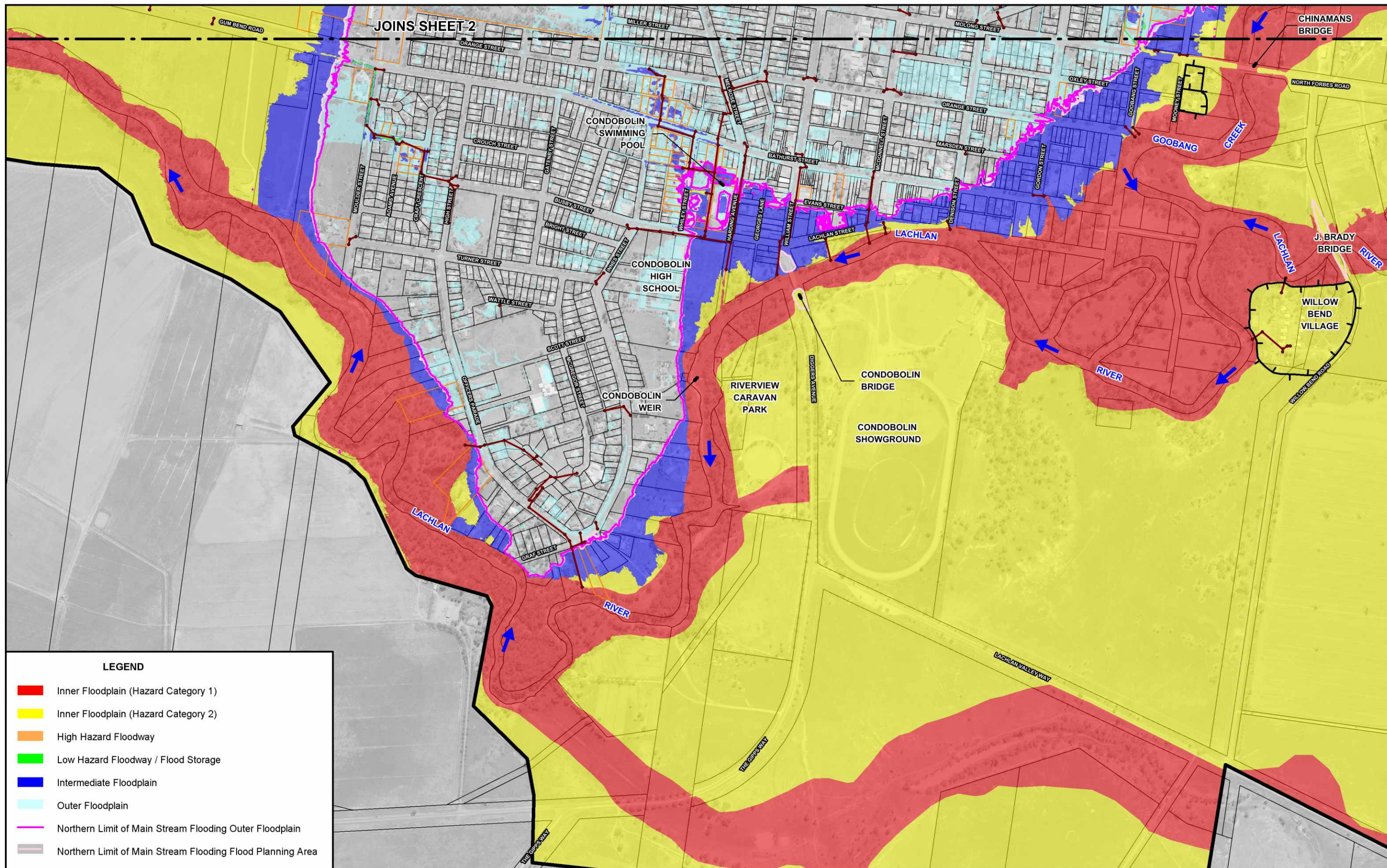


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**LACHLAN RIVER (CONDOBOLIN)
FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN**



LEGEND

- Inner Floodplain (Hazard Category 1)
- Inner Floodplain (Hazard Category 2)
- High Hazard Floodway
- Low Hazard Floodway / Flood Storage
- Intermediate Floodplain
- Outer Floodplain
- Northern Limit of Main Stream Flooding Outer Floodplain
- Northern Limit of Main Stream Flooding Flood Planning Area

LEGEND

- Modelled Stormwater Network
- Limit of Flood Mapping
- Ring Levee
- Major Overland Flow Affected Properties (1% AEP)



100 0 100 200 300 m
Scale: 1:10,000

NOTE:

The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 4 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

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LACHLAN RIVER (CONDOBOLIN) FLOODPLAIN RISK MANAGEMENT STUDY AND DRAFT PLAN

Figure D1.3
(Sheet 3 of 3)

CONDOBOLIN FLOOD HAZARD MAP