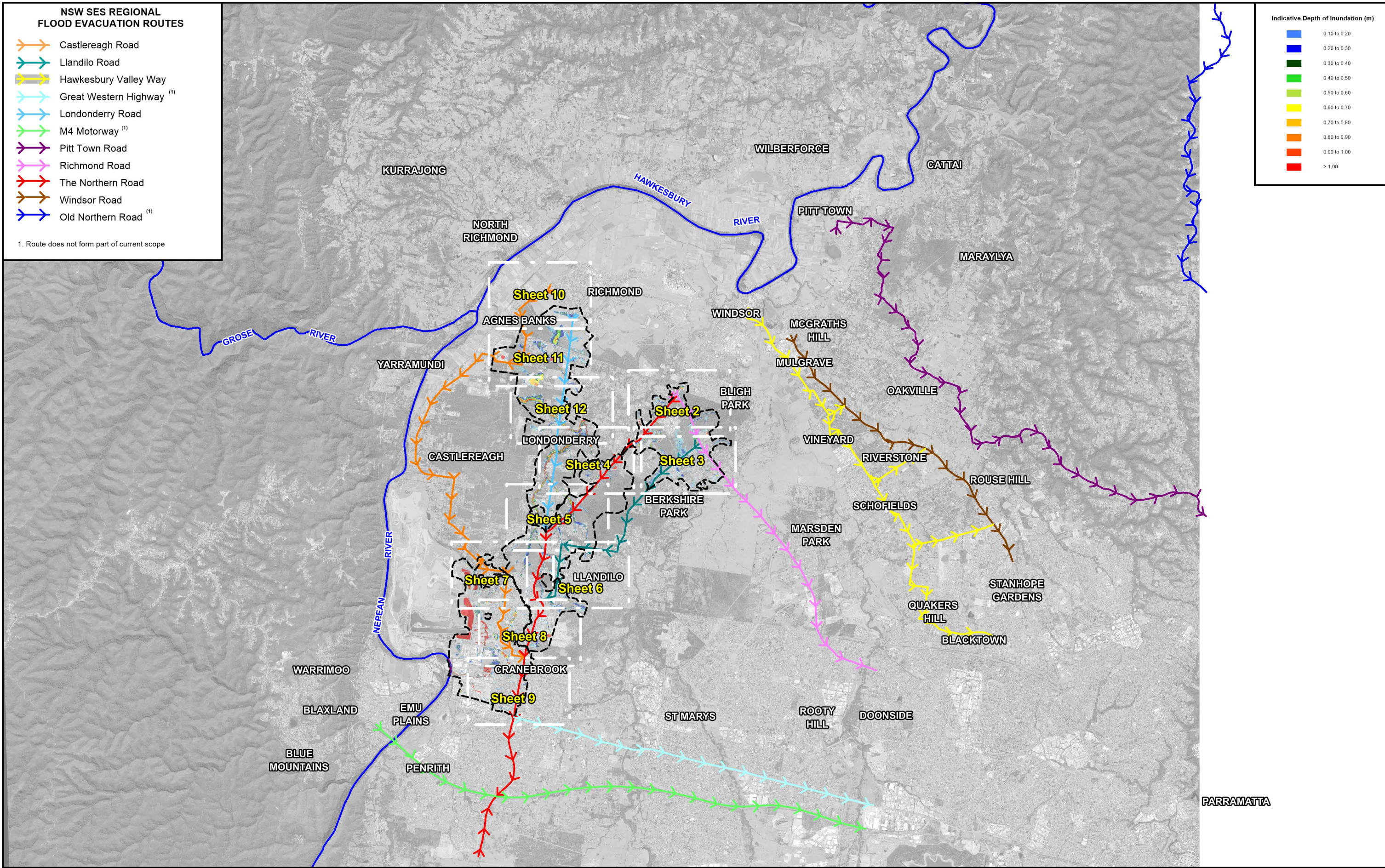
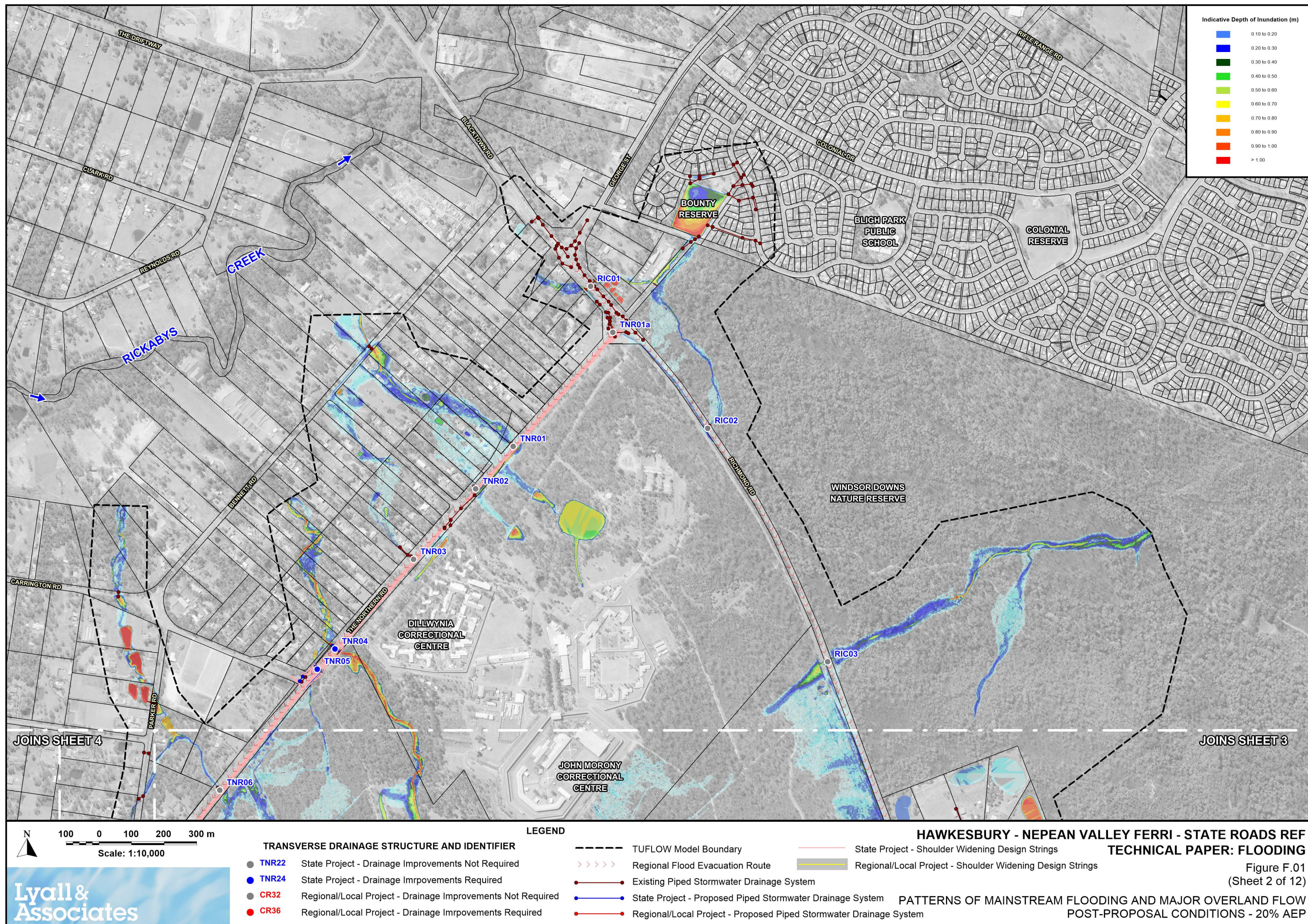


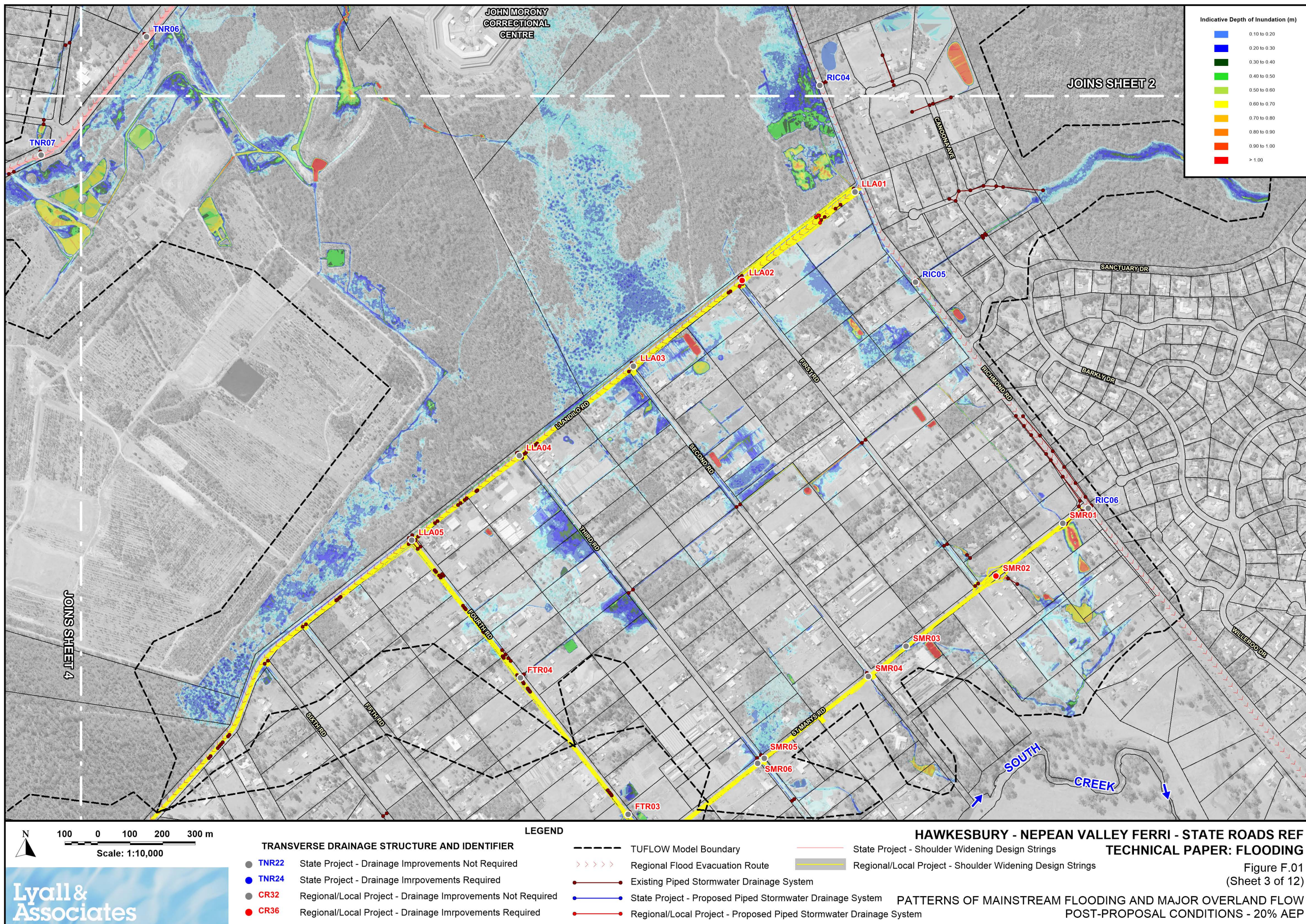
ANNEXURE F
FIGURES SHOWING FIGURES SHOWING PATTERNS OF MAINSTREAM
FLOODING AND MAJOR OVERLAND FLOW UNDER POST-PROPOSAL
CONDITIONS FOR STORMS WITH AEPS OF 20%, 5% AND 0.05%

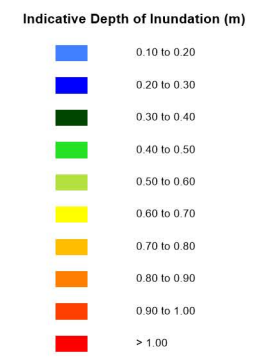
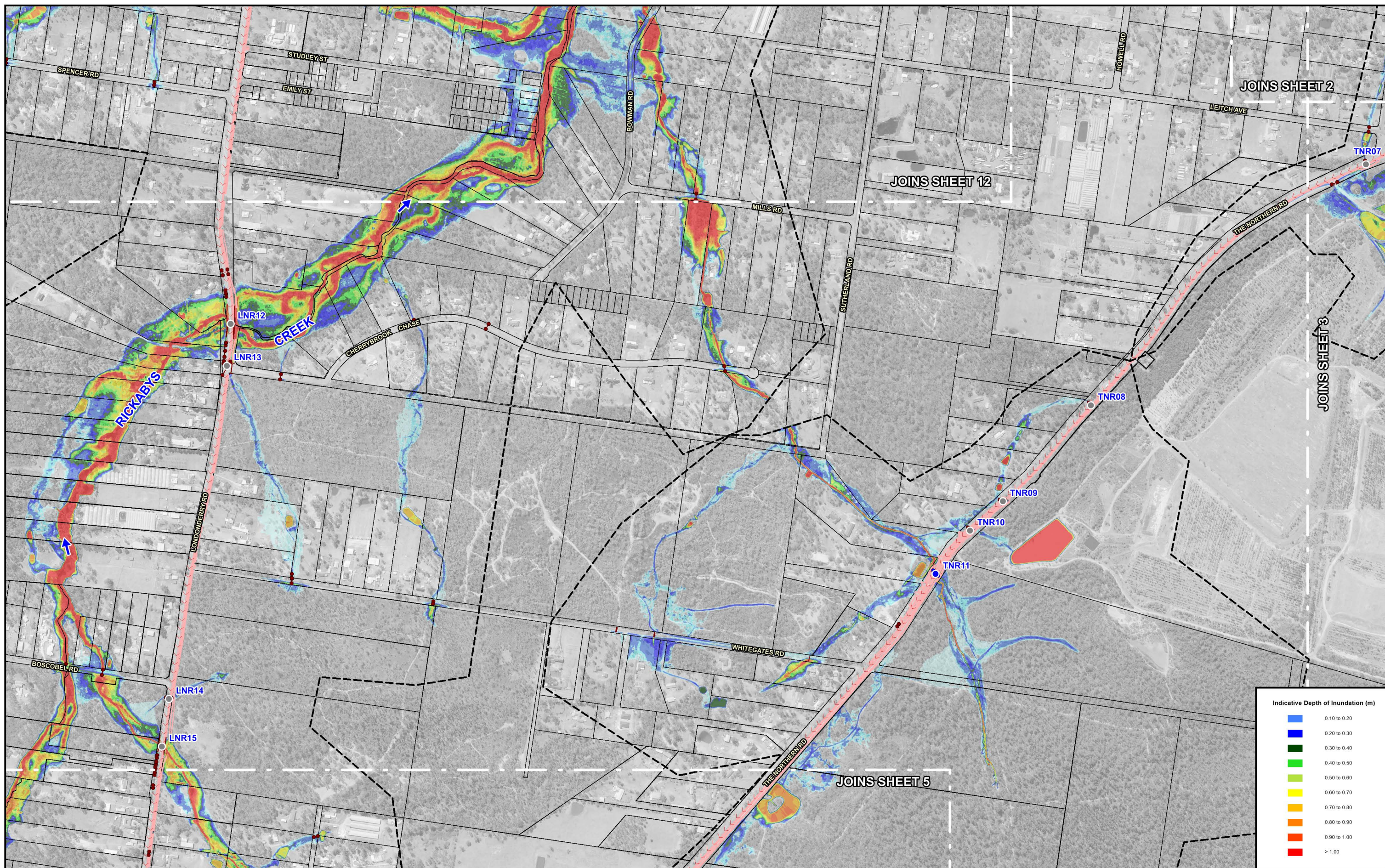
LIST OF ANNEXURE F FIGURES

- F.01 Patterns of mainstream flooding and major overland flow – Post-proposal conditions – 20% AEP (12 sheets)
- F.02 Patterns of mainstream flooding and major overland flow – Post-proposal conditions – 5% AEP (12 sheets)
- F.03 Patterns of mainstream flooding and major overland flow – Post-proposal conditions – 0.05% AEP (12 sheets)









N

100 0 100 200 300 m

Scale: 1:10,000

Lyll & Associates

TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

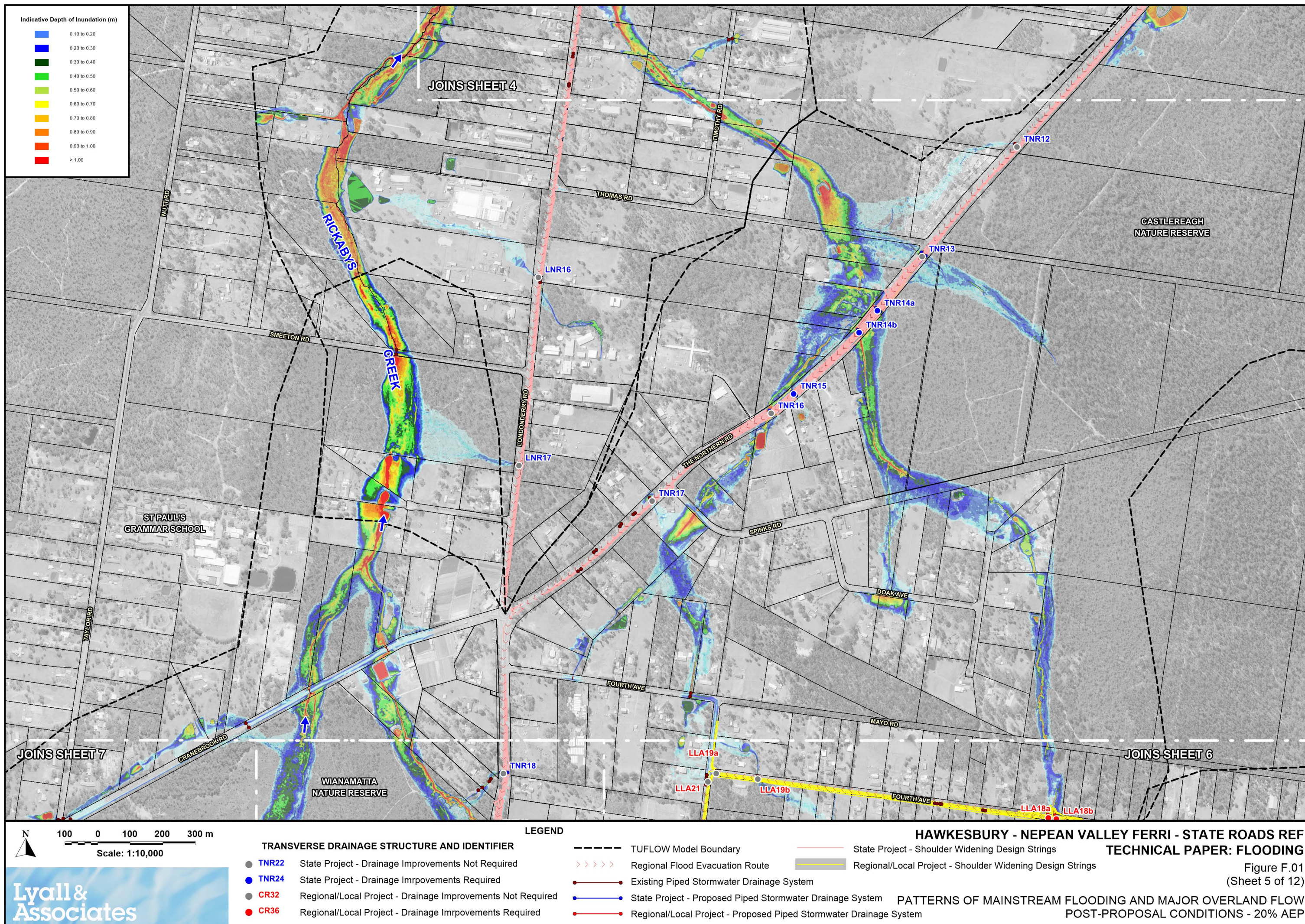
-----	TUFLOW Model Boundary	-----	State Project - Shoulder Widening Design Strings
>>>>	Regional Flood Evacuation Route	-----	Regional/Local Project - Shoulder Widening Design Strings
●●●●	Existing Piped Stormwater Drainage System		
●●●●	State Project - Proposed Piped Stormwater Drainage System		
●●●●	Regional/Local Project - Proposed Piped Stormwater Drainage System		

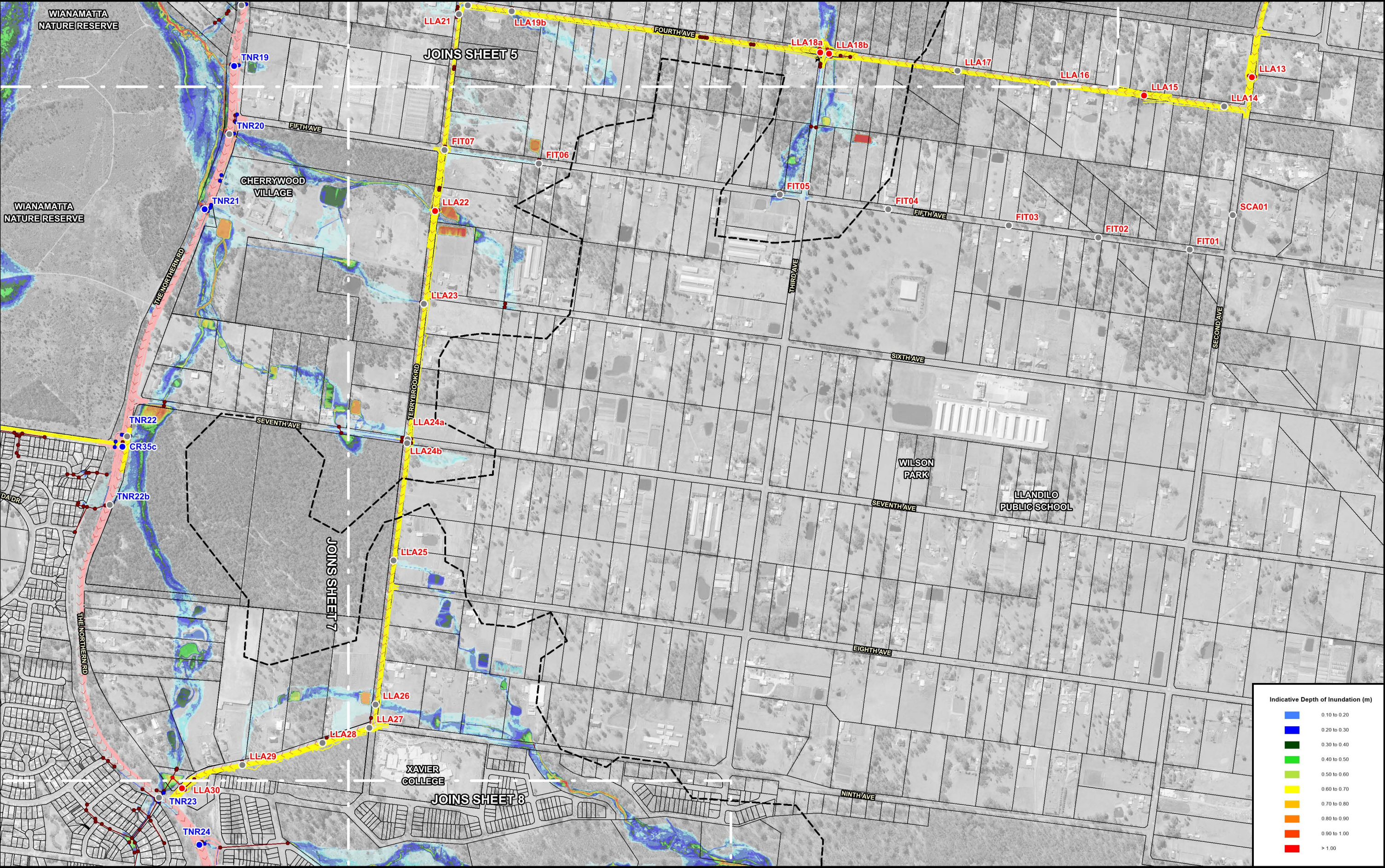
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

TECHNICAL PAPER: FLOODING

Figure F.01
(Sheet 4 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW
POST-PROPOSAL CONDITIONS - 20% AEP





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100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

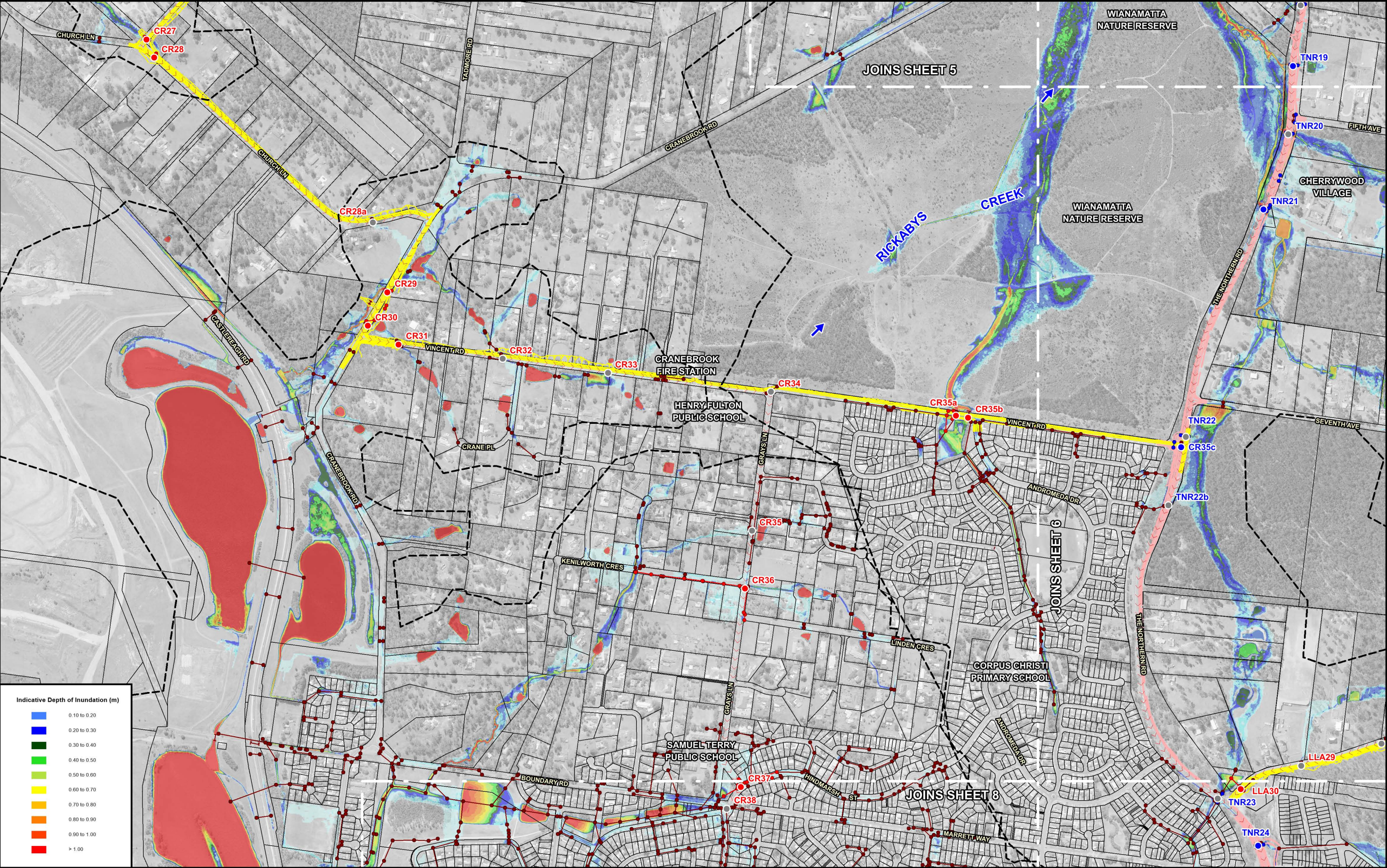
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>>>>	Regional Flood Evacuation Route	---	Regional/Local Project - Shoulder Widening Design Strings
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---	State Project - Proposed Piped Stormwater Drainage System	---	Regional/Local Project - Proposed Piped Stormwater Drainage System

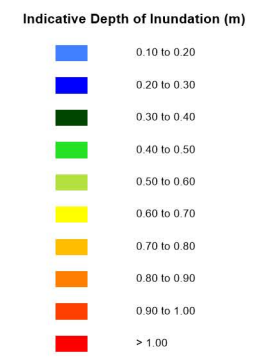
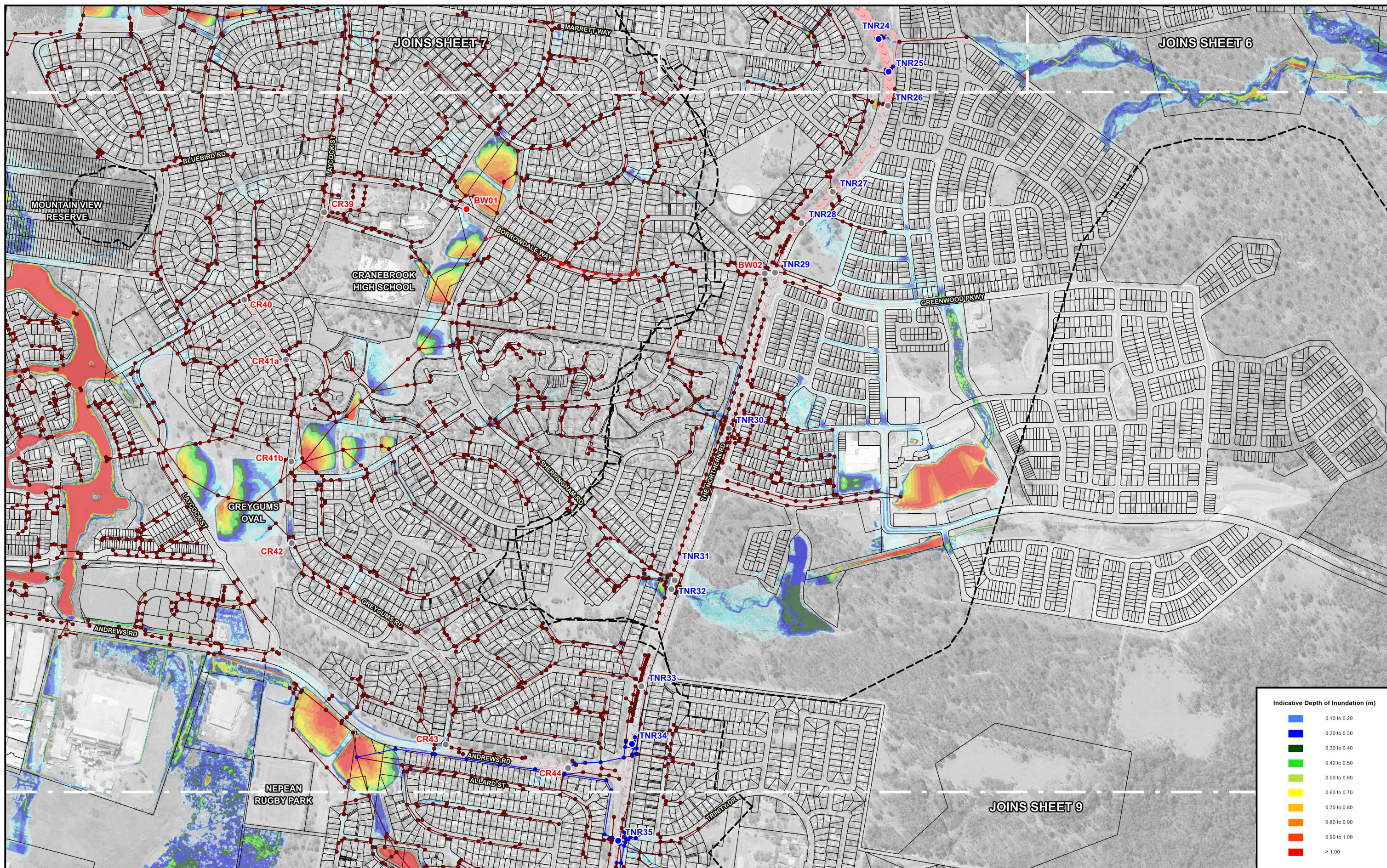
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

TECHNICAL PAPER: FLOODING

Figure F.01
(Sheet 6 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW POST-PROPOSAL CONDITIONS - 20% AEP





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100 0 100 200 300 m

Scale: 1:10,000

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LEGEND

<p>● TNR22 State Project - Drainage Improvements Not Required</p> <p>● TNR24 State Project - Drainage Improvements Required</p> <p>● CR32 Regional/Local Project - Drainage Improvements Not Required</p> <p>● CR36 Regional/Local Project - Drainage Improvements Required</p>	<p>--- TUFLOW Model Boundary</p> <p>>>>> Regional Flood Evacuation Route</p> <p>--- Existing Piped Stormwater Drainage System</p> <p>--- State Project - Proposed Piped Stormwater Drainage System</p> <p>--- Regional/Local Project - Proposed Piped Stormwater Drainage System</p>
---	--

HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

State Project - Shoulder Widening Design Strings

Regional/Local Project - Shoulder Widening Design Strings

TECHNICAL PAPER: FLOODING

Figure F.01
(Sheet 8 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW

POST-PROPOSAL CONDITIONS - 20% AEP



HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF
Shoulder Widening Design Strings TECHNICAL PAPER: FLOODING

Figure F.01
(Sheet 9 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW
System POST-PROPOSAL CONDITIONS - 20% AEP



100 0 100 200 300 m

Scale: 1:10,000

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

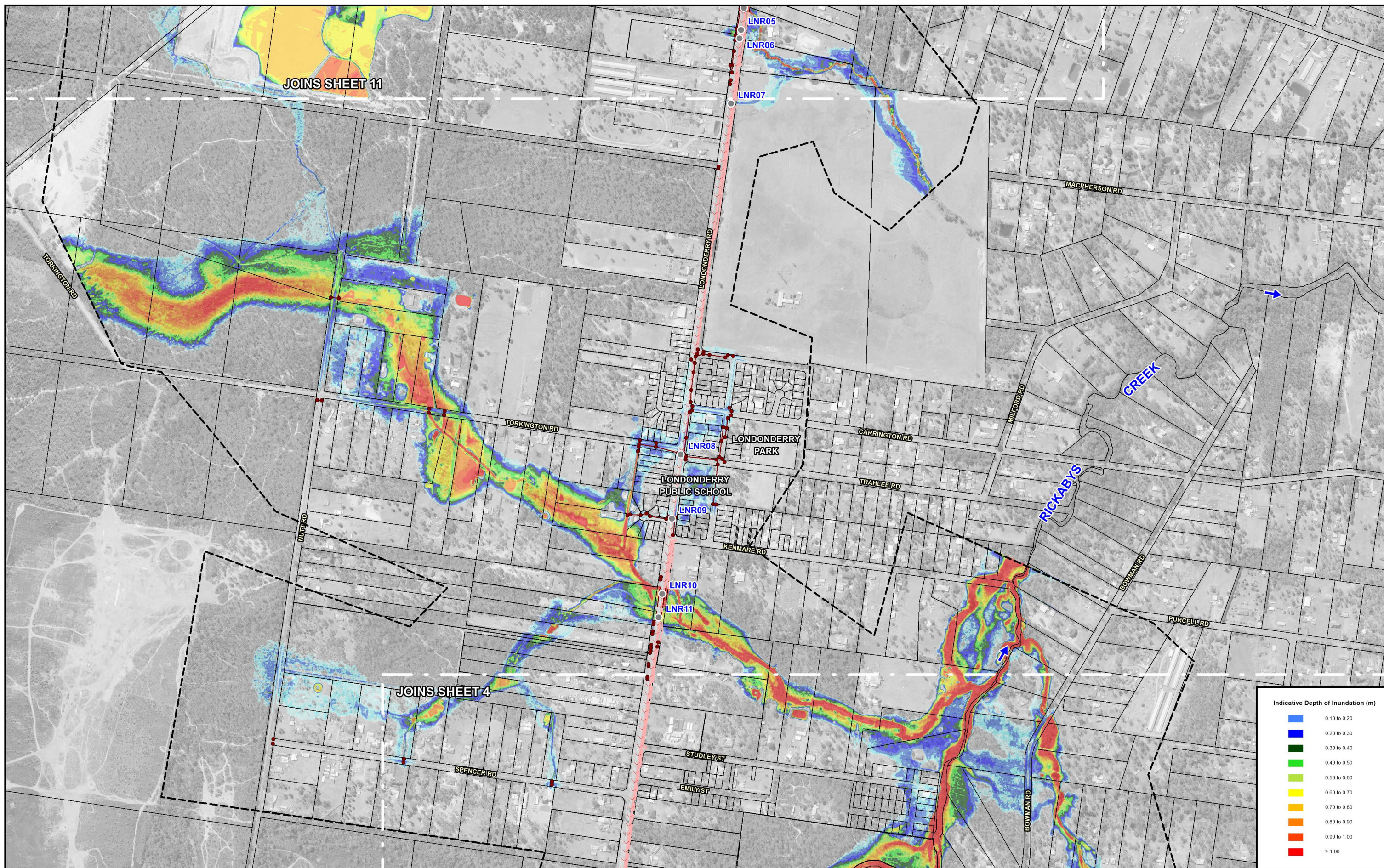
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>>>>	Regional Flood Evacuation Route	---	Regional/Local Project - Shoulder Widening Design Strings
—●—	Existing Piped Stormwater Drainage System		
—●—	State Project - Proposed Piped Stormwater Drainage System		
—●—	Regional/Local Project - Proposed Piped Stormwater Drainage System		

HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

TECHNICAL PAPER: FLOODING

Figure F.01
(Sheet 10 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW POST-PROPOSAL CONDITIONS - 20% AEP

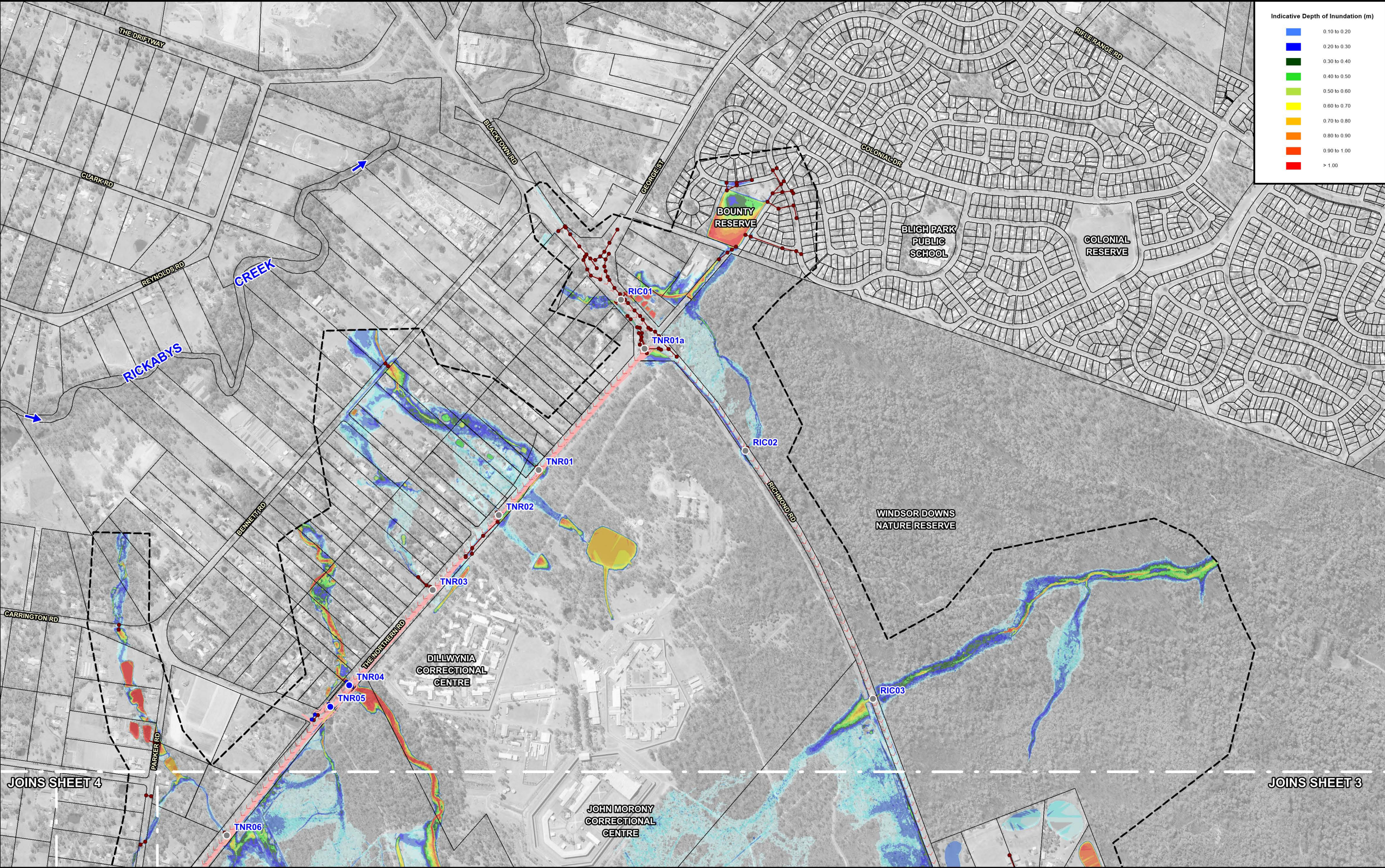


Scale: 1:10,000

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER		LEGEND	
<ul style="list-style-type: none"> ● TNR22 State Project - Drainage Improvements Not Required ● TNR24 State Project - Drainage Improvements Required ● CR32 Regional/Local Project - Drainage Improvements Not Required ● CR36 Regional/Local Project - Drainage Improvements Required 	<ul style="list-style-type: none"> --- TUFLOW Model Boundary >>>> Regional Flood Evacuation Route — Existing Piped Stormwater Drainage System — State Project - Proposed Piped Stormwater Drainage System — Regional/Local Project - Proposed Piped Stormwater Drainage System 	<ul style="list-style-type: none"> — State Project - Shoulder Widening Design Strings — Regional/Local Project - Shoulder Widening Design Strings 	<p>HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF</p> <p>TECHNICAL PAPER: FLOODING</p> <p>Figure F.01 (Sheet 12 of 12)</p> <p>PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW POST-PROPOSAL CONDITIONS - 20% AEP</p>



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Scale: 1:10,000

100 0 100 200 300 m

TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

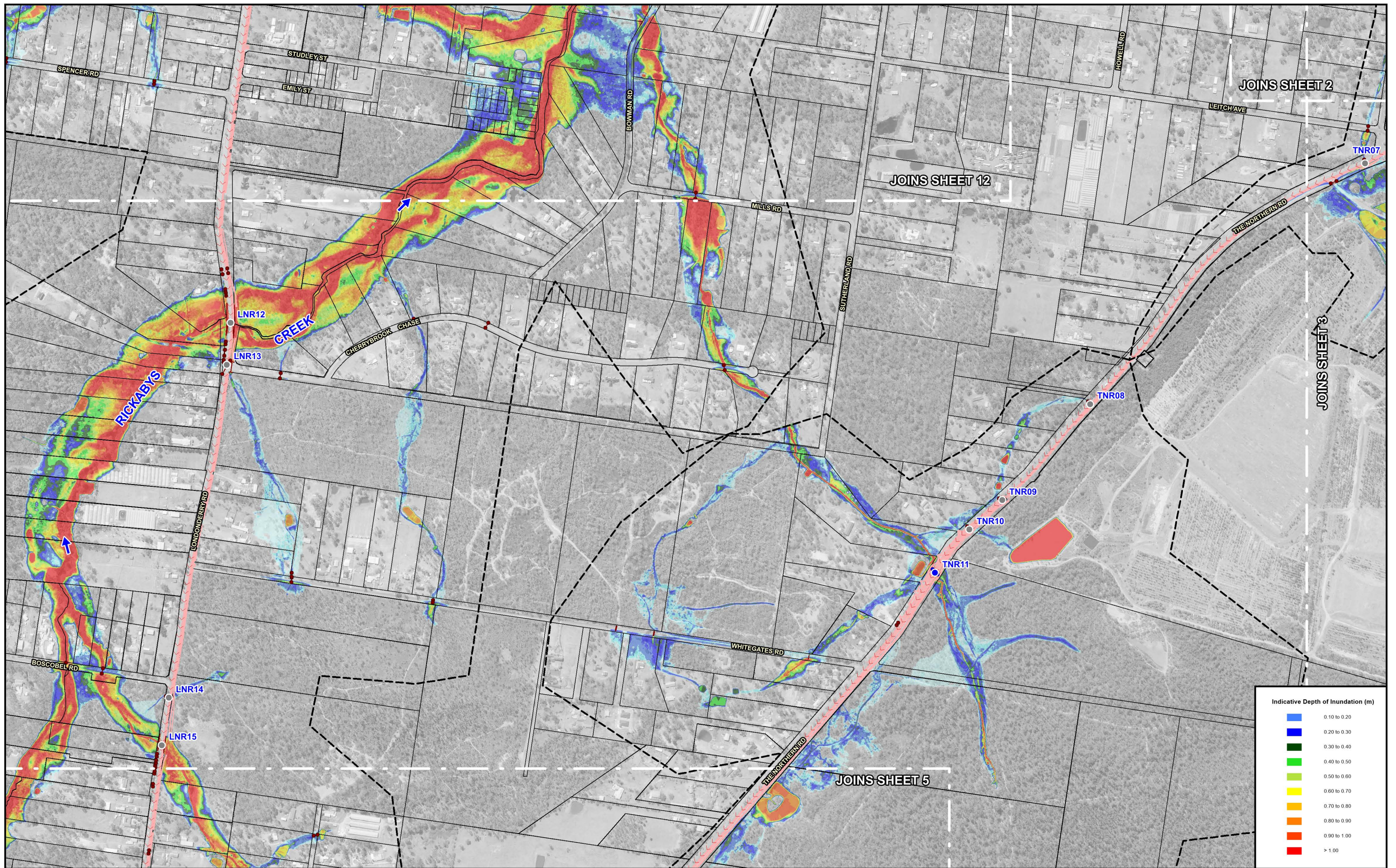
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>>>>	Regional Flood Evacuation Route	-----	Regional/Local Project - Shoulder Widening Design Strings
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●●●●	State Project - Proposed Piped Stormwater Drainage System		
●●●●	Regional/Local Project - Proposed Piped Stormwater Drainage System		

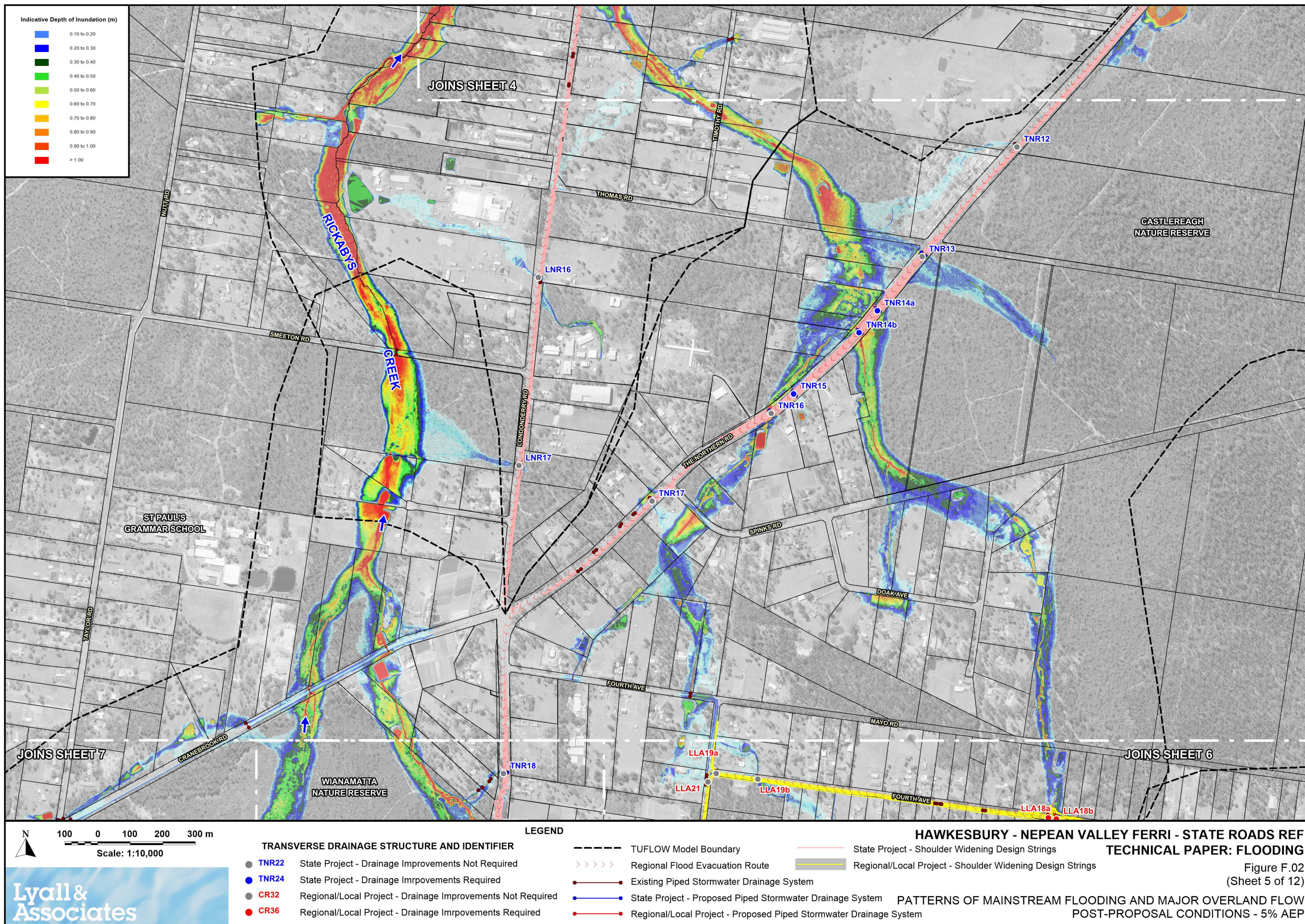
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

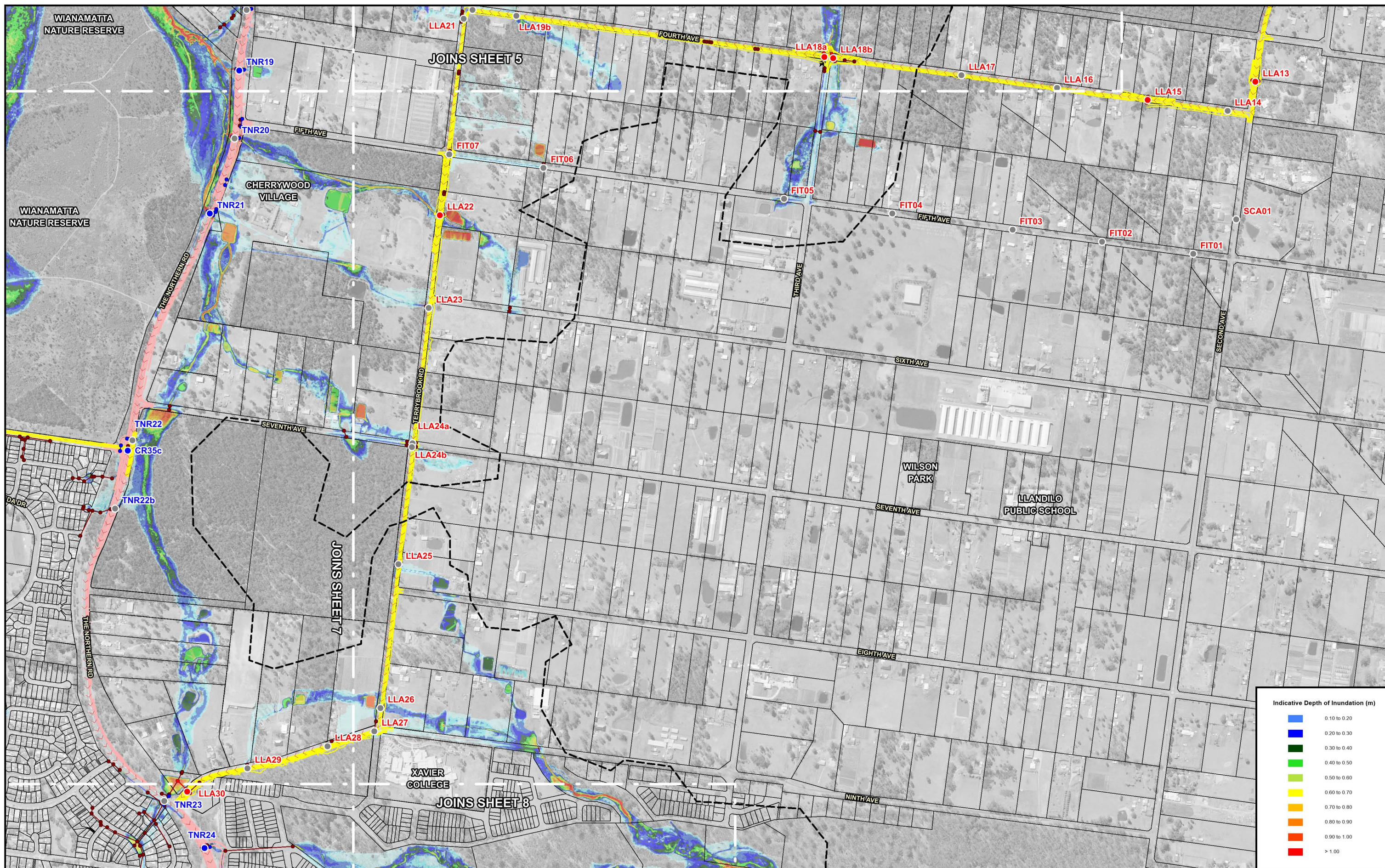
TECHNICAL PAPER: FLOODING

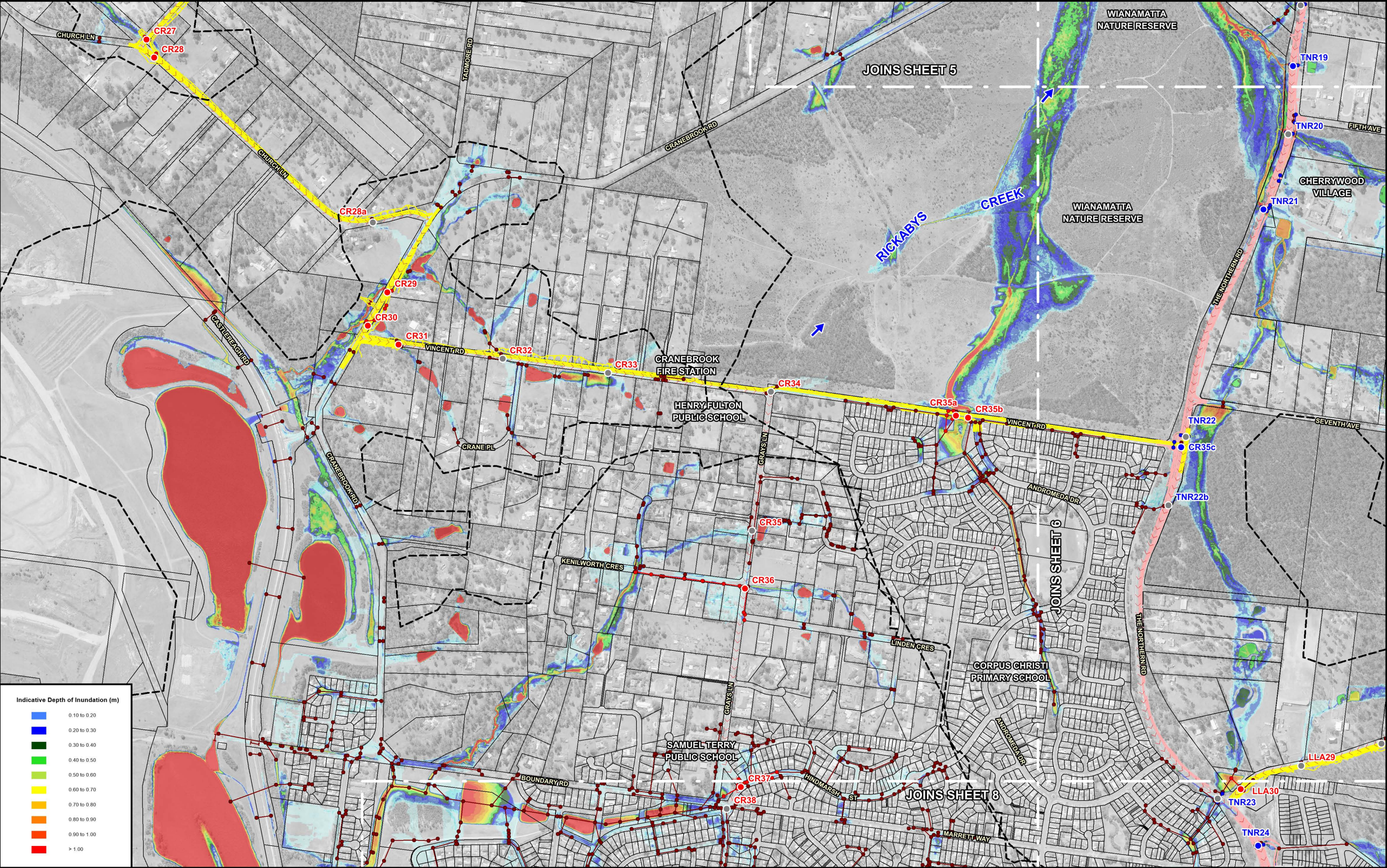
Figure F.02
(Sheet 2 of 12)

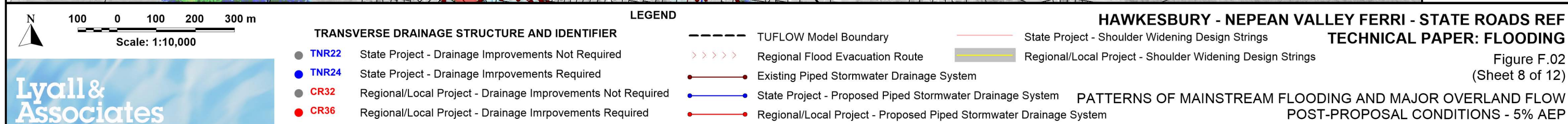
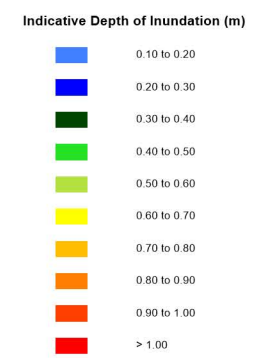
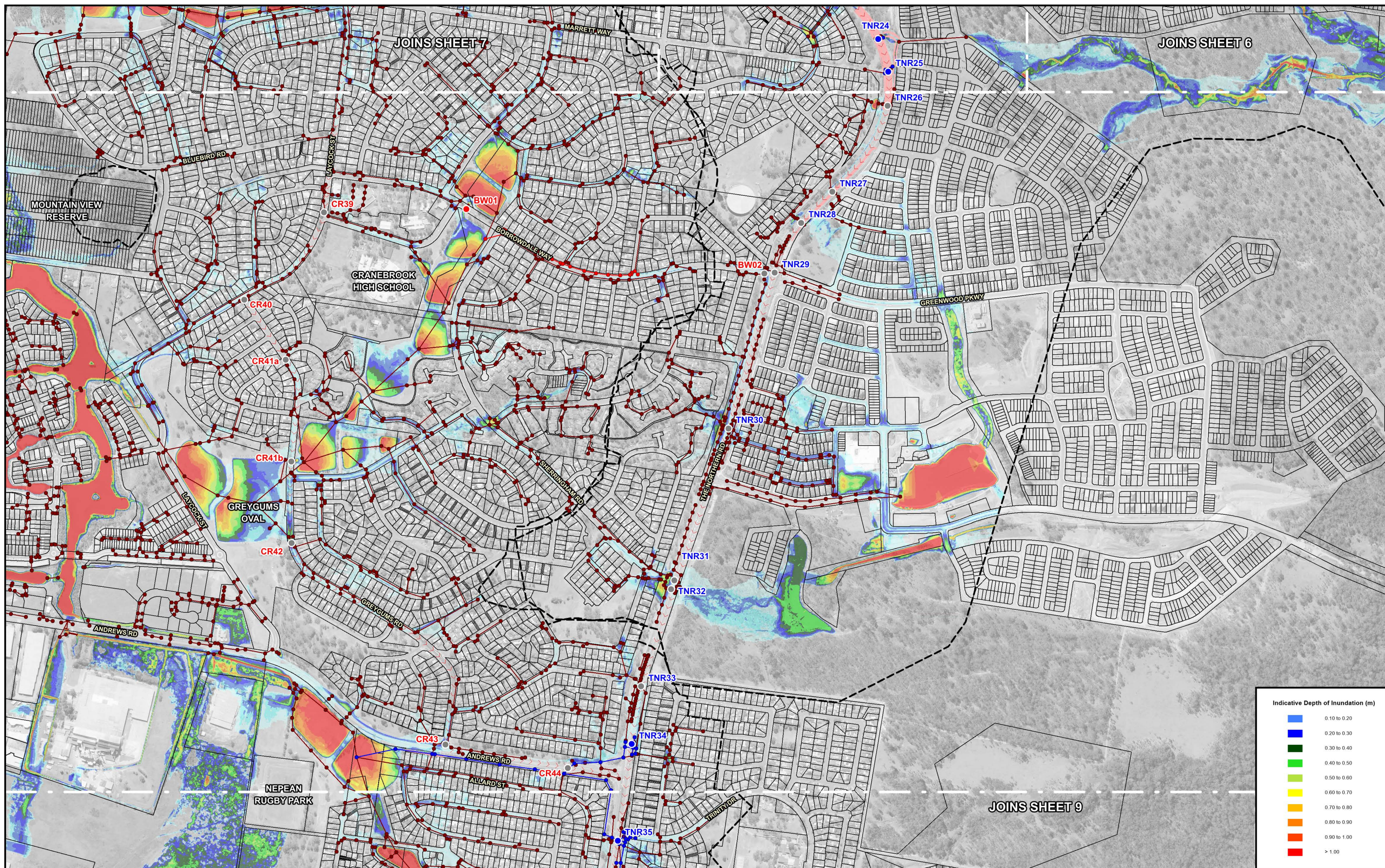
PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW
POST-PROPOSAL CONDITIONS - 5% AEP

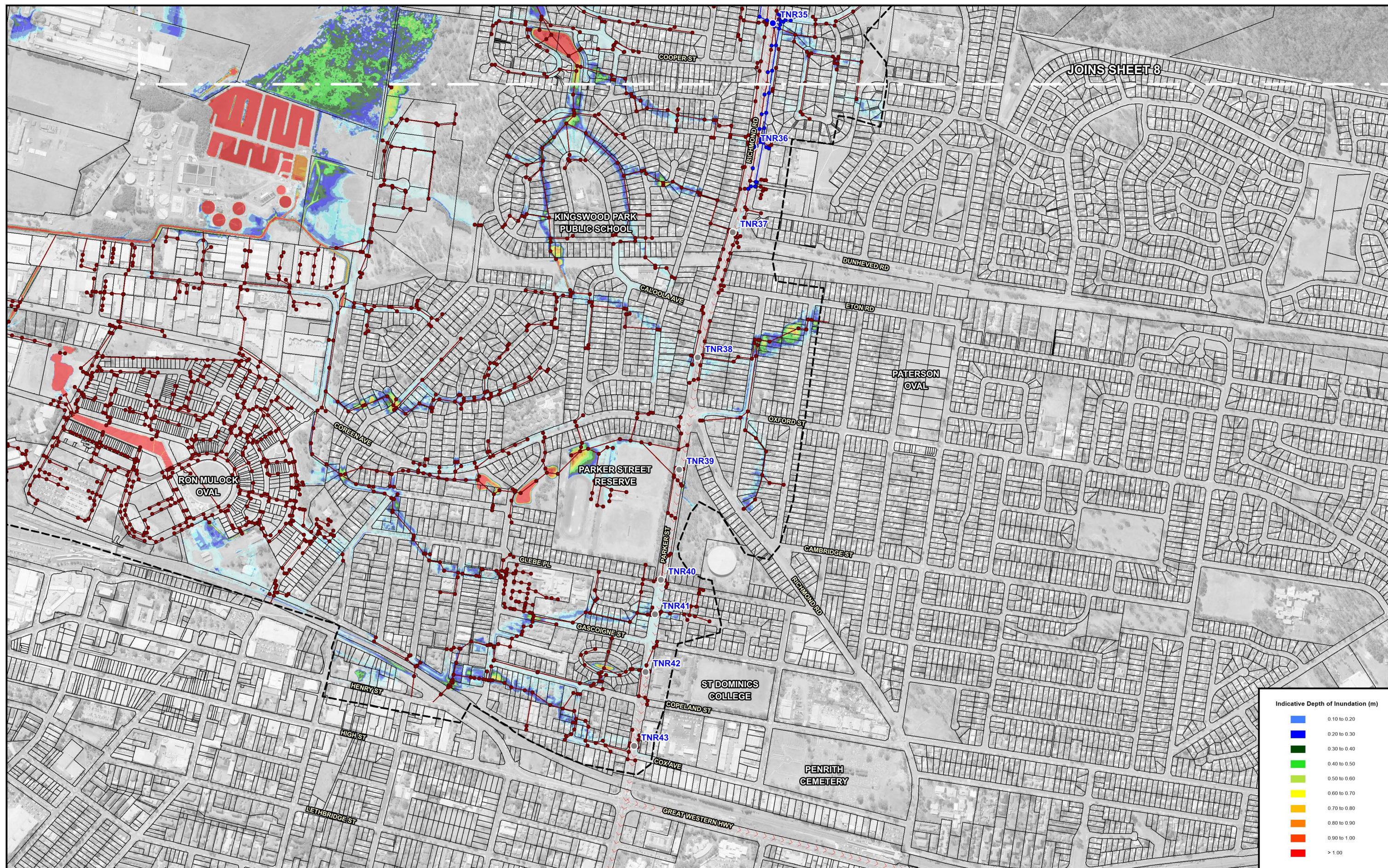


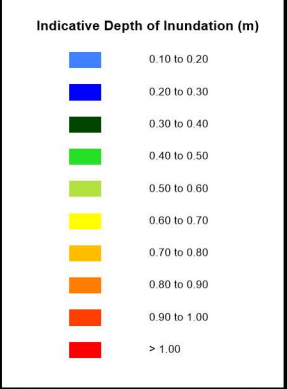












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Scale: 1:10,000

Lyall & Associates

TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

-----	TUFLOW Model Boundary
>>>>	Regional Flood Evacuation Route
—●—●—●	Existing Piped Stormwater Drainage System
—●—●—●	State Project - Proposed Piped Stormwater Drainage System
—●—●—●	Regional/Local Project - Proposed Piped Stormwater Drainage System
—	State Project - Shoulder Widening Design Strings
—	Regional/Local Project - Shoulder Widening Design Strings

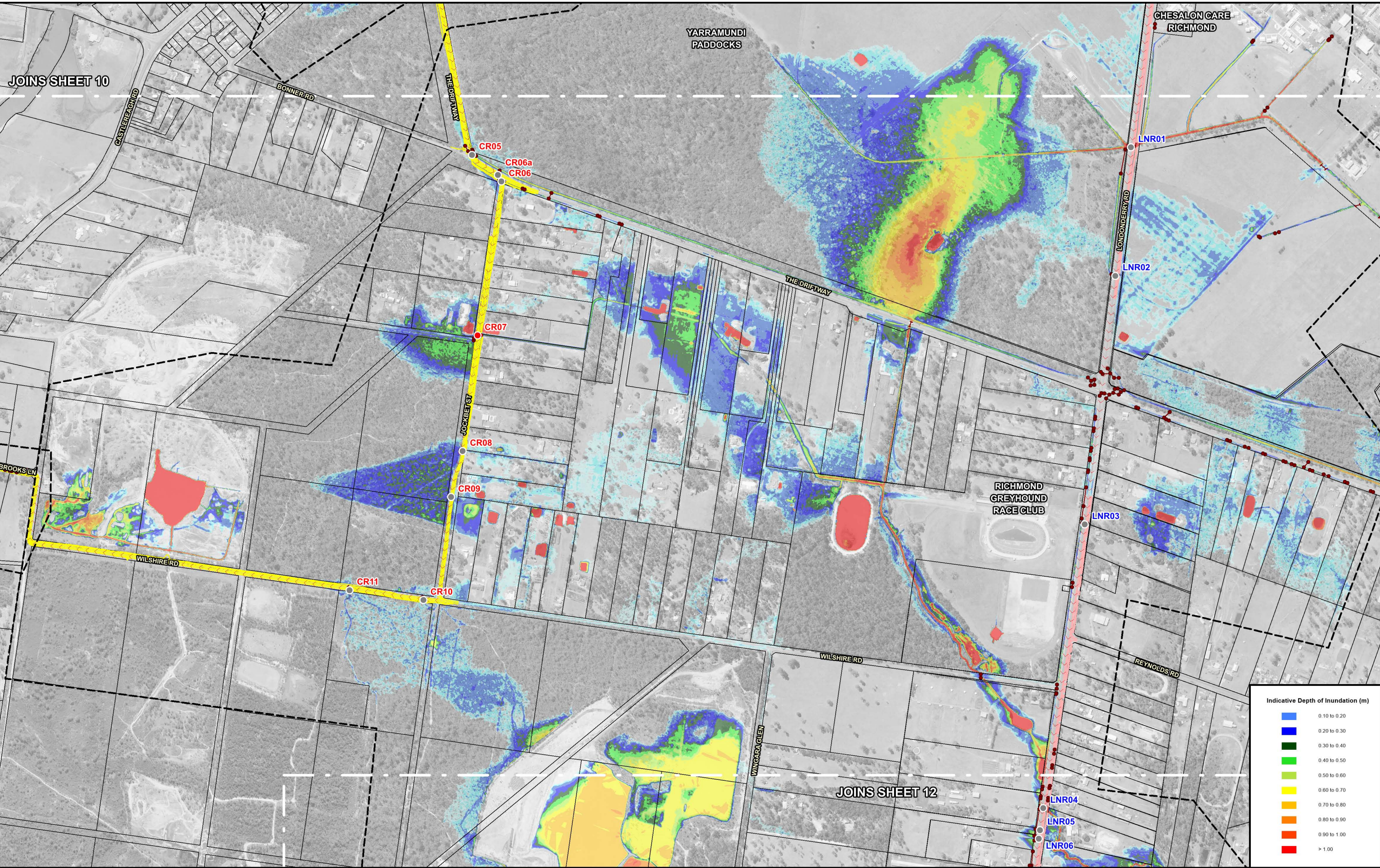
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TECHNICAL PAPER: FLOODING

Figure F.02
(Sheet 10 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW

POST-PROPOSAL CONDITIONS - 5% AEP



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100 0 100 200 300 m

Scale: 1:10,000

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

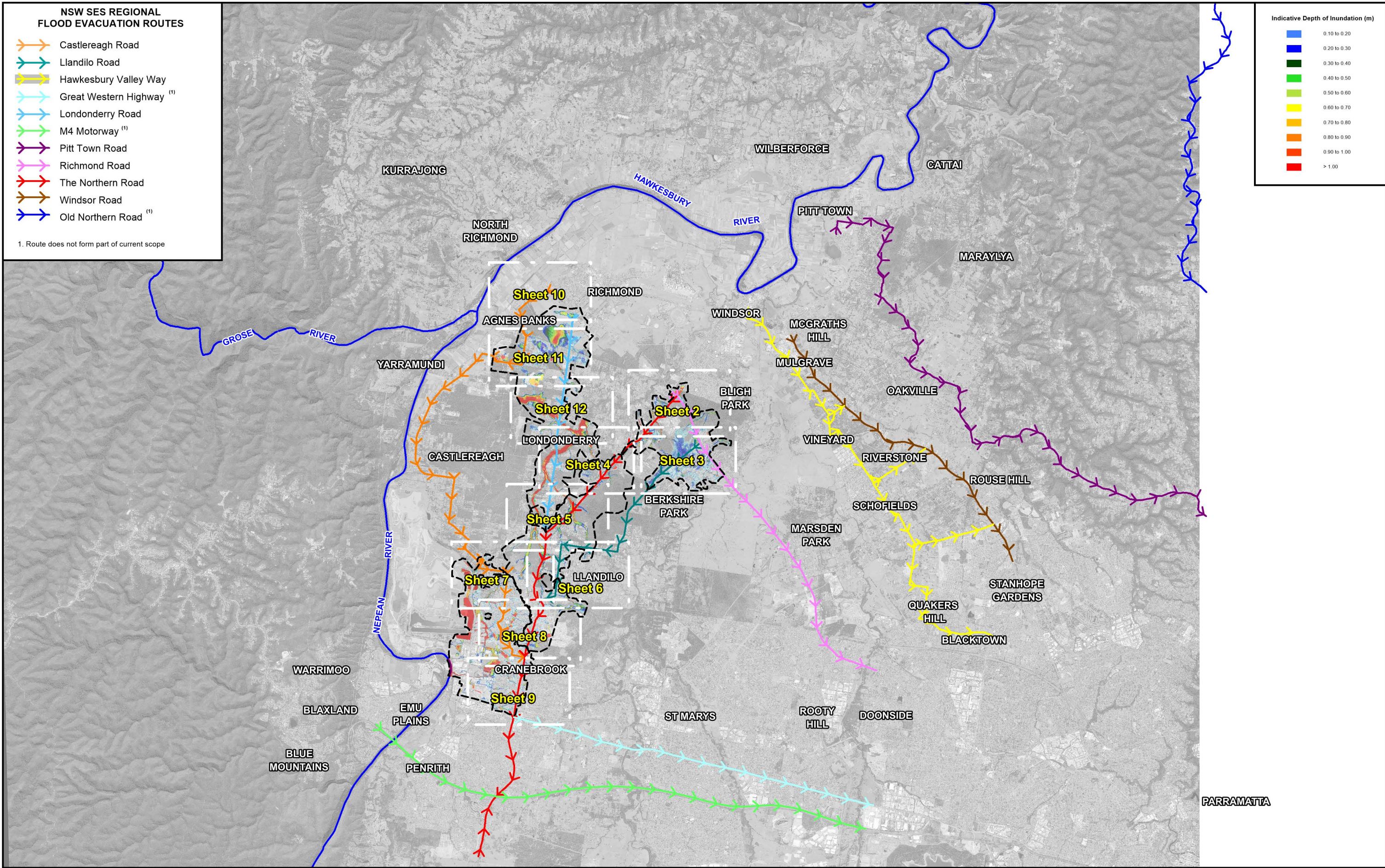
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>>>>	Regional Flood Evacuation Route	-----	Regional/Local Project - Shoulder Widening Design Strings
●●●●●	Existing Piped Stormwater Drainage System		
●●●●●	State Project - Proposed Piped Stormwater Drainage System		
●●●●●	Regional/Local Project - Proposed Piped Stormwater Drainage System		

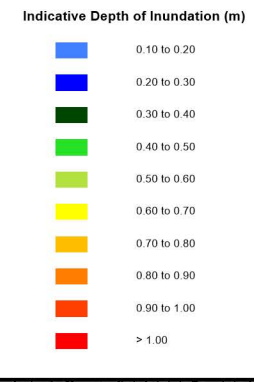
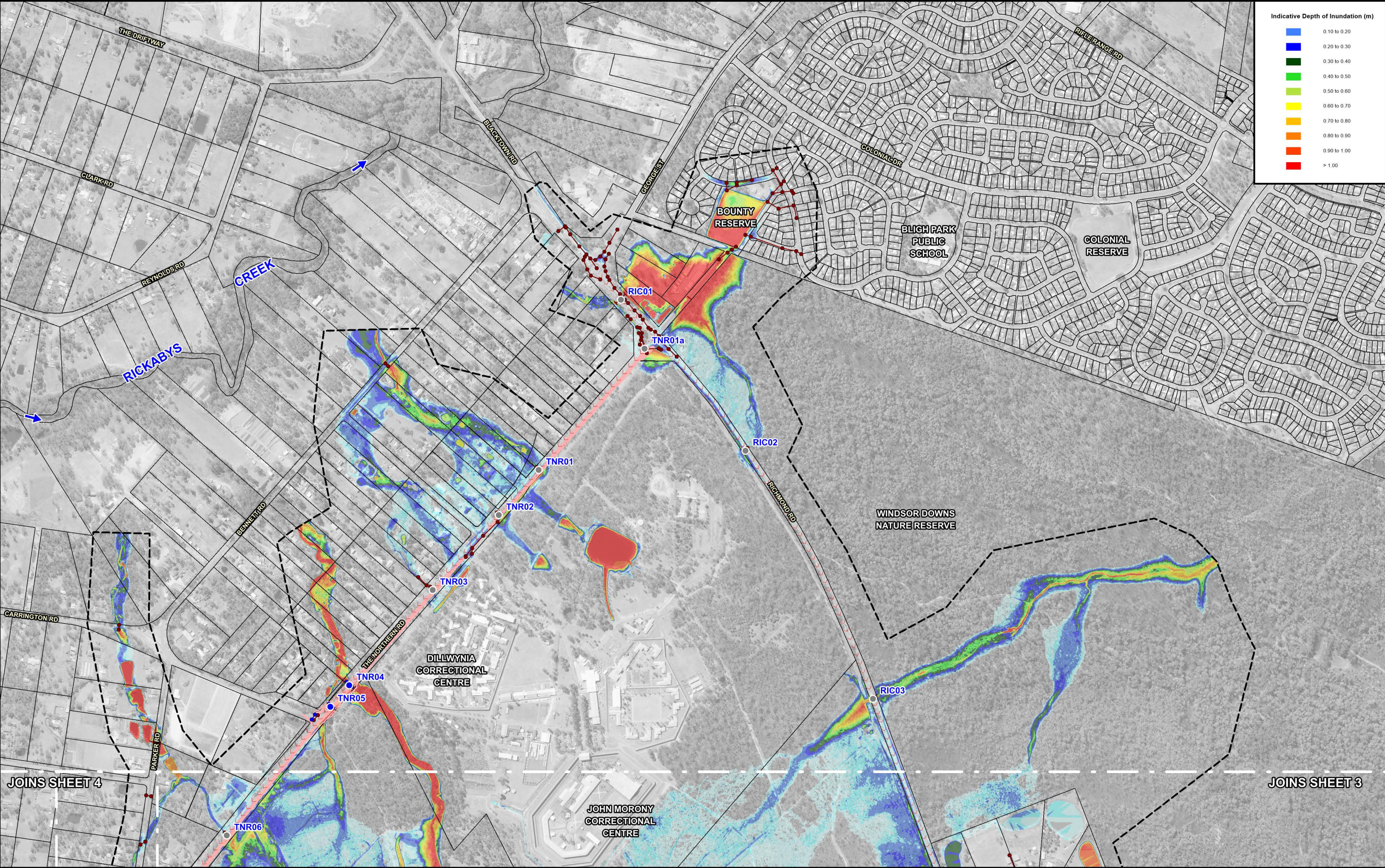
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TECHNICAL PAPER: FLOODING

Figure F.02
(Sheet 11 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW POST-PROPOSAL CONDITIONS - 5% AEP





N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

-----	TUFLOW Model Boundary	-----	State Project - Shoulder Widening Design Strings
>>>>	Regional Flood Evacuation Route	-----	Regional/Local Project - Shoulder Widening Design Strings
●●●●	Existing Piped Stormwater Drainage System		
●●●●	State Project - Proposed Piped Stormwater Drainage System		
●●●●	Regional/Local Project - Proposed Piped Stormwater Drainage System		

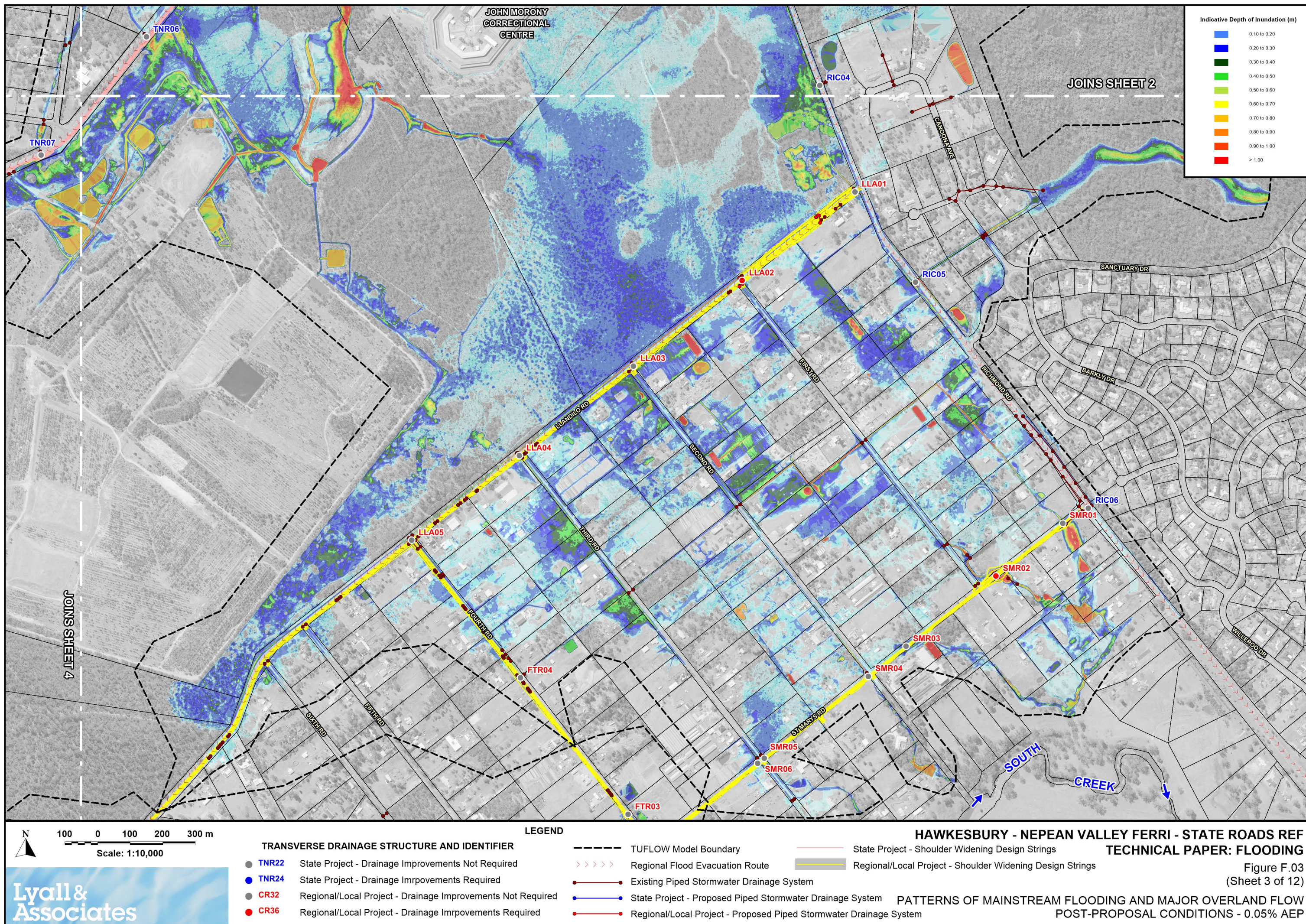
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

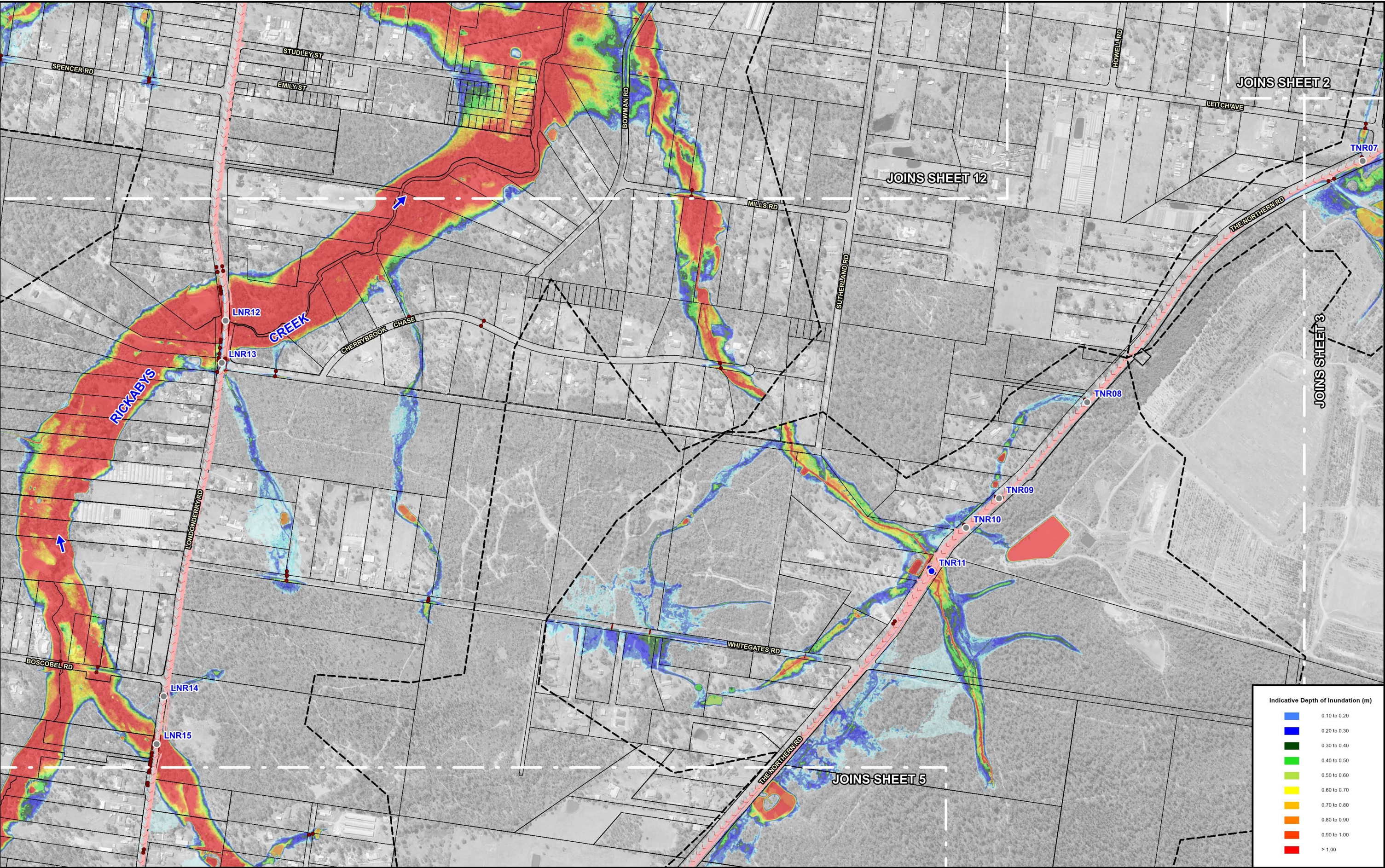
TECHNICAL PAPER: FLOODING

Figure F.03
(Sheet 2 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW

POST-PROPOSAL CONDITIONS - 0.05% AEP





Scale: 1:10,000

100 0 100 200 300 m

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

--- TUFLOW Model Boundary	--- State Project - Shoulder Widening Design Strings
>>>> Regional Flood Evacuation Route	--- Regional/Local Project - Shoulder Widening Design Strings
--- Existing Piped Stormwater Drainage System	
--- State Project - Proposed Piped Stormwater Drainage System	
--- Regional/Local Project - Proposed Piped Stormwater Drainage System	

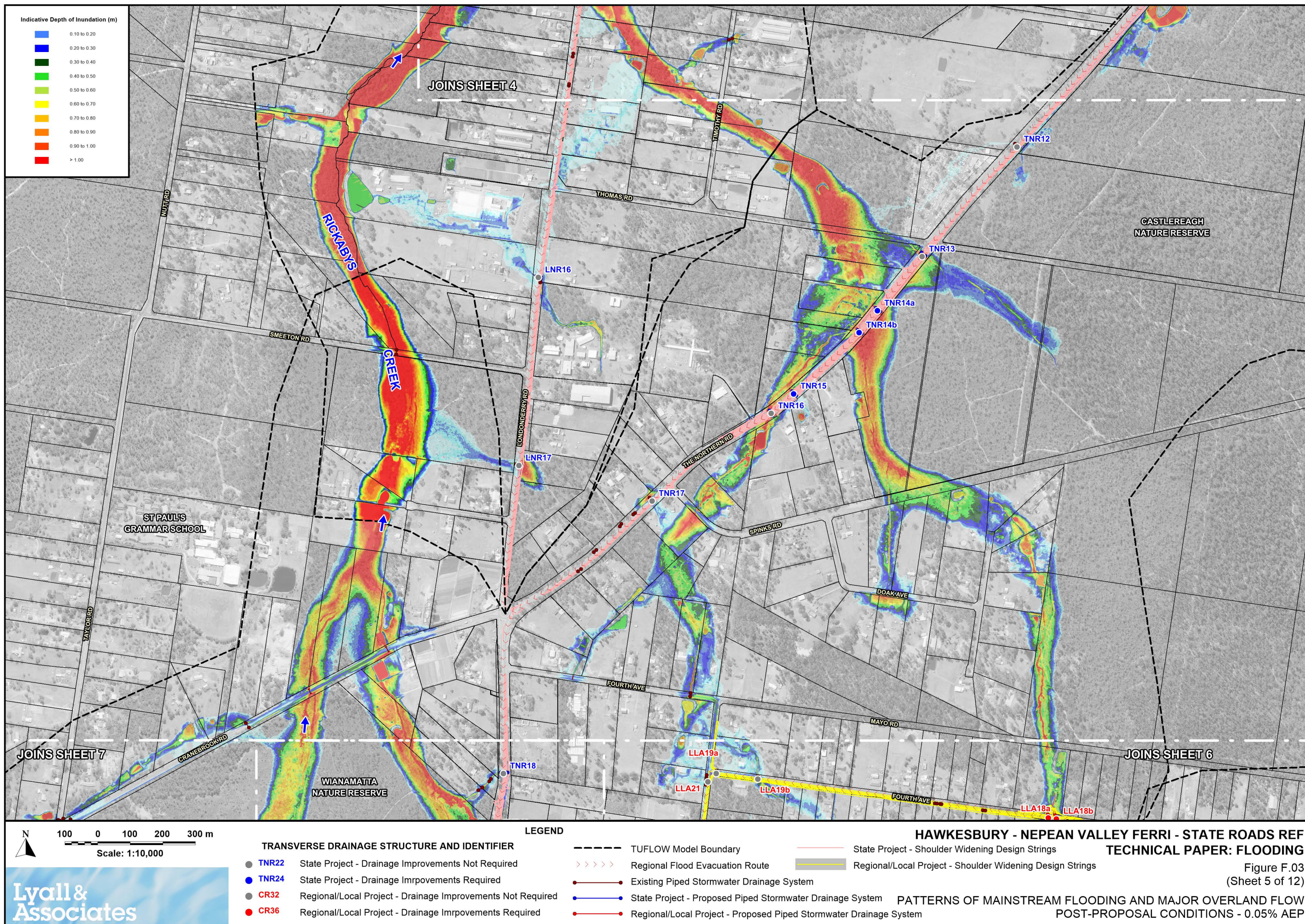
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

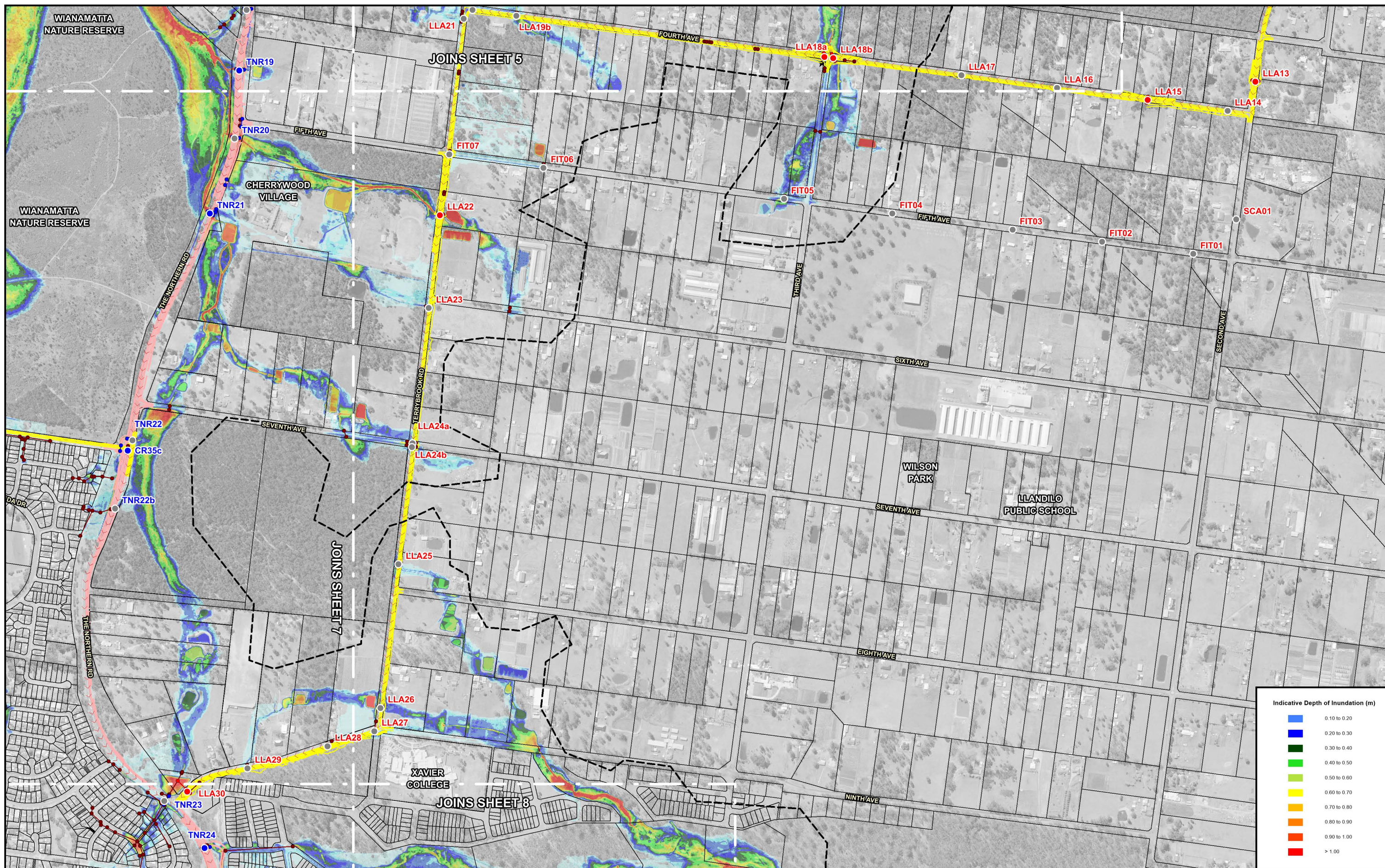
TECHNICAL PAPER: FLOODING

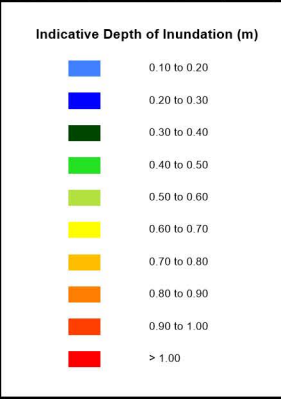
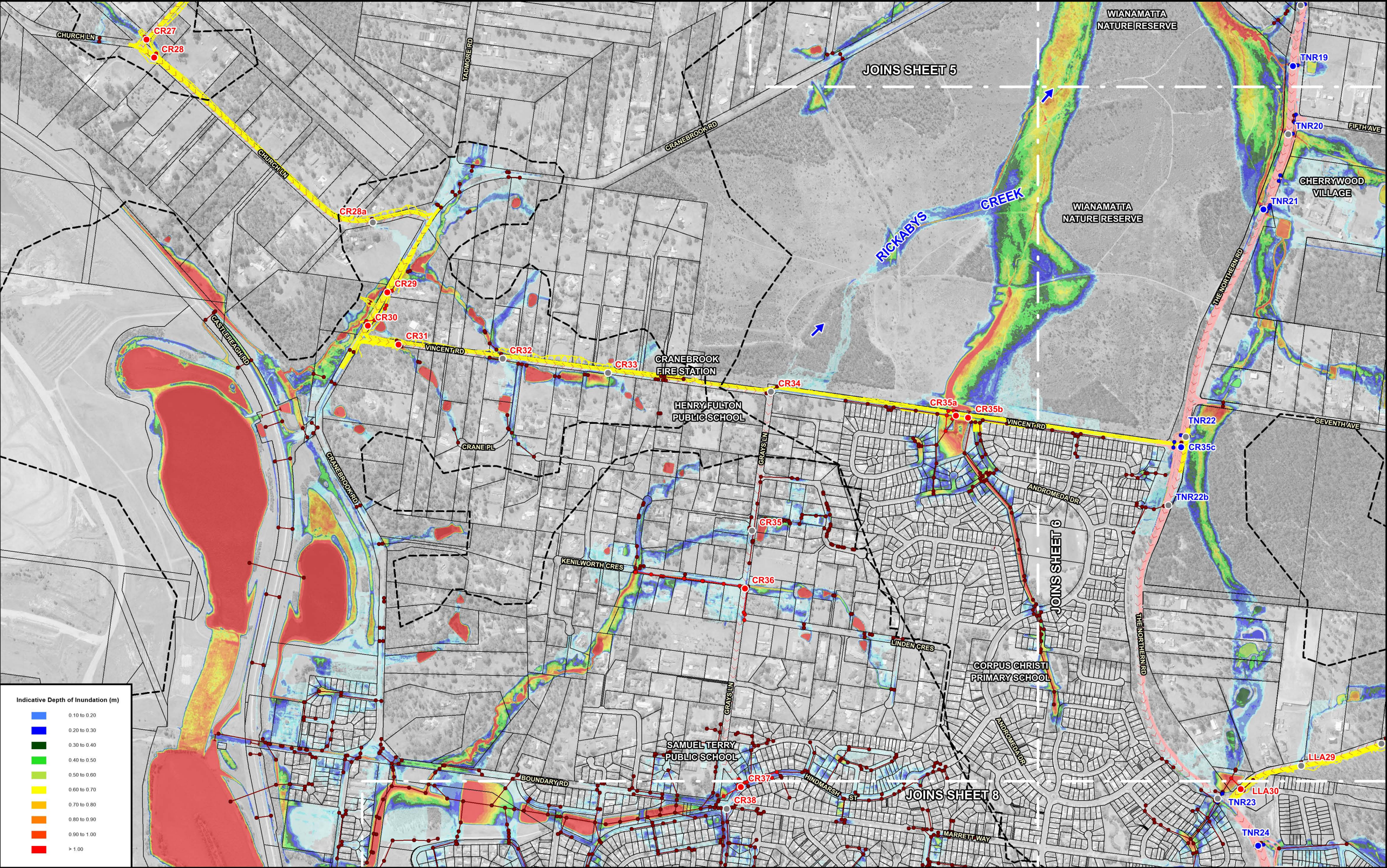
Figure F.03
(Sheet 4 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW

POST-PROPOSAL CONDITIONS - 0.05% AEP







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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

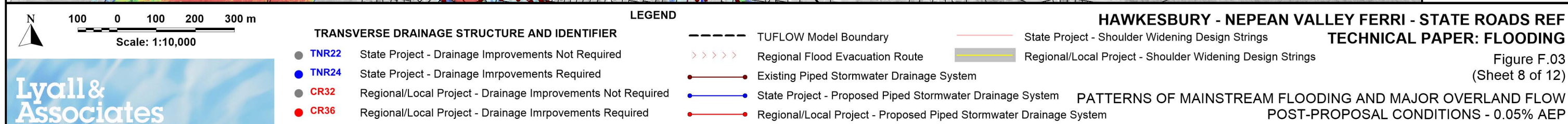
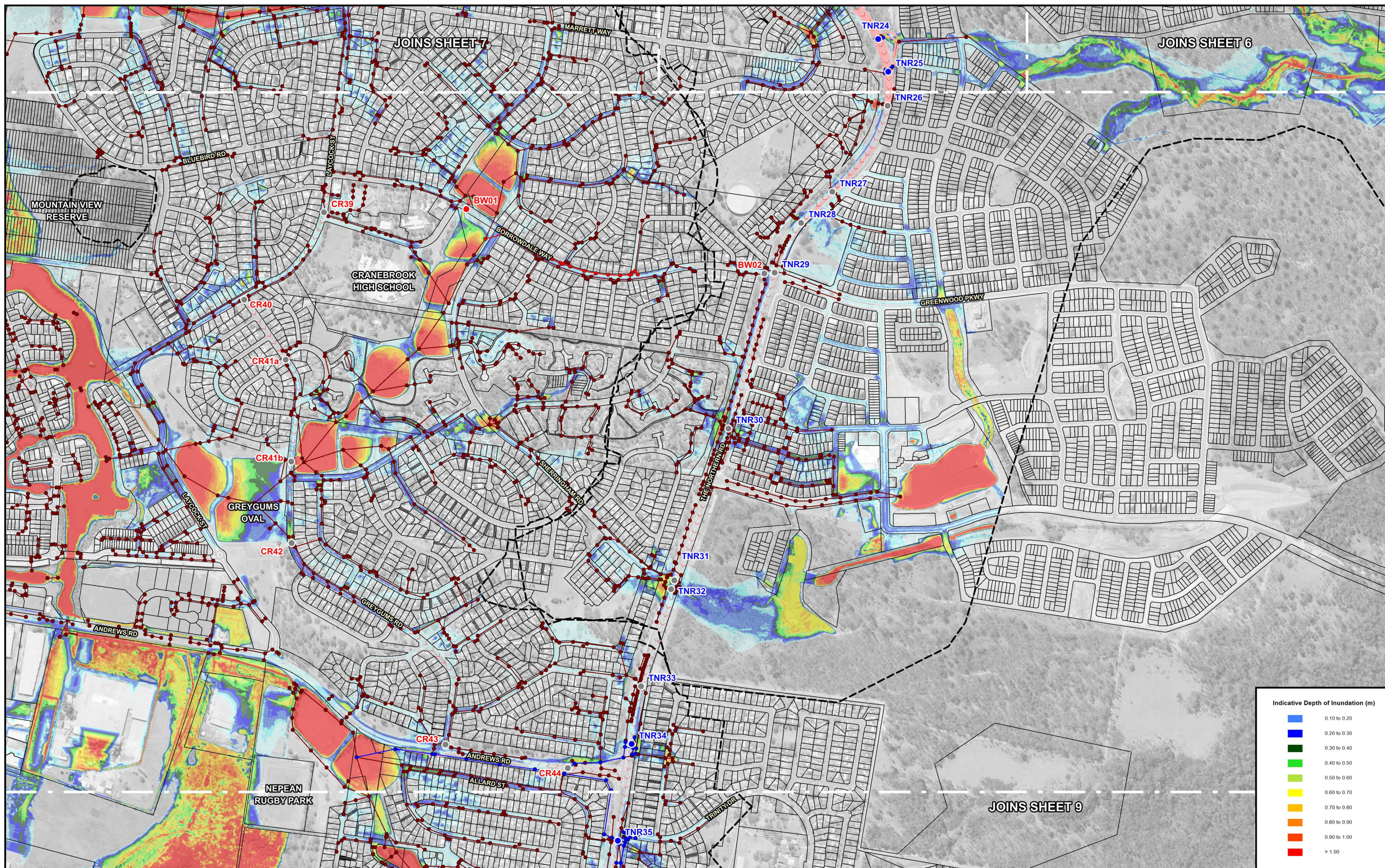
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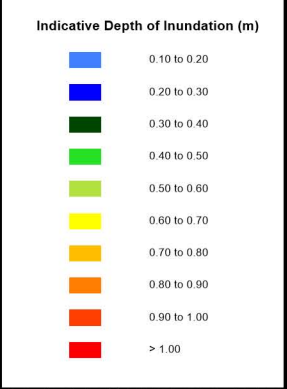
---	TUFLOW Model Boundary
--->>>---	Regional Flood Evacuation Route
---	Existing Piped Stormwater Drainage System
---	State Project - Proposed Piped Stormwater Drainage System
---	Regional/Local Project - Proposed Piped Stormwater Drainage System

HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

---	State Project - Shoulder Widening Design Strings
---	Regional/Local Project - Shoulder Widening Design Strings

Figure F.03
(Sheet 7 of 12)
PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW
POST-PROPOSAL CONDITIONS - 0.05% AEP





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100 0 100 200 300 m

Scale: 1:10,000

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER

● TNR22	State Project - Drainage Improvements Not Required
● TNR24	State Project - Drainage Improvements Required
● CR32	Regional/Local Project - Drainage Improvements Not Required
● CR36	Regional/Local Project - Drainage Improvements Required

LEGEND

-----	TUFLOW Model Boundary
>>>>	Regional Flood Evacuation Route
—●—	Existing Piped Stormwater Drainage System
—●—	State Project - Proposed Piped Stormwater Drainage System
—●—	Regional/Local Project - Proposed Piped Stormwater Drainage System
—	State Project - Shoulder Widening Design Strings
—	Regional/Local Project - Shoulder Widening Design Strings

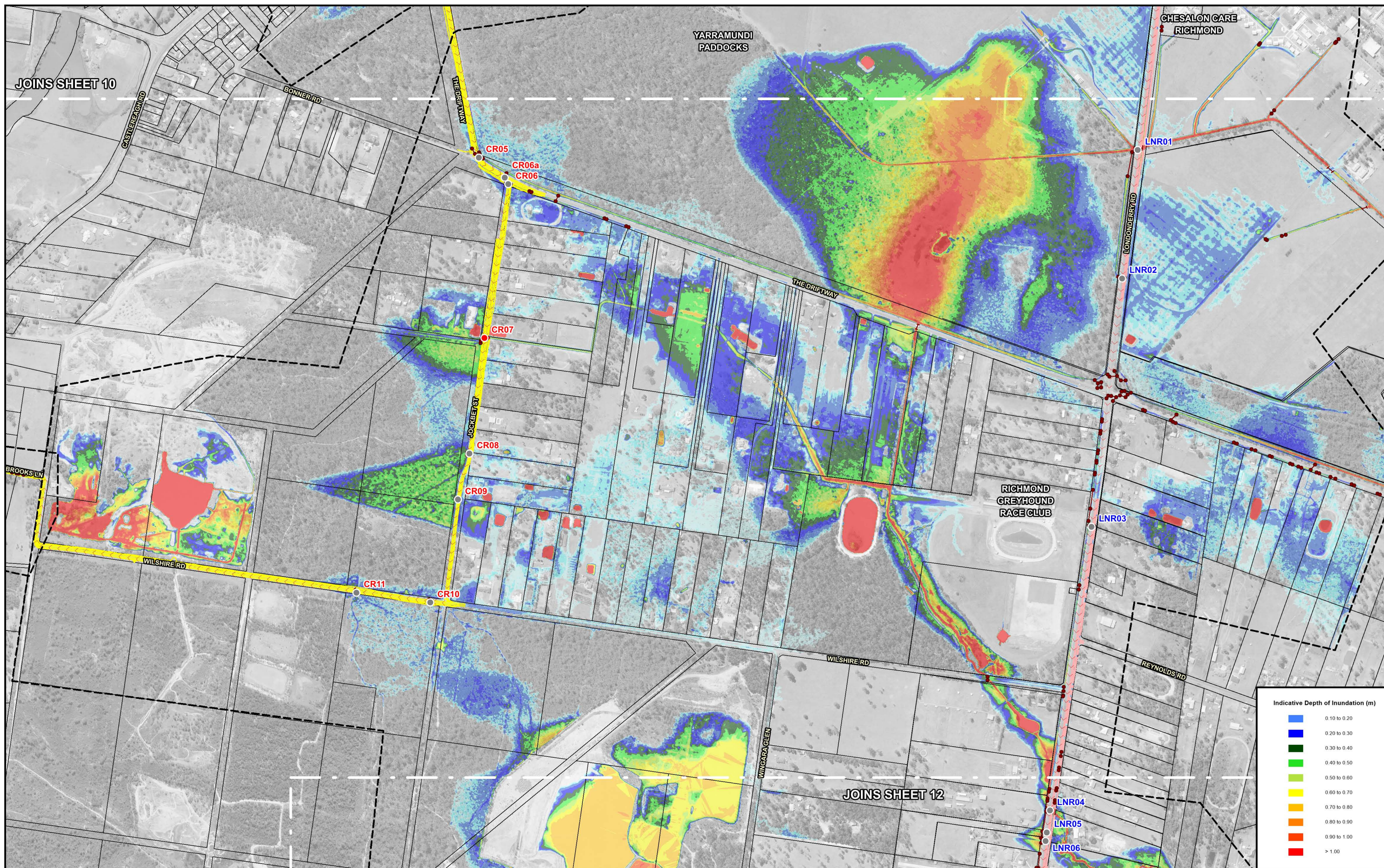
HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

TECHNICAL PAPER: FLOODING

Figure F.03
(Sheet 10 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW

POST-PROPOSAL CONDITIONS - 0.05% AEP



Scale: 1:10,000

100 0 100 200 300 m

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TRANSVERSE DRAINAGE STRUCTURE AND IDENTIFIER		LEGEND	
<ul style="list-style-type: none"> ● TNR22 ● TNR24 ● CR32 ● CR36 	<ul style="list-style-type: none"> State Project - Drainage Improvements Not Required State Project - Drainage Improvements Required Regional/Local Project - Drainage Improvements Not Required Regional/Local Project - Drainage Improvements Required 	<ul style="list-style-type: none"> --- TUFLOW Model Boundary >>>> Regional Flood Evacuation Route — Existing Piped Stormwater Drainage System — State Project - Proposed Piped Stormwater Drainage System — Regional/Local Project - Proposed Piped Stormwater Drainage System 	<ul style="list-style-type: none"> State Project - Shoulder Widening Design Strings Regional/Local Project - Shoulder Widening Design Strings

HAWKESBURY - NEPEAN VALLEY FERRI - STATE ROADS REF

TECHNICAL PAPER: FLOODING

Figure F.03
(Sheet 11 of 12)

PATTERNS OF MAINSTREAM FLOODING AND MAJOR OVERLAND FLOW
POST-PROPOSAL CONDITIONS - 0.05% AEP

