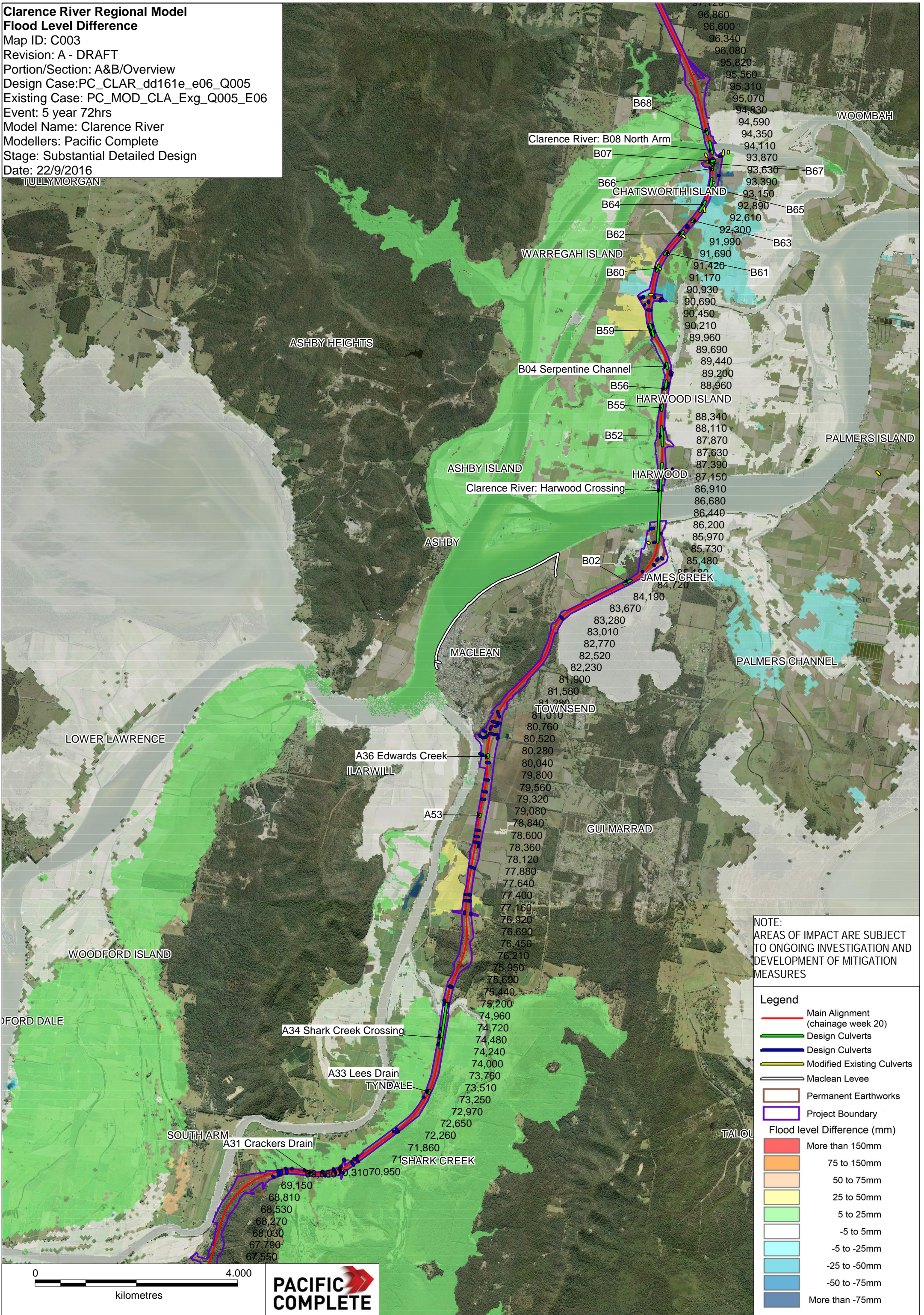


Appendix C

Future conditions flood maps for Clarence River regional floodplain

**Clarence River Regional Model
Flood Level Difference**
 Map ID: C003
 Revision: A - DRAFT
 Portion/Section: A&B/Overview
 Design Case: PC_CLAR_dd161e_e06_Q005
 Existing Case: PC_MOD_CLA_Exg_Q005_E06
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

TULLYMORGAN



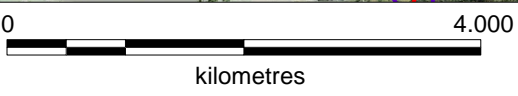
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Culverts
- Design Culverts
- Modified Existing Culverts
- Maclean Levee
- Permanent Earthworks
- Project Boundary

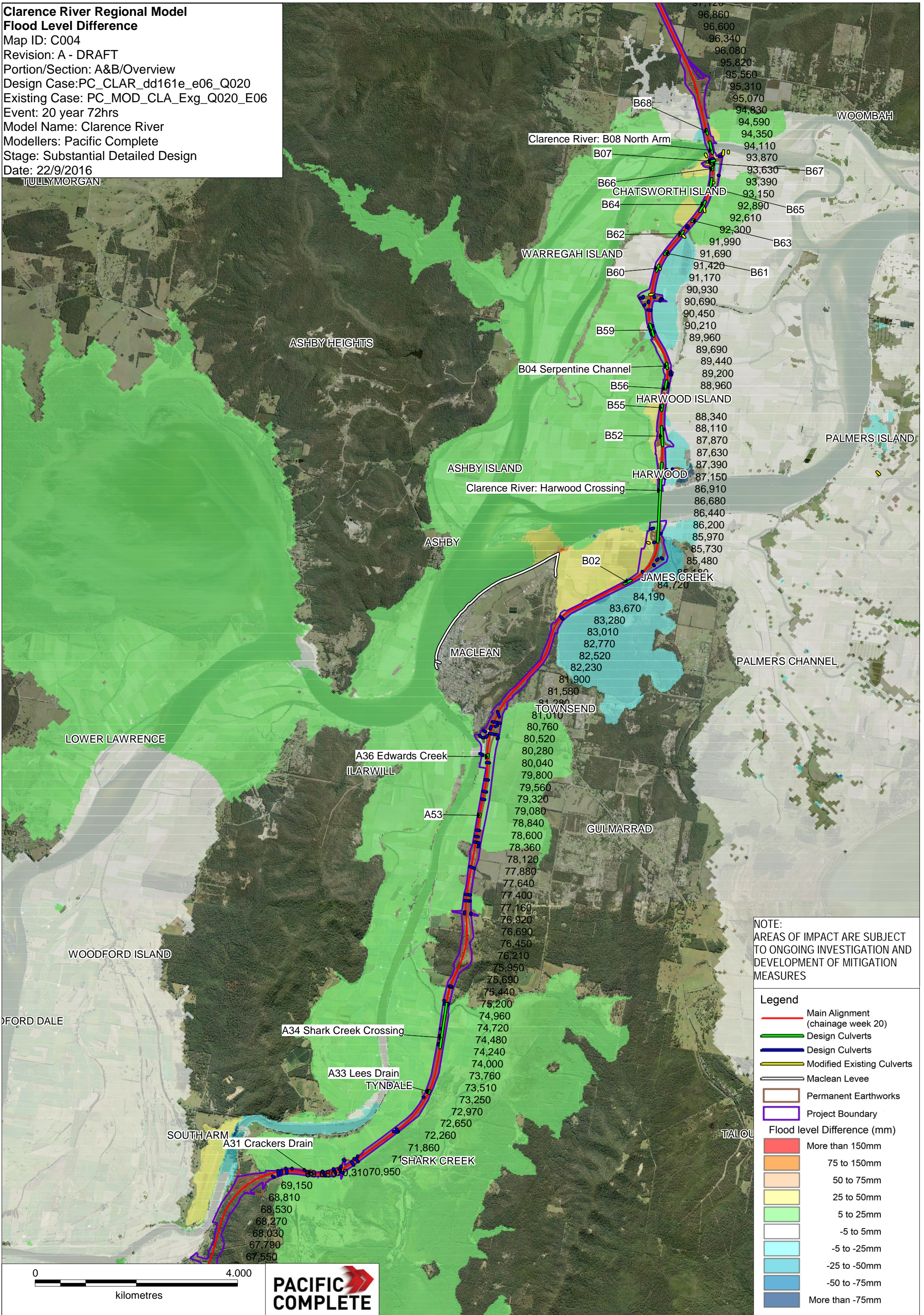
Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C004
 Revision: A - DRAFT
 Portion/Section: A&B/Overview
 Design Case: PC_CLAR_dd161e_e06_Q020
 Existing Case: PC_MOD_CLA_Exg_Q020_E06
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

TULLYMORGAN



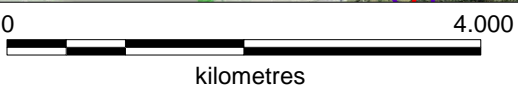
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Culverts
- Design Culverts
- Modified Existing Culverts
- Maclean Levee
- Permanent Earthworks
- Project Boundary

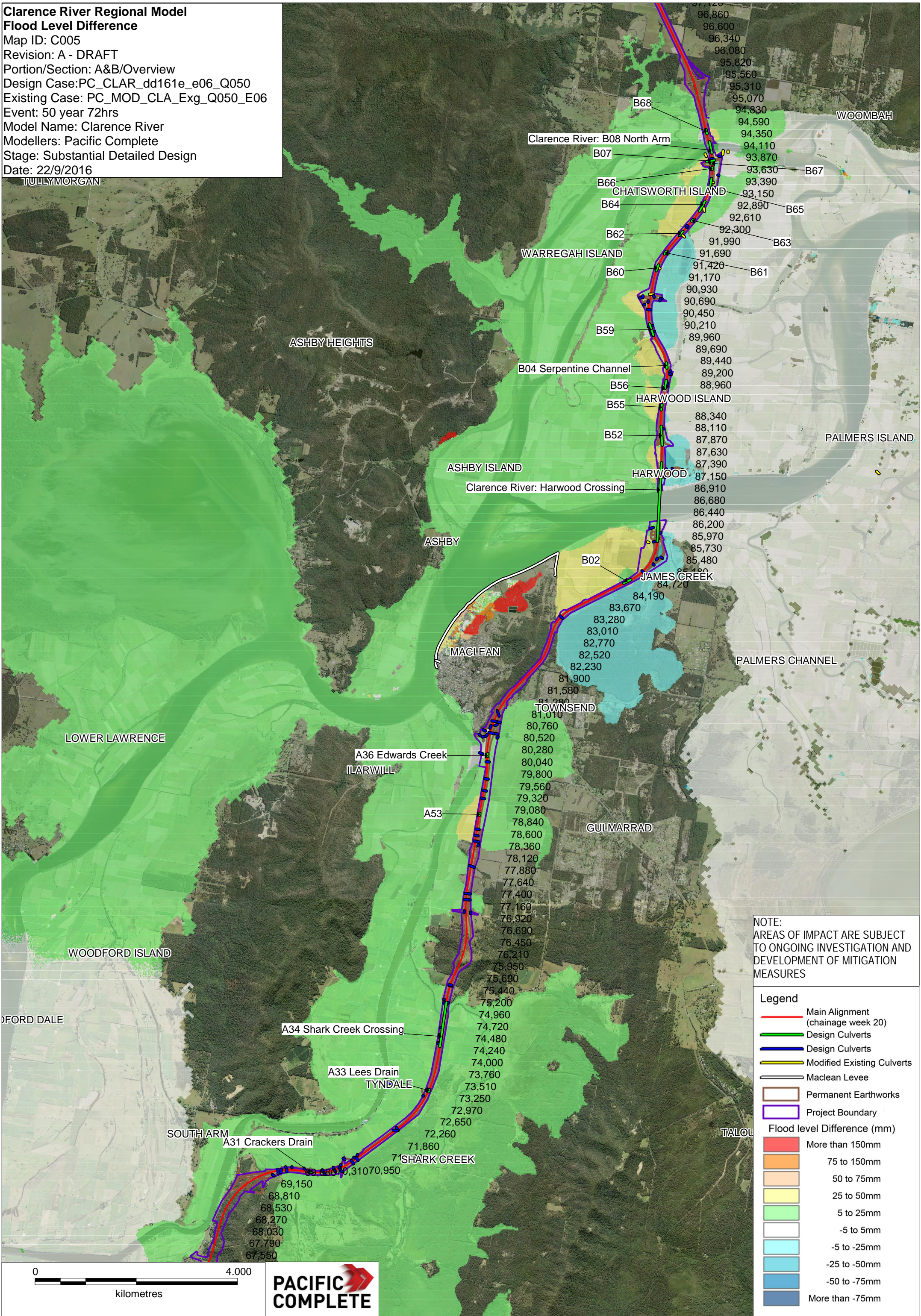
Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C005
 Revision: A - DRAFT
 Portion/Section: A&B/Overview
 Design Case: PC_CLAR_dd161e_e06_Q050
 Existing Case: PC_MOD_CLA_Exg_Q050_E06
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

TULLYMORGAN



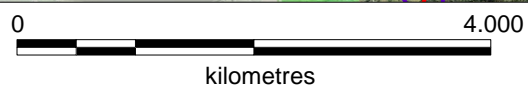
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Culverts
- Design Culverts
- Modified Existing Culverts
- Maclean Levee
- Permanent Earthworks
- Project Boundary

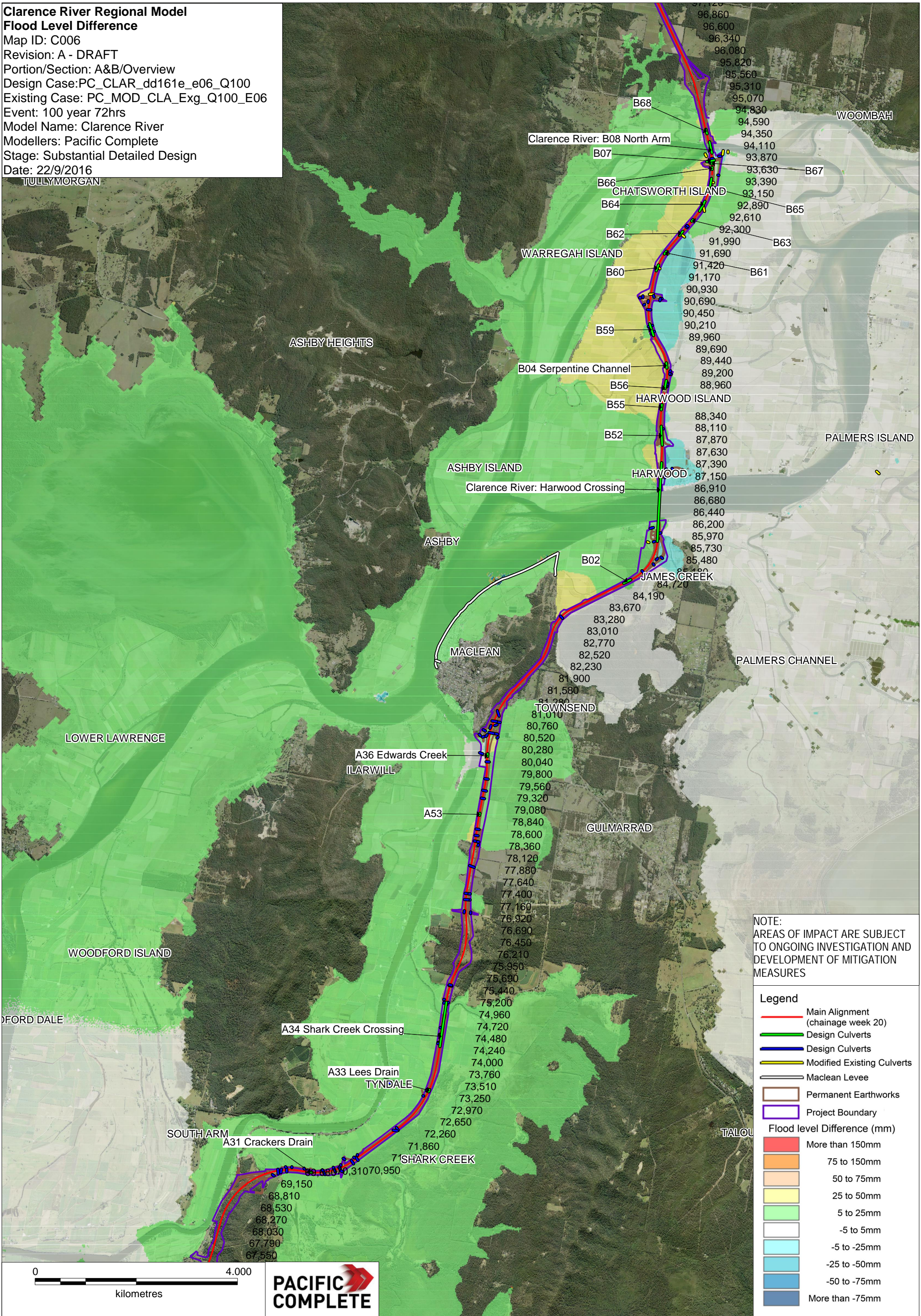
Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C006
 Revision: A - DRAFT
 Portion/Section: A&B/Overview
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E06
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

TULLYMORGAN



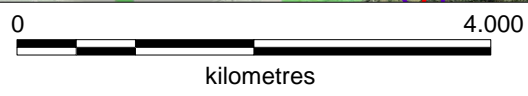
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

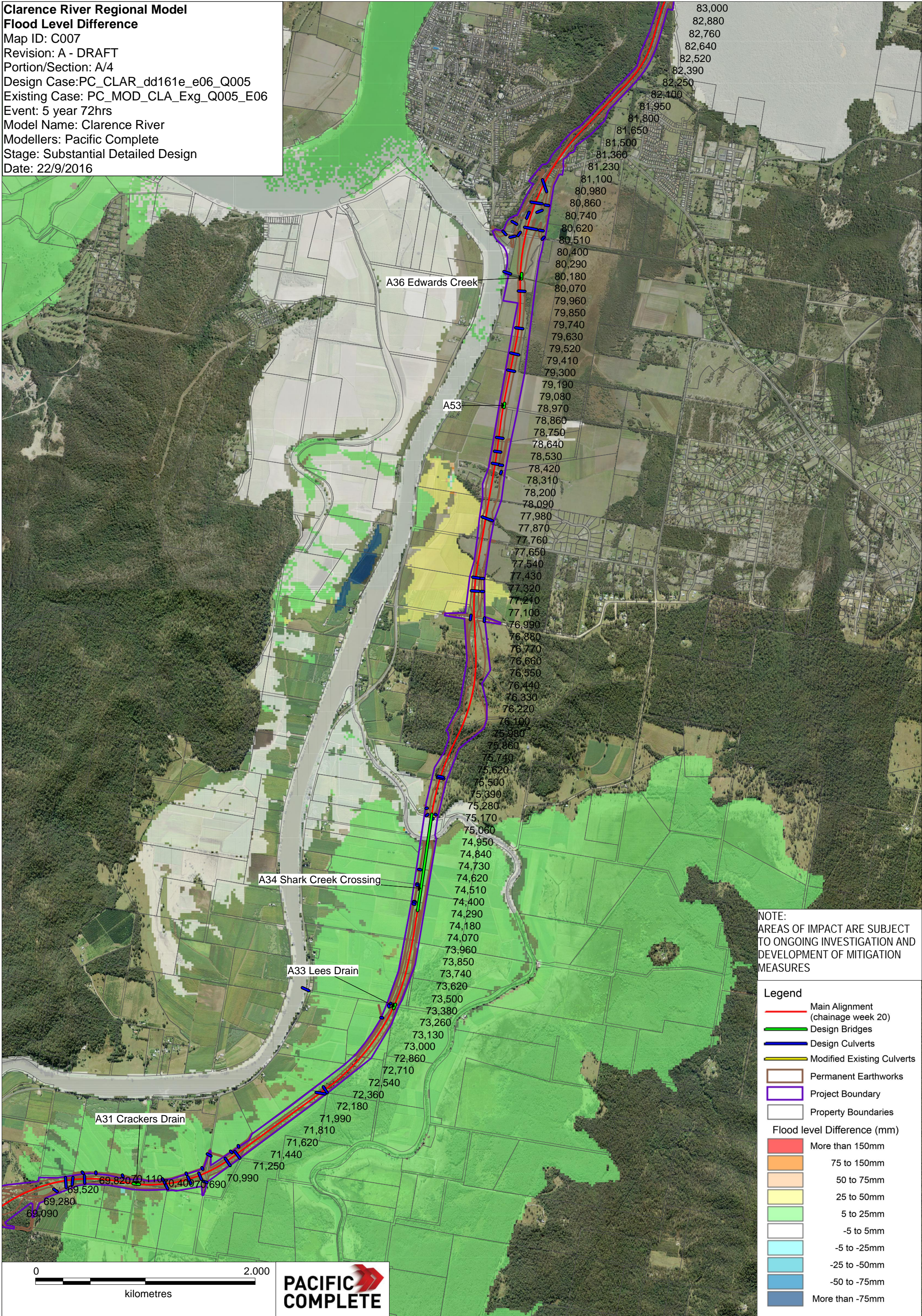
- Main Alignment (chainage week 20)
- Design Culverts
- Design Culverts
- Modified Existing Culverts
- Maclean Levee
- Permanent Earthworks
- Project Boundary

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C007
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q005
 Existing Case: PC_MOD_CLA_Exg_Q005_E06
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



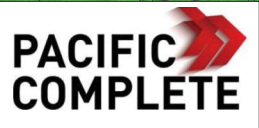
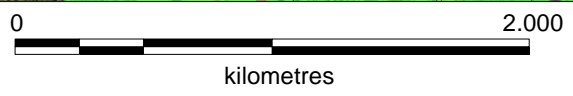
NOTE:
 AREAS OF IMPACT ARE SUBJECT TO ONGOING INVESTIGATION AND DEVELOPMENT OF MITIGATION MEASURES

Legend

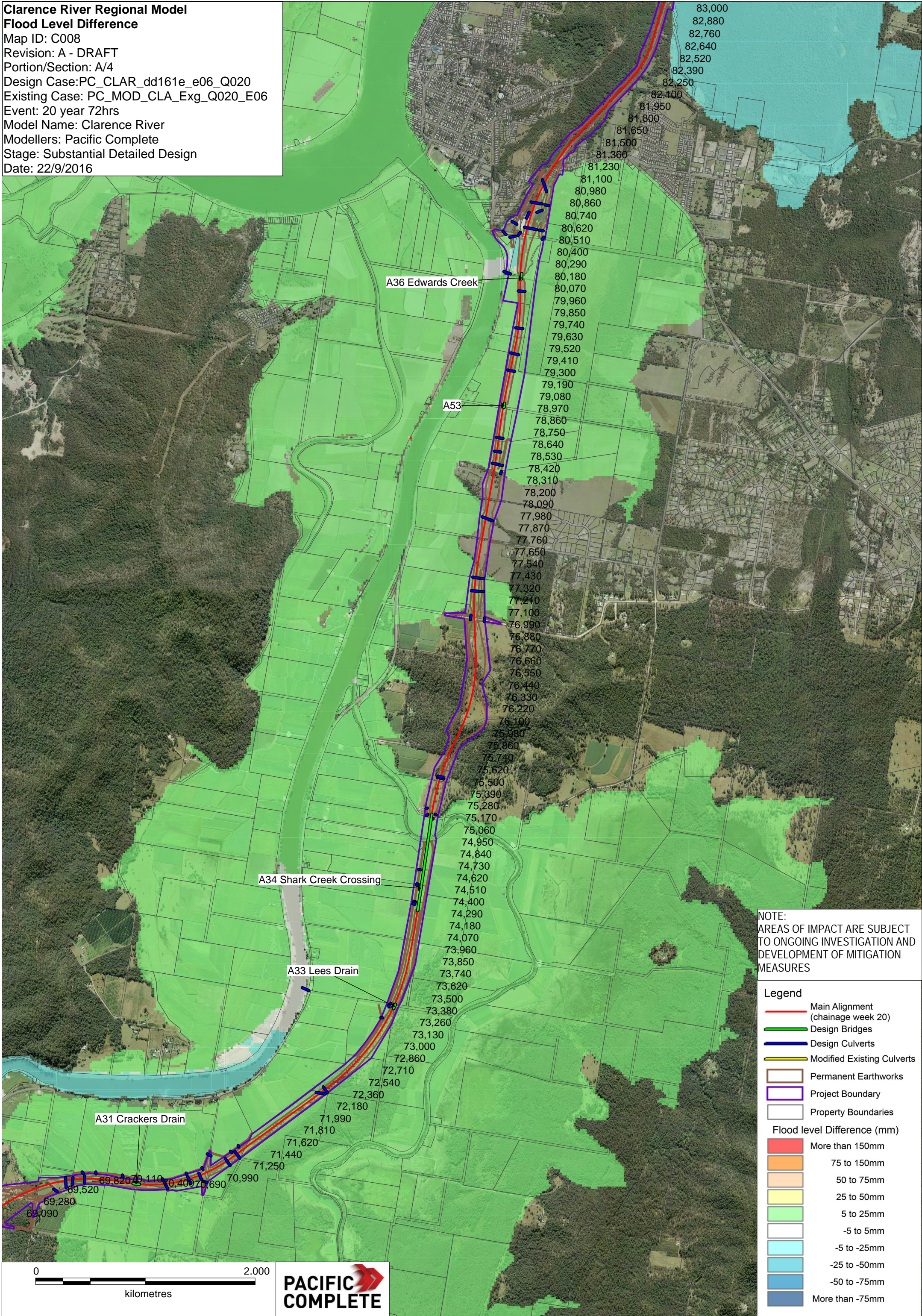
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C008
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q020
 Existing Case: PC_MOD_CLA_Exg_Q020_E06
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



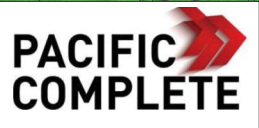
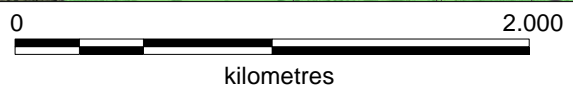
NOTE:
 AREAS OF IMPACT ARE SUBJECT TO ONGOING INVESTIGATION AND DEVELOPMENT OF MITIGATION MEASURES

Legend

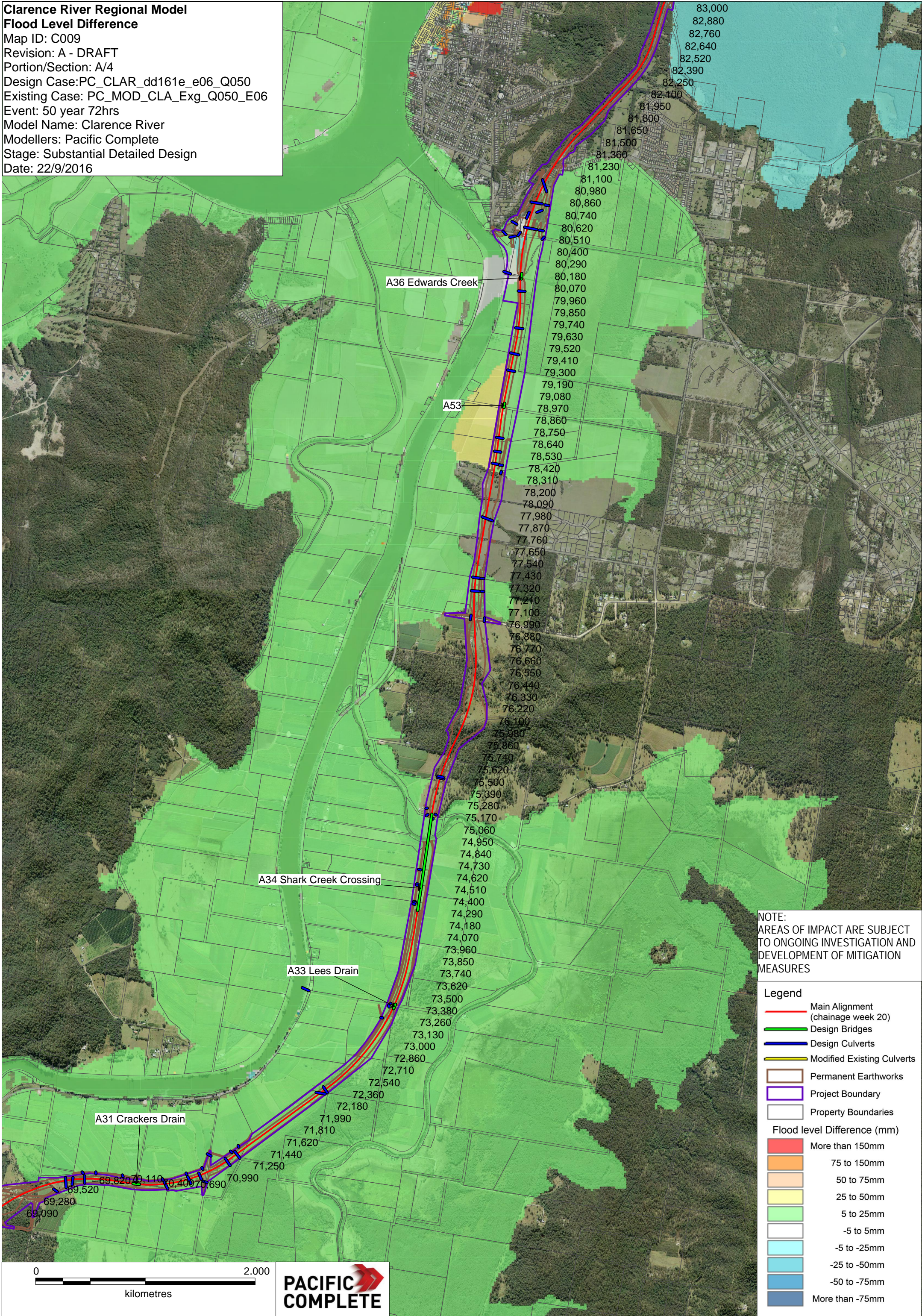
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C009
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q050
 Existing Case: PC_MOD_CLA_Exg_Q050_E06
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



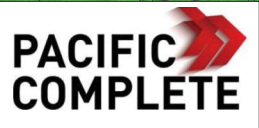
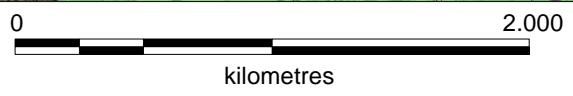
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

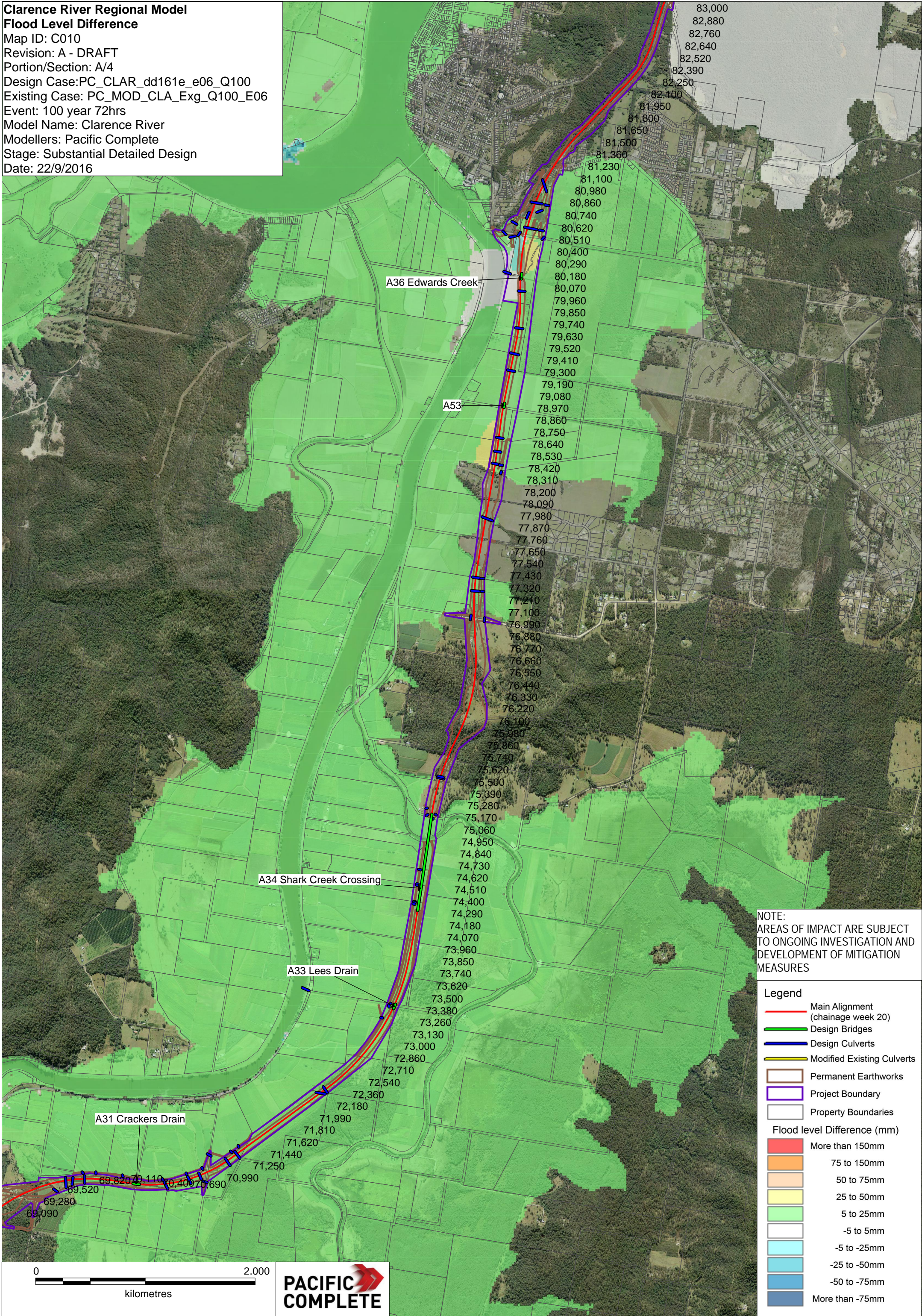
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**
 Map ID: C010
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E06
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



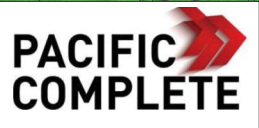
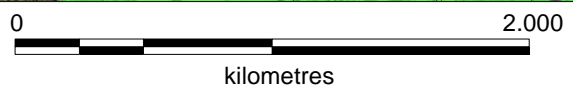
NOTE:
 AREAS OF IMPACT ARE SUBJECT TO ONGOING INVESTIGATION AND DEVELOPMENT OF MITIGATION MEASURES

Legend

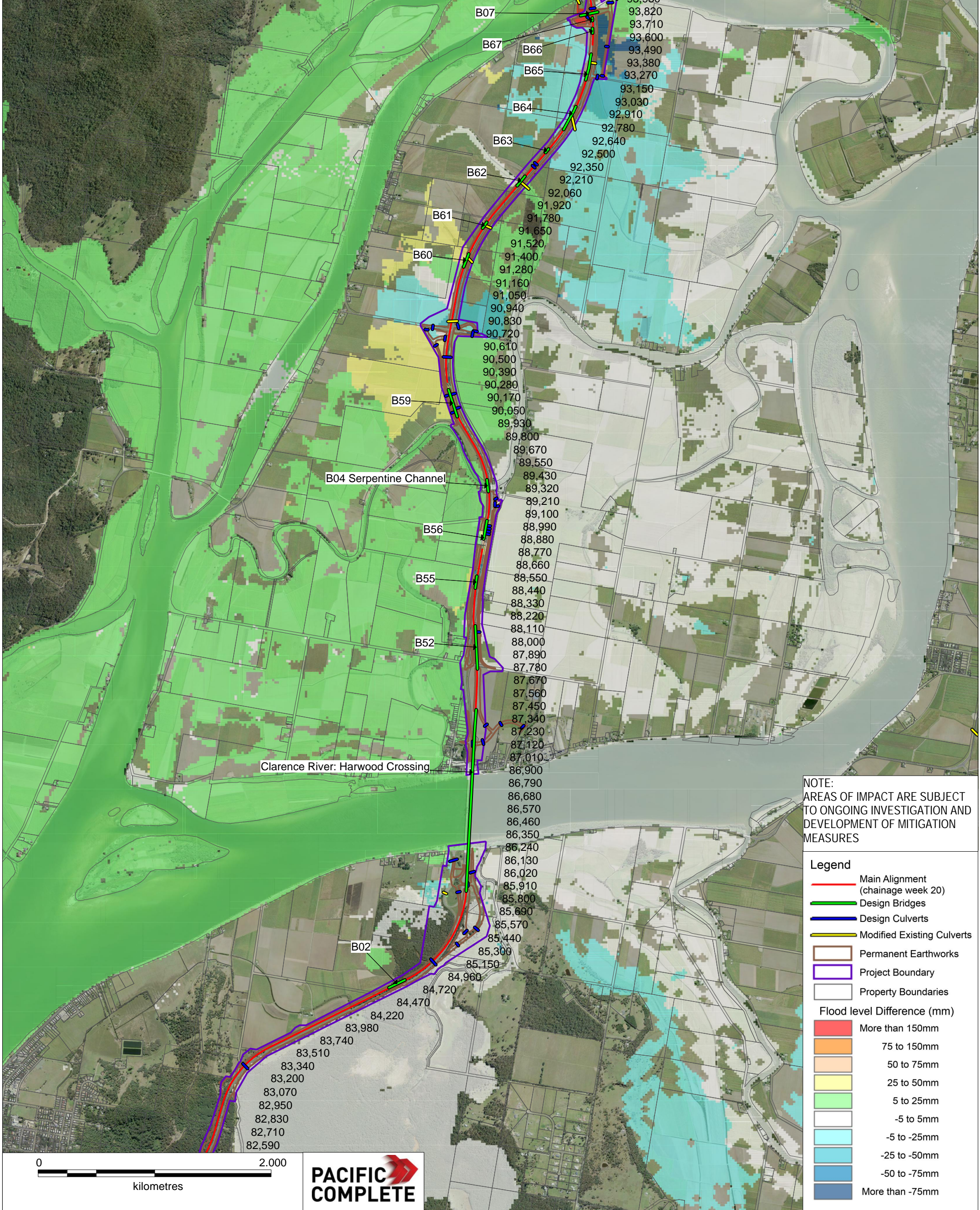
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



Clarence River Regional Model
Flood Level Difference
 Map ID: C011
 Revision: A - DRAFT
 Portion/Section: B/5
 Design Case: PC_CLAR_dd161e_e06_Q005
 Existing Case: PC_MOD_CLA_Exg_Q005_E06
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



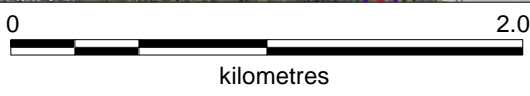
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

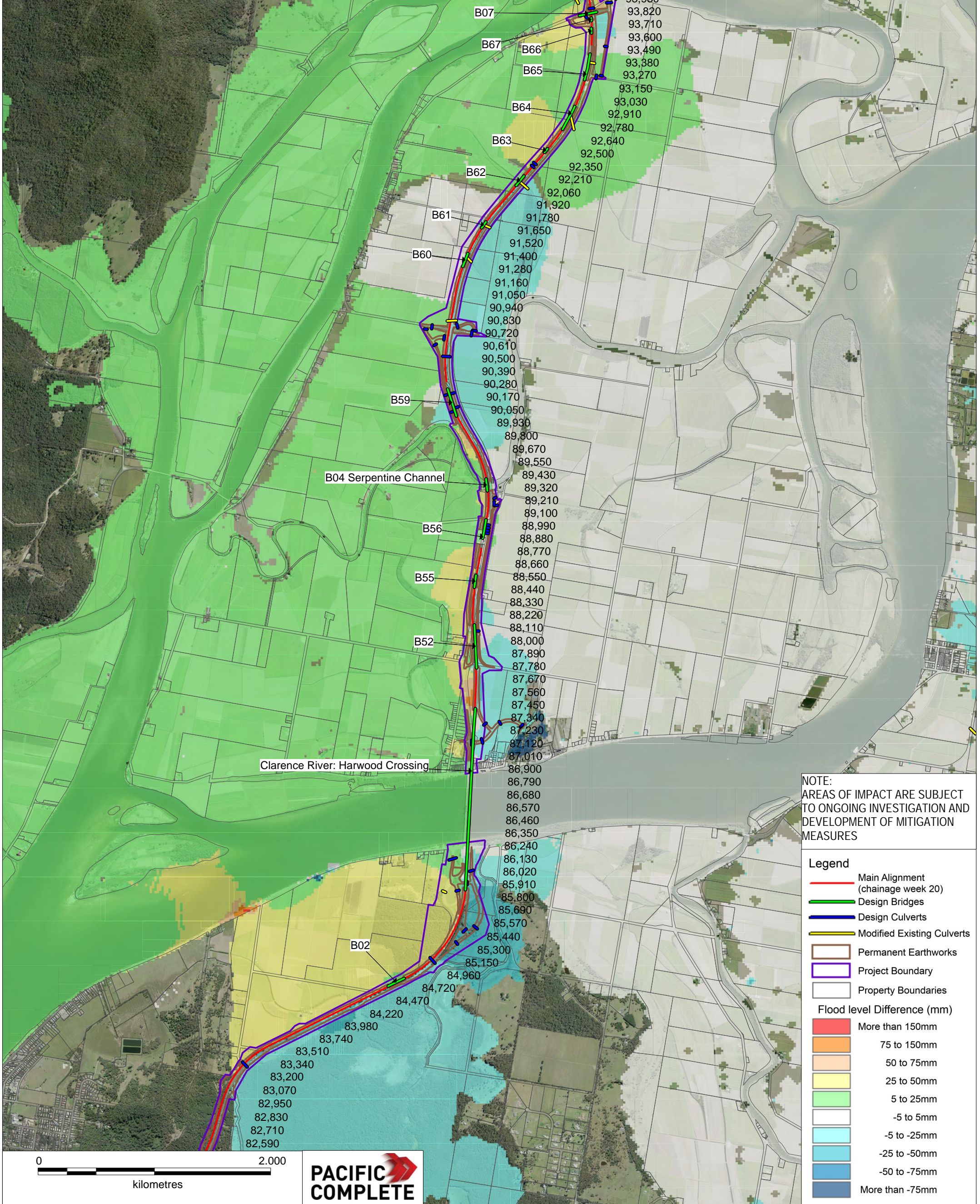
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



Clarence River Regional Model
Flood Level Difference
 Map ID: C012
 Revision: A - DRAFT
 Portion/Section: B/5
 Design Case: PC_CLAR_dd161e_e06_Q020
 Existing Case: PC_MOD_CLA_Exg_Q020_E06
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



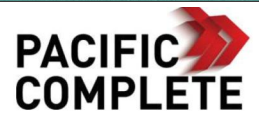
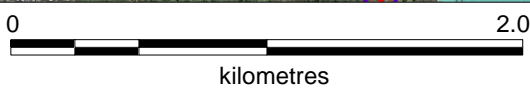
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

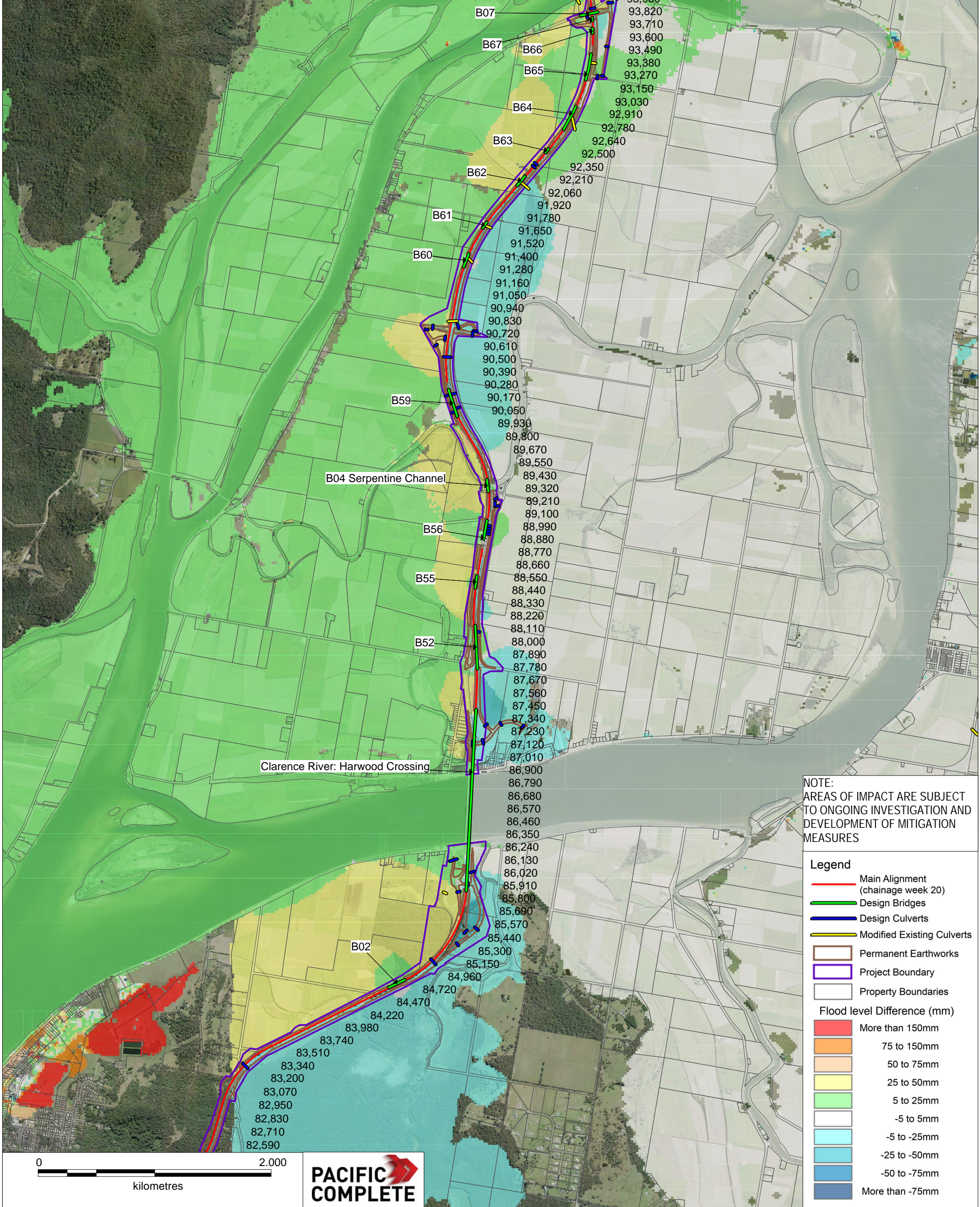
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



Clarence River Regional Model
Flood Level Difference
 Map ID: C013
 Revision: A - DRAFT
 Portion/Section: B/5
 Design Case: PC_CLAR_dd161e_e06_Q050
 Existing Case: PC_MOD_CLA_Exg_Q050_E06
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



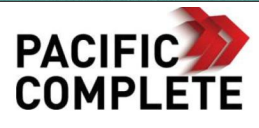
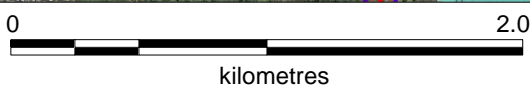
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

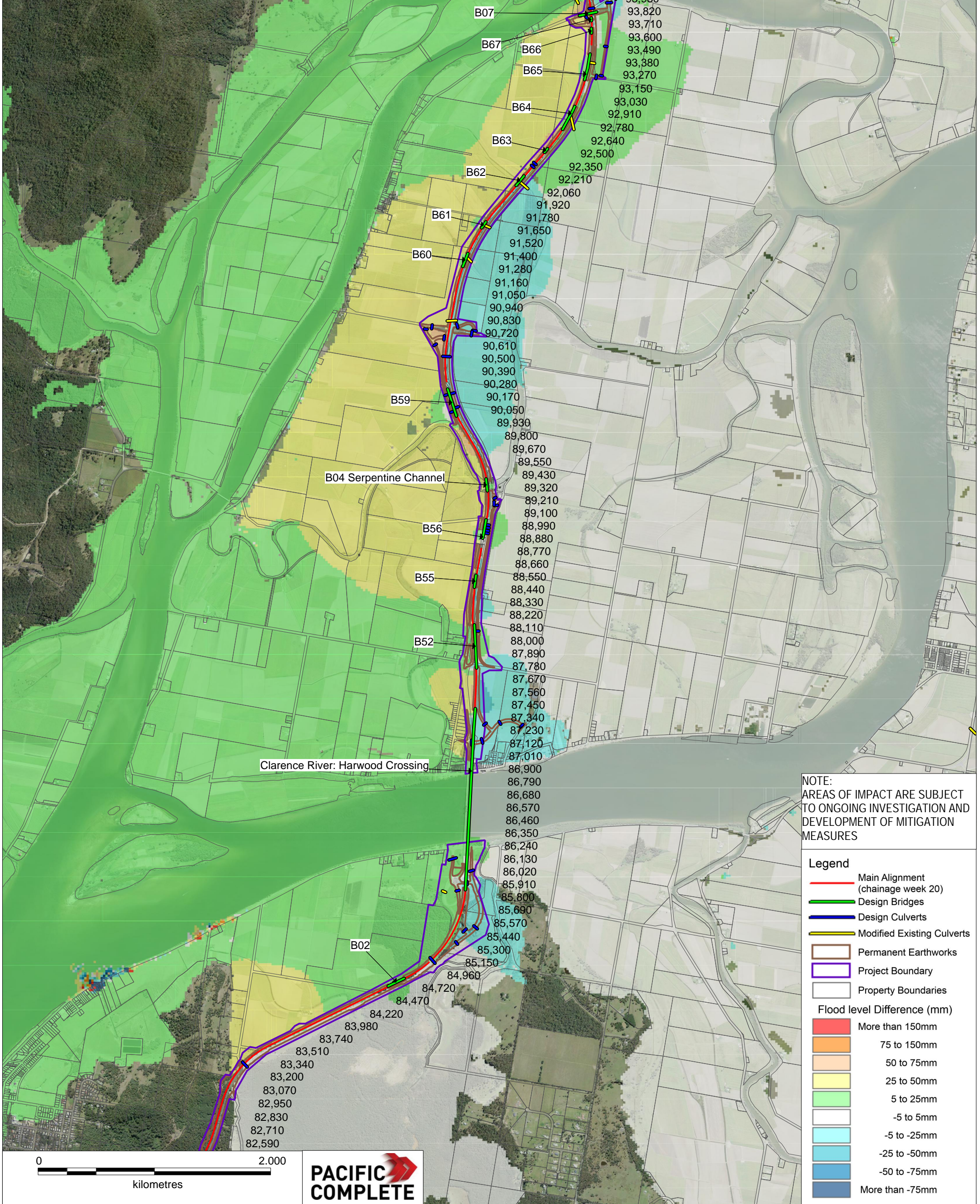
Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



**Clarence River Regional Model
Flood Level Difference**

Map ID: C014
 Revision: A - DRAFT
 Portion/Section: B/5
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E06
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

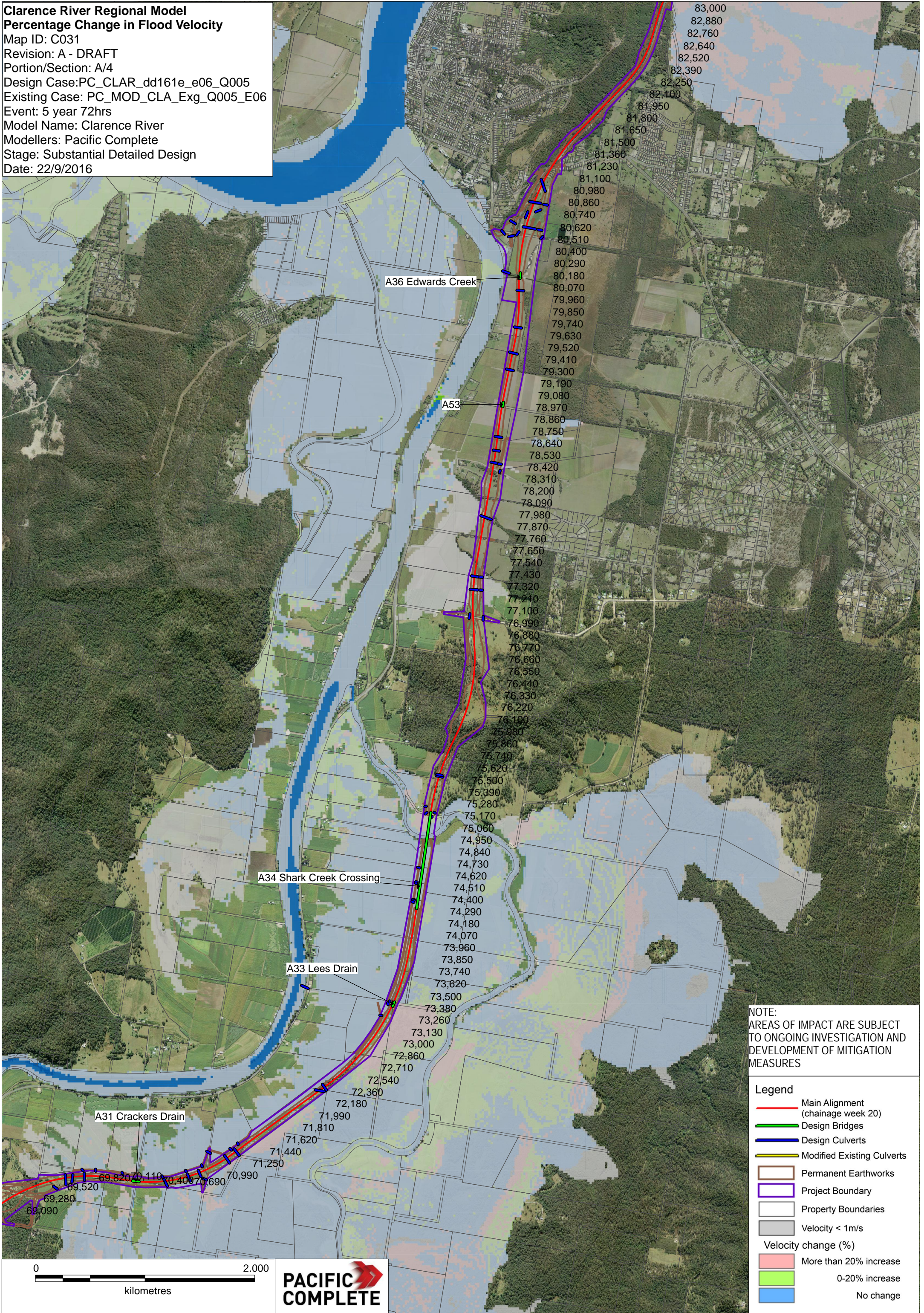
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood level Difference (mm)

- More than 150mm
- 75 to 150mm
- 50 to 75mm
- 25 to 50mm
- 5 to 25mm
- 5 to 5mm
- 5 to -25mm
- 25 to -50mm
- 50 to -75mm
- More than -75mm



Clarence River Regional Model
Percentage Change in Flood Velocity
 Map ID: C031
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q005
 Existing Case: PC_MOD_CLA_Exg_Q005_E06
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



A36 Edwards Creek

A53

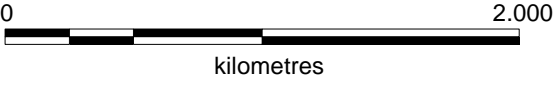
A34 Shark Creek Crossing

A33 Lees Drain

A31 Crackers Drain

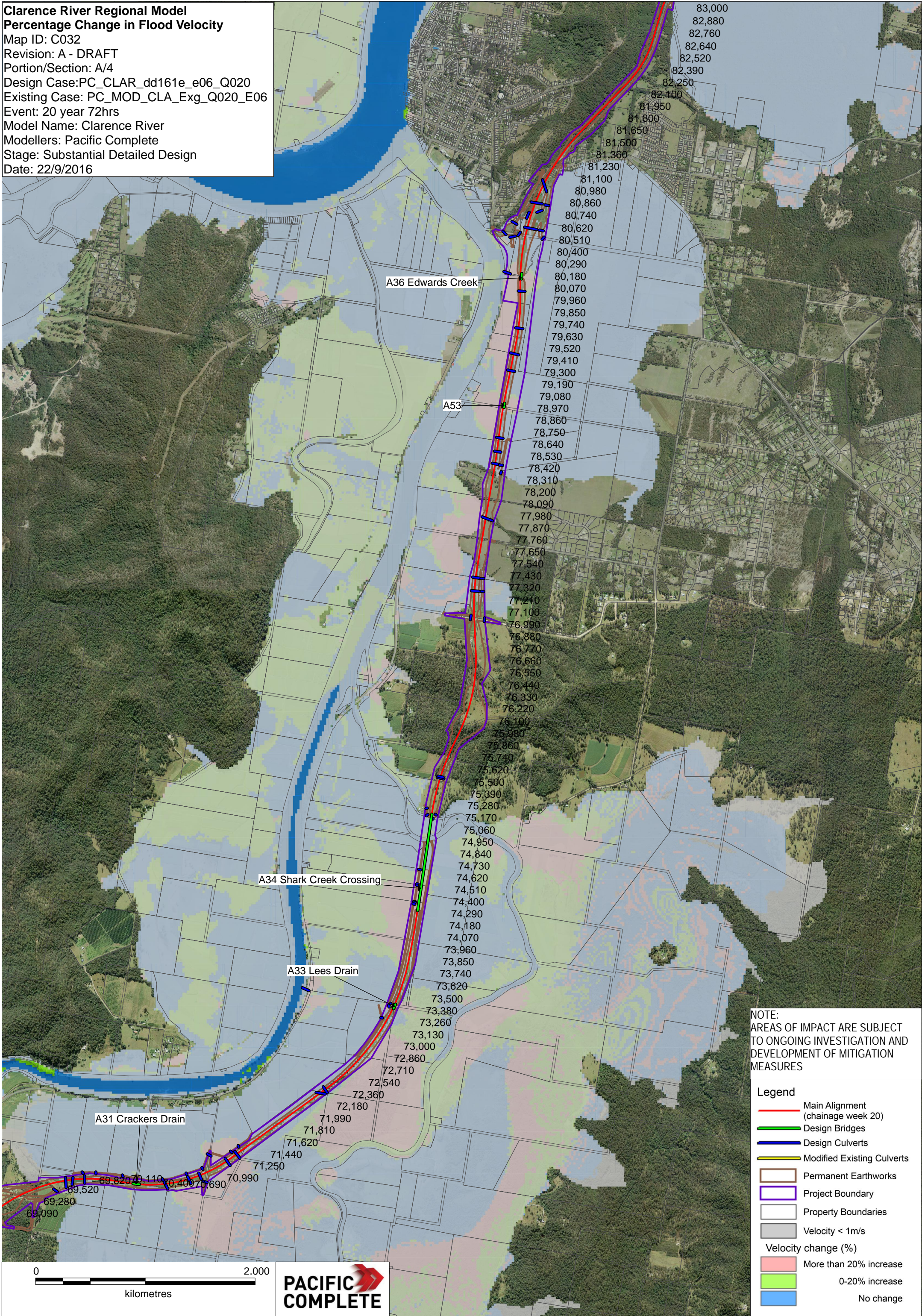
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Velocity < 1m/s
- Velocity change (%)**
- More than 20% increase
 - 0-20% increase
 - No change



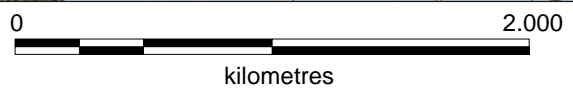
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 79,410
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 69,520
 69,280
 69,090

Clarence River Regional Model
Percentage Change in Flood Velocity
 Map ID: C032
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q020
 Existing Case: PC_MOD_CLA_Exg_Q020_E06
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

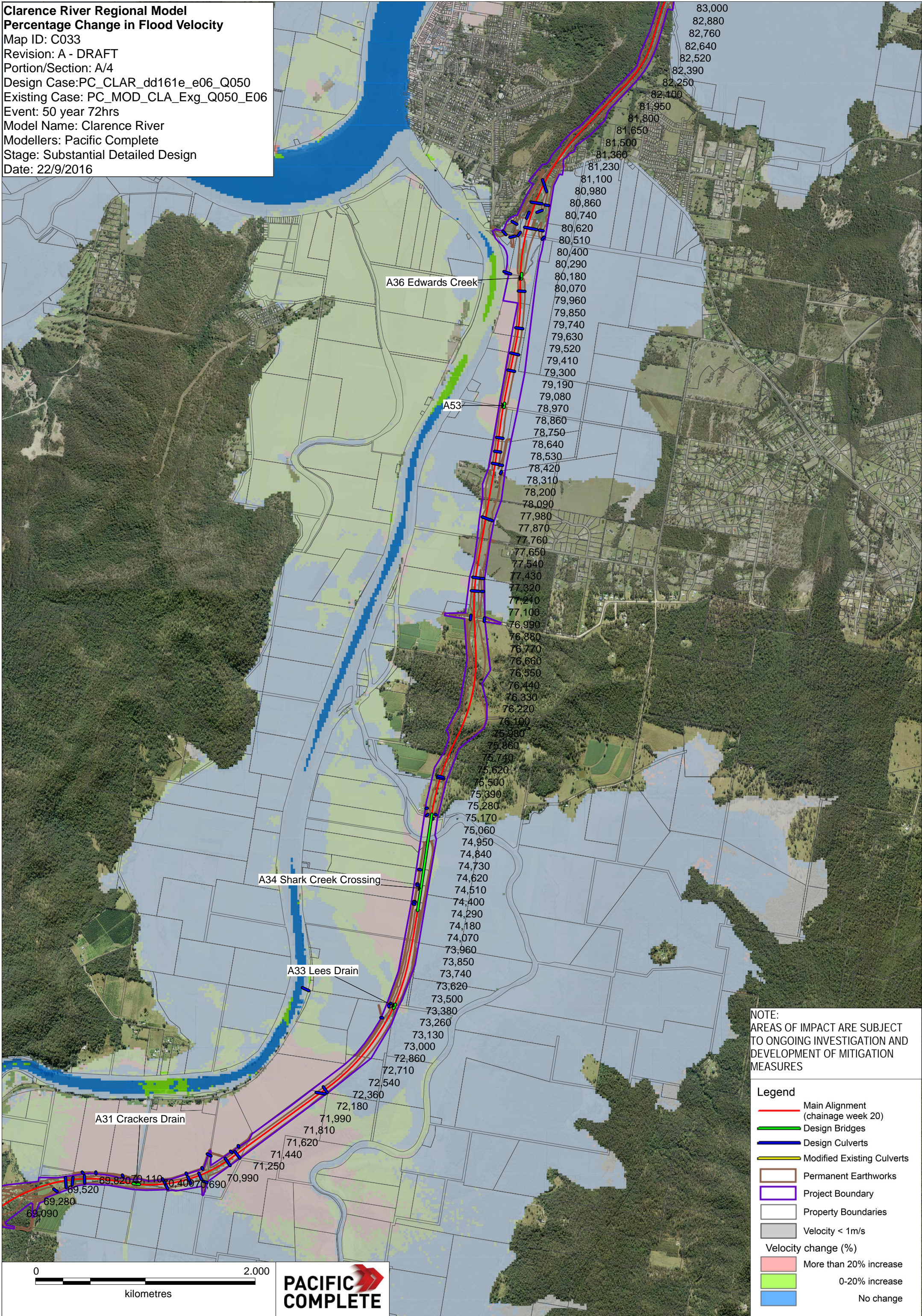


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Velocity < 1m/s
- Velocity change (%)**
- More than 20% increase
 - 0-20% increase
 - No change

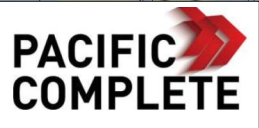
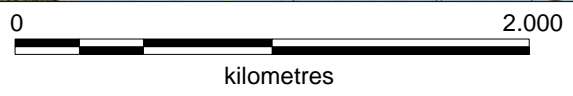


Clarence River Regional Model
Percentage Change in Flood Velocity
 Map ID: C033
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q050
 Existing Case: PC_MOD_CLA_Exg_Q050_E06
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

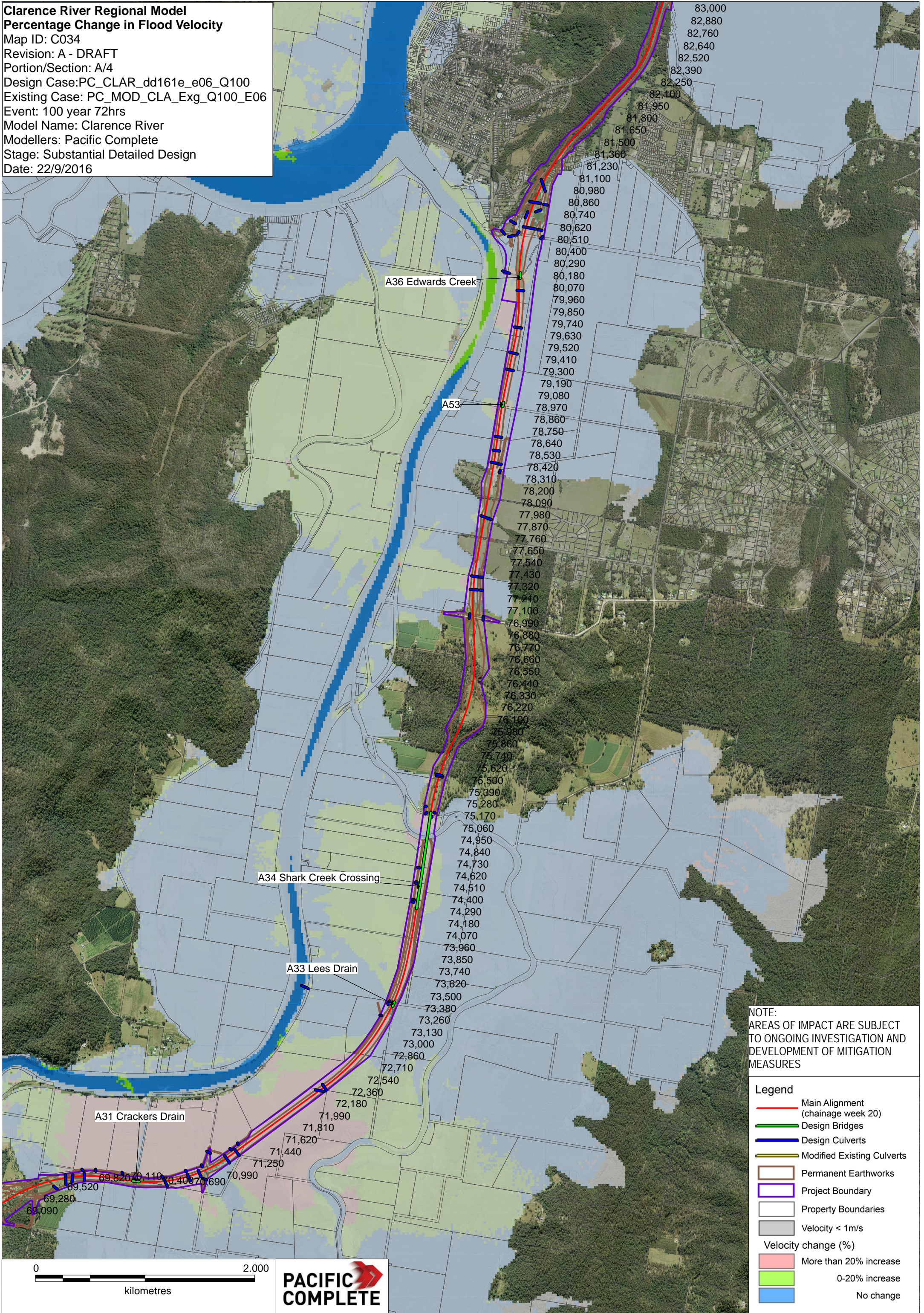


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Velocity < 1m/s
- Velocity change (%)**
- More than 20% increase
 - 0-20% increase
 - No change



Clarence River Regional Model
Percentage Change in Flood Velocity
 Map ID: C034
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E06
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



A36 Edwards Creek

A53

A34 Shark Creek Crossing

A33 Lees Drain

A31 Crackers Drain

83,000
 82,880
 82,760
 82,640
 82,520
 82,390
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 82,100
 81,950
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 80,400
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 79,960
 79,850
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 79,630
 79,520
 79,410
 79,300
 79,190
 79,080
 78,970
 78,860
 78,750
 78,640
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 78,420
 78,310
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 77,650
 77,540
 77,430
 77,320
 77,210
 77,100
 76,990
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 71,250
 70,990
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 69,520
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NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

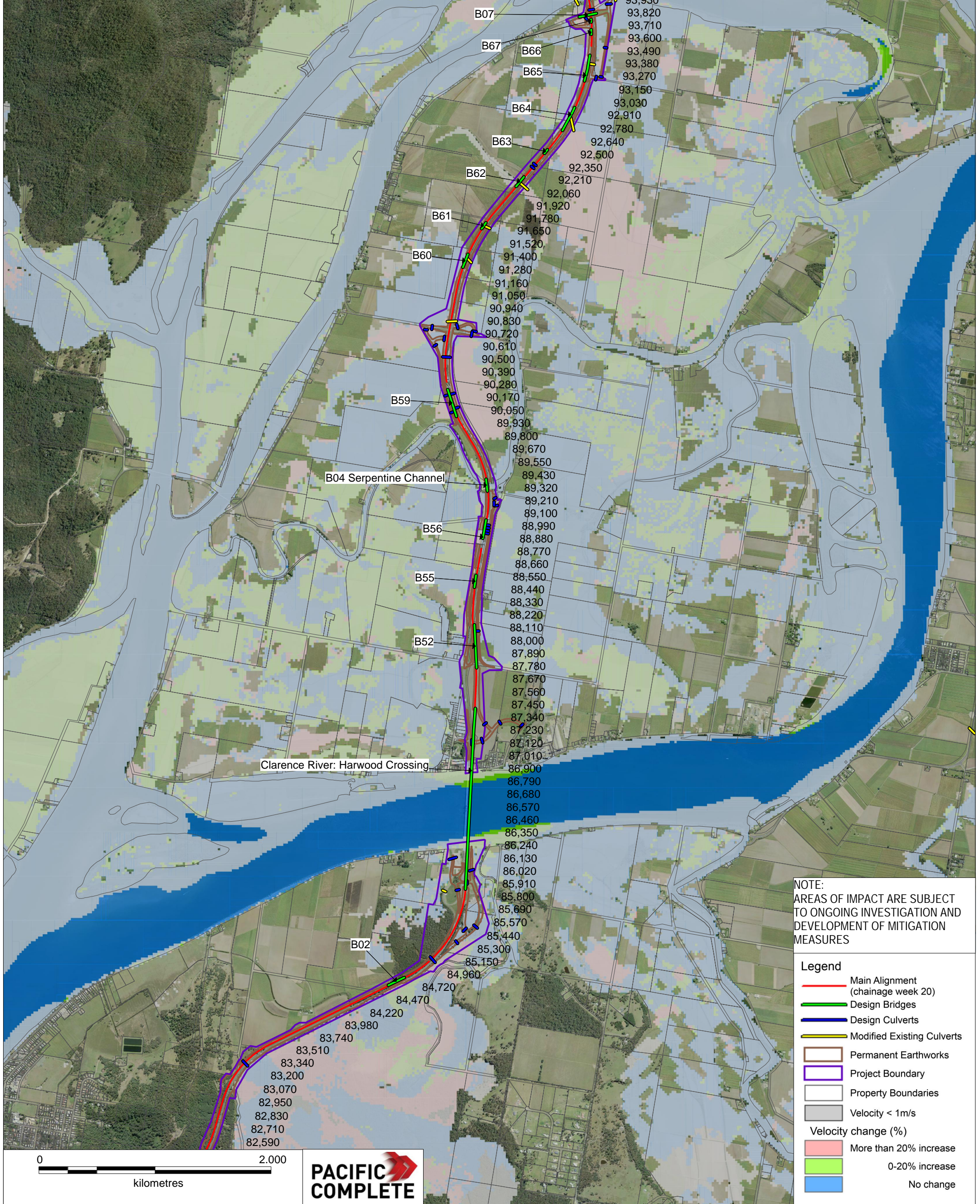
- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Velocity < 1m/s
- Velocity change (%)**
- More than 20% increase
 - 0-20% increase
 - No change

0 2.000
 kilometres



**Clarence River Regional Model
Percentage Change in Flood Velocity**

Map ID: C035
 Revision: A - DRAFT
 Portion/Section: B/5
 Design Case: PC_CLAR_dd161e_e06_Q005
 Existing Case: PC_MOD_CLA_Exg_Q005_E06
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

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