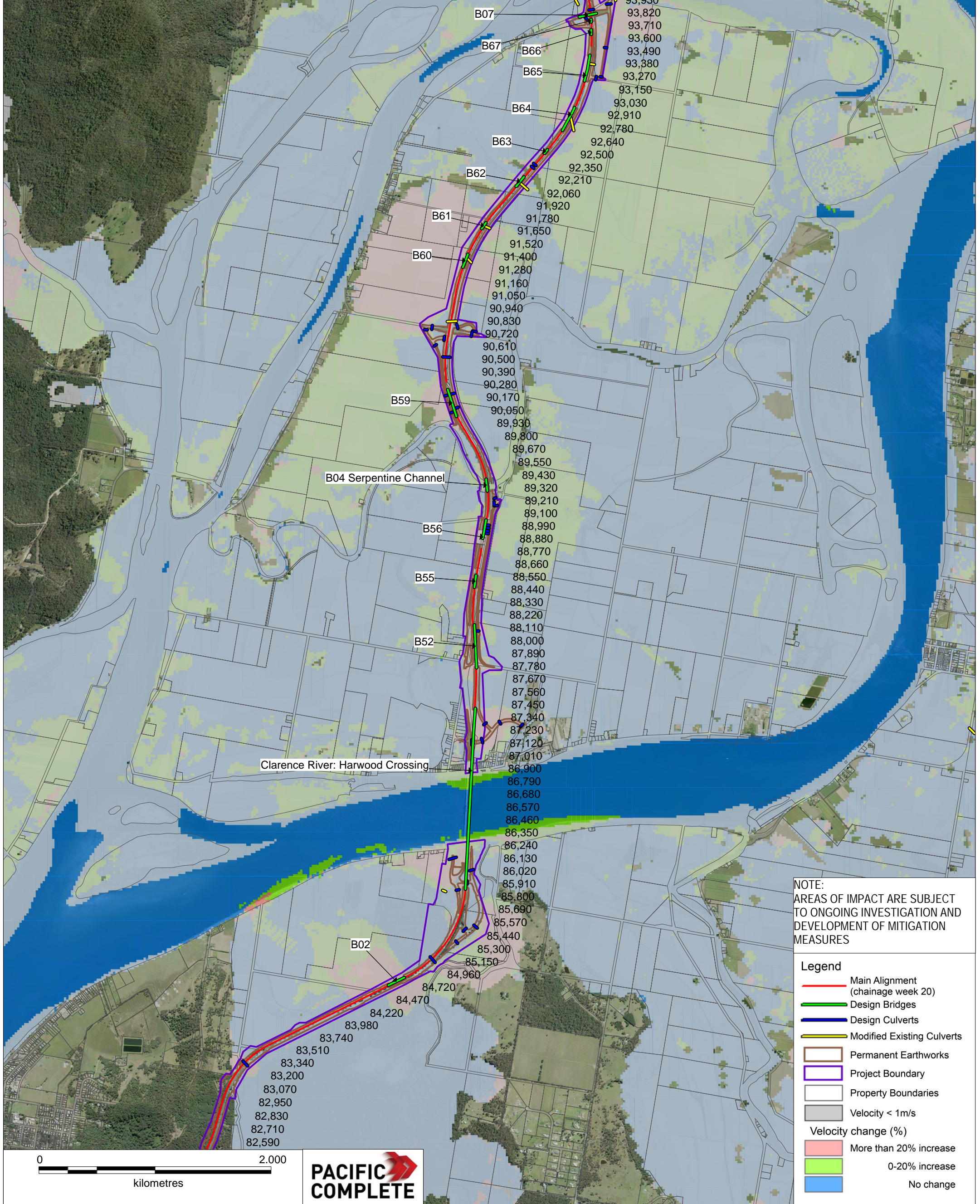


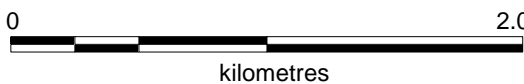
**Clarence River Regional Model
Percentage Change in Flood Velocity**

Map ID: C036
 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



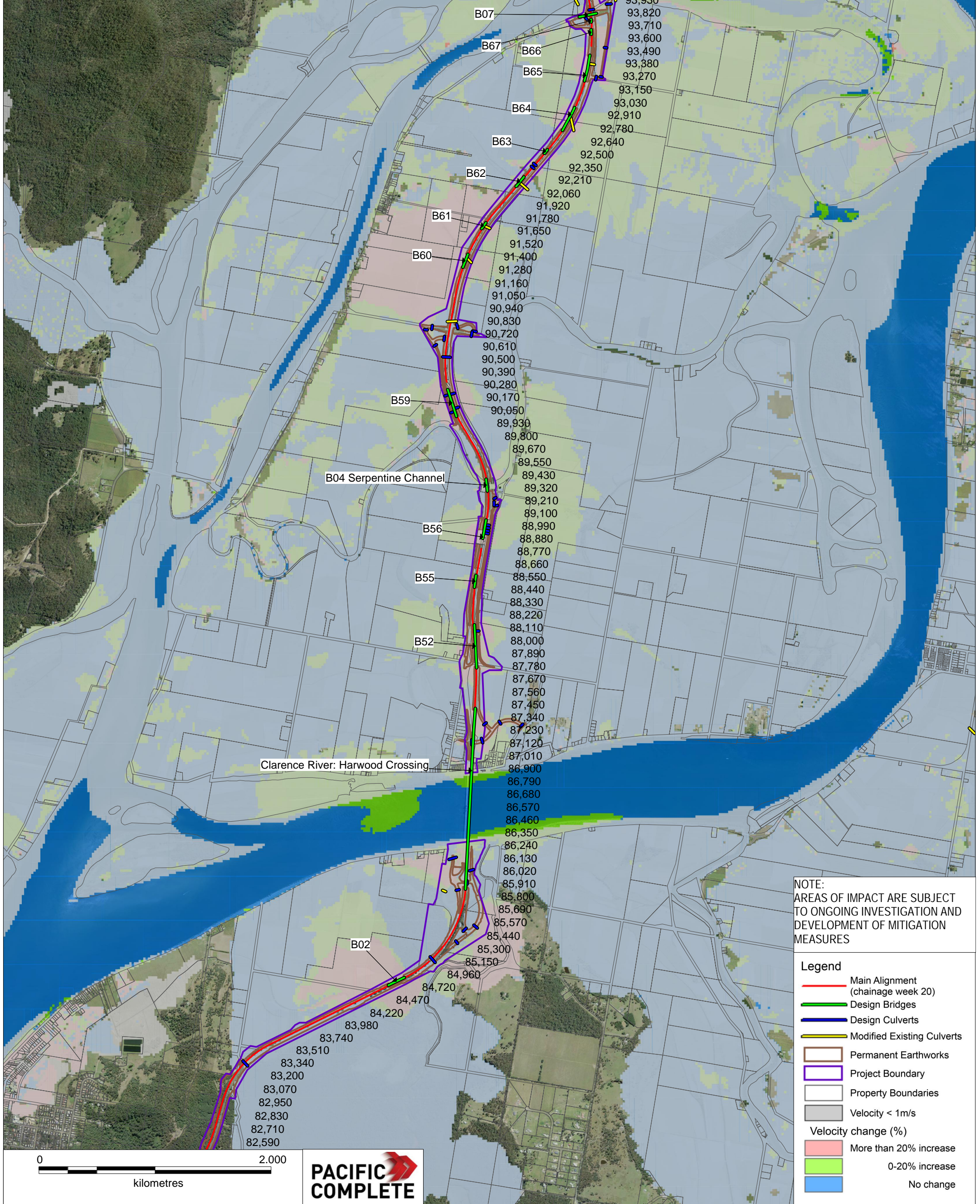
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

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



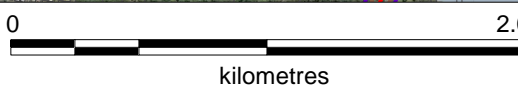
**Clarence River Regional Model
Percentage Change in Flood Velocity**

Map ID: C037
 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



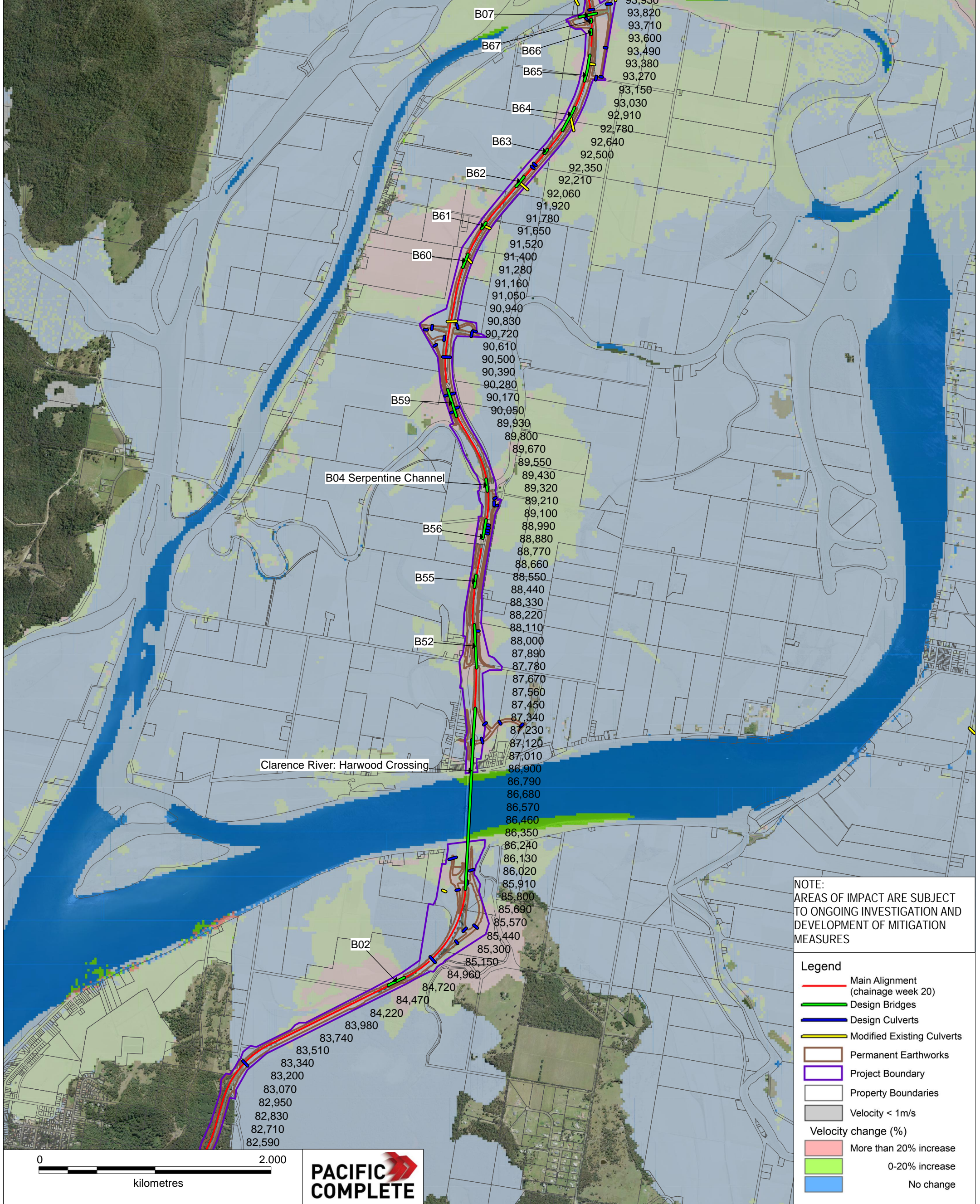
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

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



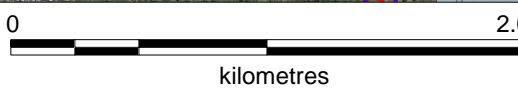
**Clarence River Regional Model
Percentage Change in Flood Velocity**

Map ID: C038
 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

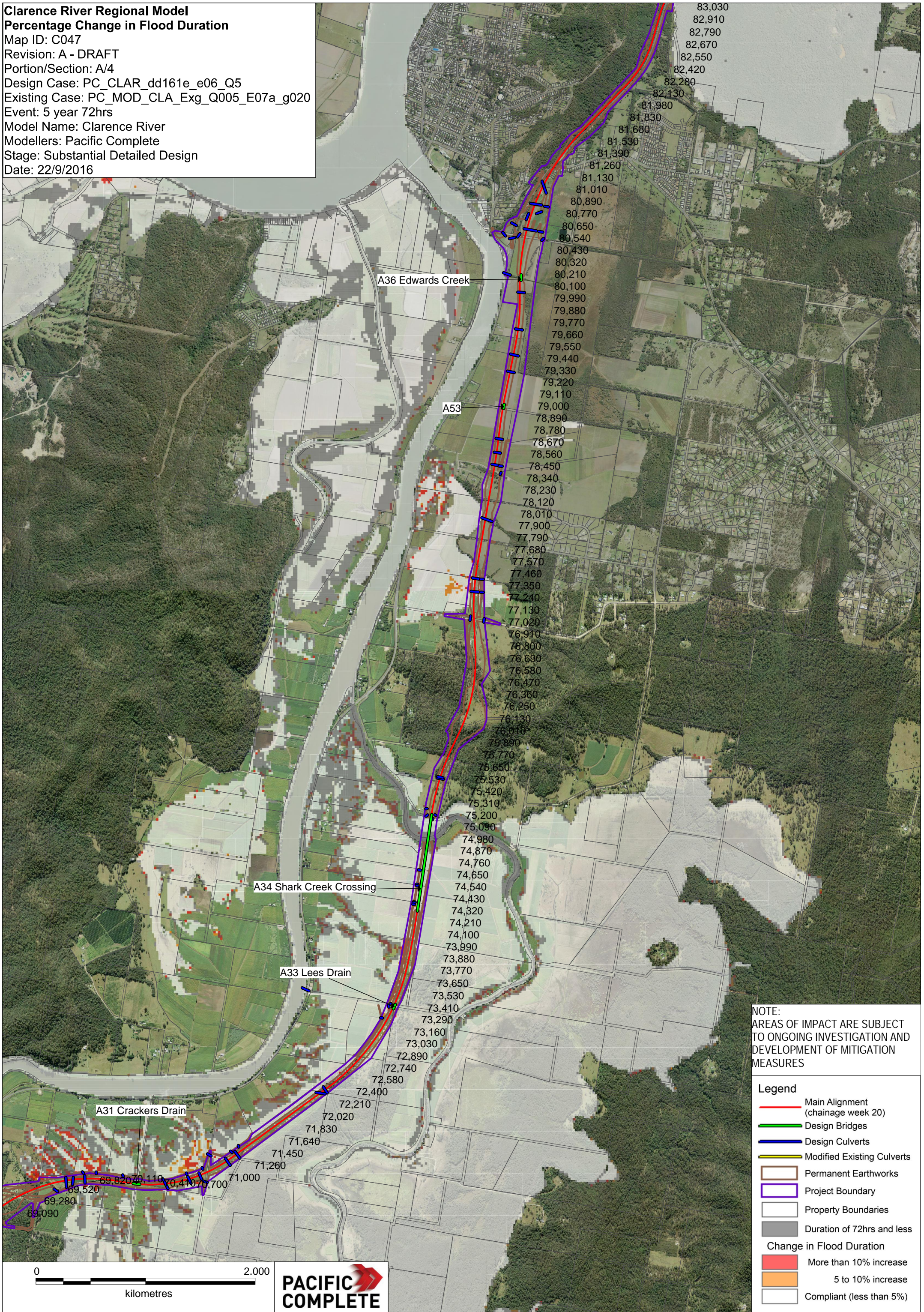


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

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

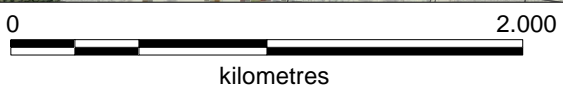


Clarence River Regional Model
Percentage Change in Flood Duration
 Map ID: C047
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q5
 Existing Case: PC_MOD_CLA_Exg_Q005_E07a_g020
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

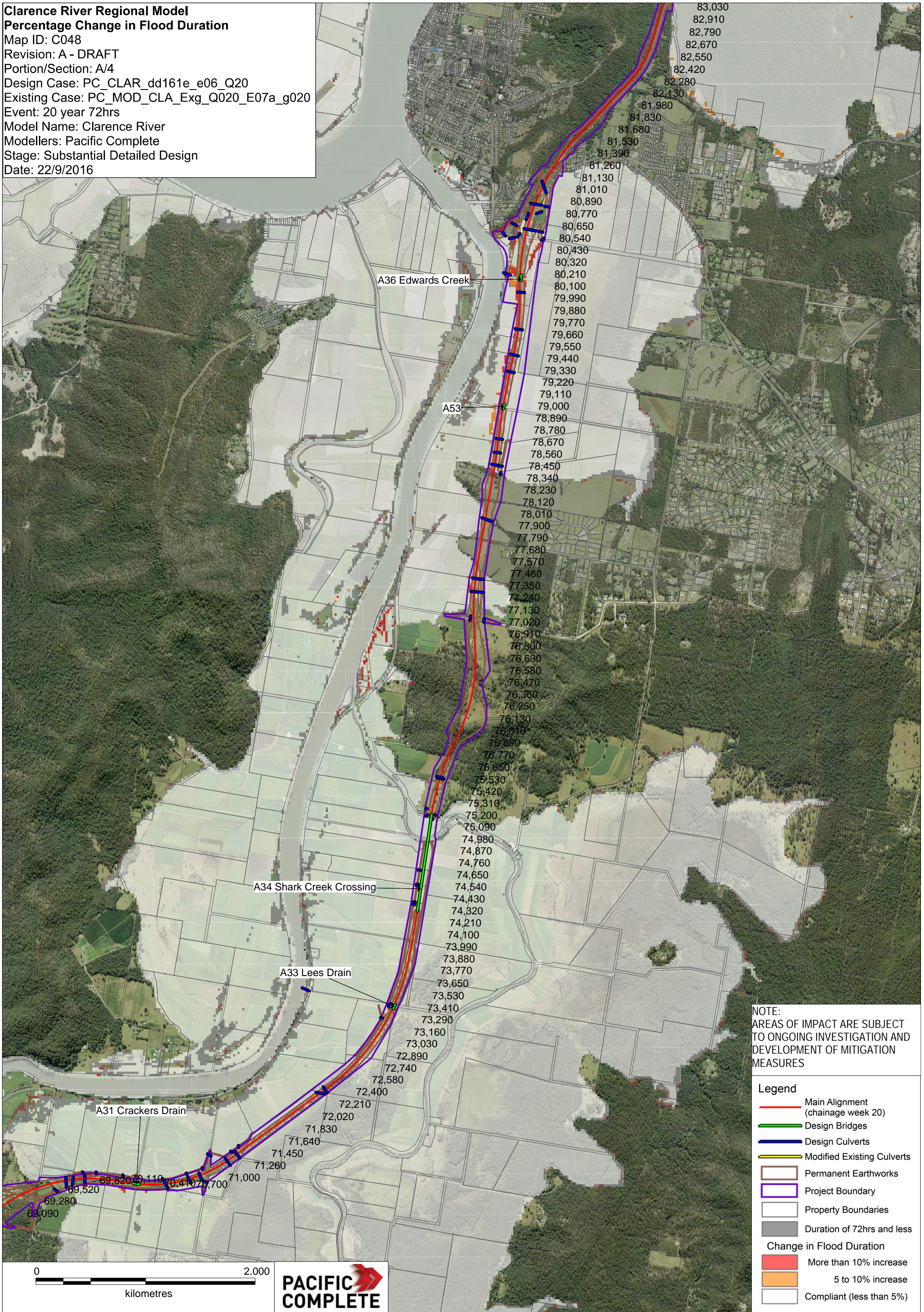


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Duration of 72hrs and less
- Change in Flood Duration**
- More than 10% increase
 - 5 to 10% increase
 - Compliant (less than 5%)

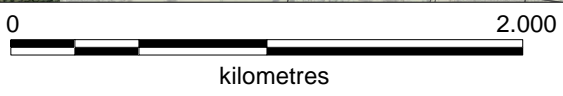


Clarence River Regional Model
Percentage Change in Flood Duration
 Map ID: C048
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q20
 Existing Case: PC_MOD_CLA_Exg_Q020_E07a_g020
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

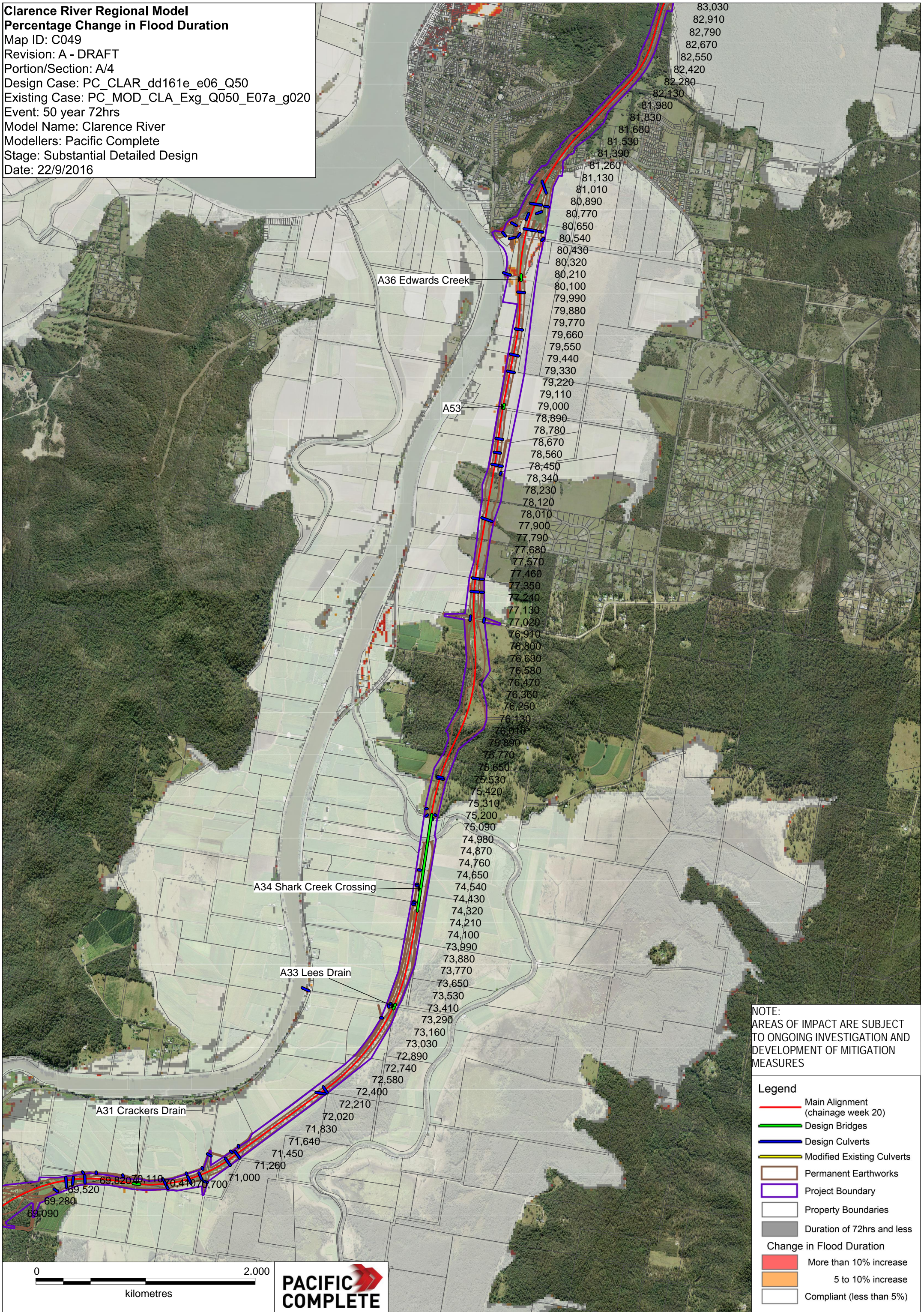


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Duration of 72hrs and less
- Change in Flood Duration**
- More than 10% increase
 - 5 to 10% increase
 - Compliant (less than 5%)

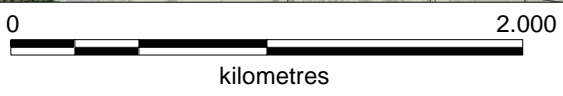


Clarence River Regional Model
Percentage Change in Flood Duration
 Map ID: C049
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q50
 Existing Case: PC_MOD_CLA_Exg_Q050_E07a_g020
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

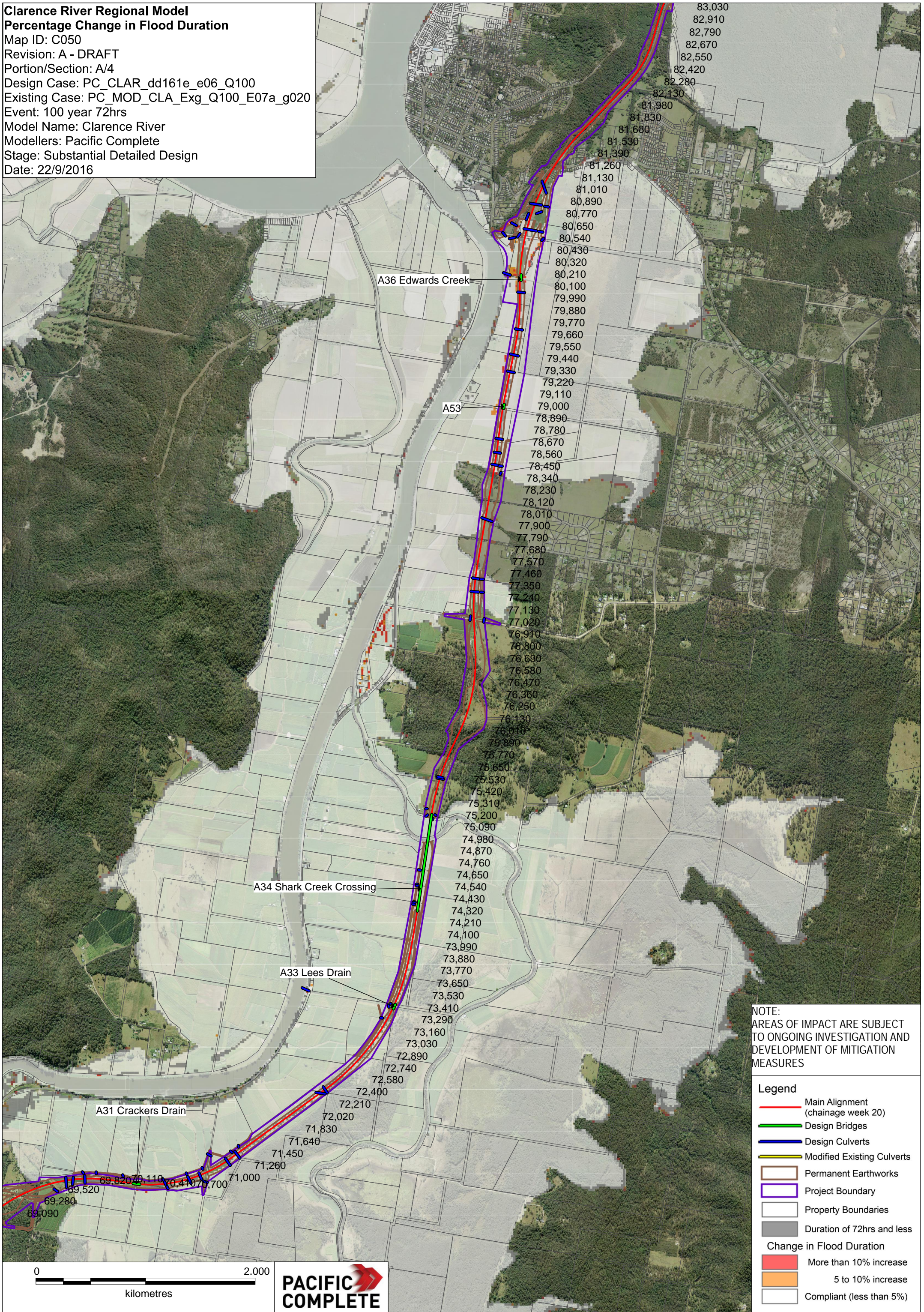


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Duration of 72hrs and less
- Change in Flood Duration**
- More than 10% increase
 - 5 to 10% increase
 - Compliant (less than 5%)

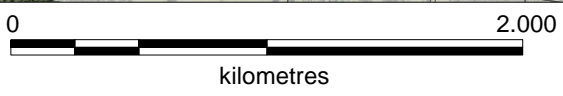


Clarence River Regional Model
Percentage Change in Flood Duration
 Map ID: C050
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E07a_g020
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



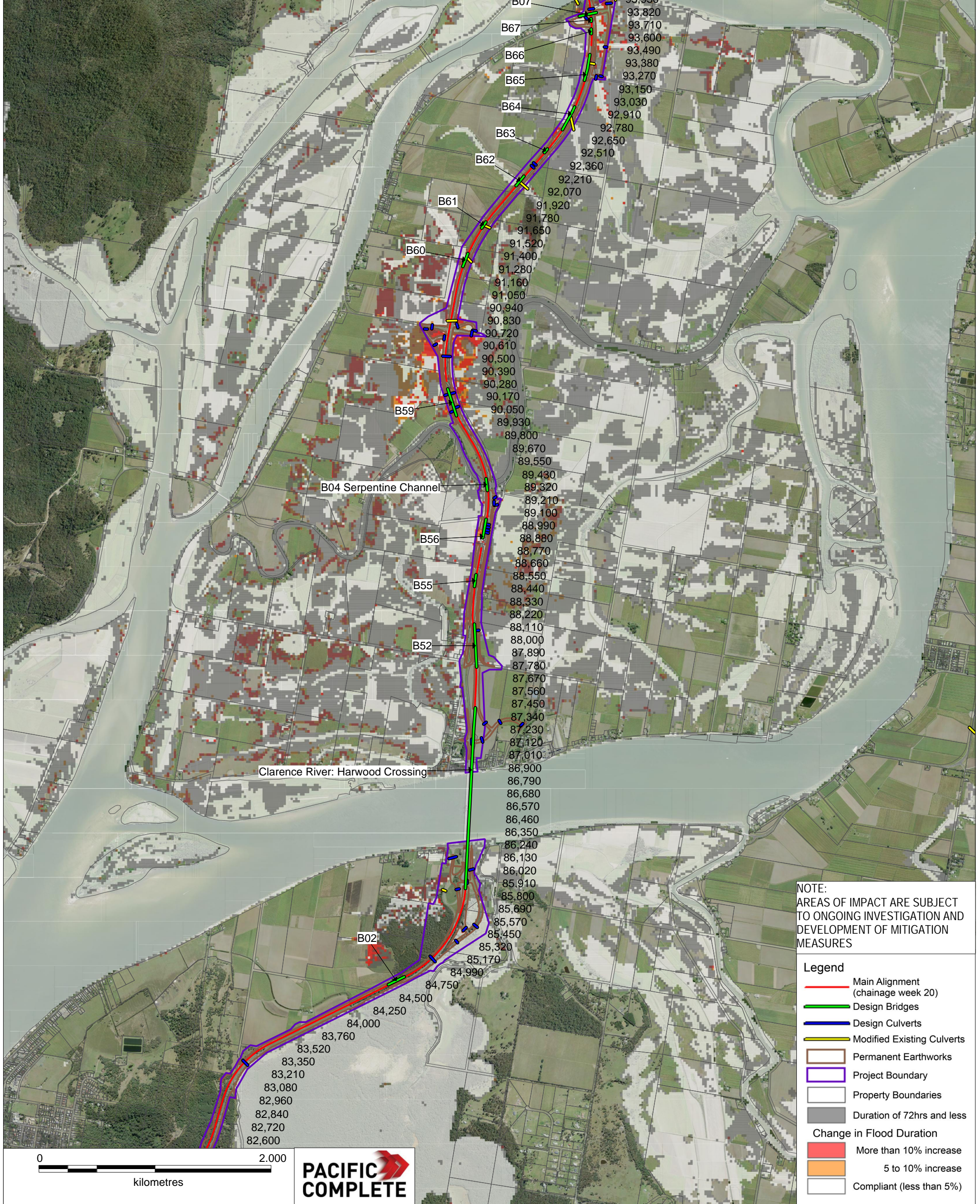
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
 - Duration of 72hrs and less
- Change in Flood Duration**
- More than 10% increase
 - 5 to 10% increase
 - Compliant (less than 5%)



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

Map ID: C051
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q5
 Existing Case: PC_MOD_CLA_Exg_Q005_E07a_g020
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



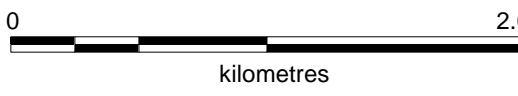
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries
- Duration of 72hrs and less

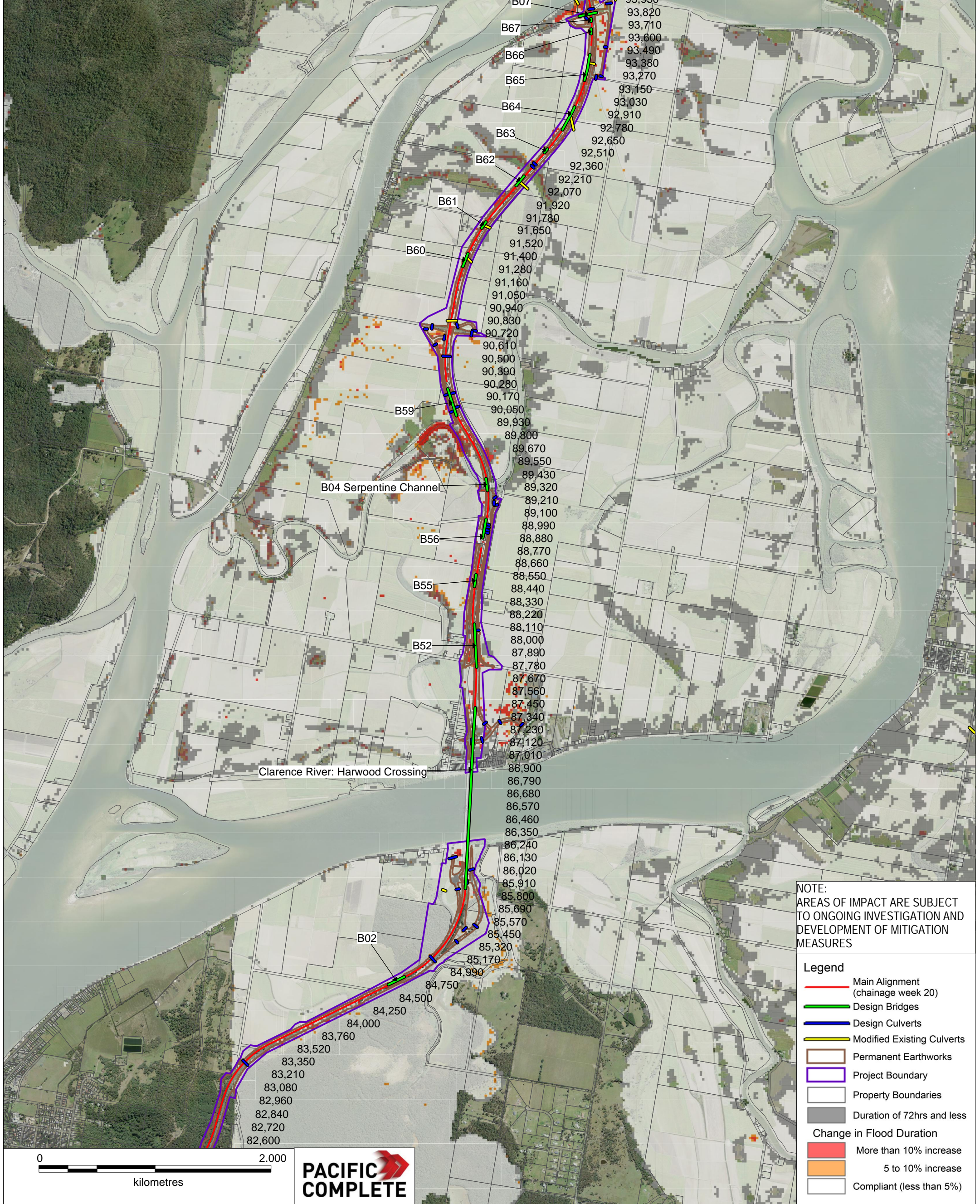
Change in Flood Duration

- More than 10% increase
- 5 to 10% increase
- Compliant (less than 5%)



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

Map ID: C052
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q20
 Existing Case: PC_MOD_CLA_Exg_Q020_E07a_g020
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



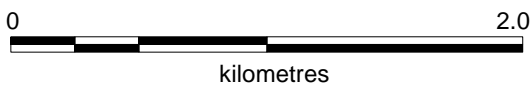
NOTE:
 AREAS OF IMPACT ARE SUBJECT TO ONGOING INVESTIGATION AND DEVELOPMENT OF MITIGATION MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries
- Duration of 72hrs and less

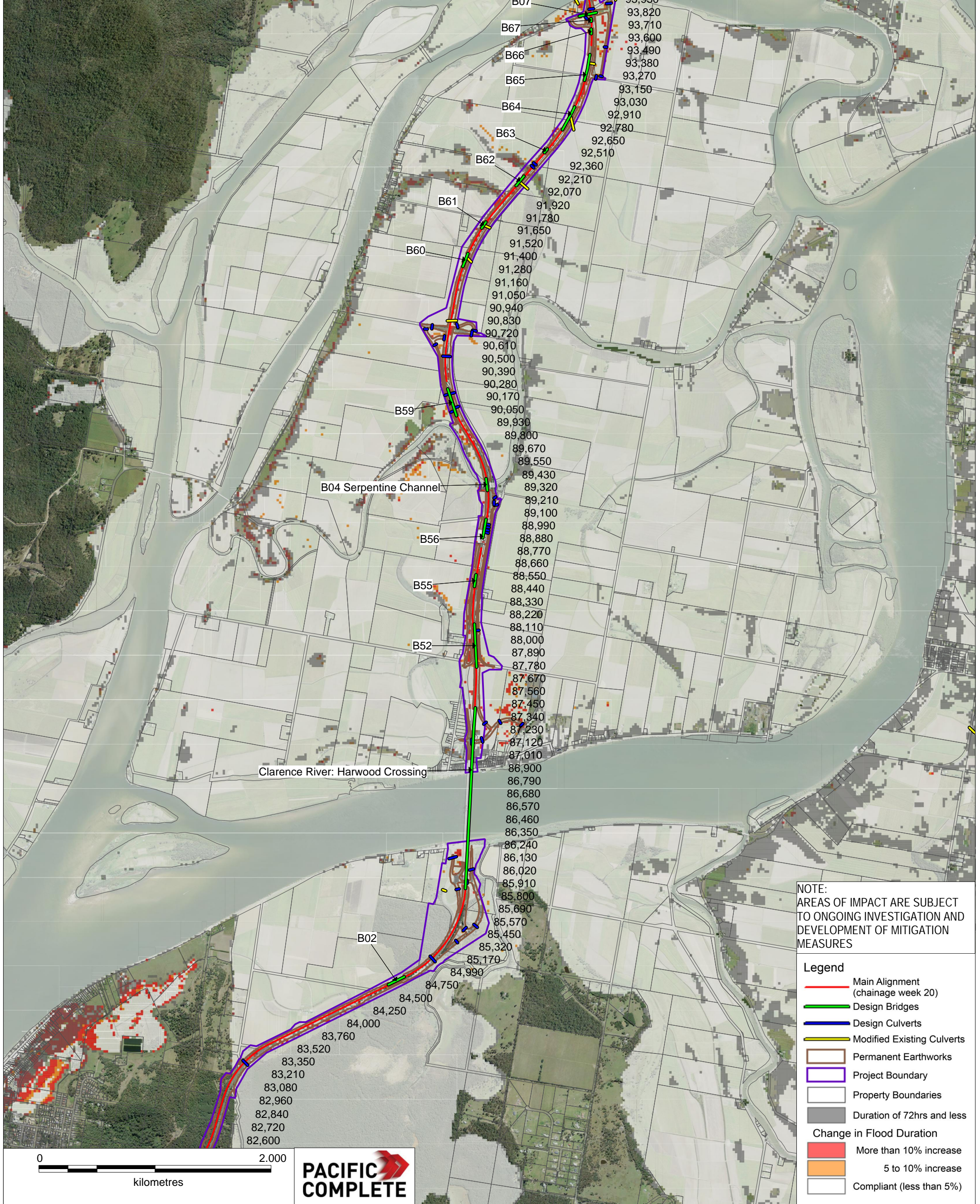
Change in Flood Duration

- More than 10% increase
- 5 to 10% increase
- Compliant (less than 5%)



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

Map ID: C053
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q50
 Existing Case: PC_MOD_CLA_Exg_Q050_E07a_g020
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



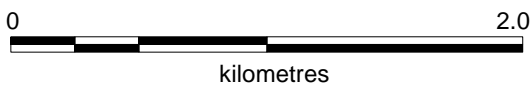
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries
- Duration of 72hrs and less

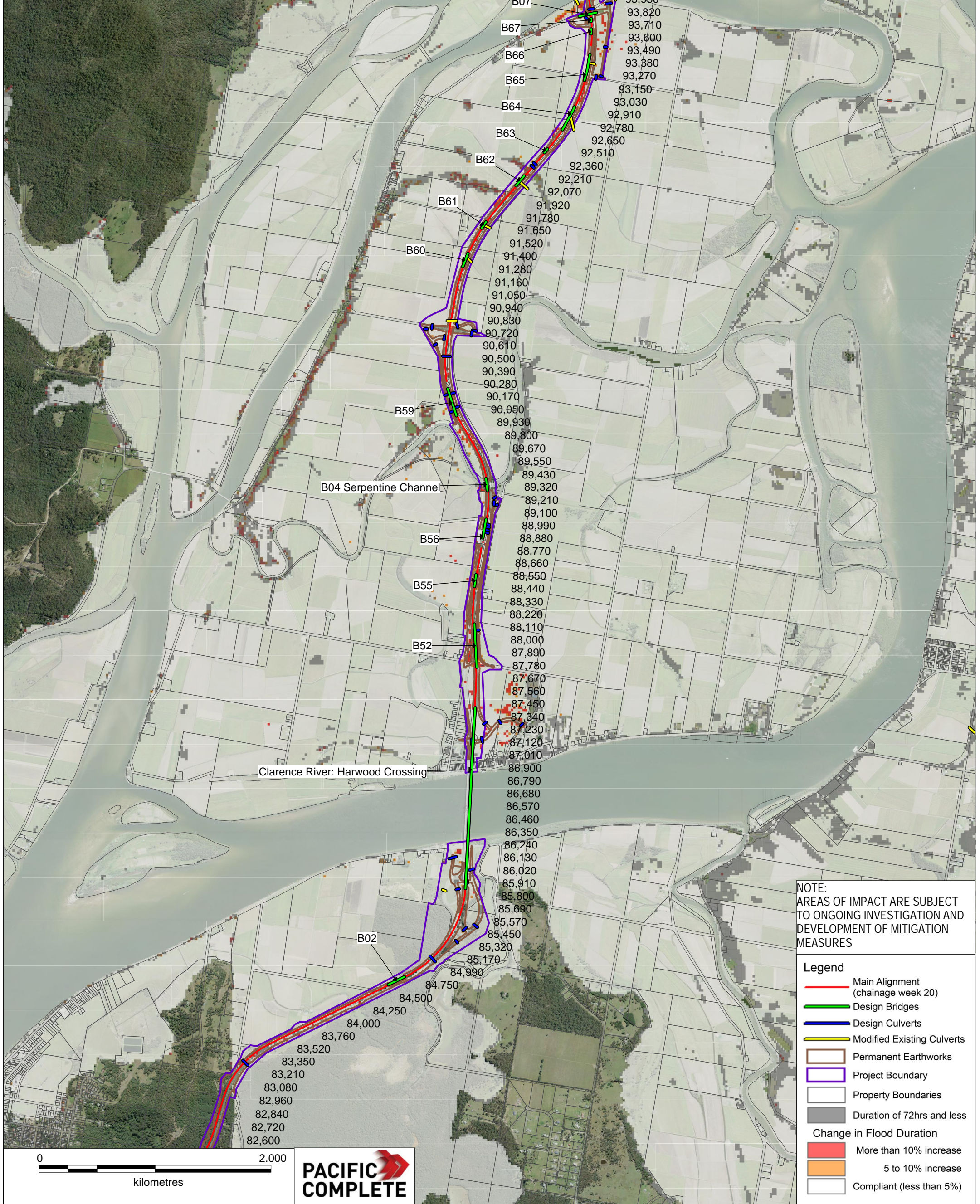
Change in Flood Duration

- More than 10% increase
- 5 to 10% increase
- Compliant (less than 5%)



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

Map ID: C054
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q100
 Existing Case: PC_MOD_CLA_Exg_Q100_E07a_g020
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



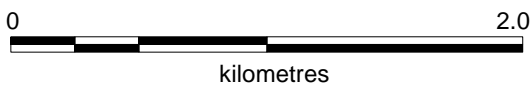
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

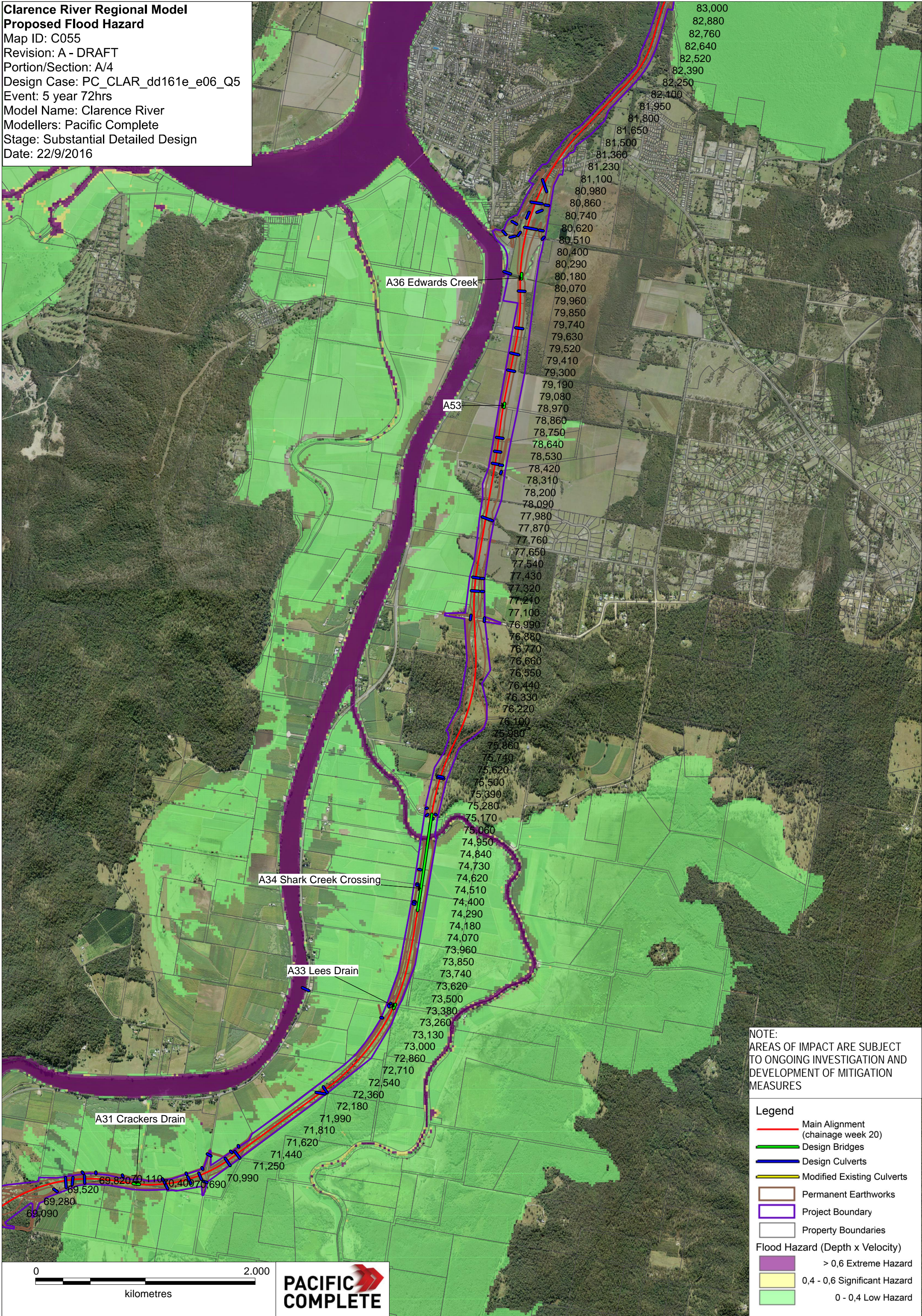
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries
- Duration of 72hrs and less

Change in Flood Duration

- More than 10% increase
- 5 to 10% increase
- Compliant (less than 5%)



**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C055
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q5
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



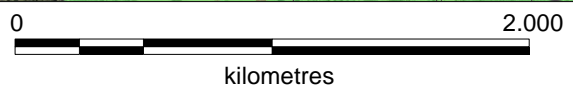
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

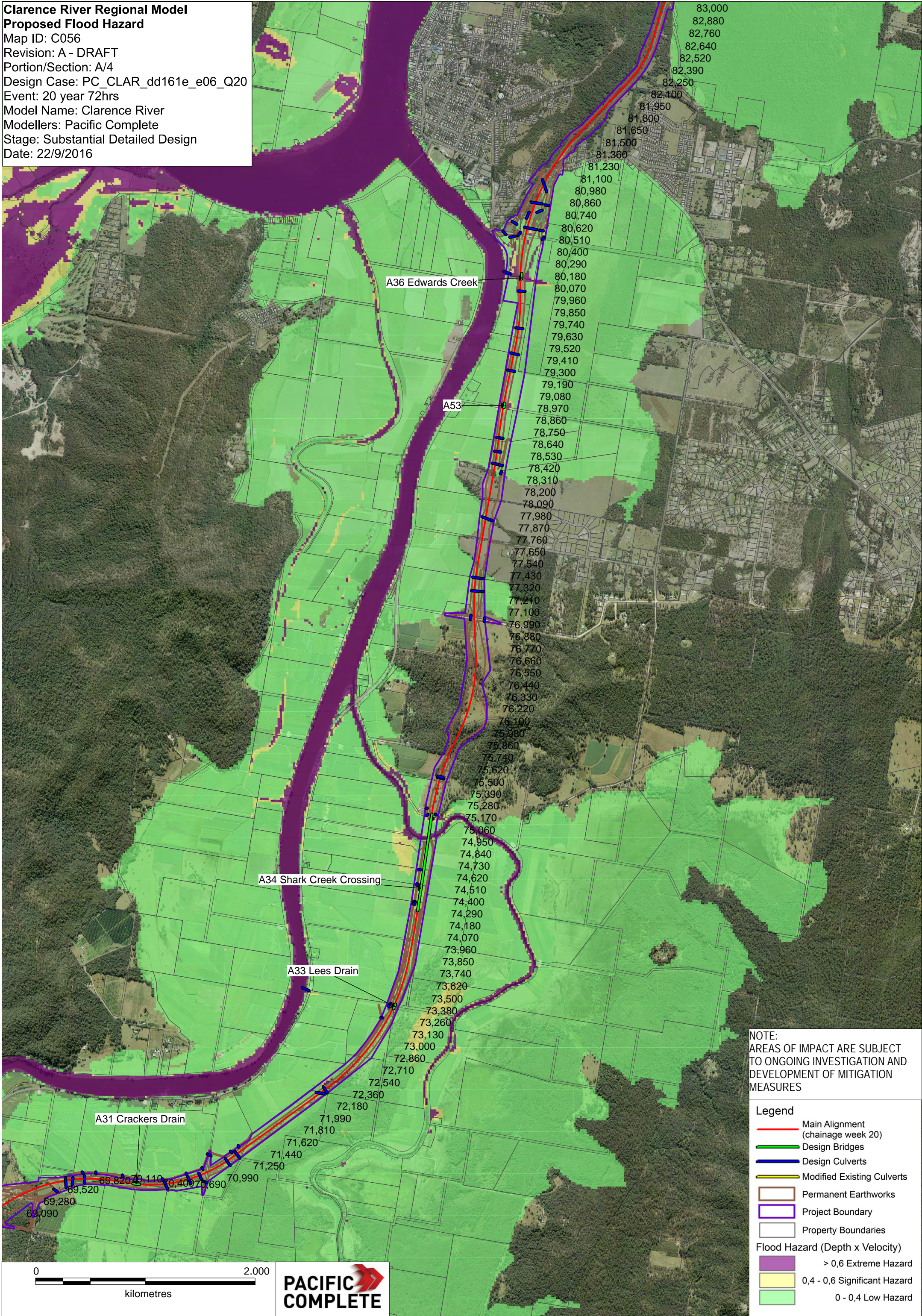
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood Hazard (Depth x Velocity)

- > 0,6 Extreme Hazard
- 0,4 - 0,6 Significant Hazard
- 0 - 0,4 Low Hazard



**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C056
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q20
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



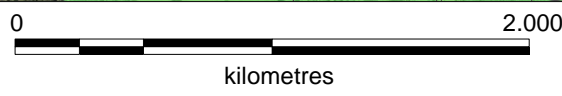
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

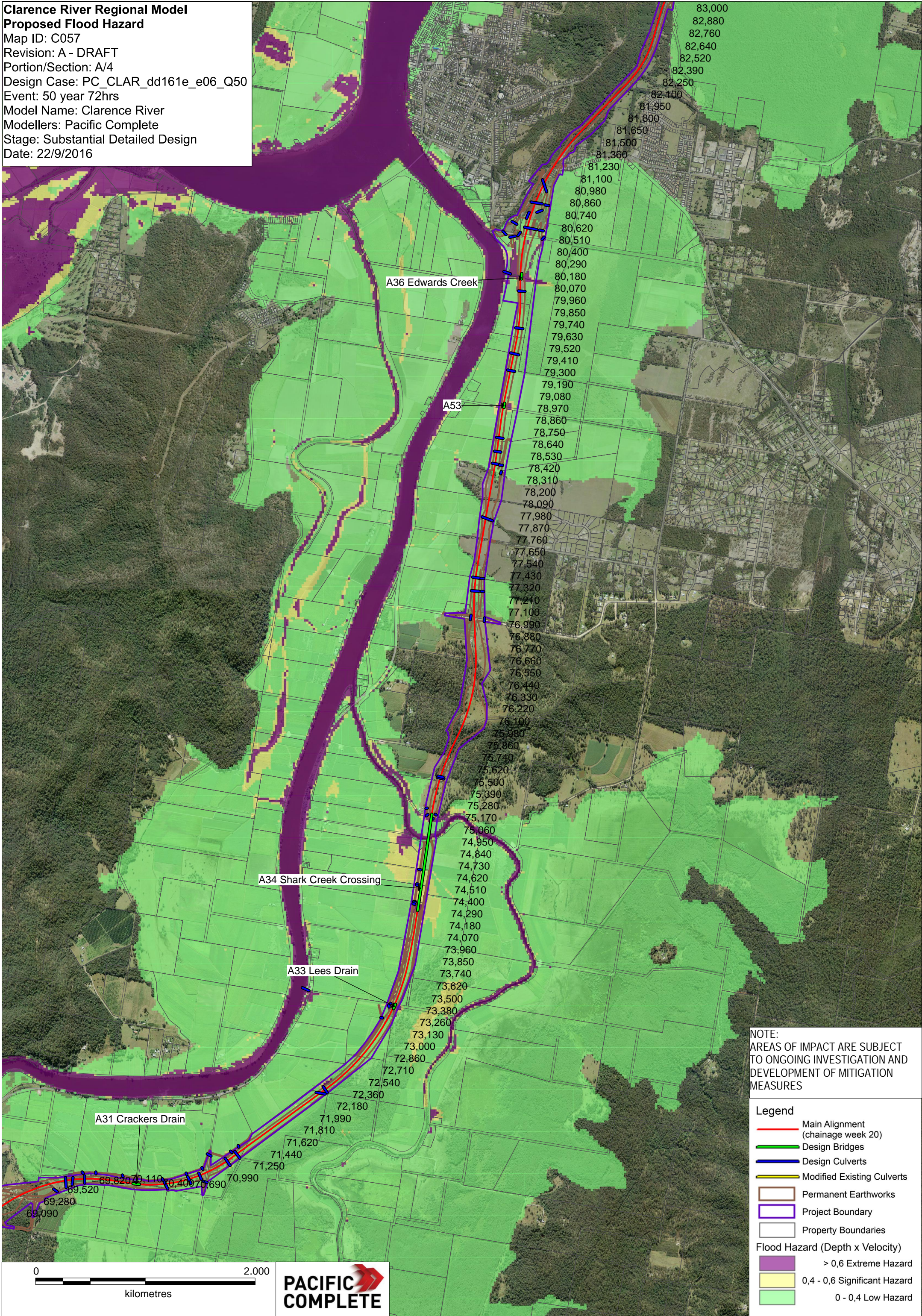
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood Hazard (Depth x Velocity)

- > 0,6 Extreme Hazard
- 0,4 - 0,6 Significant Hazard
- 0 - 0,4 Low Hazard



**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C057
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q50
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



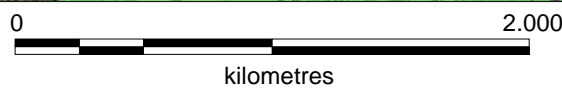
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

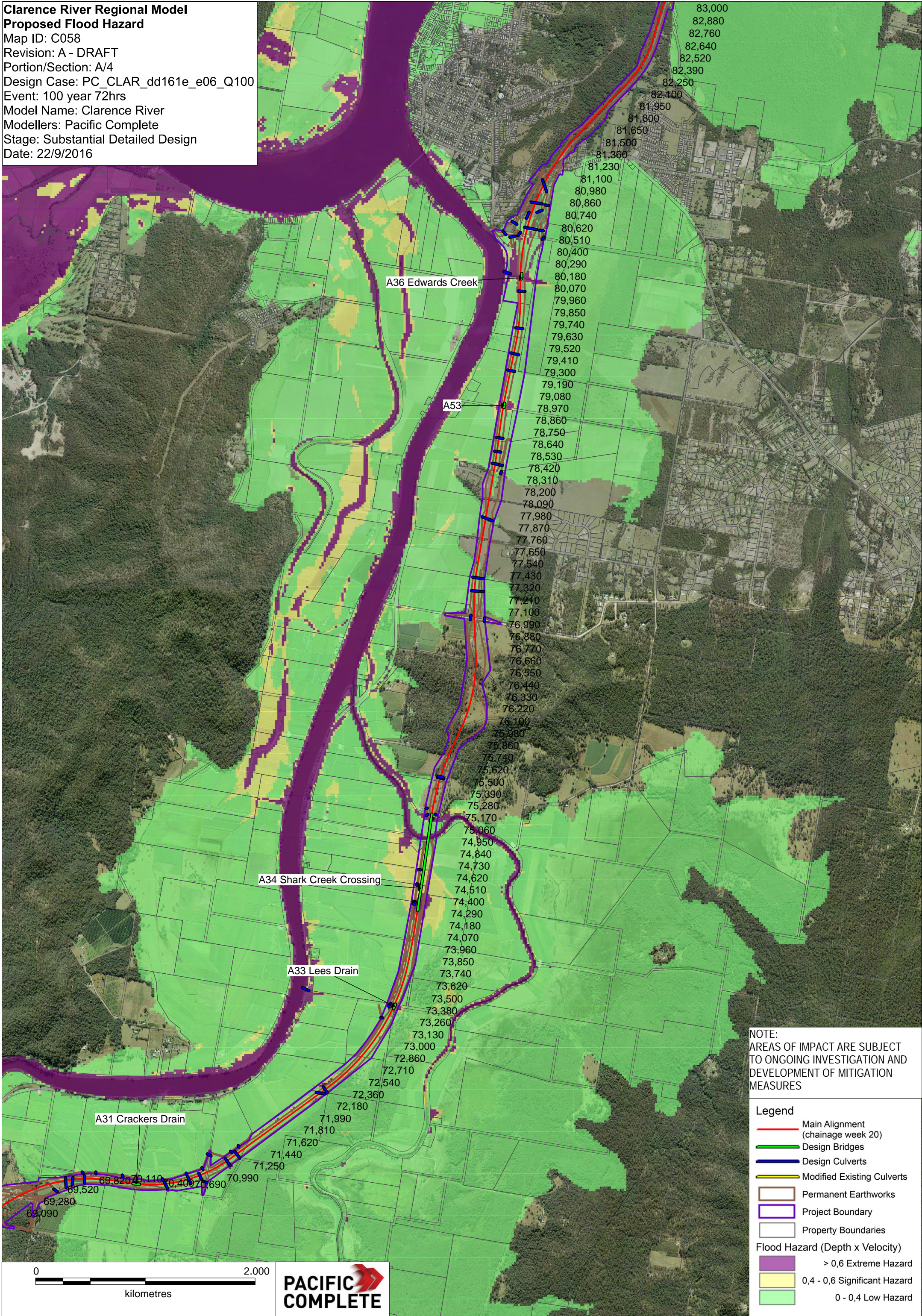
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood Hazard (Depth x Velocity)

- > 0,6 Extreme Hazard
- 0,4 - 0,6 Significant Hazard
- 0 - 0,4 Low Hazard



**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C058
 Revision: A - DRAFT
 Portion/Section: A/4
 Design Case: PC_CLAR_dd161e_e06_Q100
 Event: 100 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



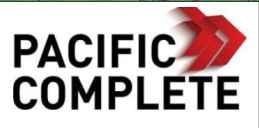
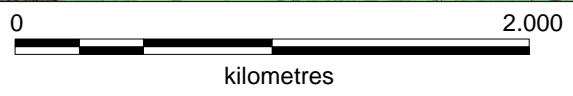
NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

Legend

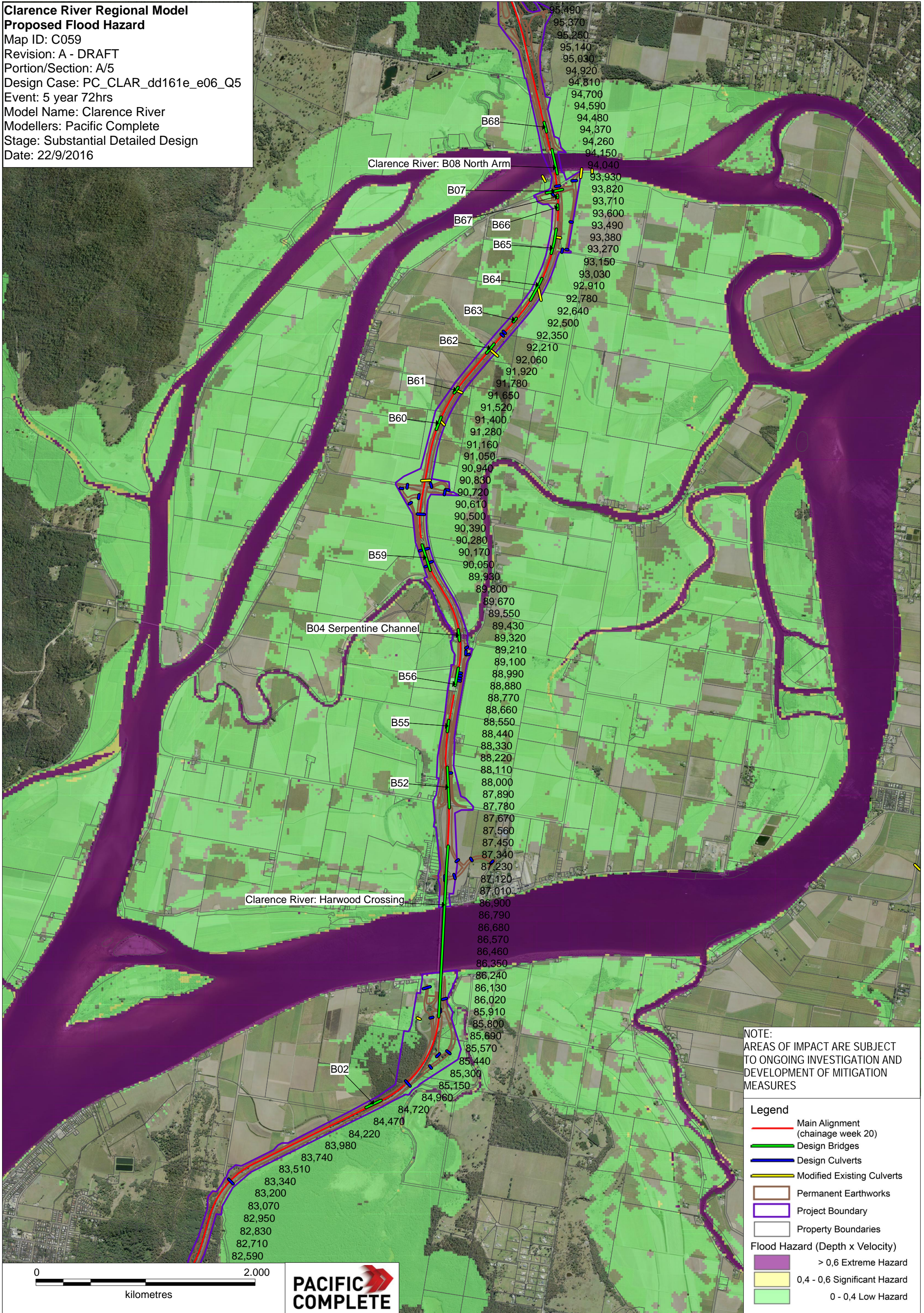
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood Hazard (Depth x Velocity)

- > 0,6 Extreme Hazard
- 0,4 - 0,6 Significant Hazard
- 0 - 0,4 Low Hazard

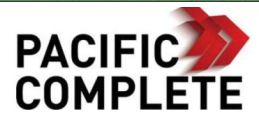
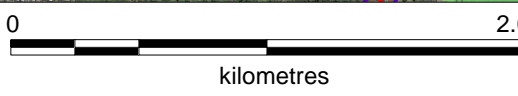


**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C059
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q5
 Event: 5 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

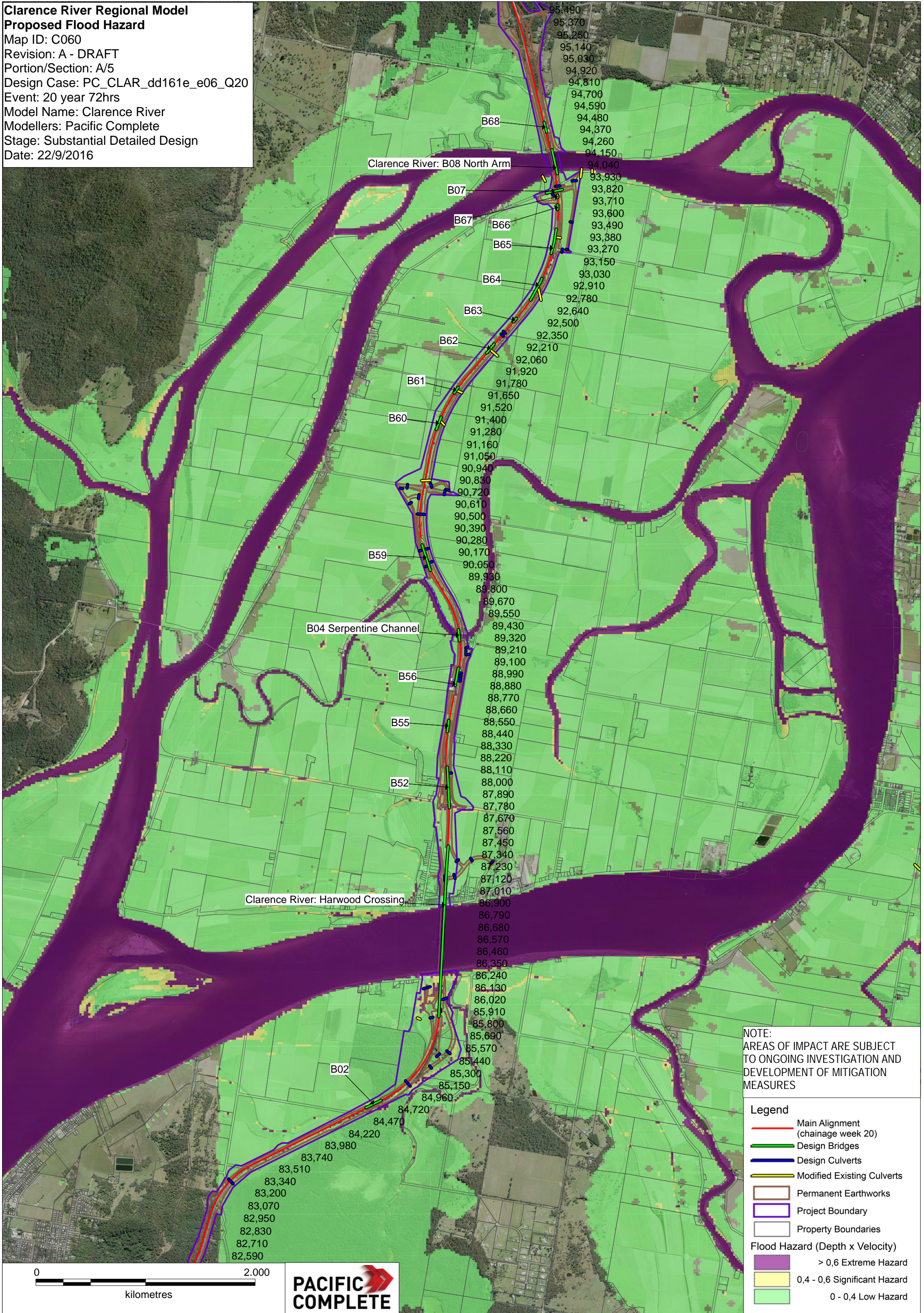


NOTE:
 AREAS OF IMPACT ARE SUBJECT
 TO ONGOING INVESTIGATION AND
 DEVELOPMENT OF MITIGATION
 MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
- Flood Hazard (Depth x Velocity)**
- > 0,6 Extreme Hazard
 - 0,4 - 0,6 Significant Hazard
 - 0 - 0,4 Low Hazard

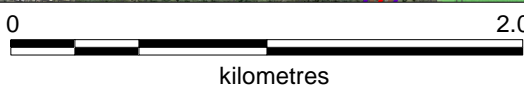


**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C060
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q20
 Event: 20 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016

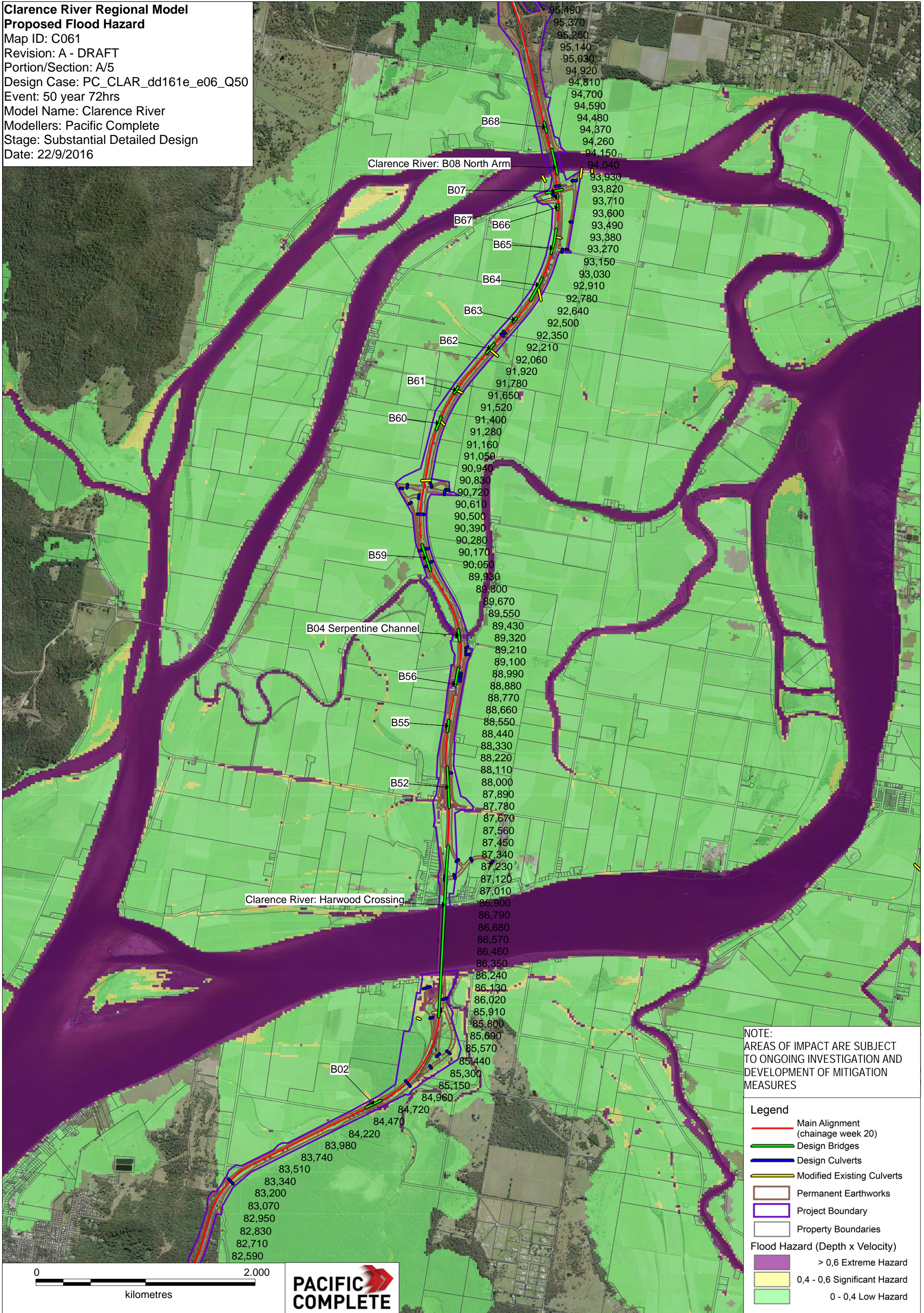


NOTE:
 AREAS OF IMPACT ARE SUBJECT TO ONGOING INVESTIGATION AND DEVELOPMENT OF MITIGATION MEASURES

- Legend**
- Main Alignment (chainage week 20)
 - Design Bridges
 - Design Culverts
 - Modified Existing Culverts
 - Permanent Earthworks
 - Project Boundary
 - Property Boundaries
- Flood Hazard (Depth x Velocity)**
- > 0,6 Extreme Hazard
 - 0,4 - 0,6 Significant Hazard
 - 0 - 0,4 Low Hazard



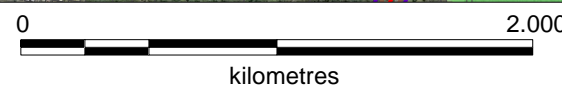
**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C061
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q50
 Event: 50 year 72hrs
 Model Name: Clarence River
 Modellers: Pacific Complete
 Stage: Substantial Detailed Design
 Date: 22/9/2016



Clarence River: B08 North Arm

B04 Serpentine Channel

Clarence River: Harwood Crossing



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

Legend

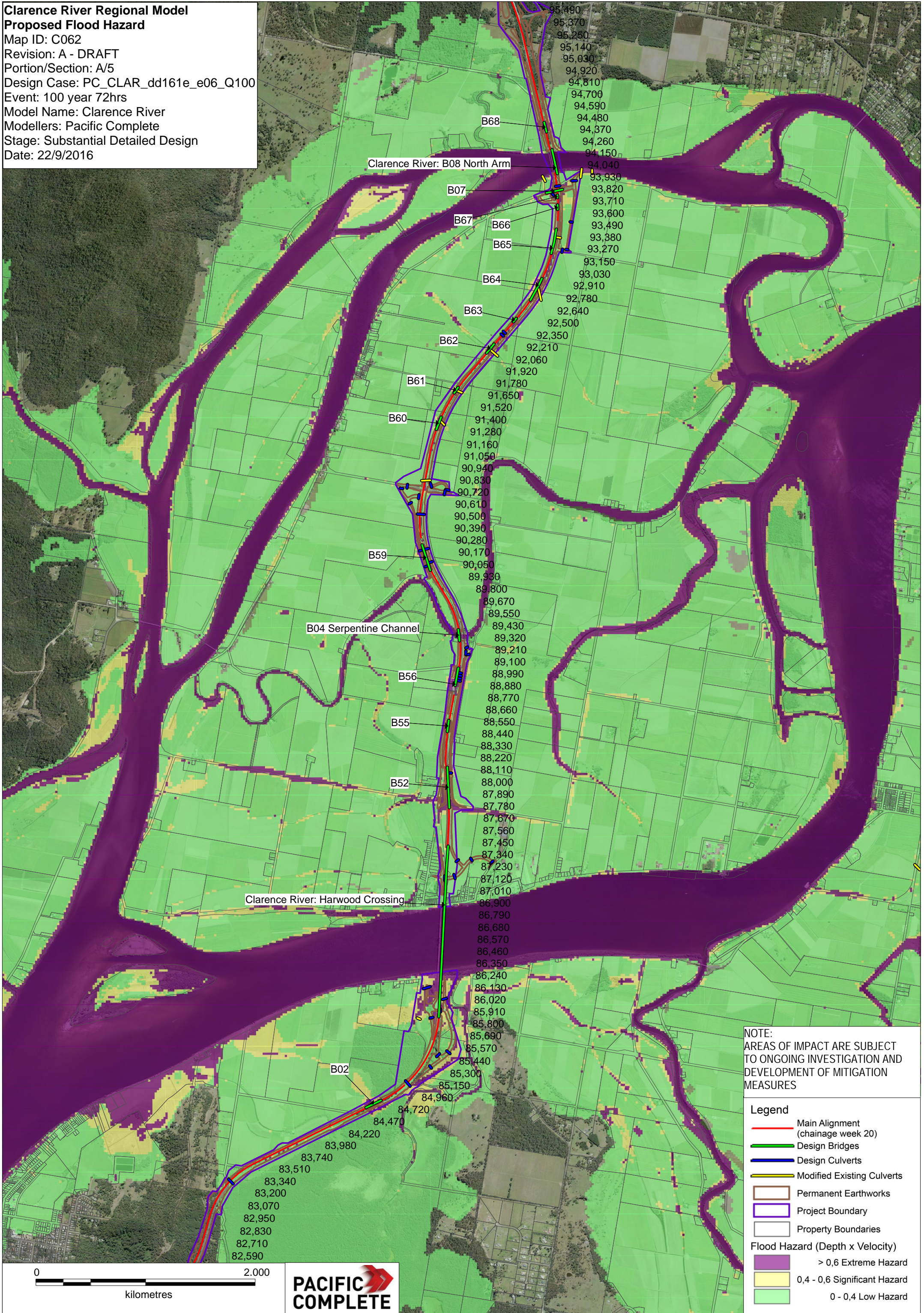
- Main Alignment (chainage week 20)
- Design Bridges
- Design Culverts
- Modified Existing Culverts
- Permanent Earthworks
- Project Boundary
- Property Boundaries

Flood Hazard (Depth x Velocity)

- > 0,6 Extreme Hazard
- 0,4 - 0,6 Significant Hazard
- 0 - 0,4 Low Hazard

95,490
 95,370
 95,250
 95,140
 95,030
 94,920
 94,810
 94,700
 94,590
 94,480
 94,370
 94,260
 94,150
 94,040
 93,930
 93,820
 93,710
 93,600
 93,490
 93,380
 93,270
 93,150
 93,030
 92,910
 92,780
 92,640
 92,500
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 92,210
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 89,550
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 87,560
 87,450
 87,340
 87,230
 87,120
 87,010
 86,900
 86,790
 86,680
 86,570
 86,460
 86,350
 86,240
 86,130
 86,020
 85,910
 85,800
 85,690
 85,570
 85,440
 85,300
 85,150
 84,960
 84,720
 84,470
 84,220
 83,980
 83,740
 83,510
 83,340
 83,200
 83,070
 82,950
 82,830
 82,710
 82,590

**Clarence River Regional Model
Proposed Flood Hazard**
 Map ID: C062
 Revision: A - DRAFT
 Portion/Section: A/5
 Design Case: PC_CLAR_dd161e_e06_Q100
 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 Hazard (Depth x Velocity)**
- > 0,6 Extreme Hazard
 - 0,4 - 0,6 Significant Hazard
 - 0 - 0,4 Low Hazard

