APPENDIX

E

Flood Study Report

Attachment F Flood Impact Assessment
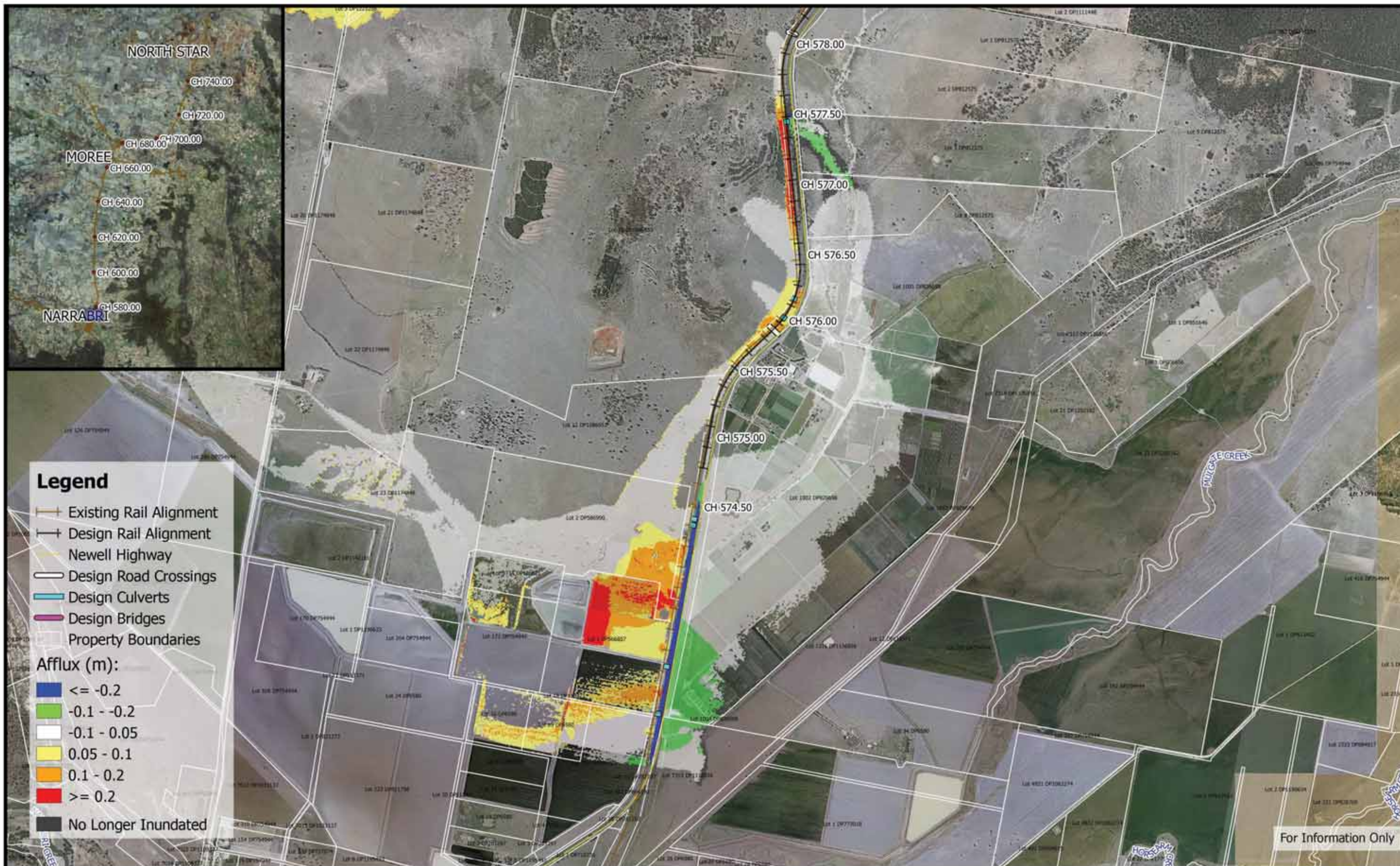for Extreme Events

PART 3 OF 3

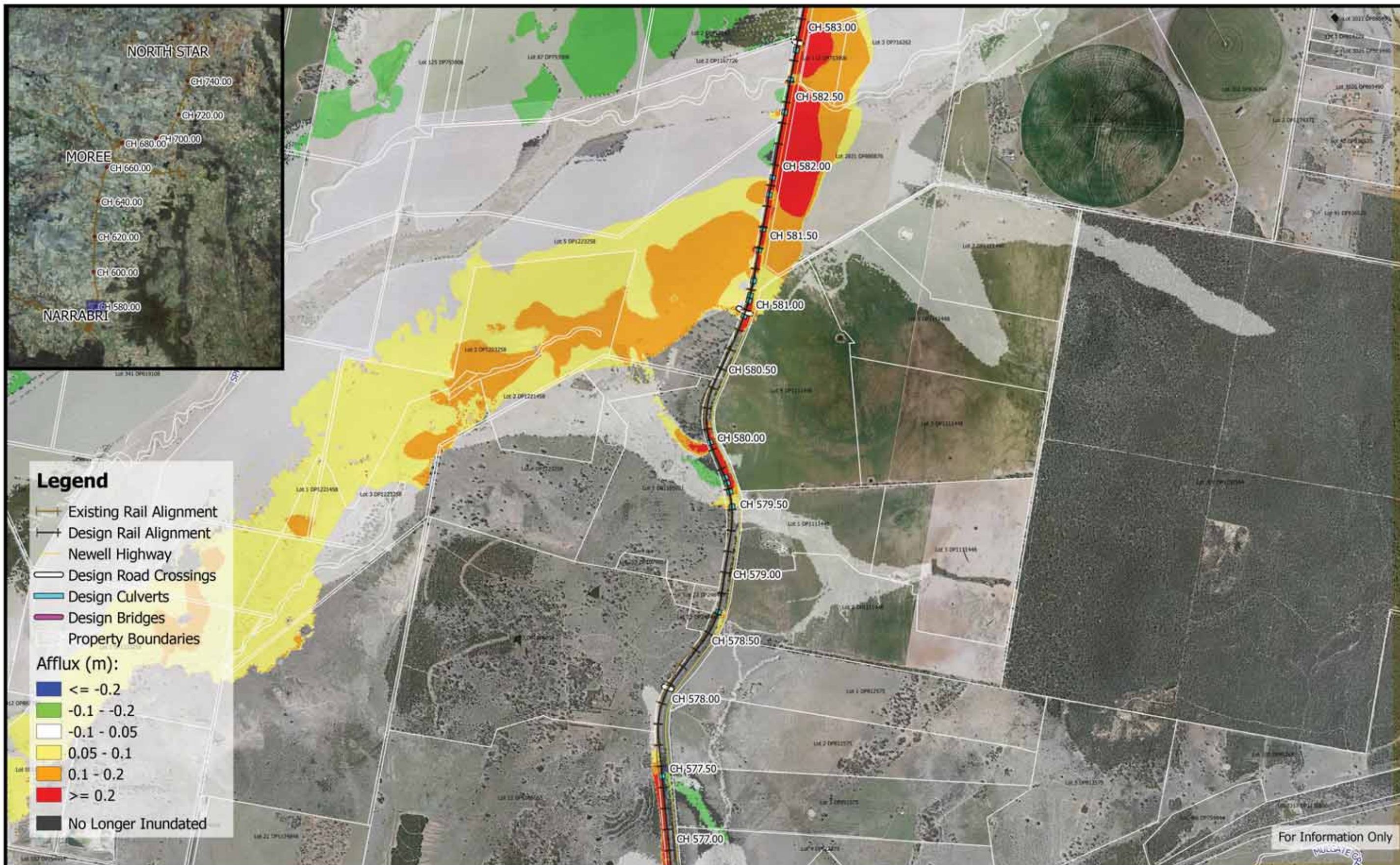**APPENDIX B2: 0.05% AEP EVENT FLOOD IMPACT MAPS**

Map List:

Flood Level Change (Afflux) 0.05% AEP – Figures DE0.05A1 to 37

Flood Velocity Change 0.05% AEP – Figures DE0.05VC1 to 37

Flood Duration Change 0.05% AEP – Figures DE0.05DC1 to 37

Legend

- ⊢—⊢ Existing Rail Alignment
- ⊢—⊢ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- ▢ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A1
0.05% AEP Flood Afflux - CH 575.00

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

🟦	<= -0.2
🟩	-0.1 - 0.2
⬜	-0.1 - 0.05
🟨	0.05 - 0.1
🟧	0.1 - 0.2
🟥	>= 0.2
⬛	No Longer Inundated

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250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Figure DE0.05A2
0.05% AEP Flood Afflux - CH 580.00

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries

Afflux (m):

- $<= -0.2$
- $-0.1 - 0.2$
- $-0.1 - 0.05$
- $0.05 - 0.1$
- $0.1 - 0.2$
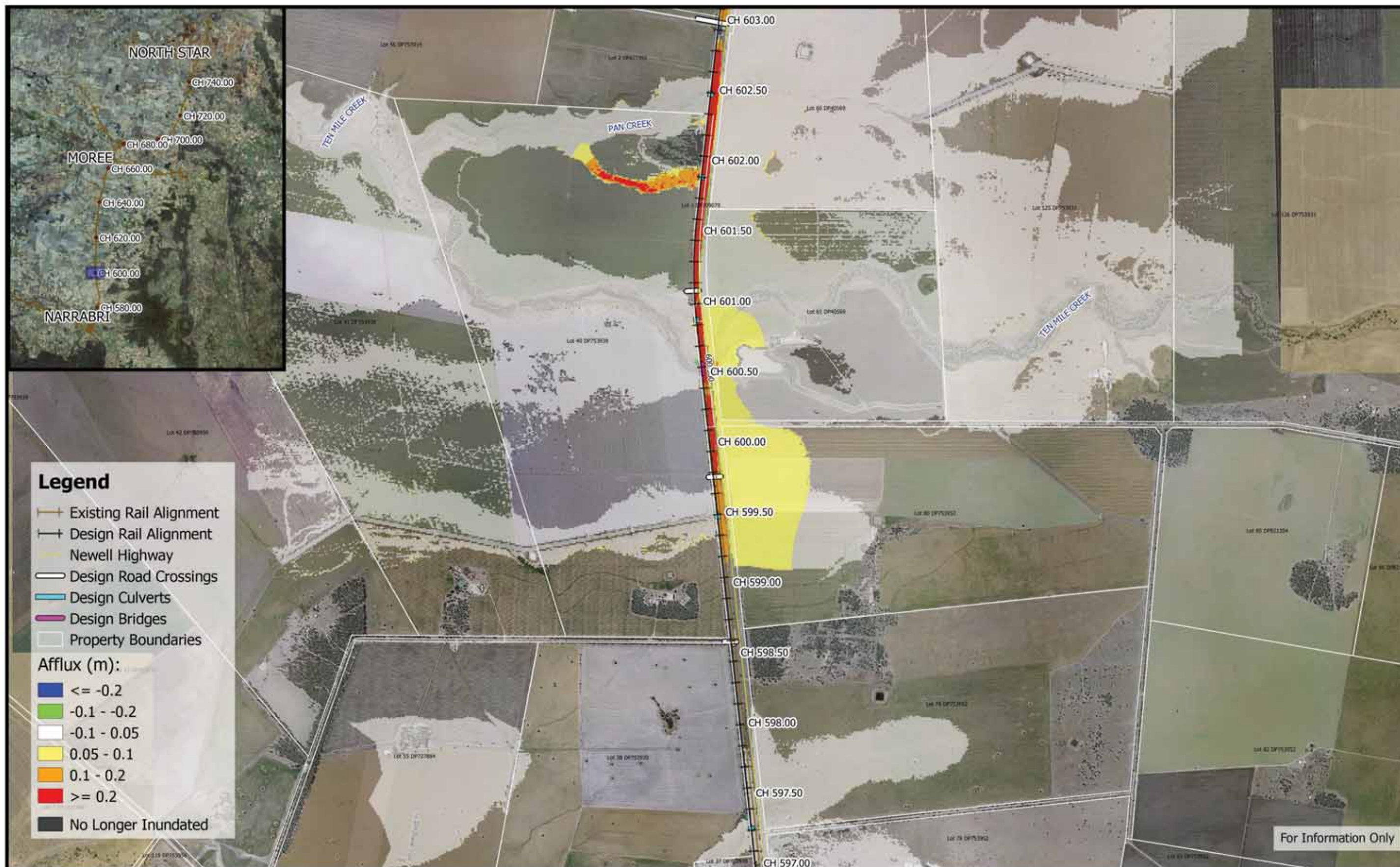- $>= 0.2$
- No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A3
0.05% AEP Flood Afflux - CH 585.00

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Legend

⊢─⊣ Existing Rail Alignment
⊢──⊣ Design Rail Alignment
── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▢ Property Boundaries

Afflux (m):

🟦	<= -0.2
🟩	-0.1 - -0.2
⬜	-0.1 - 0.05
🟨	0.05 - 0.1
🟧	0.1 - 0.2
🟥	>= 0.2
⬛	No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A4
0.05% AEP Flood Afflux - CH 590.00

Legend

⊢—⊣ Existing Rail Alignment

⊢—⊣ Design Rail Alignment

Newell Highway

▭ Design Road Crossings

▭ Design Culverts

▭ Design Bridges

▭ Property Boundaries

Afflux (m):

■ <= -0.2

■ -0.1 - -0.2

□ -0.1 - 0.05

□ 0.05 - 0.1

■ 0.1 - 0.2

■ >= 0.2

■ No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A5
0.05% AEP Flood Afflux - CH 595.00

For Information Only

Legend

⊢—⊢ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
╴╴╴ Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▭ Property Boundaries

Afflux (m):

■	<= -0.2
■	-0.1 - -0.2
□	-0.1 - 0.05
■	0.05 - 0.1
■	0.1 - 0.2
■	>= 0.2
■	No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A6
0.05% AEP Flood Afflux - CH 600.00

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Legend

- ⊢⊣ Existing Rail Alignment
- ⊢⊣ Design Rail Alignment
- — Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- □ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 608.00
CH 607.50
CH 607.00
CH 606.50
CH 606.00
CH 605.50
CH 605.00
CH 604.50
CH 604.00
CH 603.50
CH 603.00
CH 602.50
CH 602.00

BOGGY CREEK
BULLDOG CREEK
TEN MILE CREEK
PAN CREEK

For Information Only
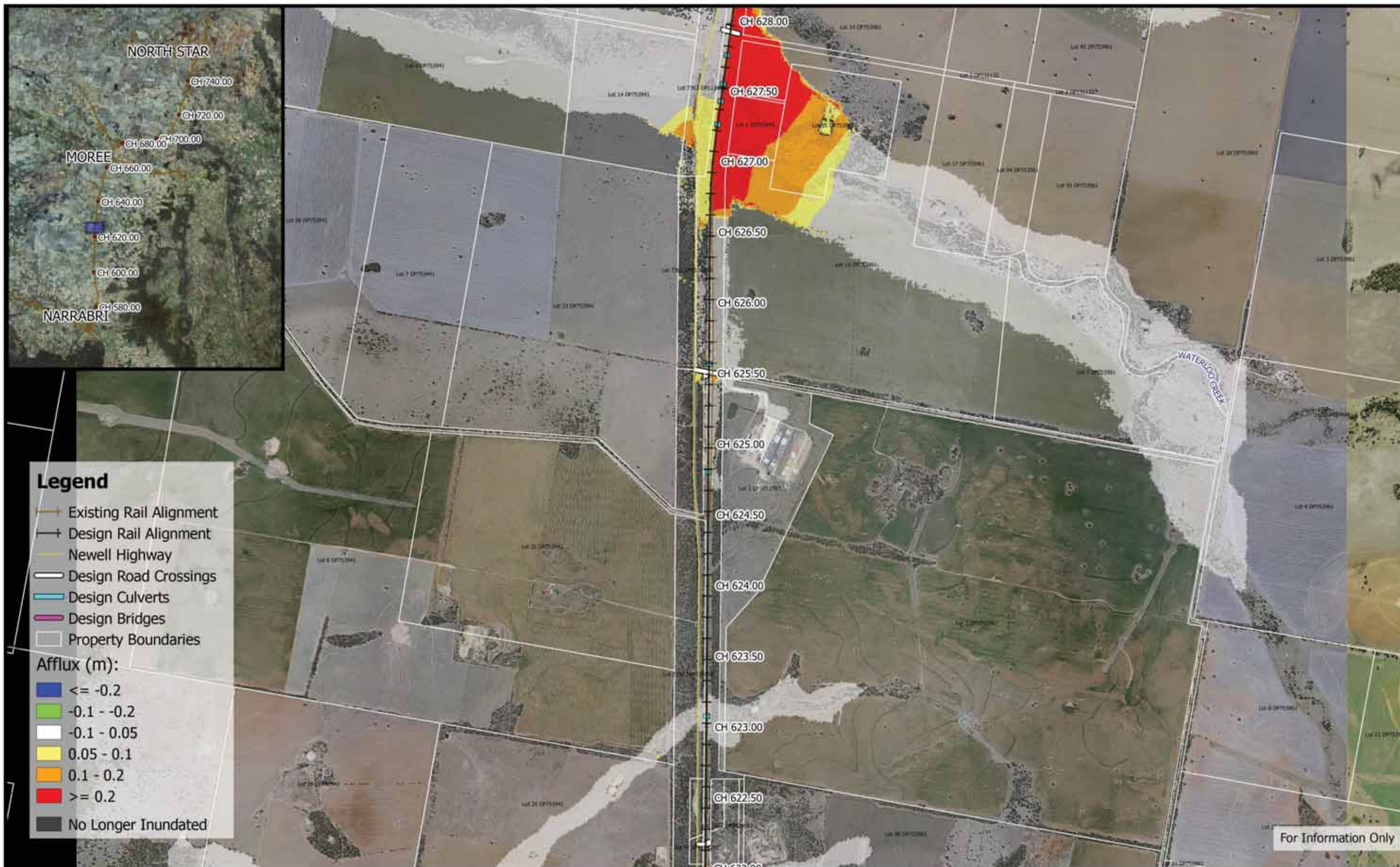
250   0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A7
0.05% AEP Flood Afflux   -   CH 605.00

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries

Afflux (m):
<= -0.2
-0.1 - -0.2
-0.1 - 0.05
0.05 - 0.1
0.1 - 0.2
>= 0.2
No Longer Inundated

For Information Only
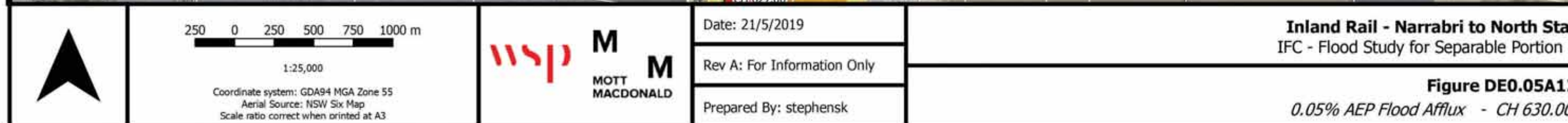
250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A8
0.05% AEP Flood Afflux - CH 610.00

Legend

⊢−⊣ Existing Rail Alignment
⊢−⊣ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):
■ <= -0.2
■ -0.1 - -0.2
□ -0.1 - 0.05
■ 0.05 - 0.1
■ 0.1 - 0.2
■ >= 0.2

■ No Longer Inundated

For Information Only
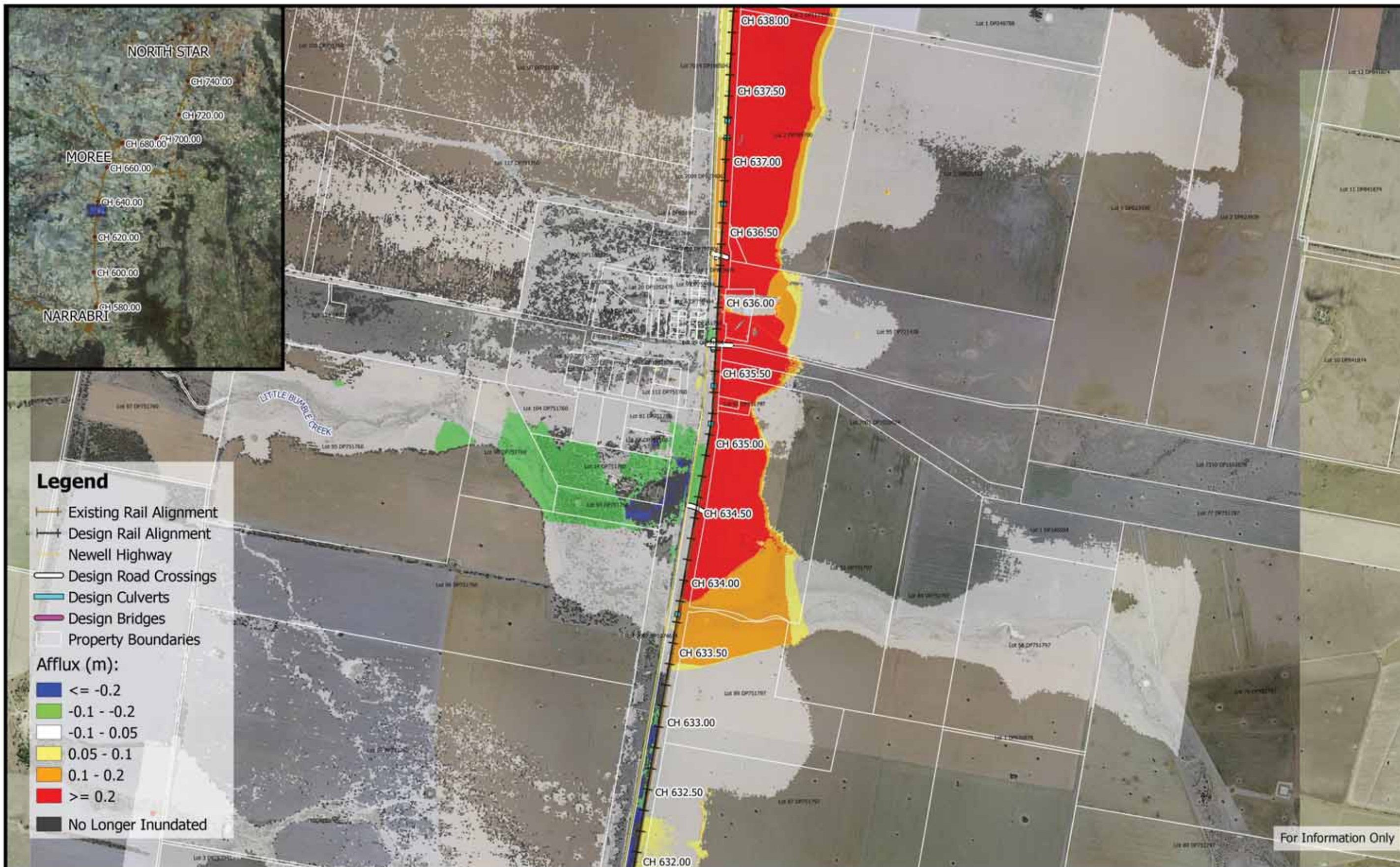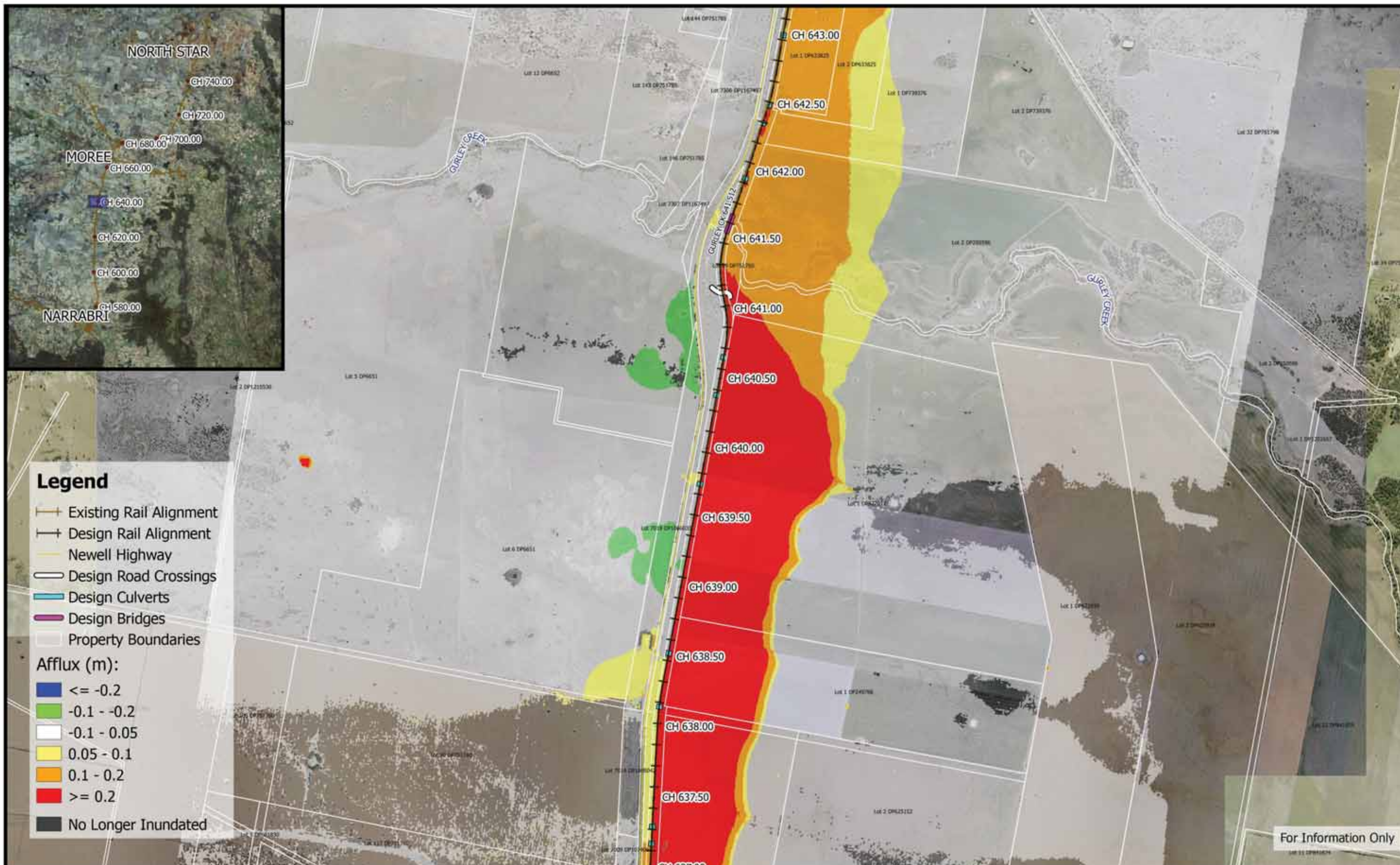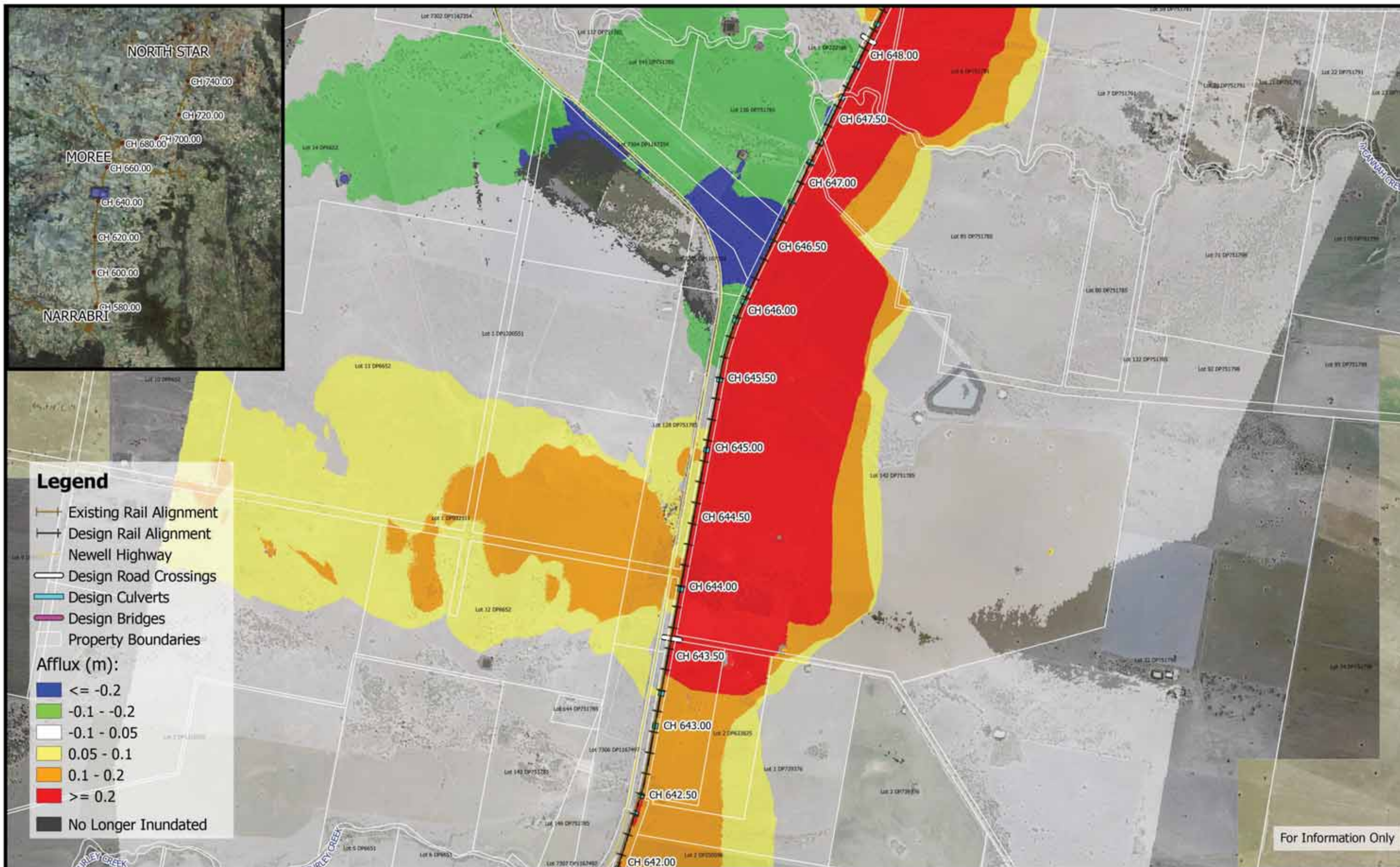
250 0   250 500 750 1000 m

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Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A9
0.05% AEP Flood Afflux - CH 615.00

Legend

⊢—⊢ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

▮	<= -0.2
▮	-0.1 - -0.2
▯	-0.1 - 0.05
▮	0.05 - 0.1
▮	0.1 - 0.2
▮	>= 0.2
▮	No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 623.00
CH 622.50
CH 622.00
CH 621.50
CH 621.00
TOOKEY CREEK
CH 620.50
CH 620.00
CH 619.50
CH 619.00
CH 618.50
CH 618.00
CH 617.50

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250 0 250 500 750 1000 m		Date: 21/5/2019	**Inland Rail - Narrabri to North Star**
1:25,000	wsp M M MOTT MACDONALD		IFC - Flood Study for Separable Portion 1
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev A: For Information Only	**Figure DE0.05A10**
		Prepared By: stephensk	*0.05% AEP Flood Afflux - CH 620.00*

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries

Afflux (m):

	<= -0.2
	-0.1 - -0.2
	-0.1 - 0.05
	0.05 - 0.1
	0.1 - 0.2
	>= 0.2
	No Longer Inundated

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A11
0.05% AEP Flood Afflux - CH 625.00

Legend

⊢—⊢ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▭ Property Boundaries

Afflux (m):
- ■ <= -0.2
- ■ -0.1 - -0.2
- □ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 633.00
CH 632.50
CH 632.00
CH 631.50
CH 631.00
CH 630.50
CH 630.00
CH 629.50
CH 629.00
CH 628.50
CH 628.00
CH 627.50
CH 627.00

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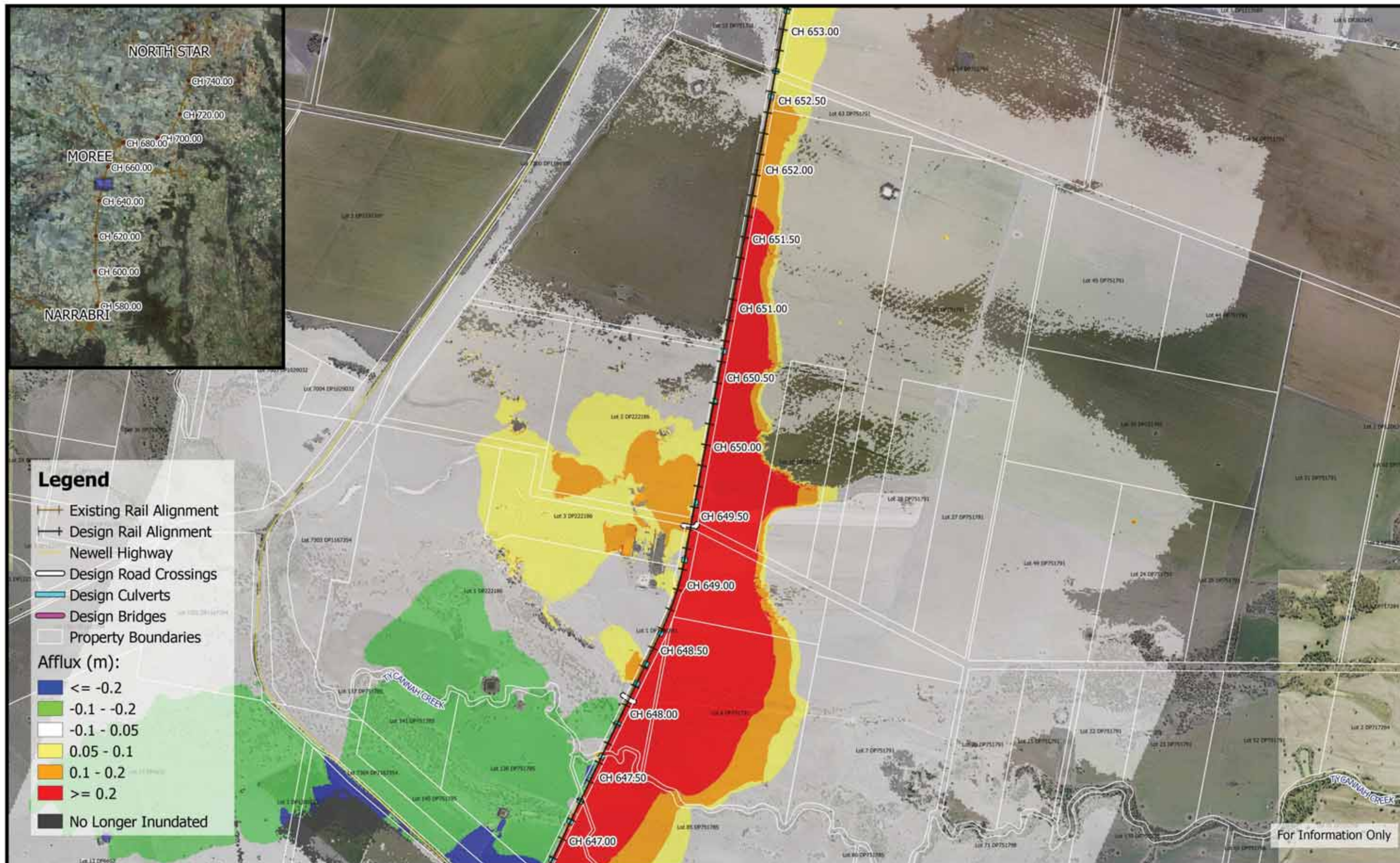250 0   250   500   750 1000 m

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Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A12
0.05% AEP Flood Afflux - CH 630.00

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

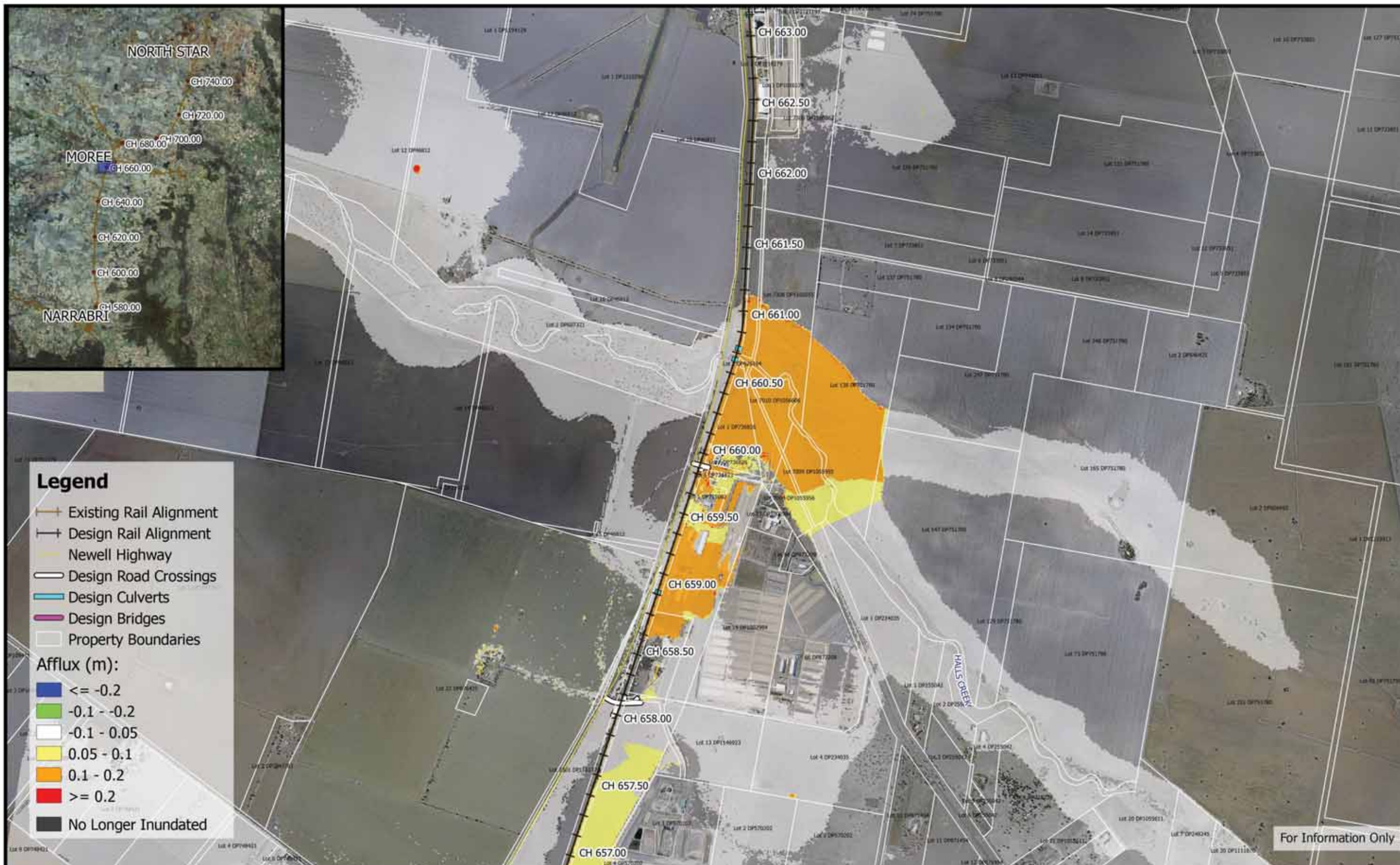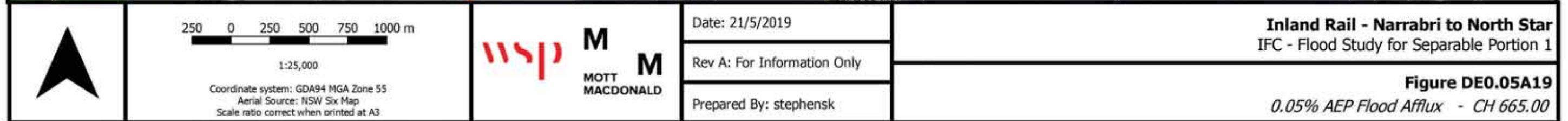|	
■	<= -0.2
■	-0.1 - -0.2
■	-0.1 - 0.05
■	0.05 - 0.1
■	0.1 - 0.2
■	>= 0.2
■	No Longer Inundated

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A13
0.05% AEP Flood Afflux   - CH 635.00

Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):

- <= -0.2
- -0.1 - -0.2
- -0.1 - 0.05
- 0.05 - 0.1
- 0.1 - 0.2
- >= 0.2
- No Longer Inundated

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

QURLEY CREEK

CH 643.00
CH 642.50
CH 642.00
CH 641.50
CH 641.00
CH 640.50
CH 640.00
CH 639.50
CH 639.00
CH 638.50
CH 638.00
CH 637.50
CH 637.00

QURLEY CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A14
0.05% AEP Flood Afflux - CH 640.00

Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):

- <= -0.2
- -0.1 - -0.2
- -0.1 - 0.05
- 0.05 - 0.1
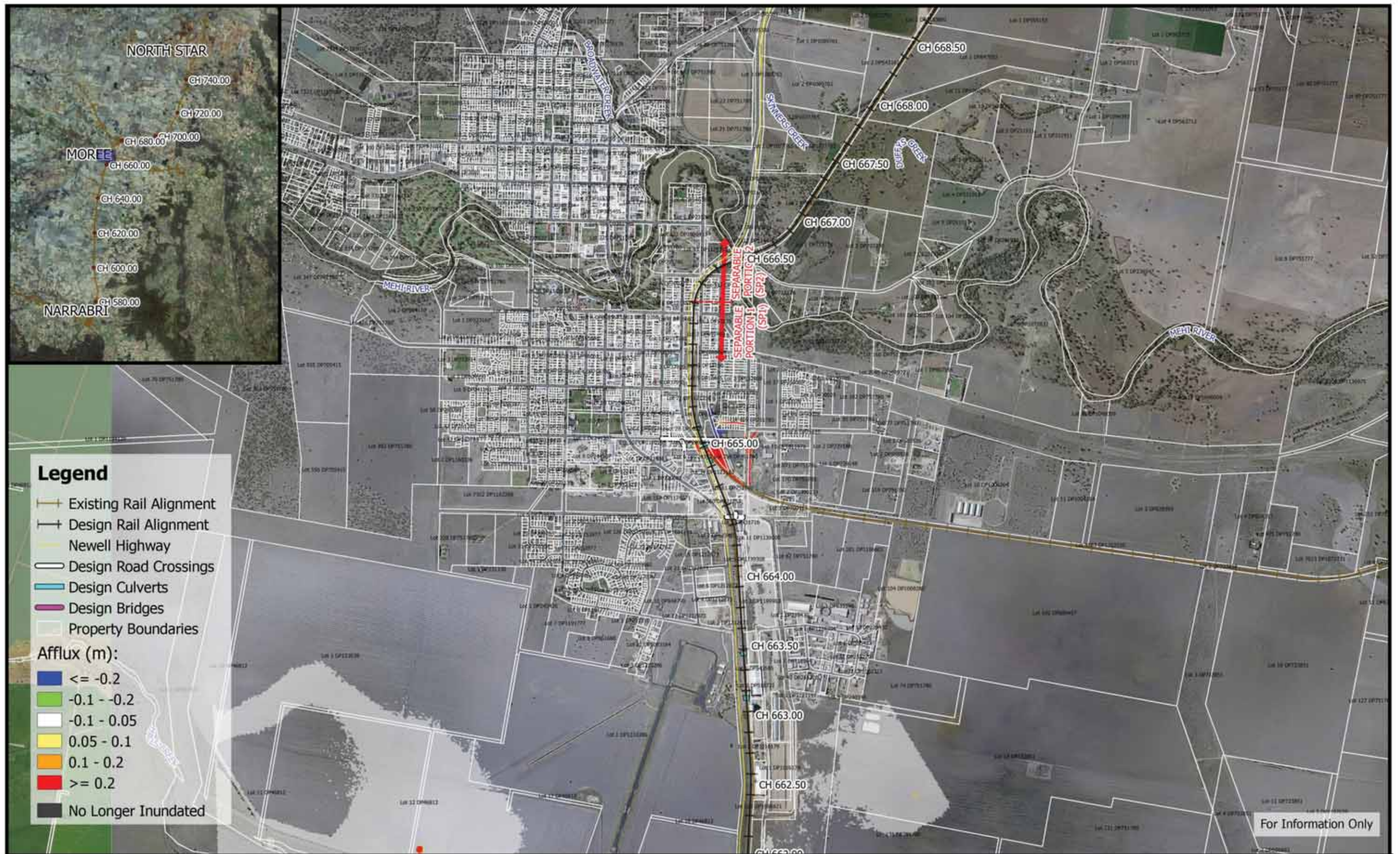- 0.1 - 0.2
- >= 0.2
- No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A15
0.05% AEP Flood Afflux - CH 645.00

For Information Only

Inset map labels:
NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

Main map chainage labels:
CH 653.00
CH 652.50
CH 652.00
CH 651.50
CH 651.00
CH 650.50
CH 650.00
CH 649.50
CH 649.00
CH 648.50
CH 648.00
CH 647.50
CH 647.00

Legend

- ⊢⊢ Existing Rail Alignment
- ⊢⊣ Design Rail Alignment
- ⎯ Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries

Afflux (m):

- ▮ <= -0.2
- ▮ -0.1 - -0.2
- ▯ -0.1 - 0.05
- ▮ 0.05 - 0.1
- ▮ 0.1 - 0.2
- ▮ >= 0.2
- ▮ No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A16
0.05% AEP Flood Afflux - CH 650.00

For Information Only

Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- ☐ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019	**Inland Rail - Narrabri to North Star**
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	Figure DE0.05A17
Prepared By: stephensk	*0.05% AEP Flood Afflux - CH 655.00*

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▭ Property Boundaries

Afflux (m):

🟦	<= -0.2
🟩	-0.1 - -0.2
⬜	-0.1 - 0.05
🟨	0.05 - 0.1
🟧	0.1 - 0.2
🟥	>= 0.2
⬛	No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 663.00
CH 662.50
CH 662.00
CH 661.50
CH 661.00
CH 660.50
CH 660.00
CH 659.50
CH 659.00
CH 658.50
CH 658.00
CH 657.50
CH 657.00

HALLS CREEK

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250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A18
0.05% AEP Flood Afflux - CH 660.00

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Legend

- ├─┤ Existing Rail Alignment
- ├─┤ Design Rail Alignment
- ── Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- ▫ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
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Figure DE0.05A19
0.05% AEP Flood Afflux - CH 665.00

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Legend

- ┼ Existing Rail Alignment
- ┼ Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):

■ (blue)	<= -0.2
■ (green)	-0.1 - 0.2
■ (white)	-0.1 - 0.05
■ (yellow)	0.05 - 0.1
■ (orange)	0.1 - 0.2
■ (red)	>= 0.2
■ (dark)	No Longer Inundated

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

GWYDIR RIVER

CH 675.50
CH 675.00
CH 674.50
CH 674.00
CH 673.50
CH 673.00
CH 672.50
CH 672.00
CH 671.50
CH 671.00
CH 670.50
CH 670.00
CH 669.50
CH 669.00
CH 668.50
CH 668.00
CH 667.50
CH 667.00
CH 666.50

BROADWATER CREEK
SKINNERS CREEK

For Information Only

	250	0	250	500	750	1000 m			Date: 21/5/2019		**Inland Rail - Narrabri to North Star**
							wsp	M M MOTT MACDONALD			IFC - Flood Study for Separable Portion 1

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Rev A: For Information Only

Prepared By: stephensk

Figure DE0.05A20
0.05% AEP Flood Afflux - CH 670.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- ⊢—⊣ Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- □ -0.1 - 0.05
- □ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

Map labels: NORTH STAR, MOREE, NARRABRI, CAMURRA, GWYDIR RIVER, CARROLL CREEK, DUFFY'S CREEK

SEPARABLE PORTION 2 (SP2), SEPARABLE PORTION 1 (SP1)

EQUALITY 678.534 = 680.00

Chainages: CH 670.50, CH 671.00, CH 671.50, CH 672.00, CH 672.50, CH 673.50, CH 674.00, CH 674.50, CH 675.00, CH 675.50, CH 676.00, CH 676.50, CH 677.00, CH 677.50, CH 678.00, CH 680.00, CH 680.50, CH 681.00, CH 681.50, CH 682.00

Inset chainages: CH 1740.00, CH 720.00, CH 700.00, CH 680.00, CH 660.00, CH 640.00, CH 620.00, CH 600.00, CH 580.00

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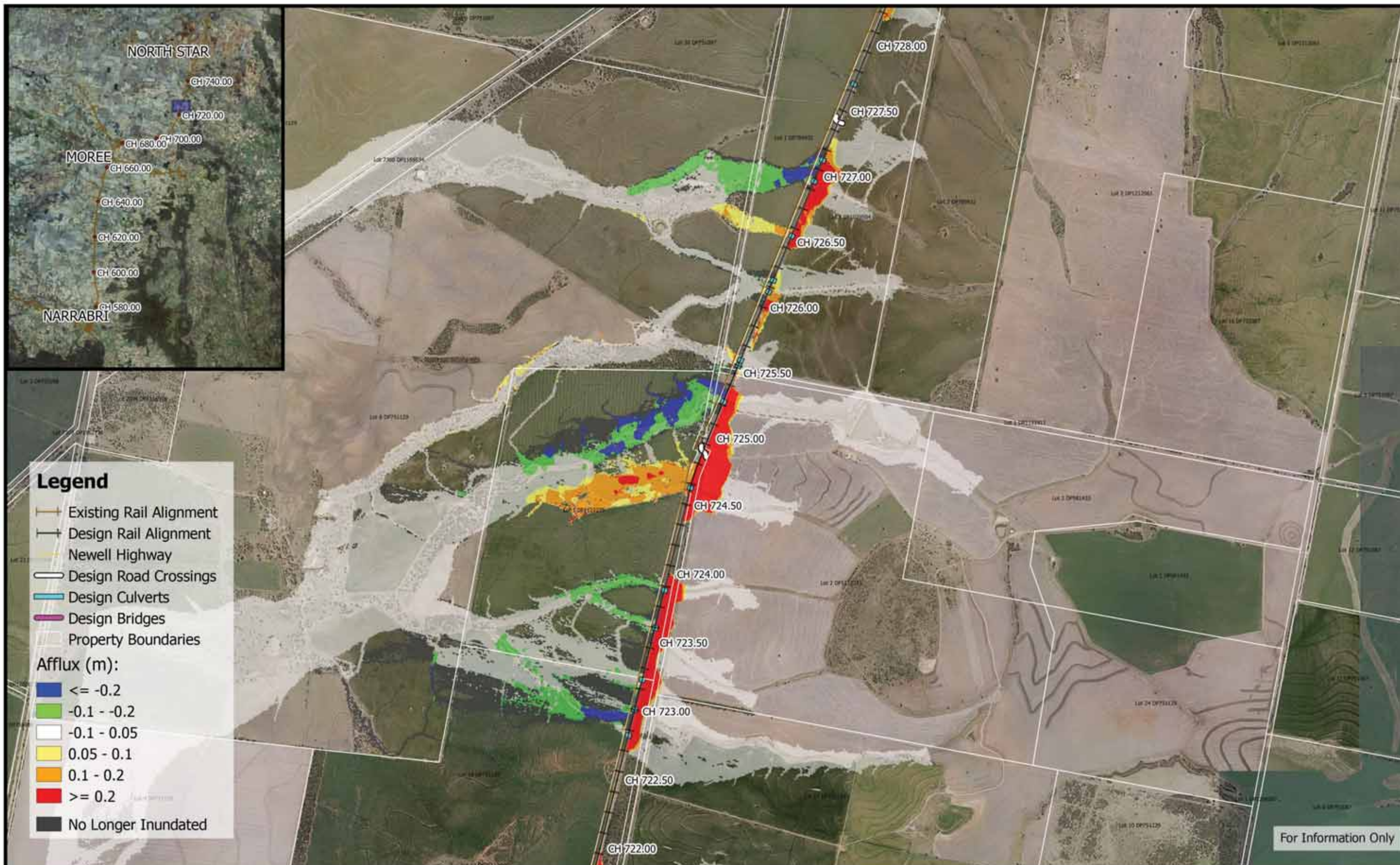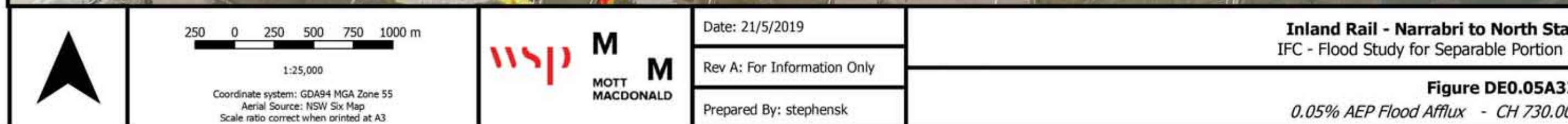
250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

M M
MOTT MACDONALD

Date: 21/5/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A21
0.05% AEP Flood Afflux   -   CH 675.00

Legend

⊢——⊣	Existing Rail Alignment
⊢——⊣	Design Rail Alignment
——	Newell Highway
◻	Design Road Crossings
◻	Design Culverts
——	Design Bridges
◻	Property Boundaries

Afflux (m):

🟦	<= -0.2
🟩	-0.1 - 0.2
⬜	-0.1 - 0.05
🟨	0.05 - 0.1
🟧	0.1 - 0.2
🟥	>= 0.2
⬛	No Longer Inundated

For Information Only

NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE

CH 660.00

CH 640.00

CH 620.00

CH 600.00

CH 580.00

NARRABRI

EQUALITY
678.534 = 680.00

CAMURRA

CH 678.00   CH 680.00   CH 680.50   CH 681.00   CH 681.50   CH 682.00   CH 682.50   CH 683.00   CH 683.50   CH 684.00
CH 677.50   CH 684.50

SEPARABLE
PORTION 2
(SP2)   SEPARABLE
PORTION 1
(SP1)

CH 677.00

CH 676.50

CH 676.00

CH 675.50

CH 675.00

CH 674.50

CH 674.00

CH 673.50

Scale bar

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp   M
       M
MOTT
MACDONALD

Date: 21/5/2019

Rev A: For Information Only

Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

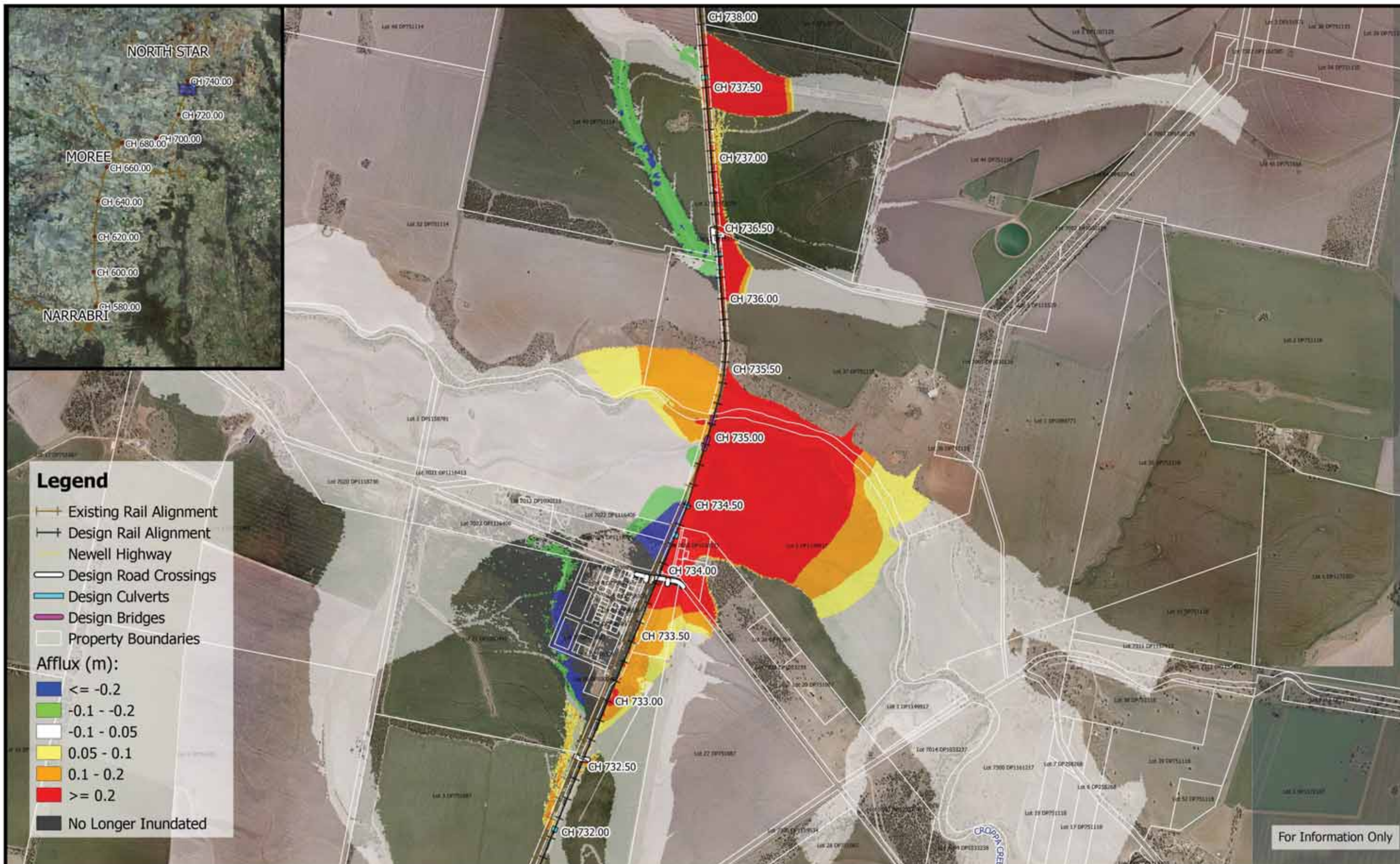**Figure DE0.05A22**
0.05% AEP Flood Afflux   - CH 680.00

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▬ Design Culverts
▬ Design Bridges
▭ Property Boundaries

Afflux (m):

▮	<= -0.2
▮	-0.1 - 0.2
▯	-0.1 - 0.05
▮	0.05 - 0.1
▮	0.1 - 0.2
▮	>= 0.2
▮	No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp M M
MOTT
MACDONALD

Date: 21/5/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1
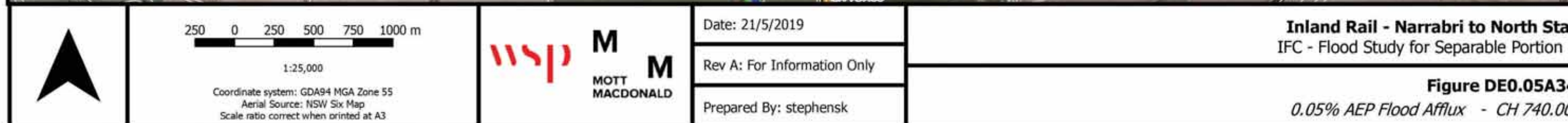
Figure DE0.05A23
0.05% AEP Flood Afflux - CH 685.00

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Legend

⊢─┼ Existing Rail Alignment
⊢─┤ Design Rail Alignment
── Newell Highway
── Design Road Crossings
── Design Culverts
── Design Bridges
── Property Boundaries

Afflux (m):
■ <= -0.2
■ -0.1 - -0.2
□ -0.1 - 0.05
□ 0.05 - 0.1
■ 0.1 - 0.2
■ >= 0.2
■ No Longer Inundated

For Information Only

250 0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A24
0.05% AEP Flood Afflux - CH 690.00

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries

Afflux (m):
- ▮ <= -0.2
- ▮ -0.1 - -0.2
- ▮ -0.1 - 0.05
- ▮ 0.05 - 0.1
- ▮ 0.1 - 0.2
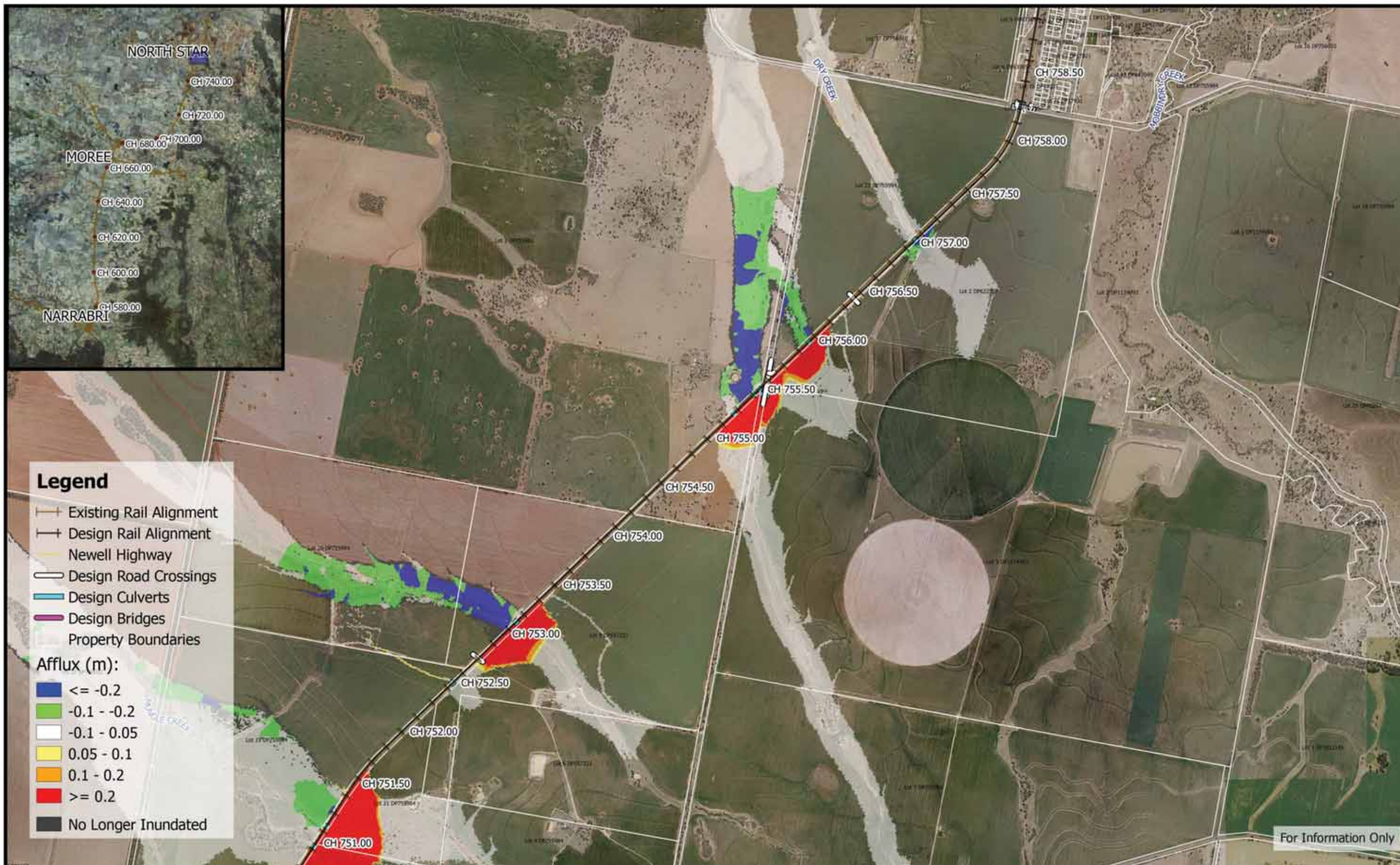- ▮ >= 0.2
- ▮ No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp   M M
MOTT
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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A25
0.05% AEP Flood Afflux - CH 695.00

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Legend

- ⊢┤ Existing Rail Alignment
- ⊢┼┤ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- □ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A26
0.05% AEP Flood Afflux - CH 700.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- —— Newell Highway
- ⊂⊃ Design Road Crossings
- ☐ Design Culverts
- ☐ Design Bridges
- ☐ Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- ☐ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A27
0.05% AEP Flood Afflux - CH 705.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- Property Boundaries

Afflux (m):

- ■ <= -0.2
- ■ -0.1 - -0.2
- □ -0.1 - 0.05
- ■ 0.05 - 0.1
- ■ 0.1 - 0.2
- ■ >= 0.2
- ■ No Longer Inundated

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A28
0.05% AEP Flood Afflux - CH 710.00

For Information Only

Legend

⊢—⊣	Existing Rail Alignment
⊢—⊣	Design Rail Alignment
—	Newell Highway
▭	Design Road Crossings
▭	Design Culverts
▬	Design Bridges
	Property Boundaries

Afflux (m):

■ (blue)	<= -0.2
■ (green)	-0.1 - -0.2
■ (white)	-0.1 - 0.05
■ (yellow)	0.05 - 0.1
■ (orange)	0.1 - 0.2
■ (red)	>= 0.2
■ (dark)	No Longer Inundated

Map labels: NORTH STAR, MOREE, NARRABRI, CROOBLE

Chainage labels (inset): CH 740.00, CH 720.00, CH 700.00, CH 680.00, CH 660.00, CH 640.00, CH 620.00, CH 600.00, CH 580.00

Chainage labels (main): CH 718.00, CH 717.50, CH 717.00, CH 716.50, CH 716.00, CH 715.50, CH 715.00, CH 714.50, CH 714.00, CH 713.50, CH 713.00, CH 712.50, CH 712.00

Creek labels: DOLE CREEK, GOOMI CREEK, BUNNA BUNNA CREEK, GIL GIL CREEK

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp **M M** MOTT MACDONALD

Date: 21/5/2019
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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A29
0.05% AEP Flood Afflux - CH 715.00

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Legend

⊢—+ Existing Rail Alignment
⊢—+ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

■	<= -0.2
■	-0.1 - -0.2
▢	-0.1 - 0.05
▢	0.05 - 0.1
■	0.1 - 0.2
■	>= 0.2
■	No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 700.00
CH 680.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 723.00
CH 722.50
CH 722.00
CH 721.50
CH 721.00
CH 720.50
CH 720.00
CH 719.50
CH 719.00
CH 718.50
CH 718.00
CH 717.50
CROOBLE
CH 717.00

COOMA CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp
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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A30
0.05% AEP Flood Afflux - CH 720.00

Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries

Afflux (m):
- <= -0.2
- -0.1 - -0.2
- -0.1 - 0.05
- 0.05 - 0.1
- 0.1 - 0.2
- >= 0.2
- No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

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MACDONALD

Date: 21/5/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A31
0.05% AEP Flood Afflux - CH 725.00

Legend

├─┤ Existing Rail Alignment
├─┤ Design Rail Alignment
─── Newell Highway
─── Design Road Crossings
─── Design Culverts
─── Design Bridges
    Property Boundaries

Afflux (m):

■	<= -0.2
■	-0.1 - -0.2
□	-0.1 - 0.05
■	0.05 - 0.1
■	0.1 - 0.2
■	>= 0.2
■	No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A32
0.05% AEP Flood Afflux - CH 730.00

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

▇	<= -0.2
▇	-0.1 - -0.2
�	-0.1 - 0.05
▇	0.05 - 0.1
▇	0.1 - 0.2
▇	>= 0.2
▇	No Longer Inundated

NORTH STAR
MOREE
NARRABRI

CH 738.00
CH 737.50
CH 737.00
CH 736.50
CH 736.00
CH 735.50
CH 735.00
CH 734.50
CH 734.00
CH 733.50
CH 733.00
CH 732.50
CH 732.00

For Information Only

250 0 250 500 750 1000 m		Date: 21/5/2019	**Inland Rail - Narrabri to North Star**
1:25,000	wsp M M MOTT MACDONALD		IFC - Flood Study for Separable Portion 1
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev A: For Information Only	**Figure DE0.05A33**
		Prepared By: stephensk	*0.05% AEP Flood Afflux - CH 735.00*

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Legend

⊢—⊢ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
    Newell Highway
    Design Road Crossings
    Design Culverts
    Design Bridges
    Property Boundaries

Afflux (m):

	<= -0.2
	-0.1 - -0.2
	-0.1 - 0.05
	0.05 - 0.1
	0.1 - 0.2
	>= 0.2
	No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

M M
MOTT
MACDONALD

Date: 21/5/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A34
0.05% AEP Flood Afflux - CH 740.00

Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- Property Boundaries

Afflux (m):

- ⬛ <= -0.2
- ⬛ -0.1 - -0.2
- ⬜ -0.1 - 0.05
- ⬜ 0.05 - 0.1
- ⬛ 0.1 - 0.2
- ⬛ >= 0.2
- ⬛ No Longer Inundated

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 748.00
CH 747.50
CH 747.00
CH 746.50
CH 746.00
CH 745.50
CH 745.00
TACKINBRI CREEK
CH 744.00
CH 743.50
CH 743.00
CH 742.50
CH 742.00

YALLAROI CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp M M
MOTT MACDONALD

Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A35
0.05% AEP Flood Afflux - CH 745.00

Legend

├──┤ Existing Rail Alignment
├──┤ Design Rail Alignment
─── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries

Afflux (m):

▉	<= -0.2
▉	-0.1 - 0.2
▉	-0.1 - 0.05
▉	0.05 - 0.1
▉	0.1 - 0.2
▉	>= 0.2
▉	No Longer Inundated

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI
TACKINBRI CREEK

DRY CREEK
CH 754.00
CH 753.50
CH 753.00
CH 752.50
MUNGLE CREEK
CH 752.00
CH 751.50
CH 751.00
CH 750.50
CH 750.00
CH 749.50
CH 749.00
CH 748.50
CH 748.00
CH 747.50
CH 747.00

For Information Only

250 0   250 500   750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

WSP M MOTT M MACDONALD

Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A36
0.05% AEP Flood Afflux   - CH 750.00

Inset map labels (top left):
NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

Main map chainage labels:
DRY CREEK
CH 758.50
CH 758.00
CH 757.50
CH 757.00
CH 756.50
CH 756.00
CH 755.50
CH 755.00
CH 754.50
CH 754.00
CH 753.50
CH 753.00
CH 752.50
CH 752.00
CH 751.50
CH 751.00

Legend

	Existing Rail Alignment
	Design Rail Alignment
	Newell Highway
	Design Road Crossings
	Design Culverts
	Design Bridges
	Property Boundaries

Afflux (m):

	<= -0.2
	-0.1 - -0.2
	-0.1 - 0.05
	0.05 - 0.1
	0.1 - 0.2
	>= 0.2
	No Longer Inundated

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp
MOTT MACDONALD

Date: 21/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05A37
0.05% AEP Flood Afflux - CH 755.00

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Legend

⊢——⊣ Existing Rail Alignment
⊢——⊣ Design Rail Alignment
——— Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▢ Property boundary
▮ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
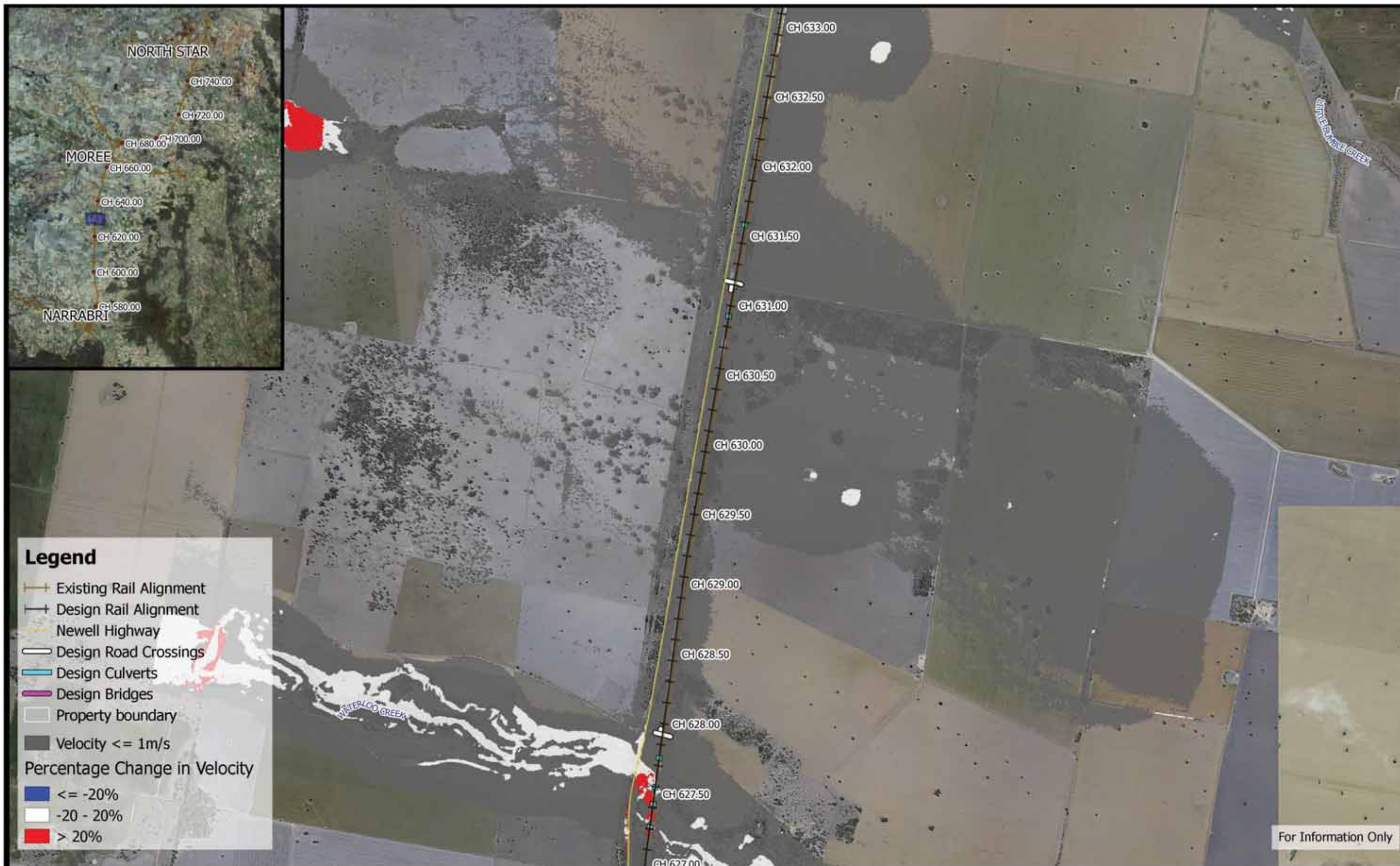▯ -20 - 20%
▮ > 20%

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Date: 22/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC1
0.05% AEP Percentage Change In Velocity   - CH 575.00

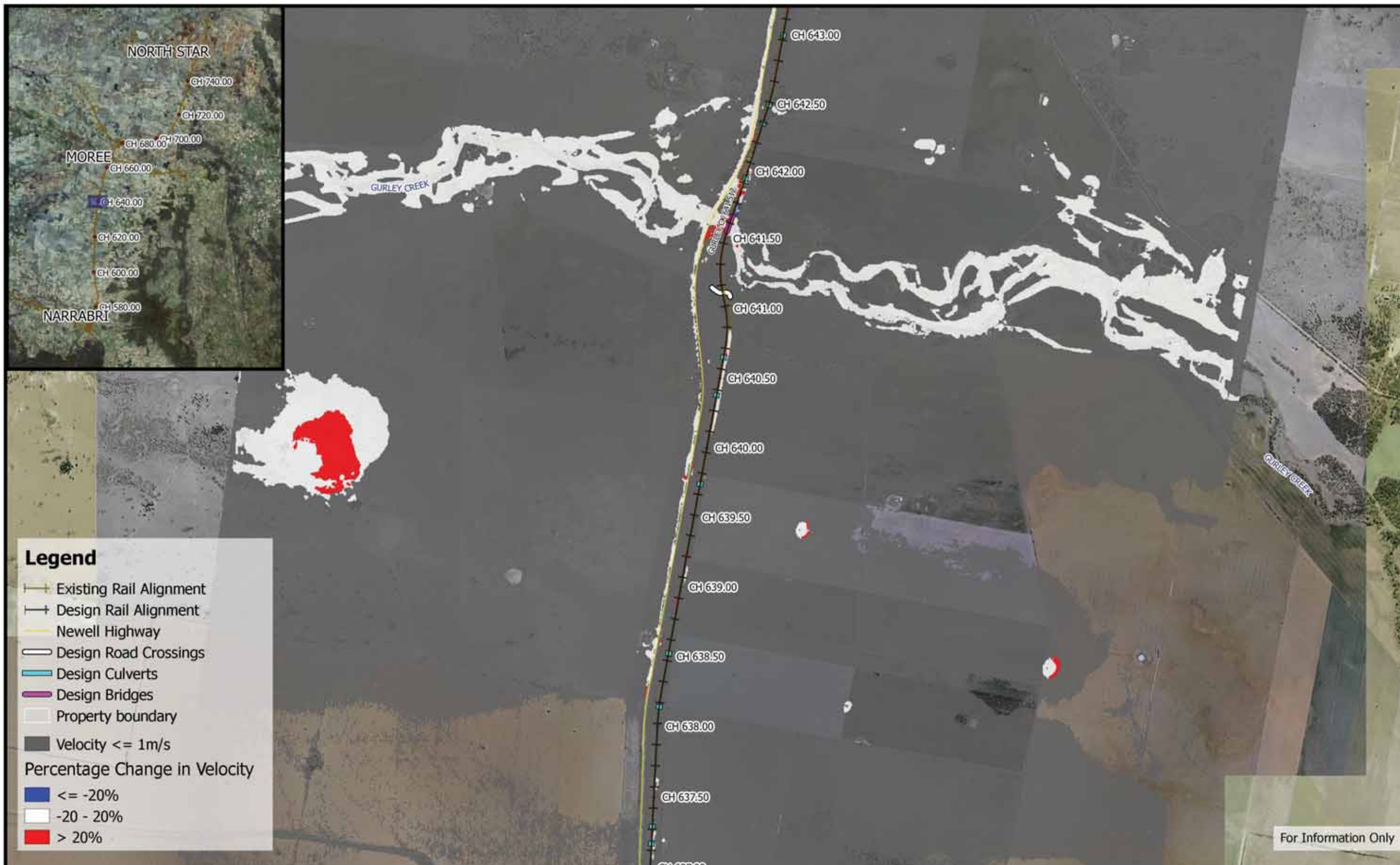E:\12dSynergy\2\JR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

├─┤ Existing Rail Alignment
├─ Design Rail Alignment
Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
Property boundary

■ Velocity <= 1m/s

Percentage Change in Velocity

■ <= -20%
□ -20 - 20%
■ > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 583.00
CH 582.50
CH 582.00
CH 581.50
CH 581.00
CH 580.50
CH 580.00
CH 579.50
CH 579.00
CH 578.50
CH 578.00
CH 577.50
CH 577.00

SPRING CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC2
0.05% AEP Percentage Change In Velocity - CH 580.00

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Legend

⊢⊢ Existing Rail Alignment
⊢— Design Rail Alignment
— Newell Highway
◻ Design Road Crossings
◻ Design Culverts
◻ Design Bridges
◻ Property boundary

◼ Velocity <= 1m/s

Percentage Change in Velocity

◼ <= -20%
◻ -20 - 20%
◼ > 20%

For Information Only

250   0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC3
0.05% AEP Percentage Change In Velocity   - CH 585.00

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Legend

⊢──⊣ Existing Rail Alignment
⊢──⊣ Design Rail Alignment
──── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary

▮ Velocity <= 1m/s

Percentage Change in Velocity
▮ <= -20%
▯ -20 - 20%
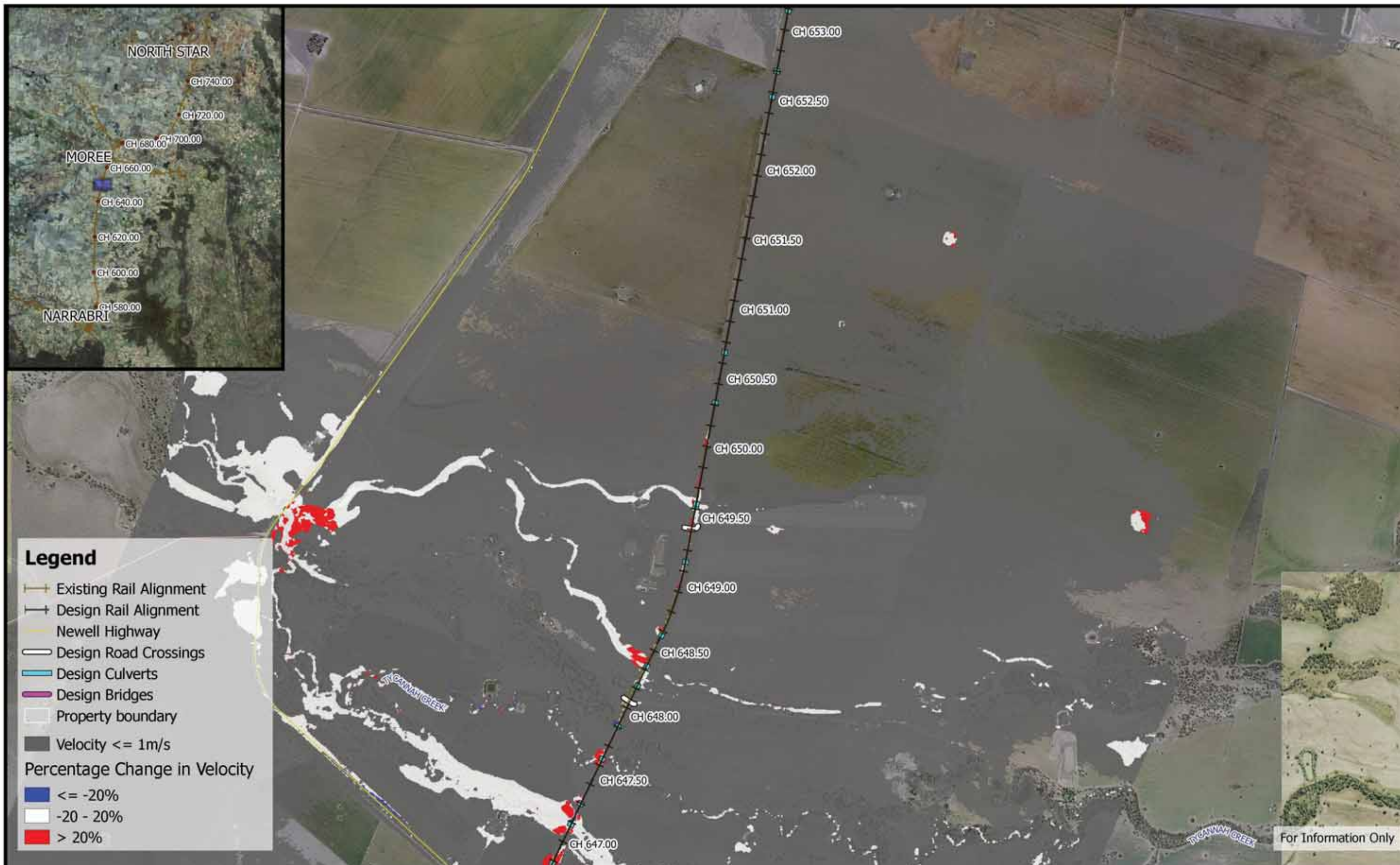▮ > 20%

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC4
0.05% AEP Percentage Change In Velocity - CH 590.00

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
- -20 - 20%
- > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
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Figure DE0.05VC5

0.05% AEP Percentage Change In Velocity   - CH 595.00

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NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE
CH 660.00

CH 640.00

CH 620.00

CH 600.00

NARRABRI CH 580.00

CH 603.00
CH 602.50
PAN CREEK
TEN MILE CREEK
CH 602.00
CH 601.50
CH 601.00
TENMILE CREEK
CH 600.50
CH 600.00
CH 599.50
CH 599.00
CH 598.50
CH 598.00
CH 597.50
CH 597.00

Legend

- ⊢+ Existing Rail Alignment
- ⊢+ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property boundary

- ■ Velocity <= 1m/s

Percentage Change in Velocity

- ■ <= -20%
- □ -20 - 20%
- ■ > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC6
0.05% AEP Percentage Change In Velocity   - CH 600.00

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Legend

├─┤ Existing Rail Alignment
├─┤ Design Rail Alignment
─── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary
▓ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
▯ -20 - 20%
▮ > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
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Figure DE0.05VC7
0.05% AEP Percentage Change In Velocity - CH 605.00

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Legend

⊢–⊣	Existing Rail Alignment
⊢–⊣	Design Rail Alignment
—	Newell Highway
⊂⊃	Design Road Crossings
▭	Design Culverts
▭	Design Bridges
▭	Property boundary
▮	Velocity <= 1m/s

Percentage Change in Velocity

▮	<= -20%
□	-20 - 20%
▮	> 20%

BOGGY CREEK

NORTH STAR

MOREE

NARRABRI

CH 740.00
CH 720.00
CH 700.00
CH 680.00
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00

CH 613.00
CH 612.50
CH 612.00
CH 611.50
CH 611.00
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CH 610.00
CH 609.50
CH 609.00
CH 608.50
CH 608.00
CH 607.50
CH 607.00

For Information Only

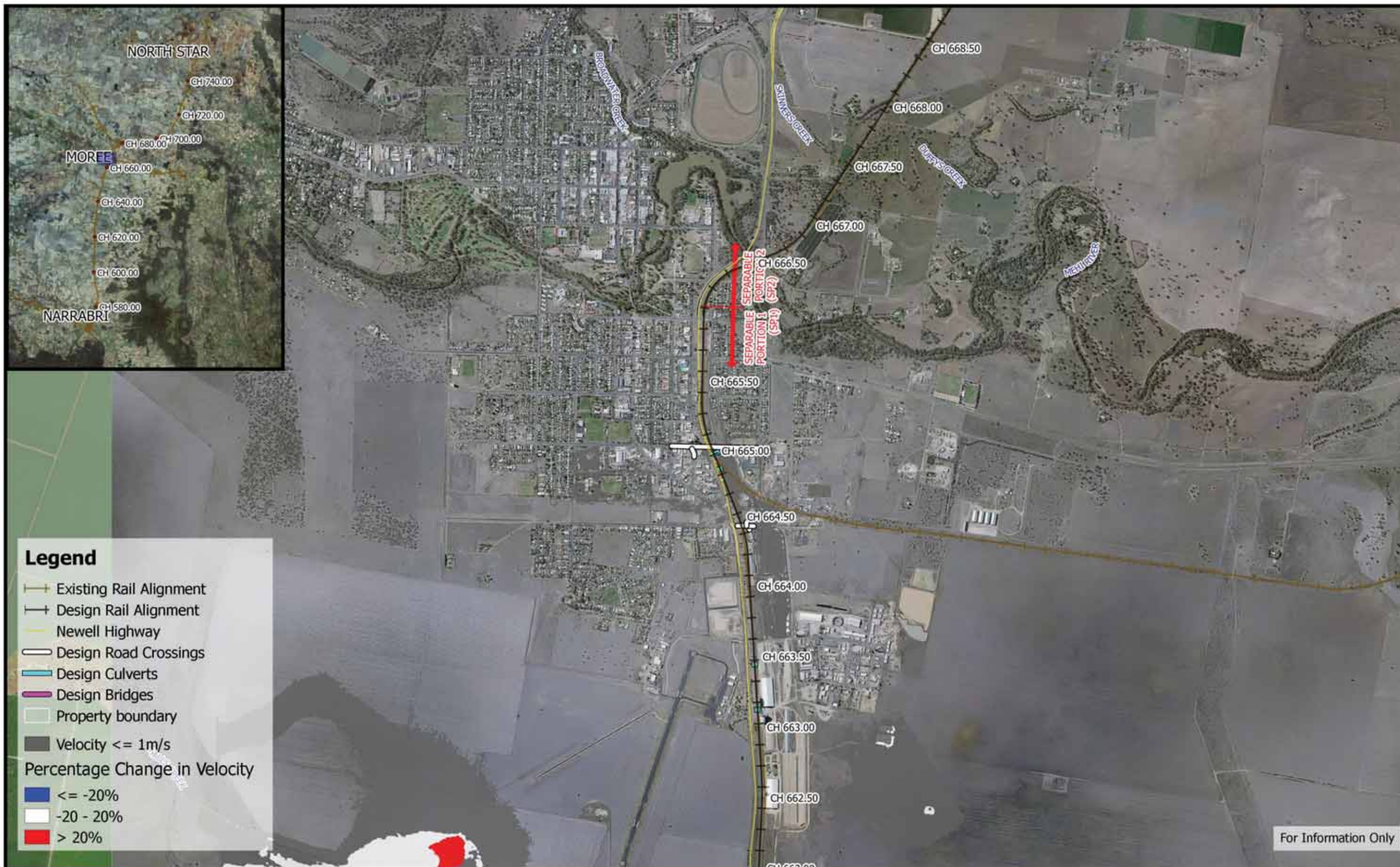250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC8
0.05% AEP Percentage Change In Velocity   - CH 610.00

Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- —— Newell Highway
- ⊂⊃ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▢ Property boundary
- � Velocity <= 1m/s

Percentage Change in Velocity

- 🟦 <= -20%
- ⬜ -20 - 20%
- 🟥 > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 618.00
CH 617.50
CH 617.00
CH 616.50
CH 616.00
BELLATA
CH 615.50
CH 615.00
GEHAN CREEK
CH 614.50
CH 614.00
MYALL HOLLOW CREEK
CH 613.50
MYALL HOLLOW CREEK
CH 613.00
CH 612.50

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250   0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

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Inland Rail - Narrabri to North Star
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Figure DE0.05VC9
0.05% AEP Percentage Change In Velocity   -   CH 615.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—→ Design Rail Alignment
- ⋯ Newell Highway
- ⌒ Design Road Crossings
- ▭ Design Culverts
- ▬ Design Bridges
- ▦ Property boundary

- ▨ Velocity <= 1m/s

Percentage Change in Velocity

- ▮ <= -20%
- ▯ -20 - 20%
- ▮ > 20%

For Information Only
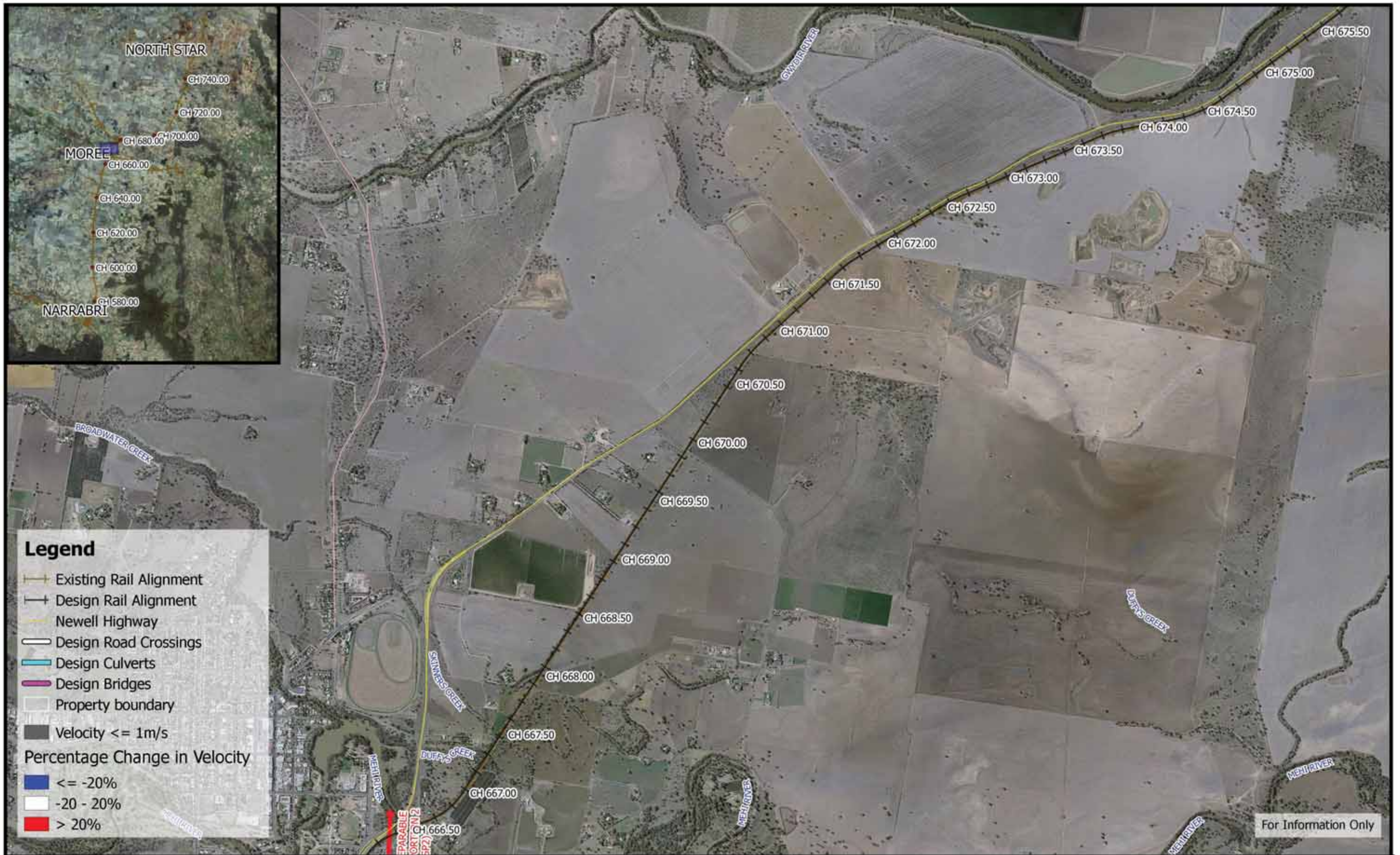
250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC10
0.05% AEP Percentage Change In Velocity - CH 620.00

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Legend

├──┤	Existing Rail Alignment
├──→	Design Rail Alignment
	Newell Highway
⬭	Design Road Crossings
▬	Design Culverts
▬	Design Bridges
▢	Property boundary
▨	Velocity <= 1m/s

Percentage Change in Velocity

🟦	<= -20%
⬜	-20 - 20%
🟥	> 20%

For Information Only

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 628.00
CH 627.50
CH 627.00
CH 626.50
CH 626.00
CH 625.50
CH 625.00
CH 624.50
CH 624.00
CH 623.50
CH 623.00
CH 622.50

WATERLOO CREEK

250 0 250 500 750 1000 m		Date: 22/5/2019	**Inland Rail - Narrabri to North Star**
1:25,000			IFC - Flood Study for Separable Portion 1
	wsp **M M** MOTT MACDONALD	Rev A: For Information Only	
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Prepared By: StephensK	**Figure DE0.05VC11** *0.05% AEP Percentage Change In Velocity - CH 625.00*

Legend

⊢┼ Existing Rail Alignment

⊢┤ Design Rail Alignment

Newell Highway

Design Road Crossings

Design Culverts

Design Bridges

Property boundary

Velocity <= 1m/s

Percentage Change in Velocity

<= -20%

-20 - 20%

> 20%

For Information Only
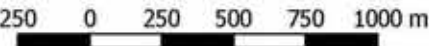
250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC12

0.05% AEP Percentage Change In Velocity - CH 630.00

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Legend

⊢─⊣	Existing Rail Alignment
⊢─⊣	Design Rail Alignment
──	Newell Highway
▭	Design Road Crossings
▭	Design Culverts
▬	Design Bridges
▭	Property boundary
▬	Velocity <= 1m/s

Percentage Change in Velocity

▮	<= -20%
▯	-20 - 20%
▮	> 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

BUMBLE CREEK

CH 638.00
CH 637.50
CH 637.00
CH 636.50
CH 636.00
GURLEY
CH 635.00
CH 634.50
CH 634.00
LITTLE BUMBLE CREEK
CH 633.50
CH 633.00
CH 632.50
CH 632.00

For Information Only

250   0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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	IFC - Flood Study for Separable Portion 1
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	Figure DE0.05VC13
Prepared By: StephensK	*0.05% AEP Percentage Change In Velocity - CH 635.00*

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Legend

- ⊢+ Existing Rail Alignment
- ⊢+ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property boundary
- ▬ Velocity <= 1m/s

Percentage Change in Velocity

- ▮ <= -20%
- ▯ -20 - 20%
- ▮ > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

GURLEY CREEK

CH 643.00
CH 642.50
CH 642.00
CH 641.50
CH 641.00
CH 640.50
CH 640.00
CH 639.50
CH 639.00
CH 638.50
CH 638.00
CH 637.50

GURLEY CREEK

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 22/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC14
0.05% AEP Percentage Change In Velocity - CH 640.00

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
- -20 - 20%
- > 20%

For Information Only

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 648.00
CH 647.50
CH 647.00
CH 646.50
CH 646.00
CH 645.50
CH 645.00
CH 644.50
CH 644.00
CH 643.50
CH 643.00
CH 642.50
CH 642.00

GURLEY CREEK
GURLEY CREEK

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC15
0.05% AEP Percentage Change In Velocity - CH 645.00

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Inset map labels:
NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

Main map chainage labels:
CH 653.00
CH 652.50
CH 652.00
CH 651.50
CH 651.00
CH 650.50
CH 650.00
CH 649.50
CH 649.00
CH 648.50
CH 648.00
CH 647.50
CH 647.00
TYCANNAH CREEK

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary
▮ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
▯ -20 - 20%
▮ > 20%

For Information Only

250 0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
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Figure DE0.05VC16
0.05% AEP Percentage Change In Velocity   -   CH 650.00

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property boundary

Velocity <= 1m/s

Percentage Change in Velocity

<= -20%
-20 - 20%
> 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC17
0.05% AEP Percentage Change In Velocity - CH 655.00

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▬ Design Bridges
▭ Property boundary

▮ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
▯ -20 - 20%
▮ > 20%

wsp M MOTT M MACDONALD

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

For Information Only

Legend

⊢→ Existing Rail Alignment
⊢→ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▢ Property boundary

⬛ Velocity <= 1m/s

Percentage Change in Velocity

🟦 <= -20%
⬜ -20 - 20%
🟥 > 20%

For Information Only

250   0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 22/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC19
0.05% AEP Percentage Change In Velocity   -   CH 665.00

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
- -20 - 20%
- > 20%

For Information Only

NORTH STAR

CH 740.00
CH 720.00
CH 700.00
CH 680.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 675.50
CH 675.00
CH 674.50
CH 674.00
CH 673.50
CH 673.00
CH 672.50
CH 672.00
CH 671.50
CH 671.00
CH 670.50
CH 670.00
CH 669.50
CH 669.00
CH 668.50
CH 668.00
CH 667.50
CH 667.00
CH 666.50

BROADWATER CREEK
SKINNERS CREEK
DUFFY'S CREEK
MEHI RIVER
GWYDIR RIVER

SEPARABLE PORTION 2 (SP2)

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

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Date: 22/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC20
0.05% AEP Percentage Change In Velocity - CH 670.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- —— Newell Highway
- ⊂⊃ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property boundary
- ▪ Velocity <= 1m/s

Percentage Change in Velocity

- ▪ <= -20%
- ▫ -20 - 20%
- ▪ > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

GWYDIR RIVER
CAROLE CREEK
CAMURRA
EQUALITY 678.534 = 680.00
CH 678.00
CH 680.00
CH 680.50
CH 681.00
CH 681.50
CH 682.00 CH 68
CH 677.50
CH 677.00
SEPARABLE PORTION 2 (SP2)
SEPARABLE PORTION 1 (SP1)
CH 676.50
GWYDIR RIVER
CH 676.00
CH 675.50
CH 675.00
CH 674.50
CH 674.00
CH 673.50
CH 673.00
CH 672.50
CH 672.00
CH 671.50
DUFFY'S CREEK
CH 671.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC21
0.05% AEP Percentage Change In Velocity - CH 675.00

E:\12dSynergy\2\IR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property boundary

Velocity <= 1m/s

Percentage Change in Velocity

<= -20%
-20 - 20%
> 20%

For Information Only

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

EQUALITY 678.534 = 680.00

CAMURRA

CH 678.00
CH 680.00
CH 680.50
CH 677.50
CH 681.00
CH 681.50
CH 682.00
CH 682.50
CH 683.00
CH 683.50
CH 677.00
CH 684.00
CH 684.50

SEPARABLE PORTION 2 (SP2)
SEPARABLE PORTION 1 (SP1)

CH 676.50

CH 676.00

GWYDIR RIVER

CH 675.50

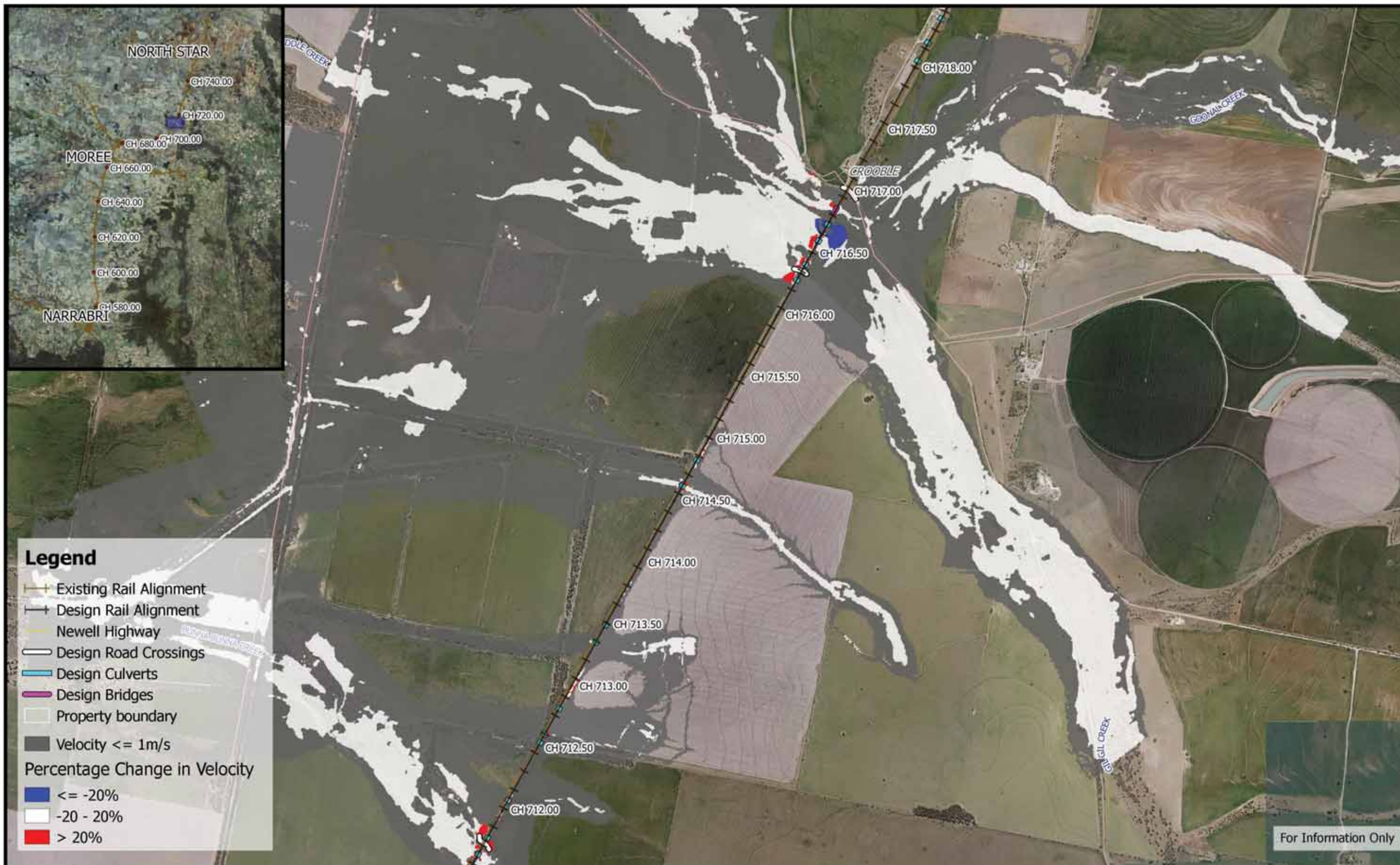CH 675.00

CH 674.50

CH 674.00

CH 673.50

CH 673.00

250 0   250   500   750   1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC22
0.05% AEP Percentage Change In Velocity - CH 680.00

E:\12dSynergy\2\IR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

- ⊢─┤ Existing Rail Alignment
- ⊢─┤ Design Rail Alignment
- Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property boundary
- ▮ Velocity <= 1m/s

Percentage Change in Velocity

- ▮ <= -20%
- ▯ -20 - 20%
- ▮ > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC23
0.05% AEP Percentage Change In Velocity - CH 685.00

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property boundary
Velocity <= 1m/s

Percentage Change in Velocity

<= -20%
-20 - 20%
> 20%

For Information Only

250 0 250 500 750 1000 m	Date: 22/5/2019	**Inland Rail - Narrabri to North Star**
		IFC - Flood Study for Separable Portion 1
1:25,000	Rev A: For Information Only	
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3	Prepared By: StephensK	**Figure DE0.05VC24** *0.05% AEP Percentage Change In Velocity - CH 690.00*

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
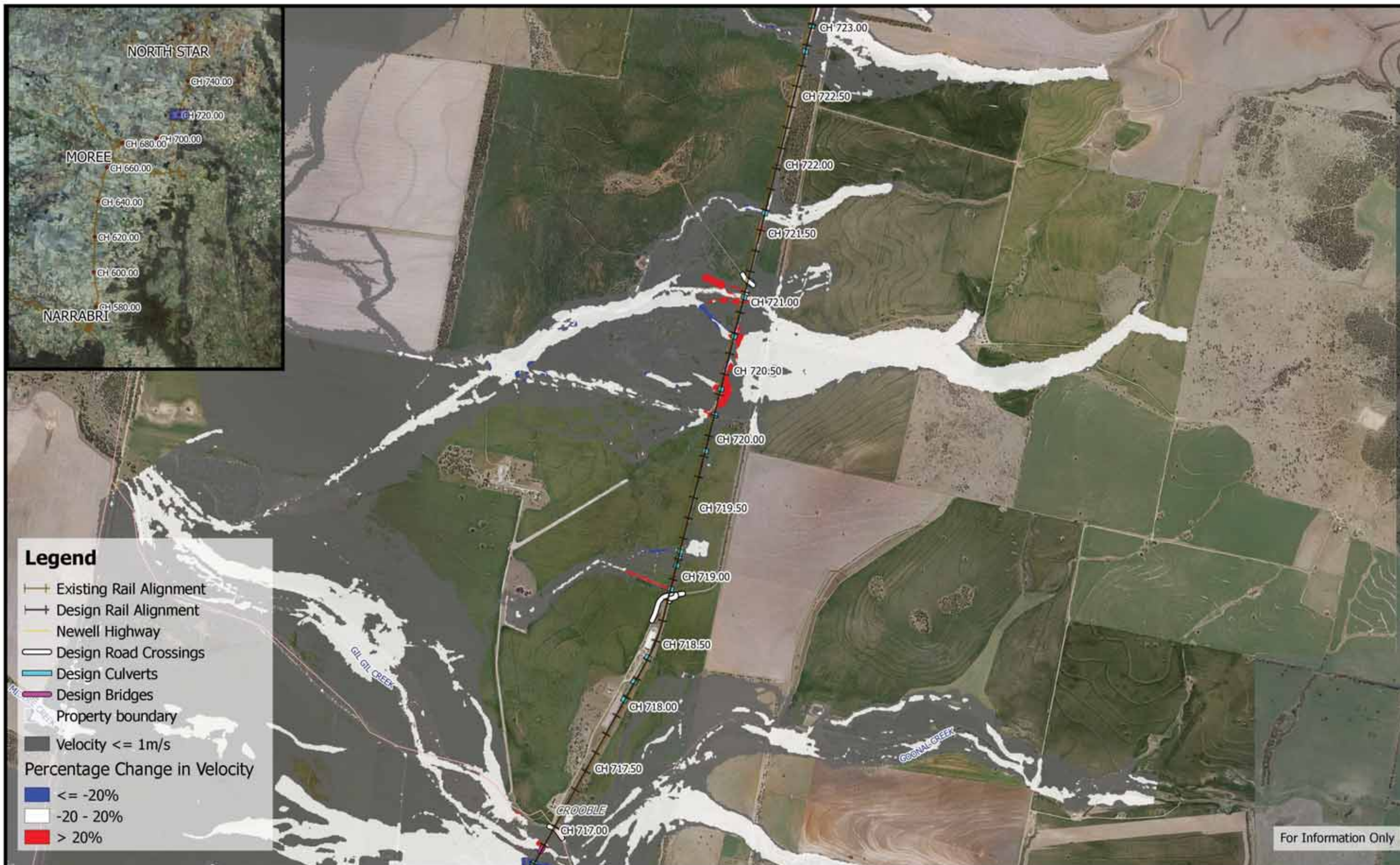- -20 - 20%
- > 20%

For Information Only

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1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC25
0.05% AEP Percentage Change In Velocity - CH 695.00

E:\12dSynergy\21\IR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property boundary

Velocity <= 1m/s

Percentage Change in Velocity

<= -20%
-20 - 20%
> 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC26
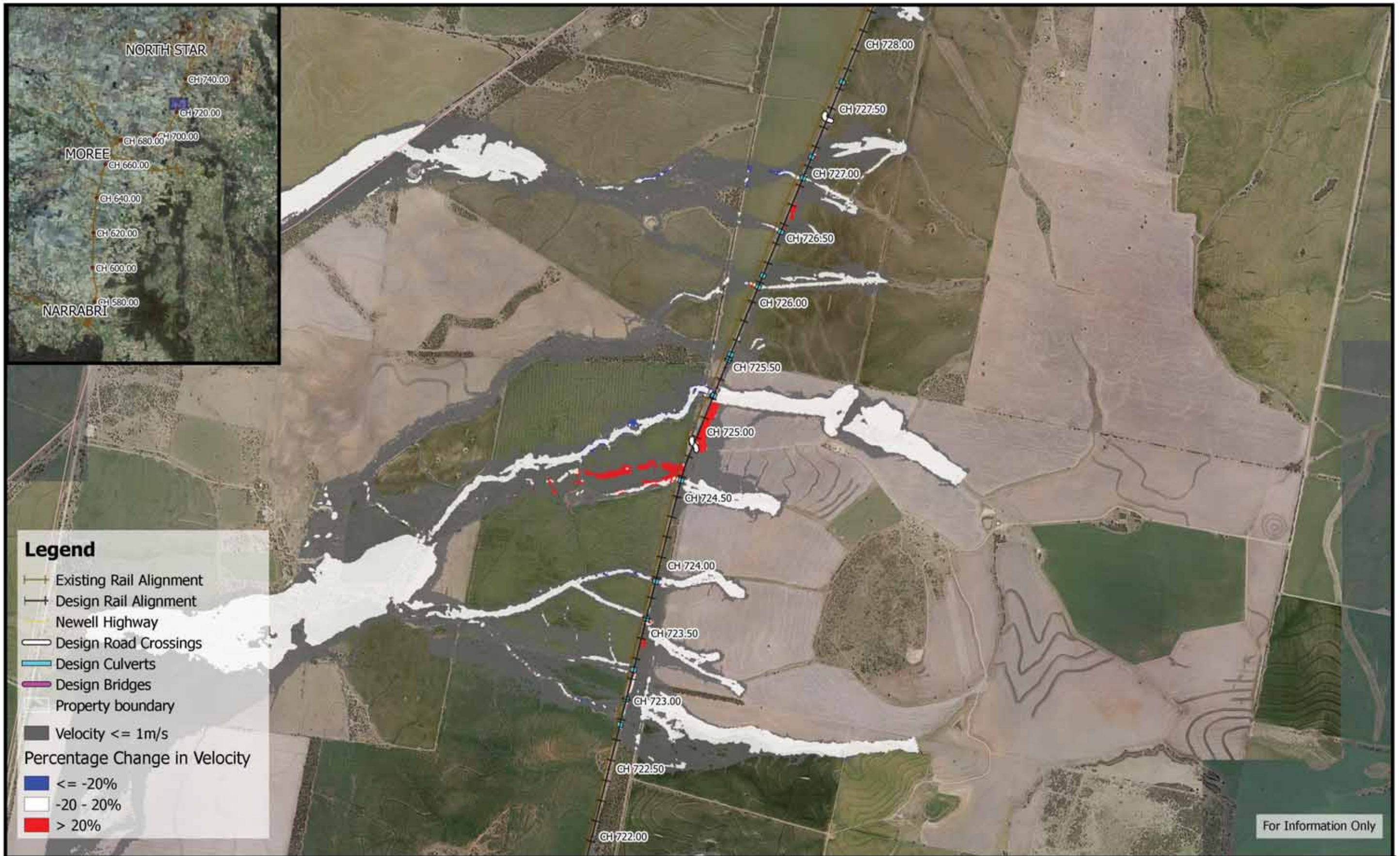*0.05% AEP Percentage Change In Velocity   -   CH 700.00*

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Legend

⊢——+ Existing Rail Alignment
⊢——+ Design Rail Alignment
—— Newell Highway
⊂——⊃ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▢ Property boundary

▨ Velocity <= 1m/s

Percentage Change in Velocity

▨ <= -20%
▯ -20 - 20%
▮ > 20%

For Information Only

250 0 250 500 750 1000 m
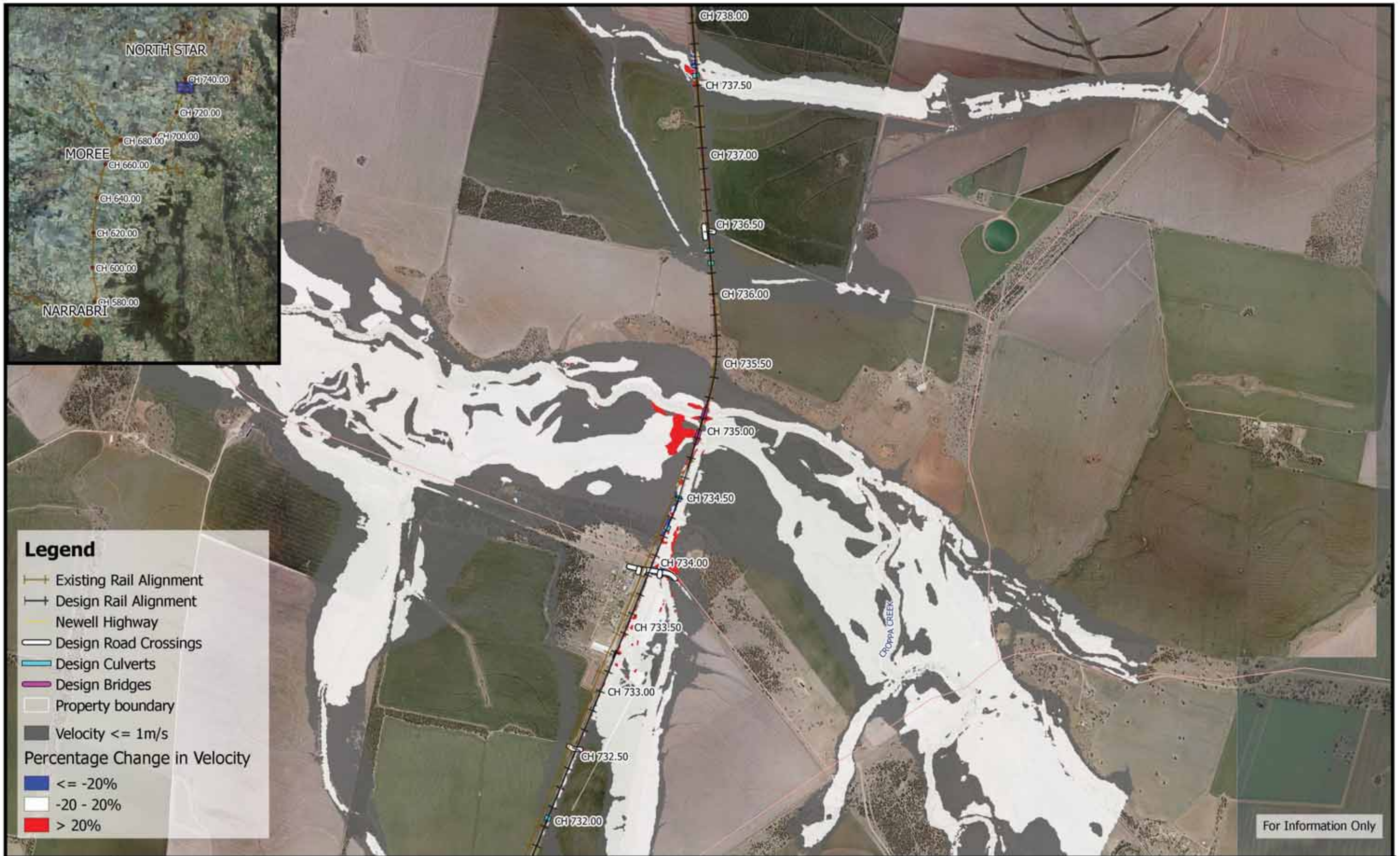
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Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC27
0.05% AEP Percentage Change In Velocity - CH 705.00

NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE

CH 660.00

CH 640.00

CH 620.00

CH 600.00

CH 580.00

NARRABRI

CH 713.00

CH 712.50

BUNNABUNNA CREEK

CH 712.00

CH 711.50

CH 711.00

CH 710.50

CH 710.00

CH 709.50

CH 709.00

CH 708.50

CH 708.00

CH 707.50

MARSHALLS PONDS CREEK

CH 707.00

MILGUY

CH 706.00

For Information Only

Legend

⊢+ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
— Newell Highway
⊂⊃ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary

▓ Velocity <= 1m/s

Percentage Change in Velocity

■ <= -20%
□ -20 - 20%
■ > 20%

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC28

0.05% AEP Percentage Change In Velocity - CH 710.00

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Legend

- ⊢—+ Existing Rail Alignment
- ⊢—+ Design Rail Alignment
- —— Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- —— Design Bridges
- ▭ Property boundary
- ▮ Velocity <= 1m/s

Percentage Change in Velocity

- ▮ <= -20%
- ▯ -20 - 20%
- ▮ > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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	IFC - Flood Study for Separable Portion 1
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	Figure DE0.05VC29
Prepared By: StephensK	*0.05% AEP Percentage Change In Velocity - CH 715.00*

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
Property boundary

▨ Velocity <= 1m/s

Percentage Change in Velocity

▨ <= -20%
▢ -20 - 20%
▨ > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 700.00
CH 680.00
CH 660.00
MOREE
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 723.00
CH 722.50
CH 722.00
CH 721.50
CH 721.00
CH 720.50
CH 720.00
CH 719.50
CH 719.00
CH 718.50
CH 718.00
CH 717.50
CROOBLE
CH 717.00

GIL GIL CREEK
COORAL CREEK

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC30
0.05% AEP Percentage Change In Velocity   - CH 720.00

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
- -20 - 20%
- > 20%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC31
0.05% AEP Percentage Change In Velocity   -   CH 725.00

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary

▮ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
▯ -20 - 20%
▮ > 20%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 733.00
CH 732.50
CH 732.00
CROPPA CREEK
CH 731.50
CH 731.00
CH 730.50
CH 730.00
CH 729.50
CH 729.00
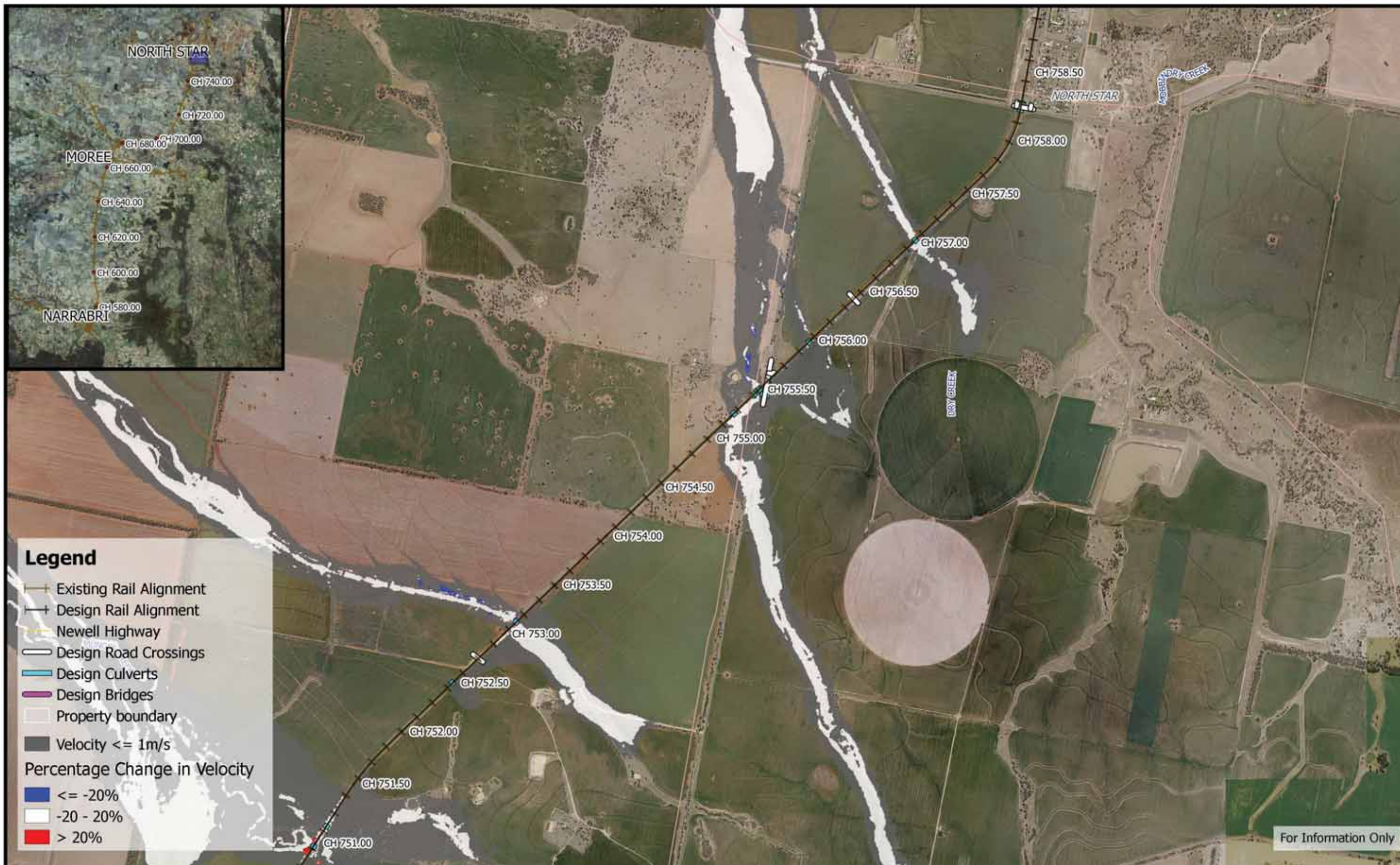CH 728.50
CH 728.00
CH 727.50
CH 727.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC32
0.05% AEP Percentage Change In Velocity - CH 730.00

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Legend

⊢—⊢ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary

▨ Velocity <= 1m/s

Percentage Change in Velocity

■ <= -20%
□ -20 - 20%
■ > 20%

For Information Only

CH 738.00
CH 737.50
CH 737.00
CH 736.50
CH 736.00
CH 735.50
CH 735.00
CH 734.50
CH 734.00
CH 733.50
CH 733.00
CH 732.50
CH 732.00

CROPPA CREEK

Inset: NORTH STAR, CH 740.00, CH 720.00, CH 700.00, CH 680.00, MOREE, CH 660.00, CH 640.00, CH 620.00, CH 600.00, NARRABRI, CH 580.00

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC33
0.05% AEP Percentage Change In Velocity - CH 735.00

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Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊢ Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property boundary
- Velocity <= 1m/s

Percentage Change in Velocity

- <= -20%
- -20 - 20%
- > 20%

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 22/5/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC34
0.05% AEP Percentage Change In Velocity - CH 740.00

For Information Only

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Legend

⊢→ Existing Rail Alignment
⊢→ Design Rail Alignment
　 Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property boundary

▮ Velocity <= 1m/s

Percentage Change in Velocity

▮ <= -20%
▯ -20 - 20%
▮ > 20%

Map labels: NORTH STAR, MOREE, NARRABRI

CH 740.00, CH 720.00, CH 700.00, CH 680.00, CH 660.00, CH 640.00, CH 620.00, CH 600.00, CH 580.00

CH 748.00, CH 747.50, CH 747.00, CH 746.50, CH 746.00, CH 745.50, CH 745.00, CH 744.50, CH 744.00, CH 743.50, CH 743.00, CH 742.50, CH 742.00

TACKINBRI CREEK, YALLAROI CREEK

For Information Only
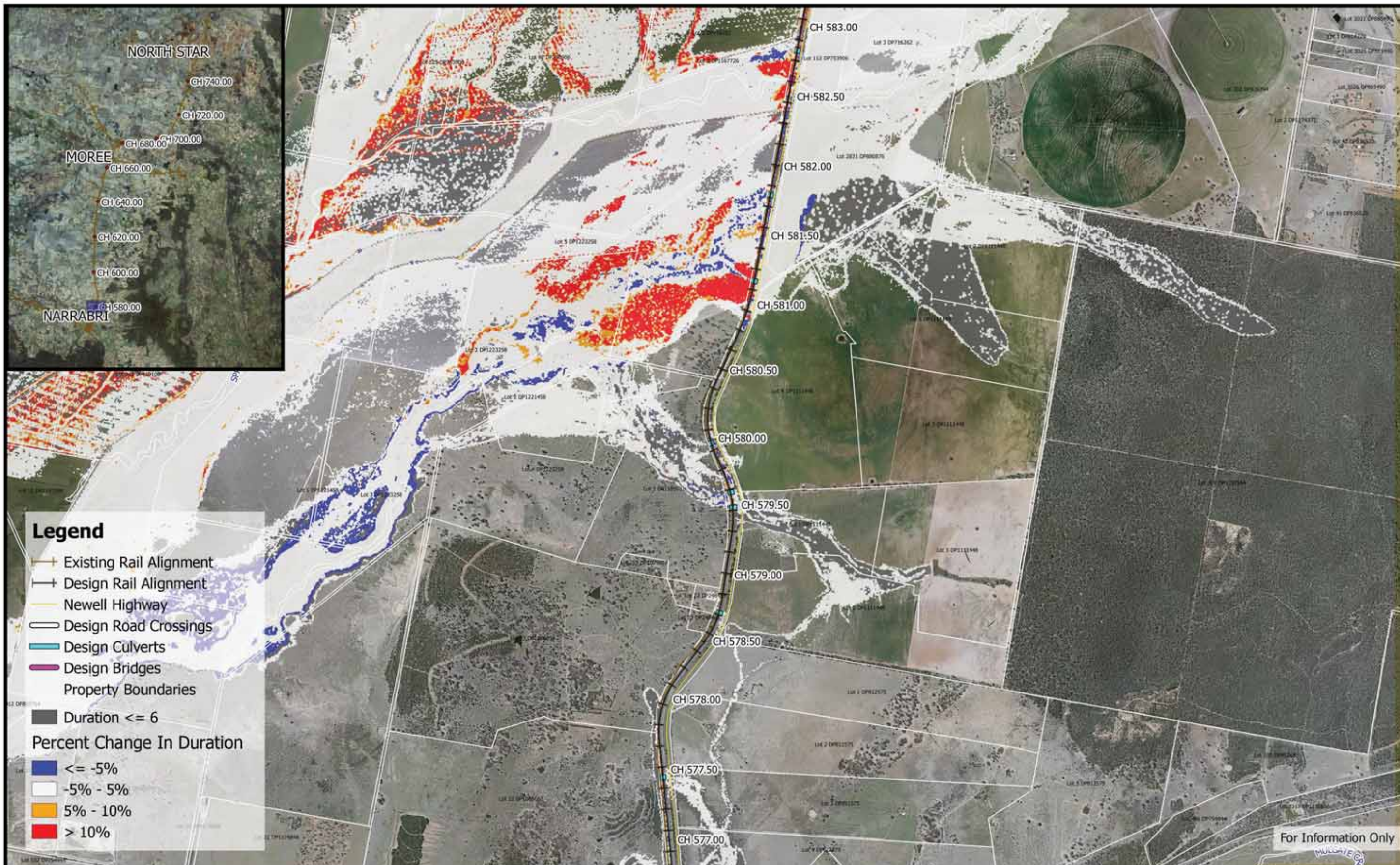
250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC35
0.05% AEP Percentage Change In Velocity - CH 745.00

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Legend

├──┤	Existing Rail Alignment
├──┤	Design Rail Alignment
	Newell Highway
▭	Design Road Crossings
▭	Design Culverts
▭	Design Bridges
	Property boundary
▬	Velocity <= 1m/s

Percentage Change in Velocity

🟦	<= -20%
⬜	-20 - 20%
🟥	> 20%

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 22/5/2019	**Inland Rail - Narrabri to North Star**
	IFC - Flood Study for Separable Portion 1
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	Figure DE0.05VC36
Prepared By: StephensK	*0.05% AEP Percentage Change In Velocity - CH 750.00*

For Information Only

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property boundary

Velocity <= 1m/s

Percentage Change in Velocity

<= -20%
-20 - 20%
> 20%

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 758.50
NORTH STAR
CH 758.00
CH 757.50
CH 757.00
CH 756.50
CH 756.00
CH 755.50
CH 755.00
CH 754.50
CH 754.00
CH 753.50
CH 753.00
CH 752.50
CH 752.00
CH 751.50
CH 751.00

DRY CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Prepared By: StephensK

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05VC37
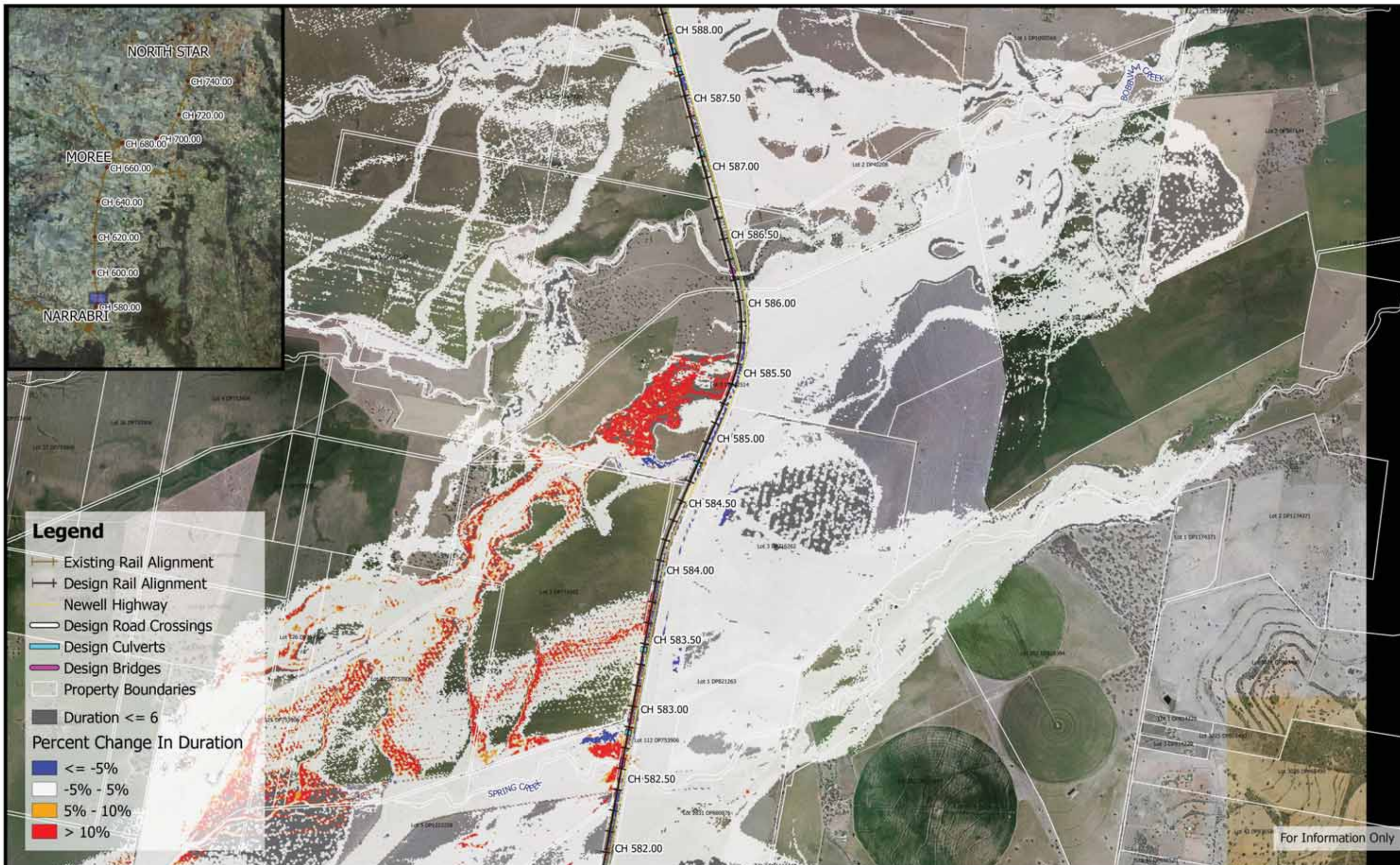*0.05% AEP Percentage Change In Velocity - CH 755.00*

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Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
Property Boundaries

■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

Rev A: For Information Only

Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D1

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 575.00

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Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries
Duration <= 6

Percent Change In Duration

	<= -5%
	-5% - 5%
	5% - 10%
	> 10%

NORTH STAR
MOREE
NARRABRI

CH 740.00
CH 720.00
CH 700.00
CH 680.00
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00

CH 583.00
CH 582.50
CH 582.00
CH 581.50
CH 581.00
CH 580.50
CH 580.00
CH 579.50
CH 579.00
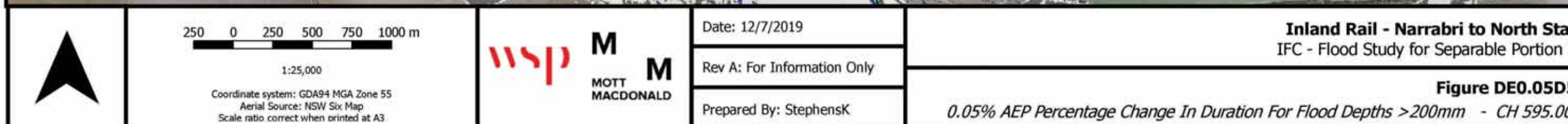CH 578.50
CH 578.00
CH 577.50
CH 577.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D2
0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 580.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries
Duration <= 6

Percent Change In Duration

<= -5%
-5% - 5%
5% - 10%
> 10%

NORTH STAR
MOREE
NARRABRI

CH 740.00
CH 720.00
CH 680.00 CH 700.00
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00

CH 588.00
CH 587.50
CH 587.00
CH 586.50
CH 586.00
CH 585.50
CH 585.00
CH 584.50
CH 584.00
CH 583.50
CH 583.00
CH 582.50
CH 582.00

BOBBIWAA CREEK
SPRING CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Date: 10/7/2019

Rev A: For Information Only

Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D3

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 585.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
⎯⎯ Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
▬ Duration <= 6

Percent Change In Duration
▬ <= -5%
▢ -5% - 5%
▬ 5% - 10%
▬ > 10%

North Star

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 593.00
CH 592.50
CH 592.00
CH 591.50
CH 591.00
CH 590.50
CH 590.00
CH 589.50
CH 589.00
CH 588.50
CH 588.00
CH 587.50
CH 587.00

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

M M
MOTT
MACDONALD

Date: 10/7/2019

Rev A: For Information Only

Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D4

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 590.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

⊢—⊢ Existing Rail Alignment
⊢—⊢ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp MOTT MACDONALD

Date: 12/7/2019	**Inland Rail - Narrabri to North Star**
	IFC - Flood Study for Separable Portion 1
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Prepared By: StephensK	**Figure DE0.05D5**
	0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 595.00

For Information Only

E:\12dSynergy\2\JR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries
Duration <= 6

Percent Change In Duration

<= -5%
-5% - 5%
5% - 10%
> 10%

For Information Only

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

TEN MILE CREEK
PAN CREEK
CH 603.00
CH 602.50
CH 602.00
CH 601.50
CH 601.00
CH 600.50
CH 600.00
CH 599.50
CH 599.00
CH 598.50
CH 598.00
CH 597.50
CH 597.00
TEN MILE CREEK

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp   M
       MOTT M
       MACDONALD

Date: 12/7/2019

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Prepared By: StephensK

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D6
0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 600.00

E:\12dSynergy\2\IR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
▮ Duration <= 6

Percent Change In Duration

▮ <= -5%
▯ -5% - 5%
▮ 5% - 10%
▮ > 10%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 608.00
CH 607.50
BOGGY CREEK
CH 607.00
CH 606.50
CH 606.00
CH 605.50
CH 605.00
CH 604.50
BULLDOG CREEK
CH 604.00
CH 603.50
CH 603.00
CH 602.50
PAN CREEK
CH 602.00

For Information Only

250 0   250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp M M
MOTT
MACDONALD

Date: 12/7/2019	**Inland Rail - Narrabri to North Star**
	IFC - Flood Study for Separable Portion 1
Rev A: For Information Only	
Prepared By: StephensK	**Figure DE0.05D7**
	0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 605.00

E:\12dSynergy\2\JR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

	250 0 250 500 750 1000 m			
	1:25,000		Date: 12/7/2019	**Inland Rail - Narrabri to North Star**
		wsp **M MOTT M MACDONALD**		IFC - Flood Study for Separable Portion 1
	Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev A: For Information Only	**Figure DE0.05D8**
			Prepared By: StephensK	*0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 610.00*

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Legend

⊢——+ Existing Rail Alignment
⊢——+ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▢ Property Boundaries
■ Duration <= 6

Percent Change In Duration
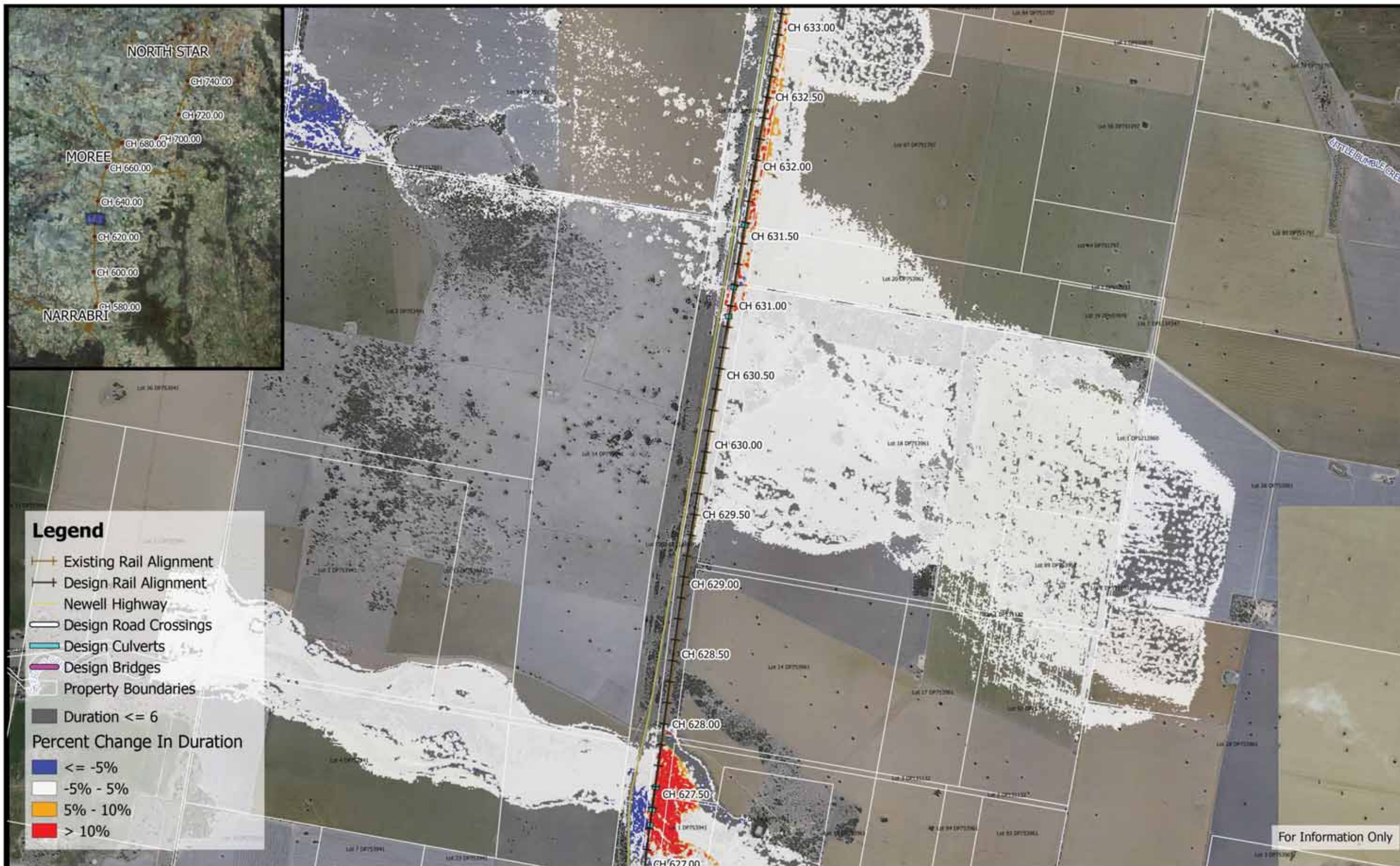■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

M M
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MACDONALD

Date: 12/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D9

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 615.00

E:\12dSynergy\2\JR N2NS_1\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.16.17

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
▮ Duration <= 6

Percent Change In Duration

▮ <= -5%
▯ -5% - 5%
▮ 5% - 10%
▮ > 10%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 623.00
CH 622.50
CH 622.00
CH 621.50
TOCKEY CREEK
CH 621.00
CH 620.50
CH 620.00
CH 619.50
CH 619.00
CH 618.50
CH 618.00
CH 617.50

For Information Only

250 0 250 500 750 1000 m	wsp M M MOTT MACDONALD	Date: 12/7/2019	**Inland Rail - Narrabri to North Star**
1:25,000		Rev A: For Information Only	IFC - Flood Study for Separable Portion 1
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Prepared By: StephensK	**Figure DE0.05D10** *0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 620.00*

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NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE

CH 660.00

CH 640.00

CH 620.00

CH 600.00

NARRABRI CH 580.00

CH 628.00

CH 627.50

CH 627.00

CH 626.50

CH 626.00

CH 625.50

CH 625.00

CH 624.50

CH 624.00

CH 623.50

CH 623.00

CH 622.50

WATERLOO CREEK

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries
Duration <= 6

Percent Change In Duration
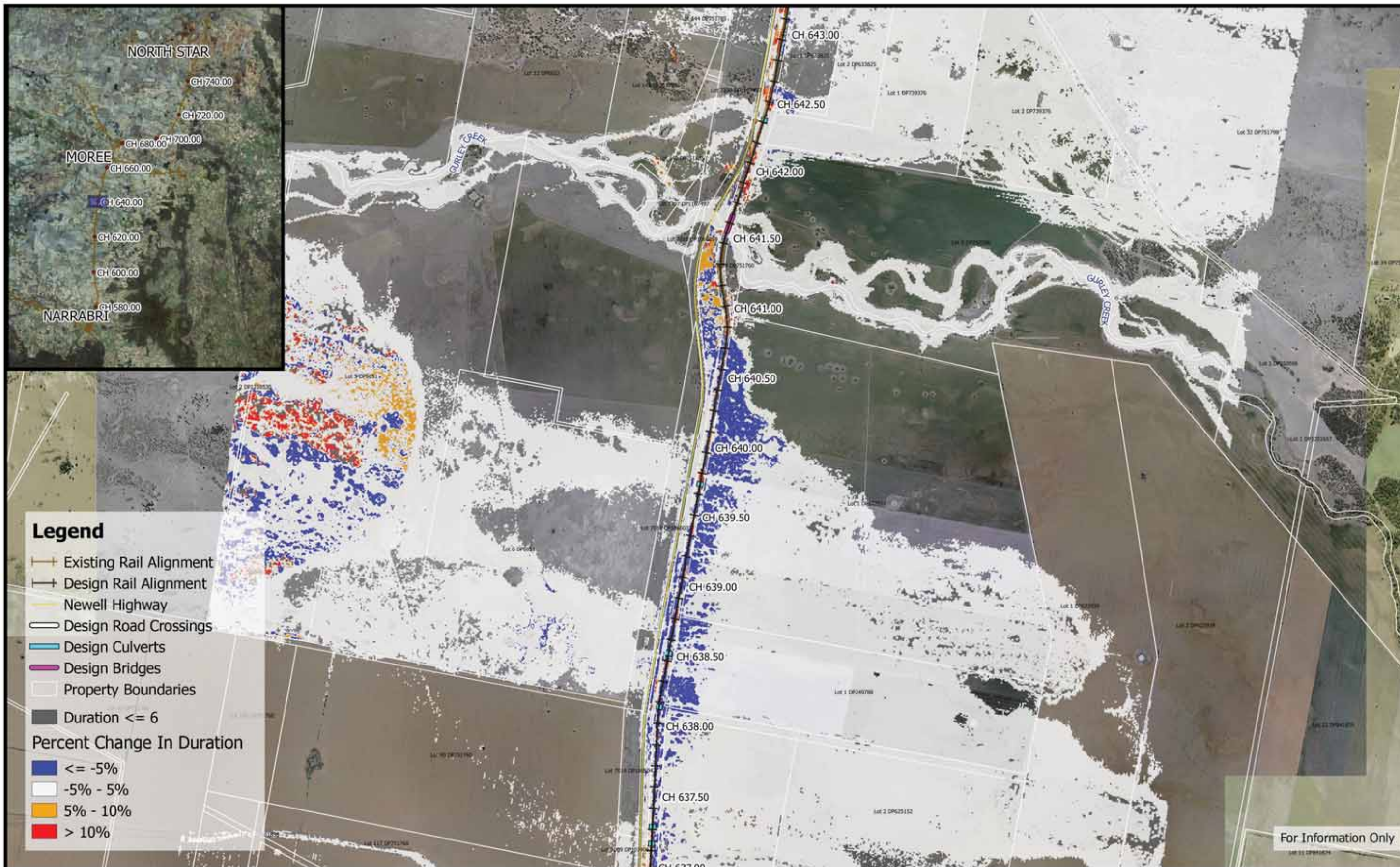
<= -5%
-5% - 5%
5% - 10%
> 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D11

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 625.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\JFC Mapping\JFCImpactMaps.qgs - 2.10.21

Figure DE0.05D12

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 630.00

Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries
- Duration <= 6

Percent Change In Duration
- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 633.00
CH 632.50
CH 632.00
CH 631.50
CH 631.00
CH 630.50
CH 630.00
CH 629.50
CH 629.00
CH 628.50
CH 628.00
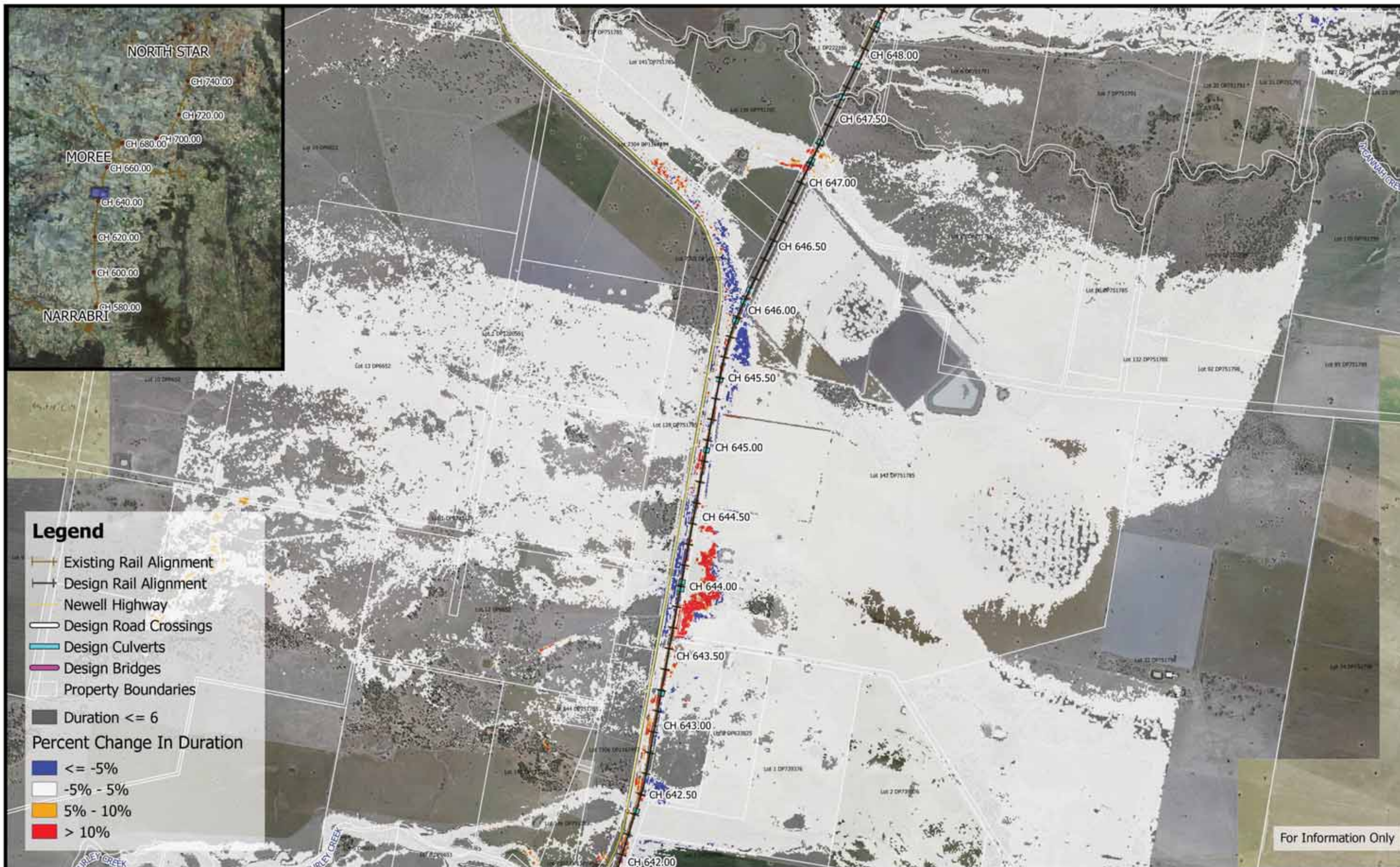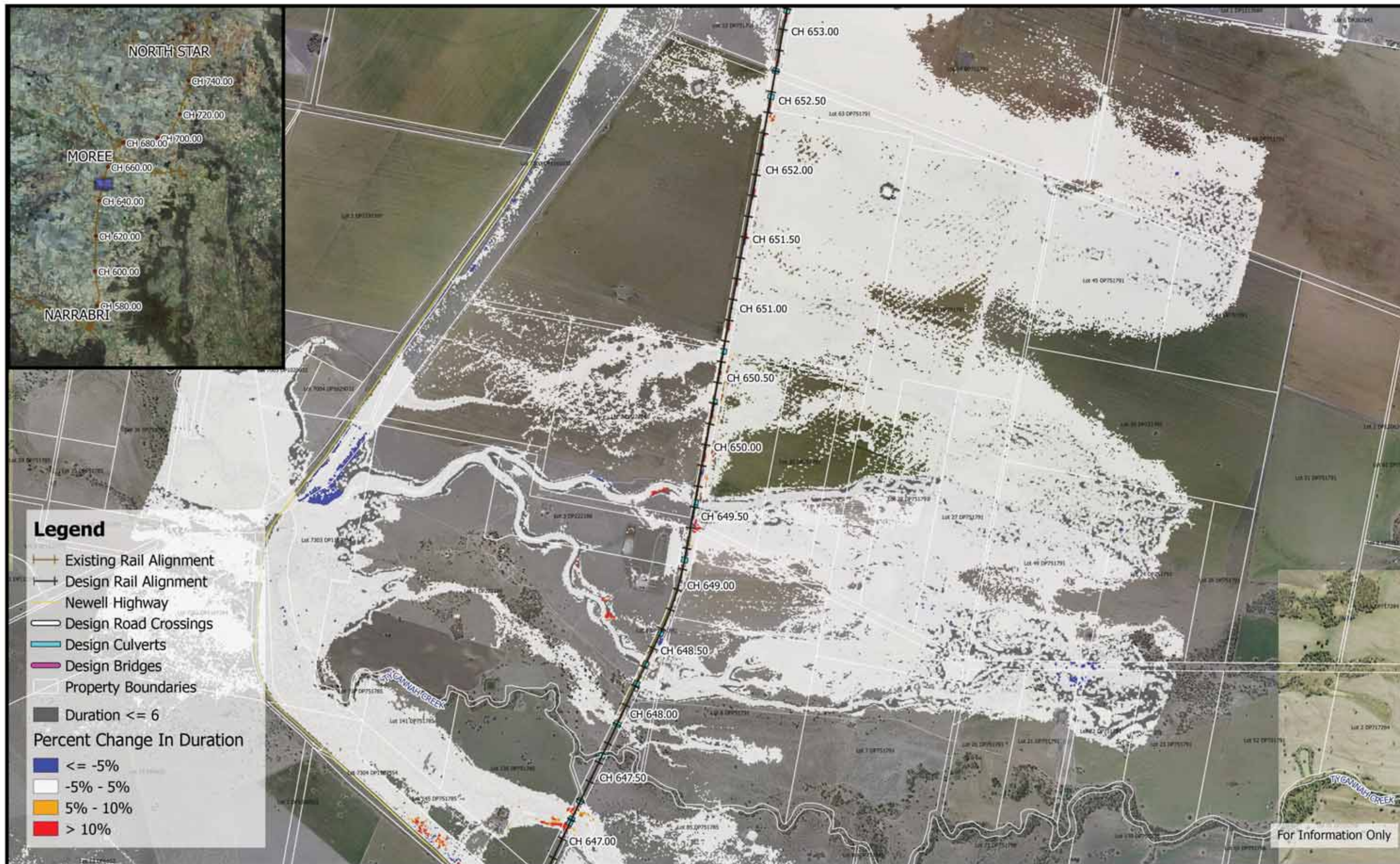CH 627.50
CH 627.00

LITTLE BUMBLE CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp M M
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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

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Legend

⊢⊣ Existing Rail Alignment
⊢⊣ Design Rail Alignment
— Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▢ Property Boundaries
▮ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

wsp

MOTT
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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D13

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 635.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE

CH 660.00

CH 640.00

CH 620.00

CH 600.00

CH 580.00

NARRABRI

GURLEY CREEK

GURLEY CREEK

CH 643.00
CH 642.50
CH 642.00
CH 641.50
CH 641.00
CH 640.50
CH 640.00
CH 639.50
CH 639.00
CH 638.50
CH 638.00
CH 637.50
CH 637.00

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
▮ Duration <= 6

Percent Change In Duration

▮ <= -5%
▯ -5% - 5%
▮ 5% - 10%
▮ > 10%

For Information Only
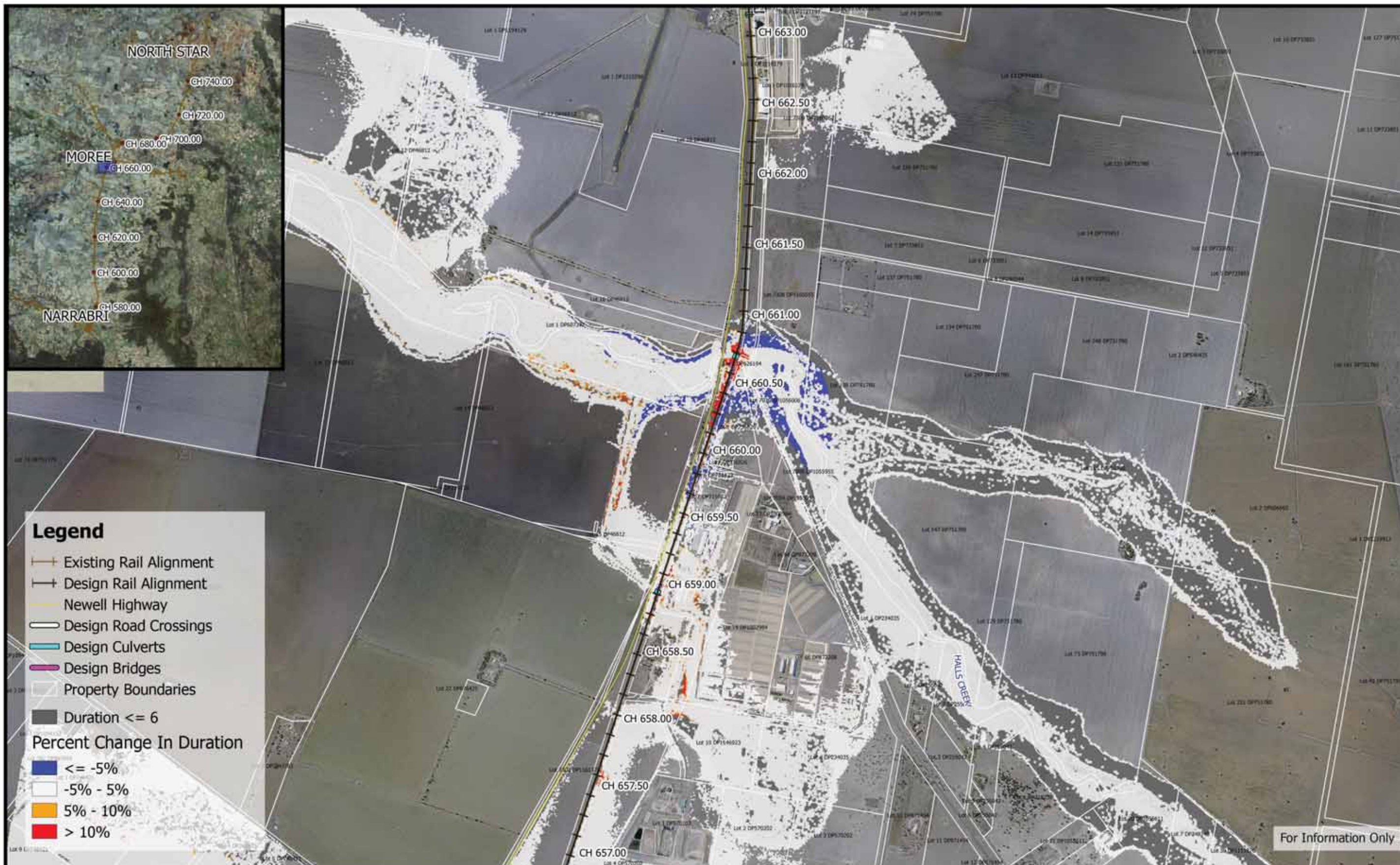
250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

WSP

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MACDONALD

Date: 10/7/2019

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Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D14

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   -   CH 640.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\JPC Mapping\JPCImpactMaps.qgs - 2.10.21

Legend

├──┤ Existing Rail Alignment
├──→ Design Rail Alignment
── Newell Highway
▭ Design Road Crossings
▭ Design Culverts
── Design Bridges
▭ Property Boundaries
▐ Duration <= 6

Percent Change In Duration

▐ <= -5%
▐ -5% - 5%
▐ 5% - 10%
▐ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D15

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 645.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
⊂⊃ Design Road Crossings
⊂⊐ Design Culverts
⊂⊐ Design Bridges
□ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 653.00
CH 652.50
CH 652.00
CH 651.50
CH 651.00
CH 650.50
CH 650.00
CH 649.50
CH 649.00
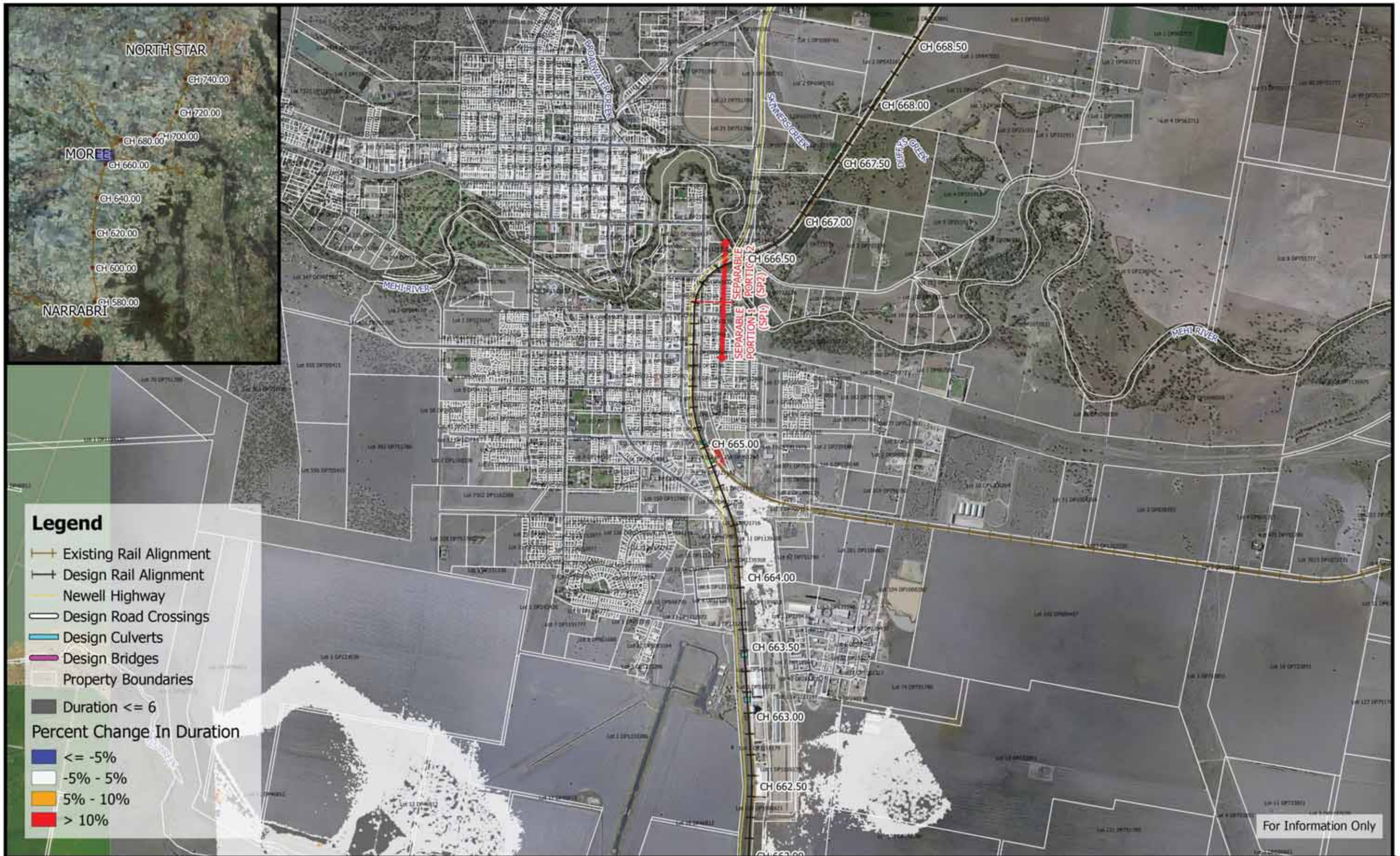CH 648.50
CH 648.00
CH 647.50
CH 647.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

WSP
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MOTT
MACDONALD

Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D16

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 650.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

- ⊢—+ Existing Rail Alignment
- ⊢—+ Design Rail Alignment
- —— Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries
- ▮ Duration <= 6

Percent Change In Duration

- ▮ <= -5%
- ▯ -5% - 5%
- ▮ 5% - 10%
- ▮ > 10%

NORTH STAR

CH 740.00
CH 720.00
CH 700.00
CH 680.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 580.00

CH 658.00
CH 657.50
CH 657.00
CH 656.50
CH 656.00
CH 655.50
CH 655.00
CH 654.50
CH 654.00
CH 653.50
CH 653.00
CH 652.50
CH 652.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Date: 10/7/2019	
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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D17

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 655.00

wsp   M MOTT MACDONALD

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Legend

— Existing Rail Alignment
— Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

NORTH STAR

CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI   CH 580.00

CH 663.00
CH 662.50
CH 662.00
CH 661.50
CH 661.00
CH 660.50
CH 660.00
CH 659.50
CH 659.00
CH 658.50
CH 658.00
CH 657.50
CH 657.00

HALLS CREEK

For Information Only

250 0 250 500 750 1000 m		**wsp** M M MOTT MACDONALD	Date: 10/7/2019	**Inland Rail - Narrabri to North Star** IFC - Flood Study for Separable Portion 1
1:25,000			Rev A: For Information Only	
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3			Prepared By: stephensk	**Figure DE0.05D18** _0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 660.00_

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

⊢—⊣ Existing Rail Alignment
⊢—⊣ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

WSP

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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D19

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 665.00

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NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00
MOREE
CH 660.00

CH 640.00

CH 620.00

CH 600.00

NARRABRI CH 580.00

Legend

├── Existing Rail Alignment
├── Design Rail Alignment
─── Newell Highway
◻ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
Property Boundaries
▨ Duration <= 6

Percent Change In Duration

▨ <= -5%
▨ -5% - 5%
▨ 5% - 10%
▨ > 10%

GWYDIR RIVER

CH 675.50
CH 675.00
CH 674.50
CH 674.00
CH 673.50
CH 673.00
CH 672.50
CH 672.00
CH 671.50
CH 671.00
CH 670.50
CH 670.00
CH 669.50
CH 669.00
CH 668.50
CH 668.00
CH 667.50
CH 667.00
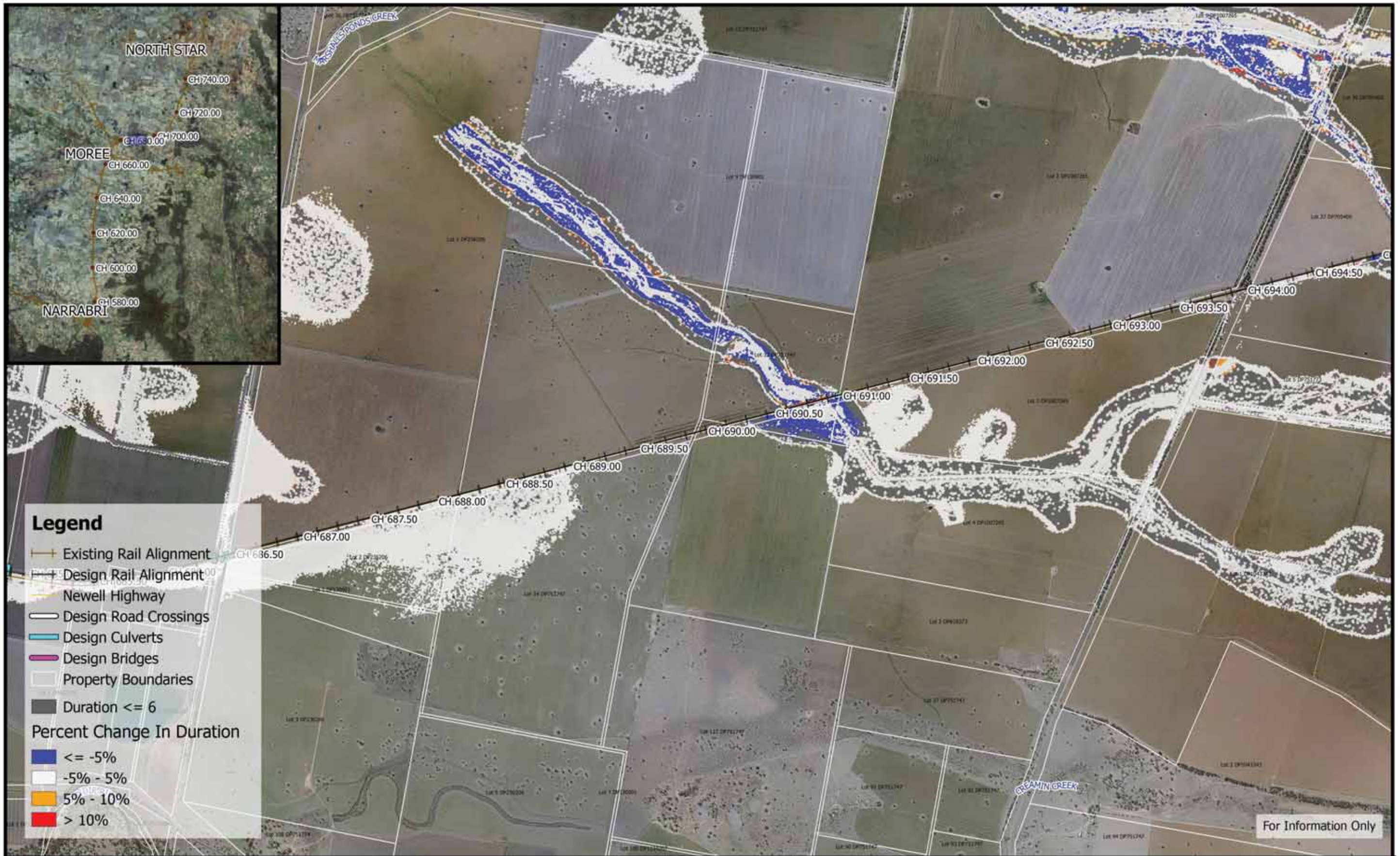CH 666.50

BROADWATER CREEK
SKINNERS CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

WSP M MOTT M MACDONALD

Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D20

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 670.00

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Legend

+–+ Existing Rail Alignment
+–+ Design Rail Alignment
—— Newell Highway
⬭ Design Road Crossings
⬭ Design Culverts
⬭ Design Bridges
☐ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
☐ -5% - 5%
■ 5% - 10%
■ > 10%

NORTH STAR

MOREE

NARRABRI

CH 1740.00
CH 720.00
CH 680.00 CH 700.00
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00

CAMURRA

EQUALITY 678.534 = 680.00

CH 678.00   CH 680.00   CH 680.50
CH 677.50   CH 681.00
                                    CH 681.50   CH 682.00   CH 68
CH 677.00

SEPARABLE   SEPARABLE
PORTION 2   PORTION 1
(SP2)   (SP1)

CH 676.50

CH 676.00

CH 675.50

GWYDIR RIVER

CH 675.00

CH 674.50

CH 674.00

CH 673.50

CH 672.50

CH 672.00

CH 671.50

CH 671.00

CH 670.50

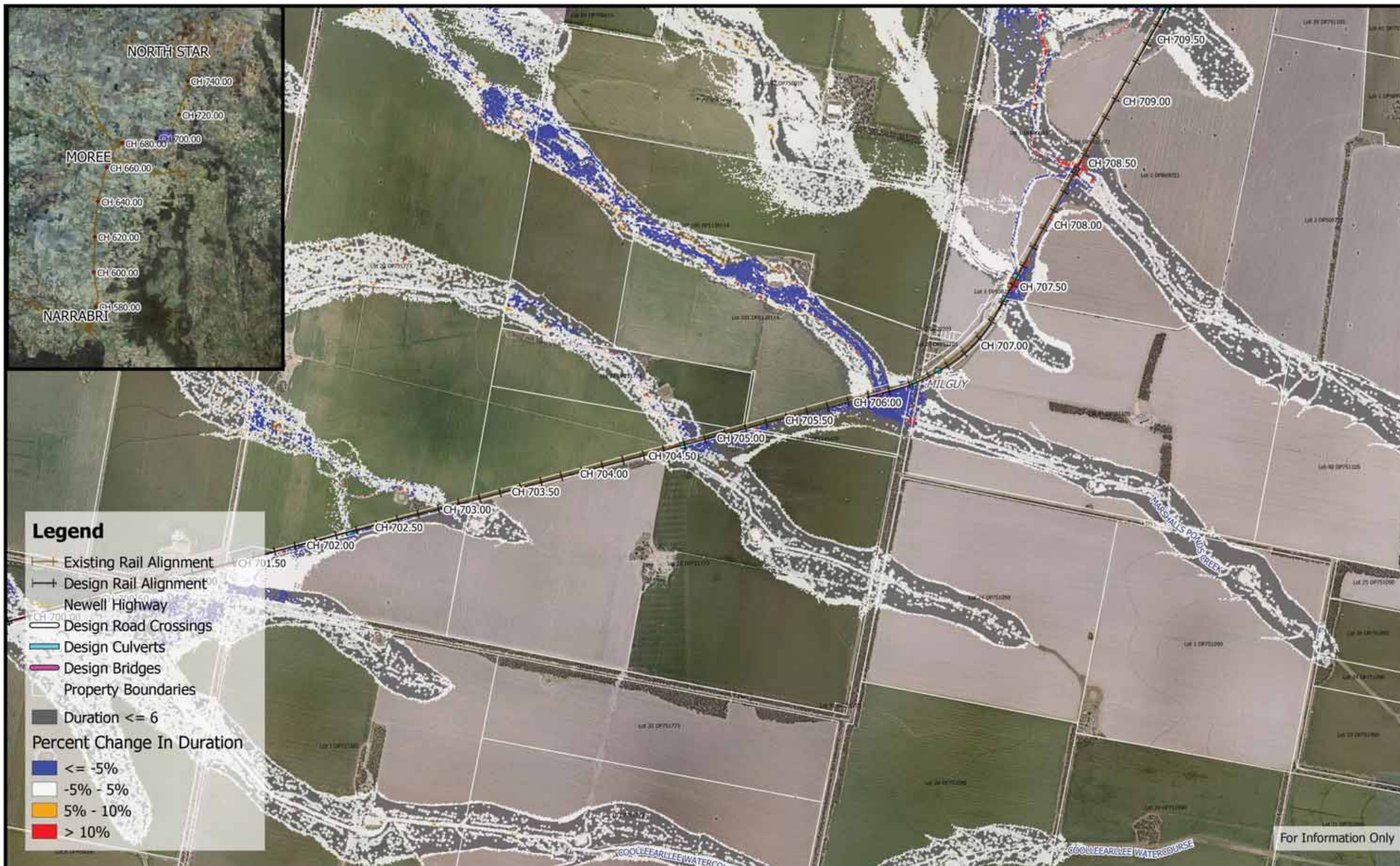CH 670.00

For Information Only

| 250 | 0 | 250 | 500 | 750 | 1000 m |

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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MACDONALD

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D21

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 675.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

NORTH STAR

CH 740.00

CH 720.00

CH 680.00 CH 700.00

MOREE

CH 660.00

CH 640.00

CH 620.00

CH 600.00

NARRABRI CH 580.00

CAMURRA

EQUALITY 678.534 = 680.00

CH 678.00 CH 680.00 CH 680.50 CH 681.00 CH 681.50 CH 682.00 CH 682.50 CH 683.00 CH 683.50
CH 677.50 CH 684.00 CH 684.50

CH 677.00

CH 676.50

SEPARABLE PORTION 2 (SP2)   SEPARABLE PORTION 1 (SP1)

CH 676.00

CH 675.50

CH 675.00

CH 674.50

CH 674.00

CH 673.50

MARSHALLS PONDS CREEK

Legend

— Existing Rail Alignment
— Design Rail Alignment
— Newell Highway
— Design Road Crossings
— Design Culverts
— Design Bridges
— Property Boundaries
▮ Duration <= 6

Percent Change In Duration
▮ <= -5%
▯ -5% - 5%
▮ 5% - 10%
▮ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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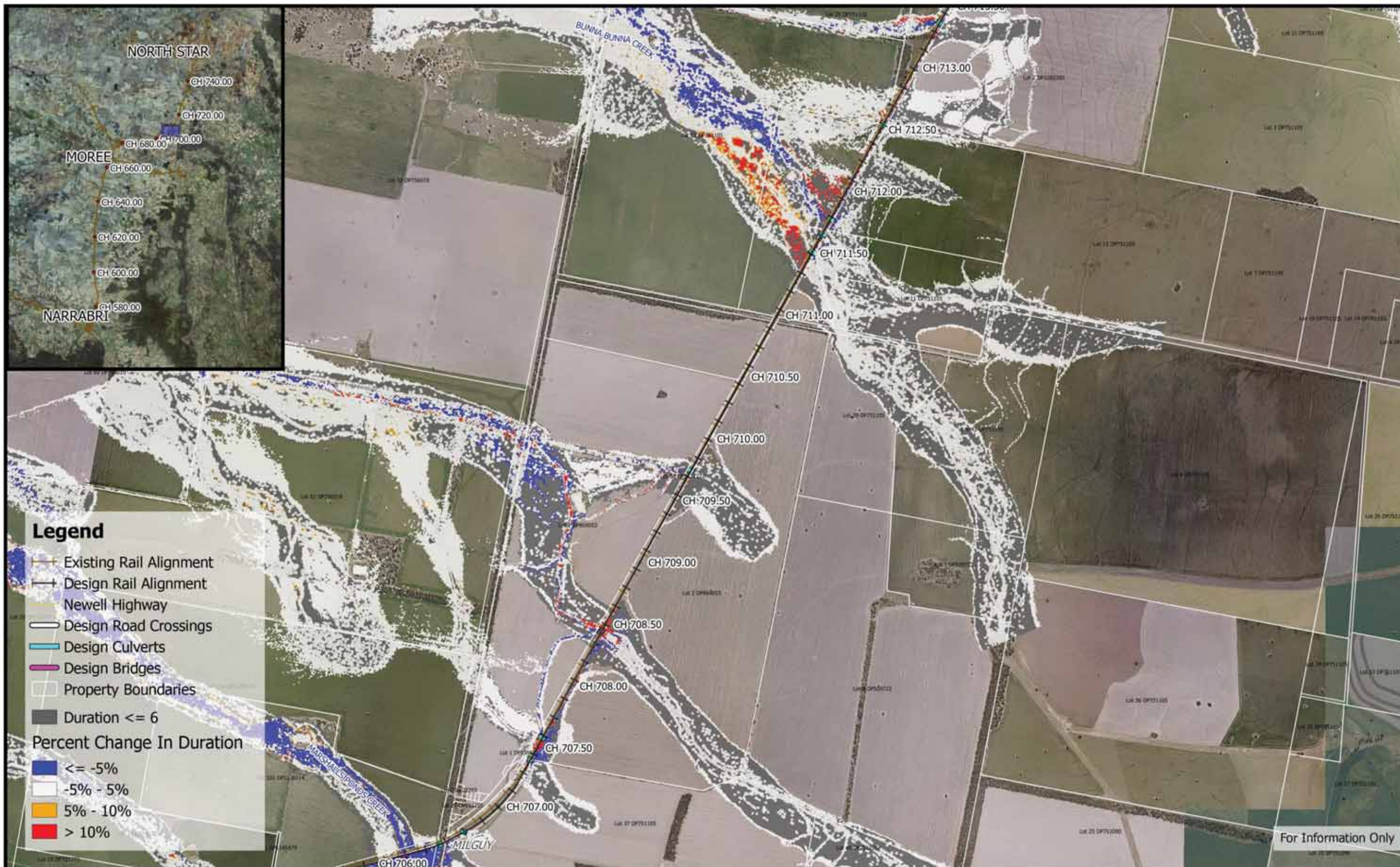
Prepared By: stephensk

Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D22

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   -   CH 680.00

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Legend

+—+ Existing Rail Alignment
+—+ Design Rail Alignment
〰 Newell Highway
⬭ Design Road Crossings
⬭ Design Culverts
⬭ Design Bridges
　 Property Boundaries
▨ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m	Date: 10/7/2019	**Inland Rail - Narrabri to North Star**
1:25,000		IFC - Flood Study for Separable Portion 1
	Rev A: For Information Only	
Coordinate system: GDA94 MGA Zone 55		**Figure DE0.05D23**
Aerial Source: NSW Six Map		
Scale ratio correct when printed at A3	Prepared By: stephensk	*0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 685.00*

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Inset map labels:
NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

Main map chainage labels:
CH 694.50
CH 694.00
CH 693.50
CH 693.00
CH 692.50
CH 692.00
CH 691.50
CH 691.00
CH 690.50
CH 690.00
CH 689.50
CH 689.00
CH 688.50
CH 688.00
CH 687.50
CH 687.00
CH 686.50

Legend

⊢+ Existing Rail Alignment
⊢+ Design Rail Alignment
— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m	Date: 10/7/2019
1:25,000	Rev A: For Information Only
Coordinate system: GDA94 MGA Zone 55 Aerial Source: NSW Six Map Scale ratio correct when printed at A3	Prepared By: stephensk

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D24

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 690.00

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Legend

⊢ Existing Rail Alignment
⊢ Design Rail Alignment
— Newell Highway
☐ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
☐ Property Boundaries

■ Duration <= 6

Percent Change In Duration

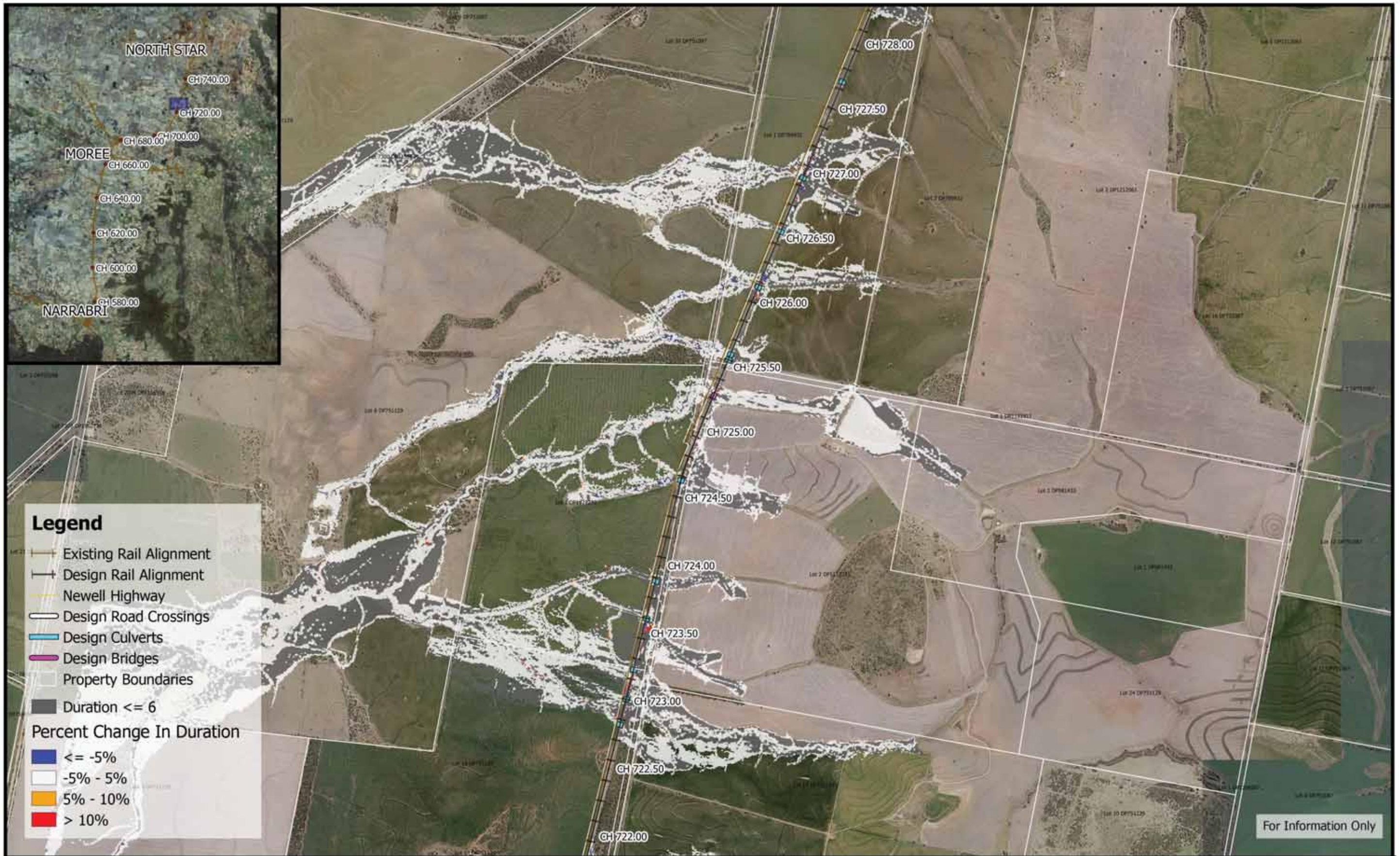■ <= -5%
☐ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0   250 500 750 1000 m

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Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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      MACDONALD

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D25

0.05% AEP Percentage Change In Duration For Flood Depths >200mm   - CH 695.00

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Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries
- Duration <= 6

Percent Change In Duration

- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

NORTH STAR

MOREE

NARRABRI

CH 740.00
CH 720.00
CH 700.00
CH 680.00
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00

For Information Only

250 0 250 500 750 1000 m

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Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D26

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 700.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

⊢⊣ Existing Rail Alignment
├──┤ Design Rail Alignment
── Newell Highway
⊂⊃ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
■ Duration <= 6

Percent Change In Duration

■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D27

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 705.00

Legend

—+— Existing Rail Alignment

—+— Design Rail Alignment

Newell Highway

▭ Design Road Crossings

▭ Design Culverts

▭ Design Bridges

▭ Property Boundaries

▨ Duration <= 6

Percent Change In Duration

■ <= -5%

□ -5% - 5%

■ 5% - 10%

■ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D28

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 710.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

	Existing Rail Alignment
	Design Rail Alignment
	Newell Highway
	Design Road Crossings
	Design Culverts
	Design Bridges
	Property Boundaries
	Duration <= 6

Percent Change In Duration

■	<= -5%
□	-5% - 5%
■	5% - 10%
■	> 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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	IFC - Flood Study for Separable Portion 1
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	Figure DE0.05D29
Prepared By: stephensk	*0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 715.00*

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgis - 2.10.21

Legend

⊢—+ Existing Rail Alignment
⊢—+ Design Rail Alignment
—— Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
Property Boundaries
■ Duration <= 6

Percent Change In Duration

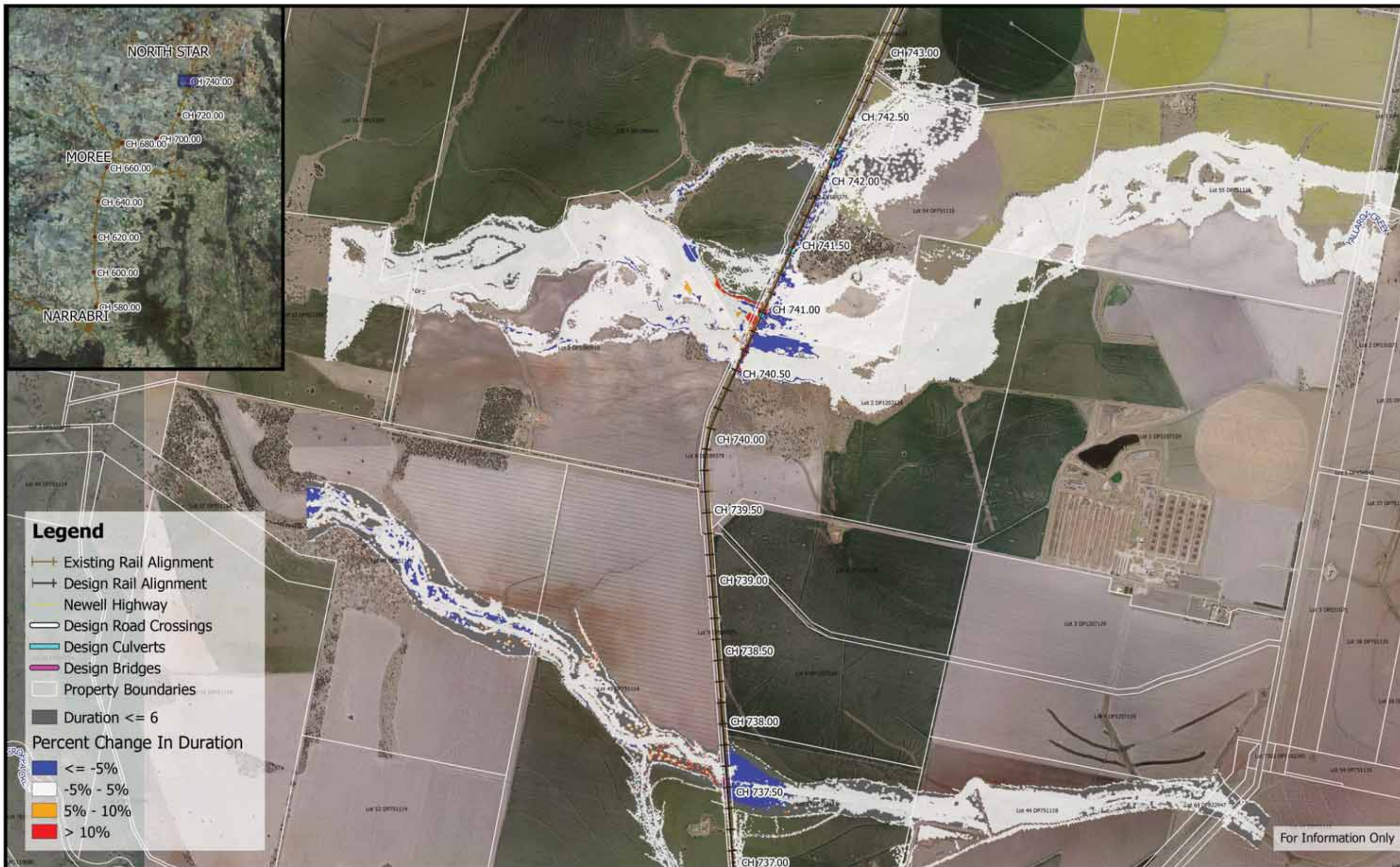■ <= -5%
□ -5% - 5%
■ 5% - 10%
■ > 10%

For Information Only

250 0   250 500   750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D30

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 720.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgis - 2.10.21

Legend

- ⊢⊣ Existing Rail Alignment
- ⊢⊣ Design Rail Alignment
- — Newell Highway
- ▭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▭ Property Boundaries
- ▬ Duration <= 6

Percent Change In Duration

- ■ <= -5%
- □ -5% - 5%
- ■ 5% - 10%
- ■ > 10%

NORTH STAR

CH 740.00
CH 720.00
CH 700.00
CH 680.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

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CH 728.00
CH 727.50
CH 727.00
CH 726.50
CH 726.00
CH 725.50
CH 725.00
CH 724.50
CH 724.00
CH 723.50
CH 723.00
CH 722.50
CH 722.00

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D31
0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 725.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IPC Mapping\IPCImpactMaps.qgs - 2.10.21

Legend

- Existing Rail Alignment
- Design Rail Alignment
- Newell Highway
- Design Road Crossings
- Design Culverts
- Design Bridges
- Property Boundaries
- Duration <= 6

Percent Change In Duration

- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D32

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 730.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IPC Mapping\IPCImpactMaps.qgs - 2.10.21

Legend

- ⊢—⊣ Existing Rail Alignment
- ⊢—⊣ Design Rail Alignment
- ——— Newell Highway
- ⬭ Design Road Crossings
- ▭ Design Culverts
- ▭ Design Bridges
- ▢ Property Boundaries
- ▮ Duration <= 6

Percent Change In Duration

- ▮ <= -5%
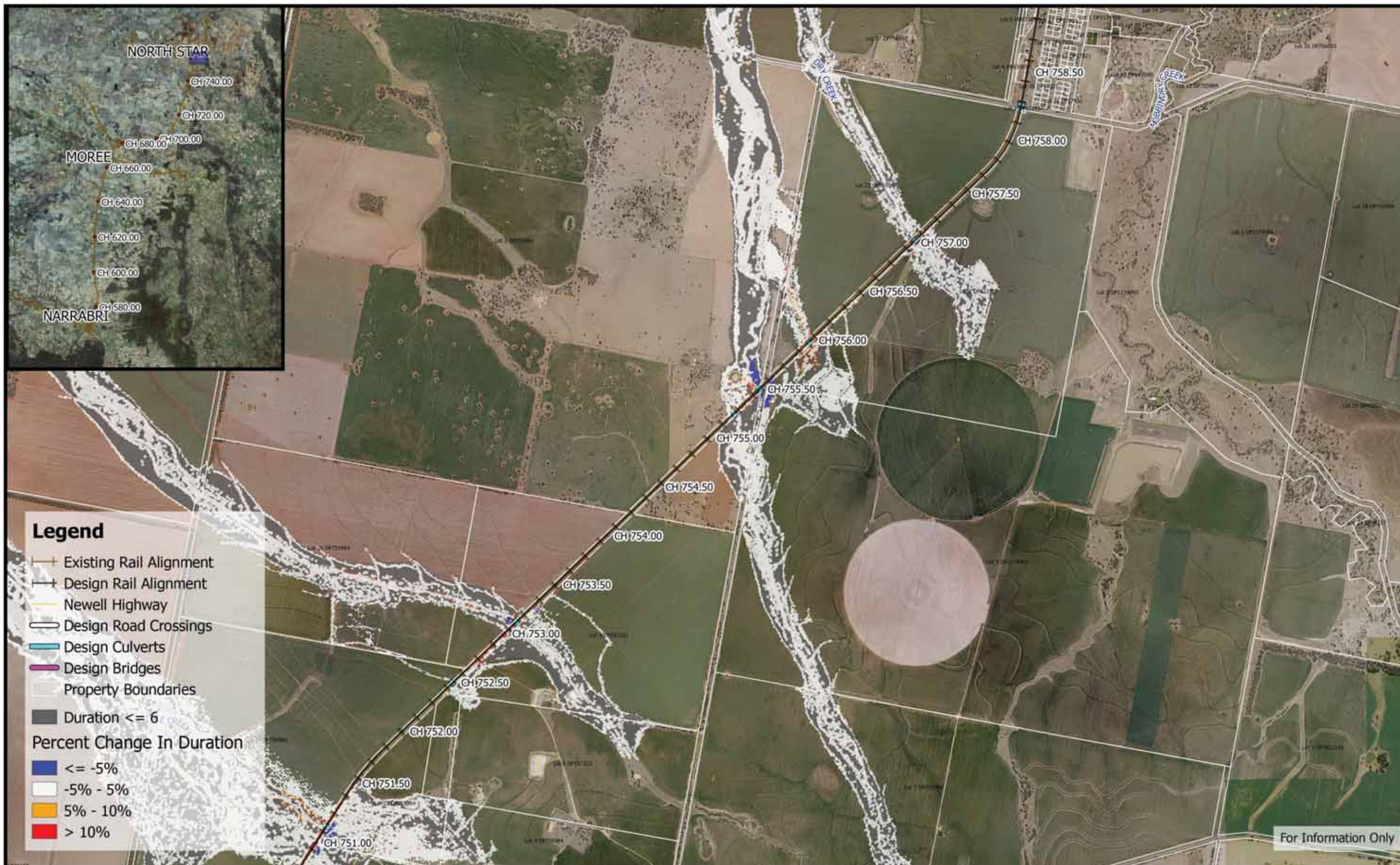- ▯ -5% - 5%
- ▮ 5% - 10%
- ▮ > 10%

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D33

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 735.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

├──┤ Existing Rail Alignment
├──┤ Design Rail Alignment
─── Newell Highway
⬭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▭ Property Boundaries
▮ Duration <= 6

Percent Change In Duration
▮ <= -5%
▮ -5% - 5%
▮ 5% - 10%
▮ > 10%

For Information Only

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
CH 580.00
NARRABRI

CH 743.00
CH 742.50
CH 742.00
CH 741.50
CH 741.00
CH 740.50
CH 740.00
CH 739.50
CH 739.00
CH 738.50
CH 738.00
CH 737.50
CH 737.00

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D34

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 740.00

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Legend

⊢—⊣ Existing Rail Alignment
⊢—+ Design Rail Alignment
—— Newell Highway
▭ Design Road Crossings
▭ Design Culverts
▭ Design Bridges
▢ Property Boundaries
▨ Duration <= 6

Percent Change In Duration

▆ <= -5%
▢ -5% - 5%
▆ 5% - 10%
▆ > 10%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 748.00
CH 747.50
CH 747.00
CH 746.50
CH 746.00
CH 745.50
CH 745.00
TACKINBRI CREEK
CH 744.00
CH 743.50
CH 743.00
CH 742.50
CH 742.00
YALLAROI CREEK

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D35

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 745.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\JPC Mapping\JPCImpactMaps.qgs - 2.10.21

Legend

Existing Rail Alignment
Design Rail Alignment
Newell Highway
Design Road Crossings
Design Culverts
Design Bridges
Property Boundaries
Duration <= 6

Percent Change In Duration

<= -5%
-5% - 5%
5% - 10%
> 10%

NORTH STAR
CH 740.00
CH 720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI CH 580.00

CH 754.00
CH 753.50
CH 753.00
CH 752.50
CH 752.00
CH 751.50
CH 751.00
CH 750.50
CH 750.00
CH 749.50
CH 749.00
CH 748.50
CH 748.00
CH 747.50
CH 747.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D36

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 750.00

S:\01 WIP\Flooding and Drainage\Qgis Mapping\IFC Mapping\IFCImpactMaps.qgs - 2.10.21

Legend

- ├─┤ Existing Rail Alignment
- ├─┤ Design Rail Alignment
- ── Newell Highway
- ▭ Design Road Crossings
- ▬ Design Culverts
- ▬ Design Bridges
- ▭ Property Boundaries
- ▬ Duration <= 6

Percent Change In Duration

- ▮ <= -5%
- ▯ -5% - 5%
- ▮ 5% - 10%
- ▮ > 10%

NORTH STAR
CH 1740.00
CH 1720.00
CH 680.00 CH 700.00
MOREE
CH 660.00
CH 640.00
CH 620.00
CH 600.00
NARRABRI
CH 1580.00

CH 758.50
CH 758.00
CH 757.50
CH 757.00
CH 756.50
CH 756.00
CH 755.50
CH 755.00
CH 754.50
CH 754.00
CH 753.50
CH 753.00
CH 752.50
CH 752.00
CH 751.50
CH 751.00

For Information Only

250 0 250 500 750 1000 m

1:25,000

Coordinate system: GDA94 MGA Zone 55
Aerial Source: NSW Six Map
Scale ratio correct when printed at A3

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Date: 10/7/2019

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Inland Rail - Narrabri to North Star
IFC - Flood Study for Separable Portion 1

Figure DE0.05D37

0.05% AEP Percentage Change In Duration For Flood Depths >200mm - CH 755.00

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