

# Appendix C

## Design Conditions Flood Maps

*C1 – Flood Level Change (Afflux) 39% AEP*

*C2 – Flood Level Change (Afflux) 10% AEP*

*C3 – Flood Level Change (Afflux) 1% AEP*

*C4 – Flood Level Change (Afflux) 1% AEP with climate change*

*C5 – Flood Velocity Change 39% AEP*

*C6 – Flood Velocity Change 10% AEP*

*C7 – Flood Velocity Change 1% AEP*

*C8 – Flood Velocity Change 1% AEP with climate change*

*C9 – Flood Duration Change 39% AEP*

*C10 – Flood Duration Change 10% AEP*

*C11 – Flood Duration Change 1% AEP*

*C12 – Flood Duration Change 1% AEP with climate change*





**Legend**

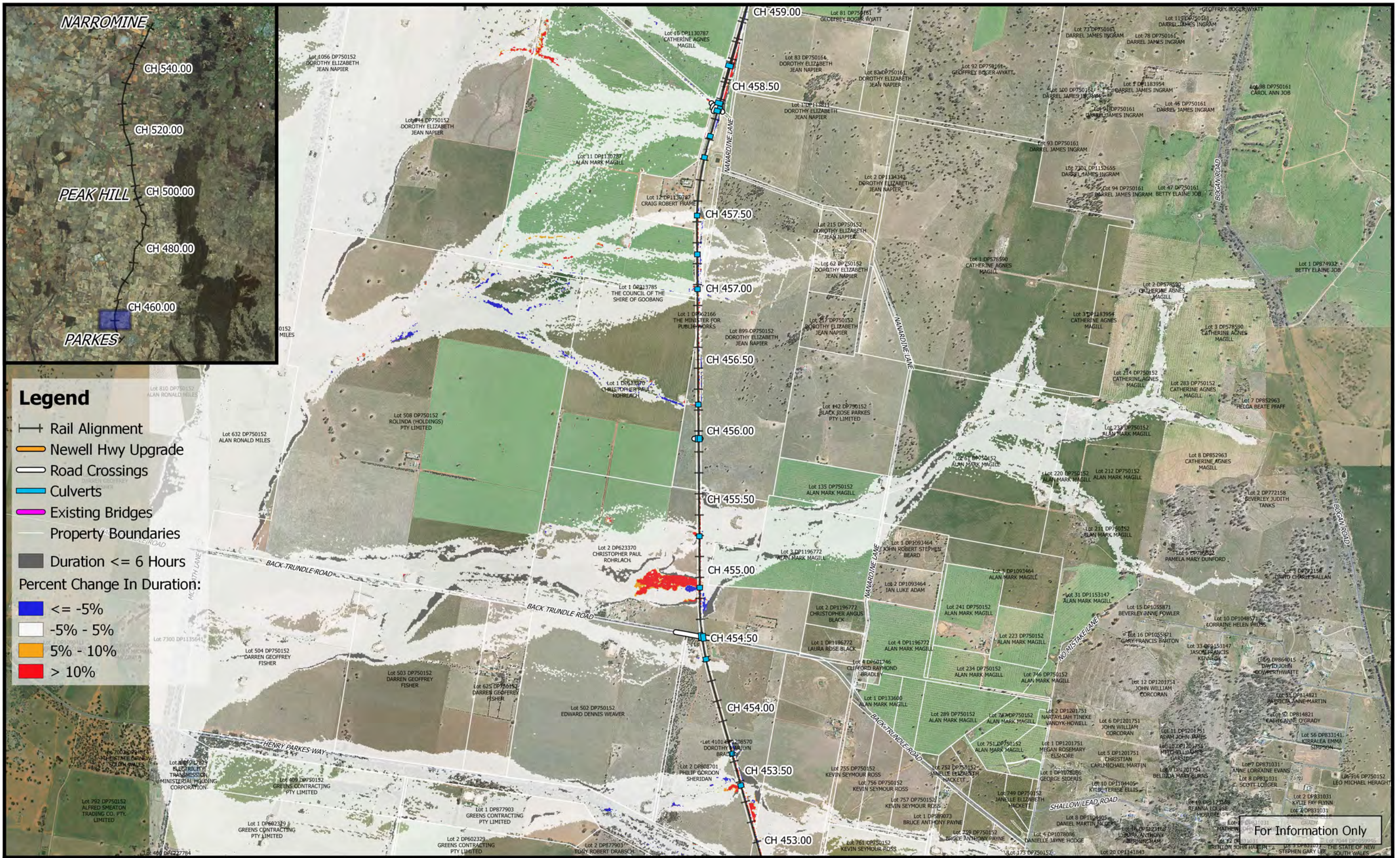
- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours

**Percent Change In Duration:**

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

For Information Only

	<p>1:25,000</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
			Prepared By: YeohM	



**Legend**



- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:**
- <= -5%
- 5% - 5%
- 5% - 10%
- > 10%

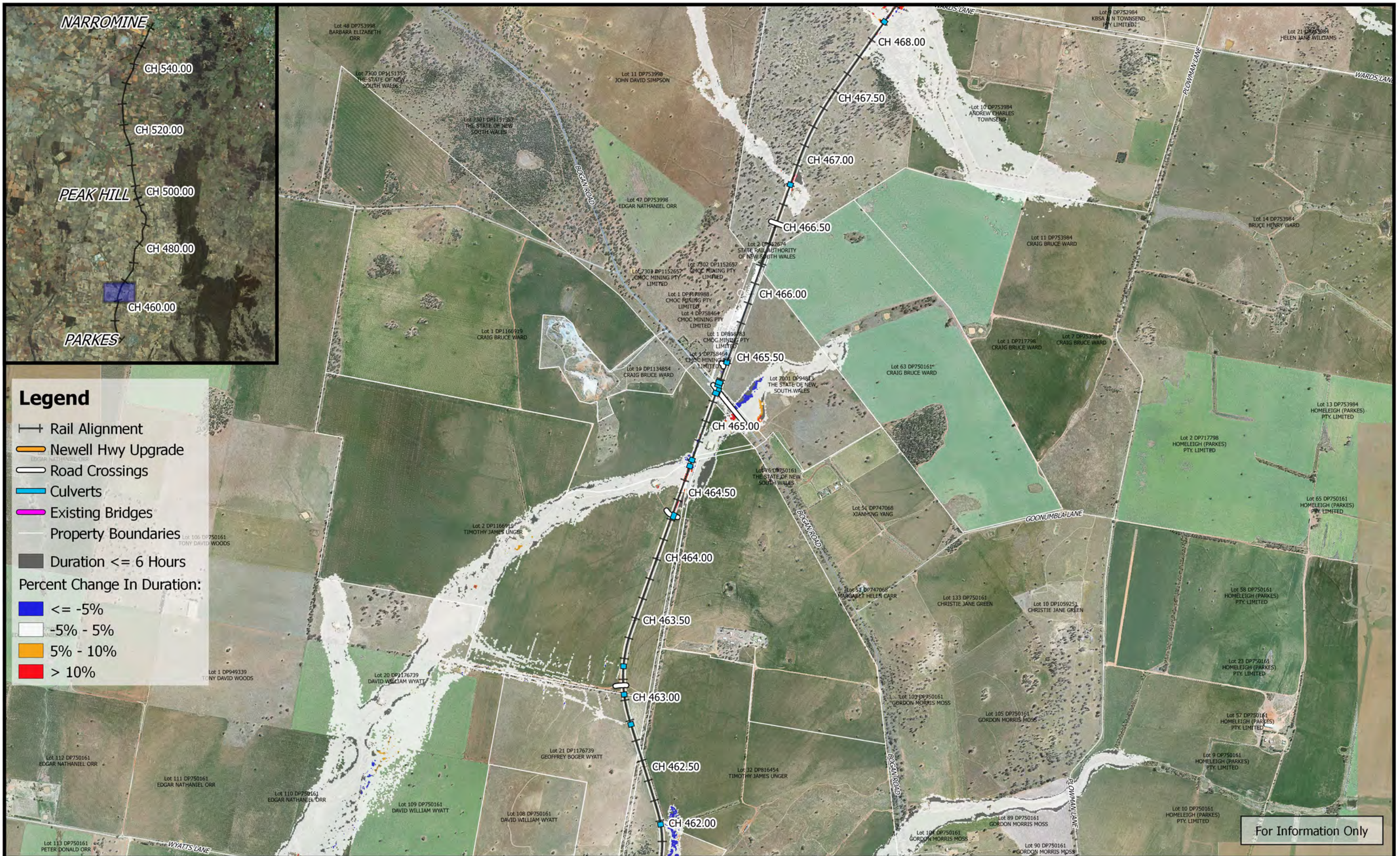
For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>	 	<p>Date: 12/10/2018</p> <p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p>	<p><b>Inland Rail - Parkes to Narromine</b></p> <p>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE1DC2</b></p> <p><i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 455.00</i></p>
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For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right"><b>Figure DE1DC3</b></p> <p align="center"><i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 460.00</i></p>
			Rev: A - For Information Only	
			Prepared By: YeohM	



**Legend**

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours

**Percent Change In Duration:**

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

For Information Only

	 1:25,000		Date: 12/10/2018	<p style="margin: 0;"><b>Inland Rail - Parkes to Narromine</b></p> <p style="margin: 0;">IFC - Cross Drainage Flood Impact Assessment Results</p>
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
<p style="margin: 0;"><b>Figure DE1DC4</b></p> <p style="margin: 0;"><i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 465.00</i></p>				

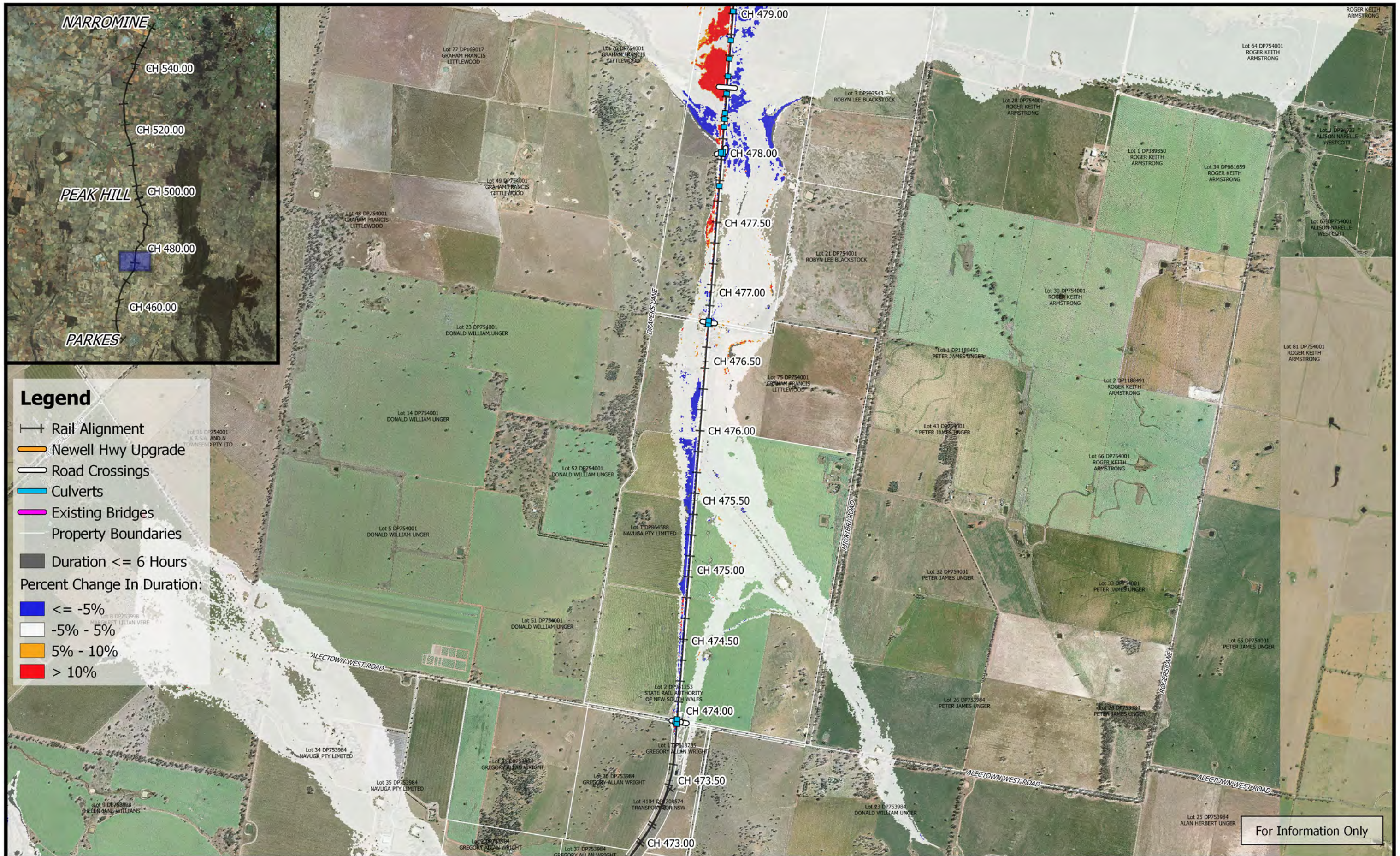


For Information Only

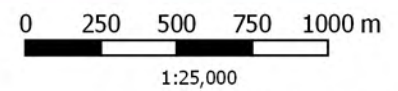
	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right"><b>Figure DE1DC5</b> <i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 470.00</i></p>
	<p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p>			



	0 250 500 750 1000 m 1:25,000		Date: 12/10/2018	<b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
		Prepared By: YeohM		



For Information Only



Coordinate system: GDA 1994 MGA Zone 55  
 Inset Aerial Source: NSW Six Map  
 Scale ratio correct when printed at A3



Date: 12/10/2018  
 Rev: A - For Information Only  
 Prepared By: YeohM



**Inland Rail - Parkes to Narromine**  
 IFC - Cross Drainage Flood Impact Assessment Results

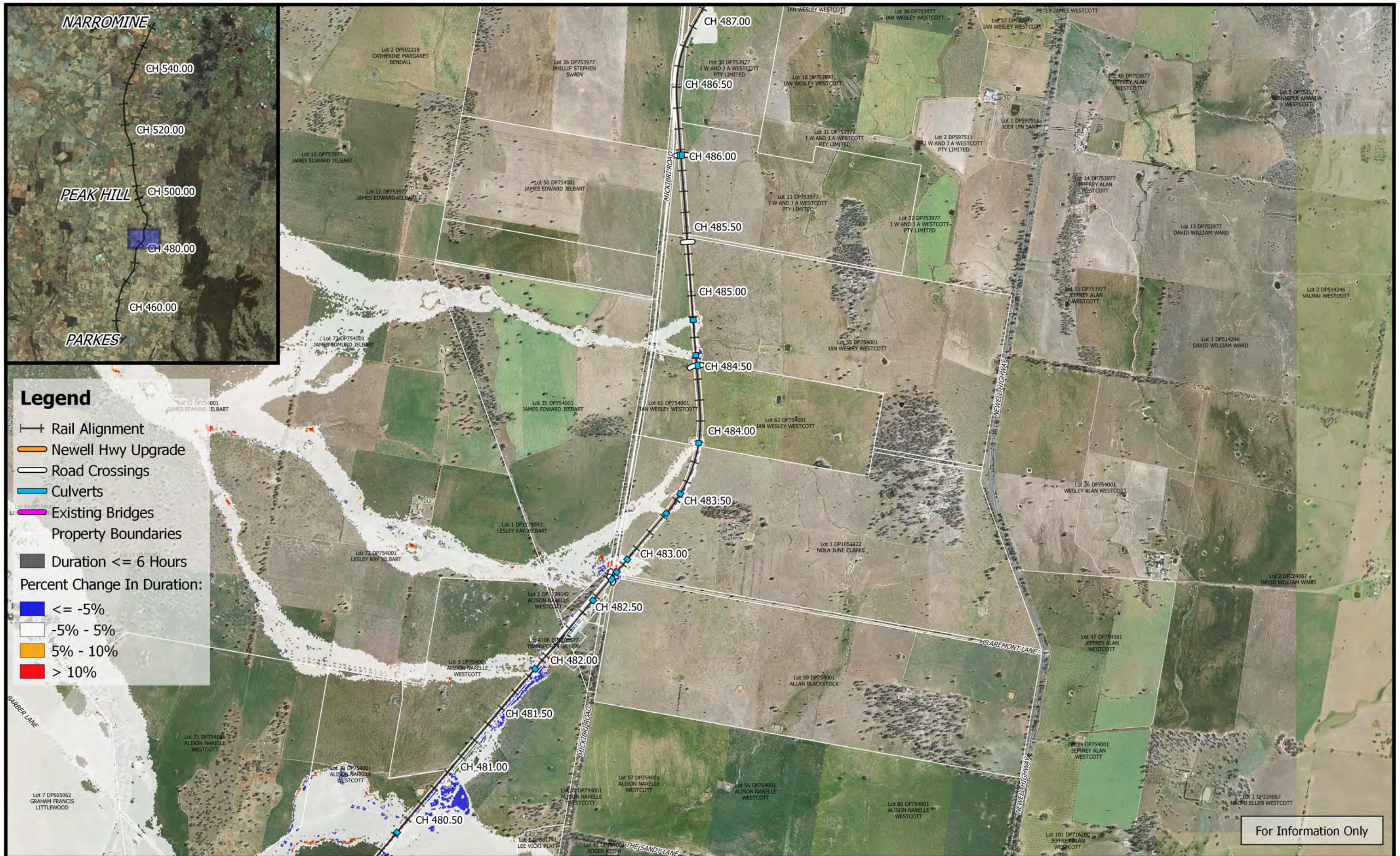
**Figure DE1DC7**  
 1% AEP Percentage Change In Duration For Flood Depths >200mm - CH 475.00







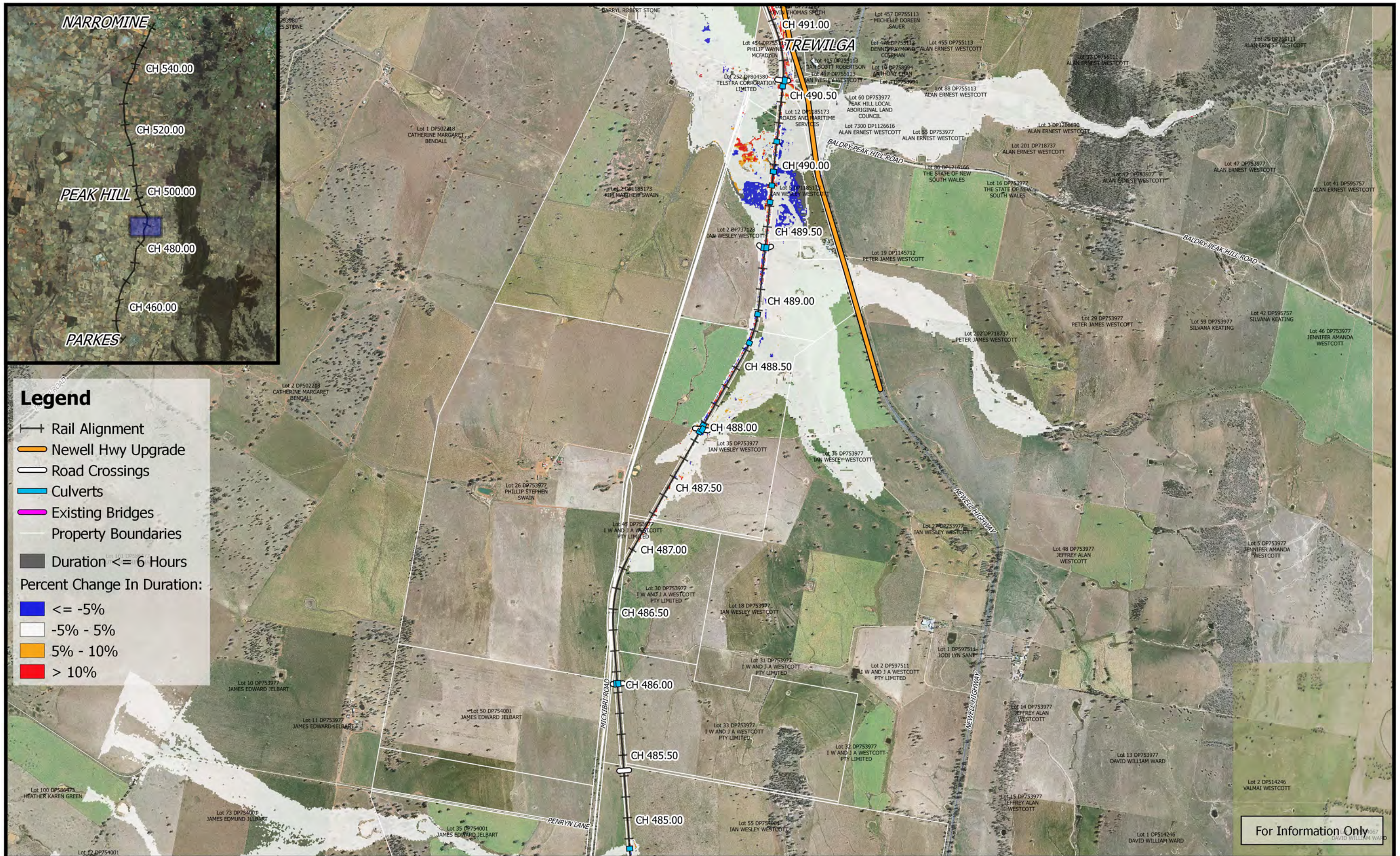
For Information Only

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			Rev: A - For Information Only	
			Prepared By: YeohM	



For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
			Rev: A - For Information Only	
Prepared By: YeohM			1% AEP Percentage Change In Duration For Flood Depths >200mm - CH 485.00	



**Legend**



- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration  $\le 6$  Hours
- Percent Change In Duration:
- $\le -5\%$
- $-5\% - 5\%$
- $5\% - 10\%$
- $> 10\%$

For Information Only

	 1:25,000		Date: 12/10/2018	<b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
			Prepared By: YeohM	



For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right"><b>Figure DE1DC11</b></p> <p align="center"><i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 492.00</i></p>
			Rev: A - For Information Only	

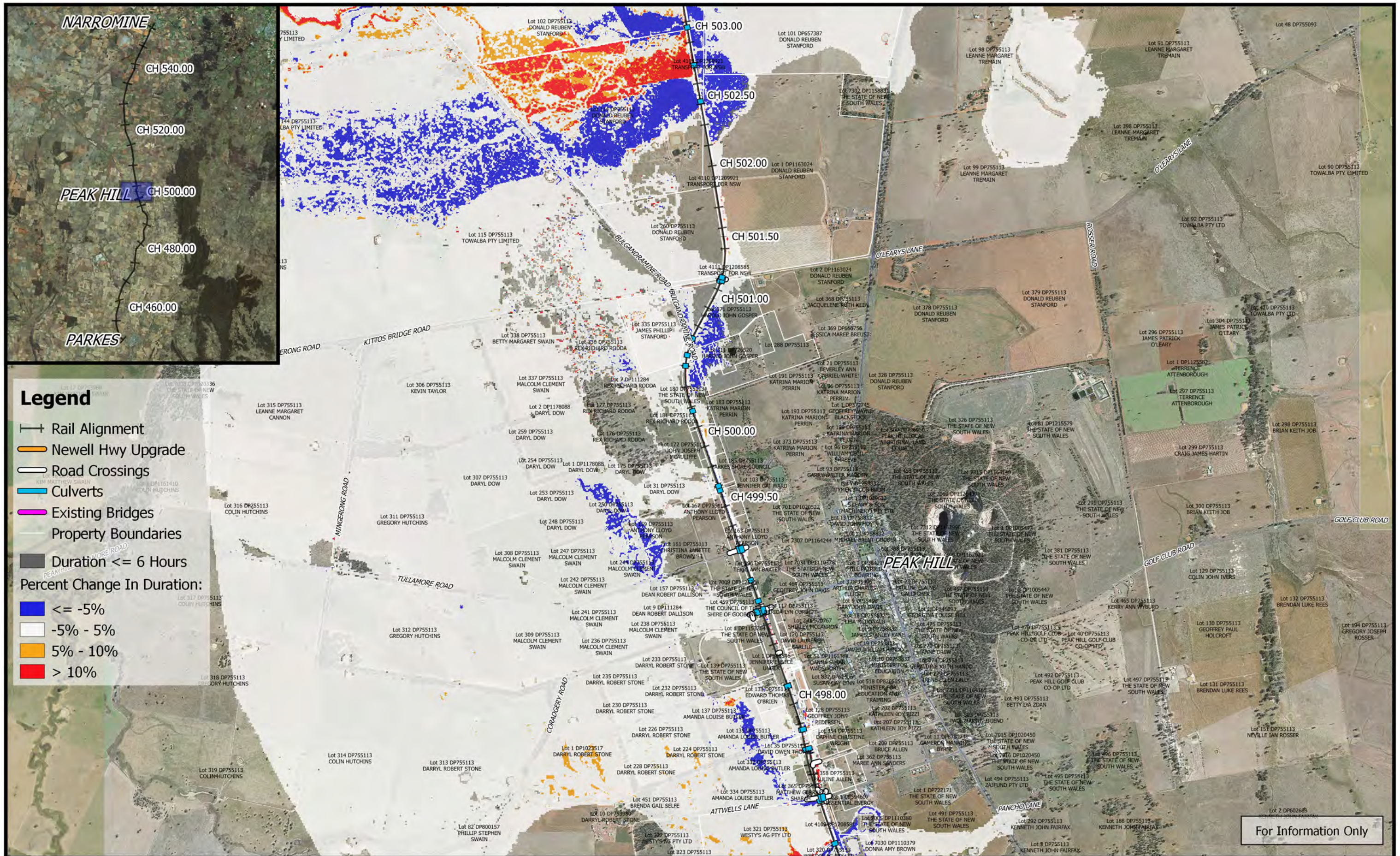


**Legend**

- Rail Alignment
  - Newell Hwy Upgrade
  - Road Crossings
  - Culverts
  - Existing Bridges
  - Property Boundaries
  - Duration <= 6 Hours
- Percent Change In Duration:
- <= -5%
  - 5% - 5%
  - 5% - 10%
  - > 10%

For Information Only

	 1:25,000		Date: 12/10/2018 Rev: A - For Information Only	<b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3	Prepared By: YeohM	<b>Figure DE1DC12</b> 1% AEP Percentage Change In Duration For Flood Depths >200mm - CH 495.00	



**Legend**

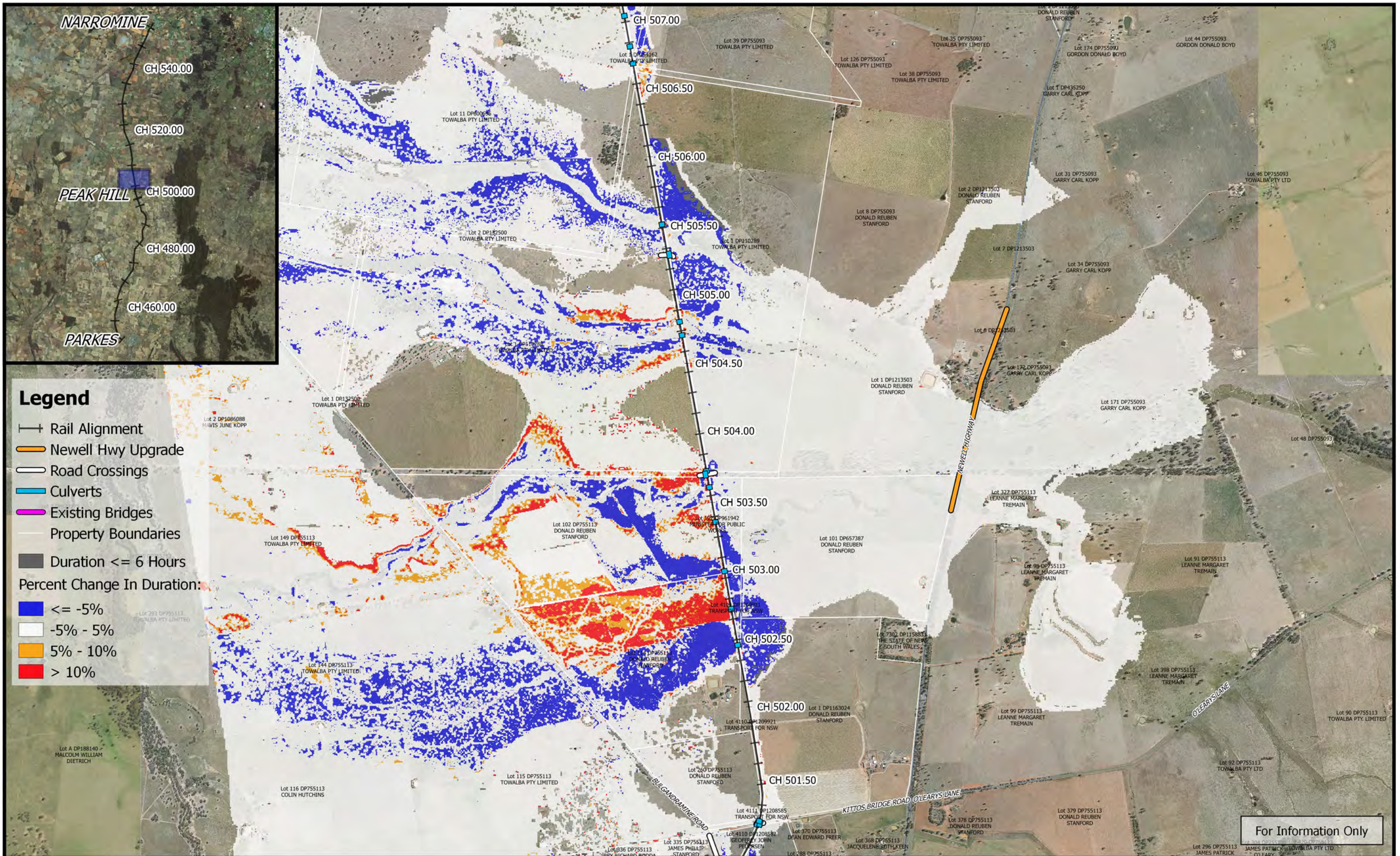
- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours

**Percent Change In Duration:**

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

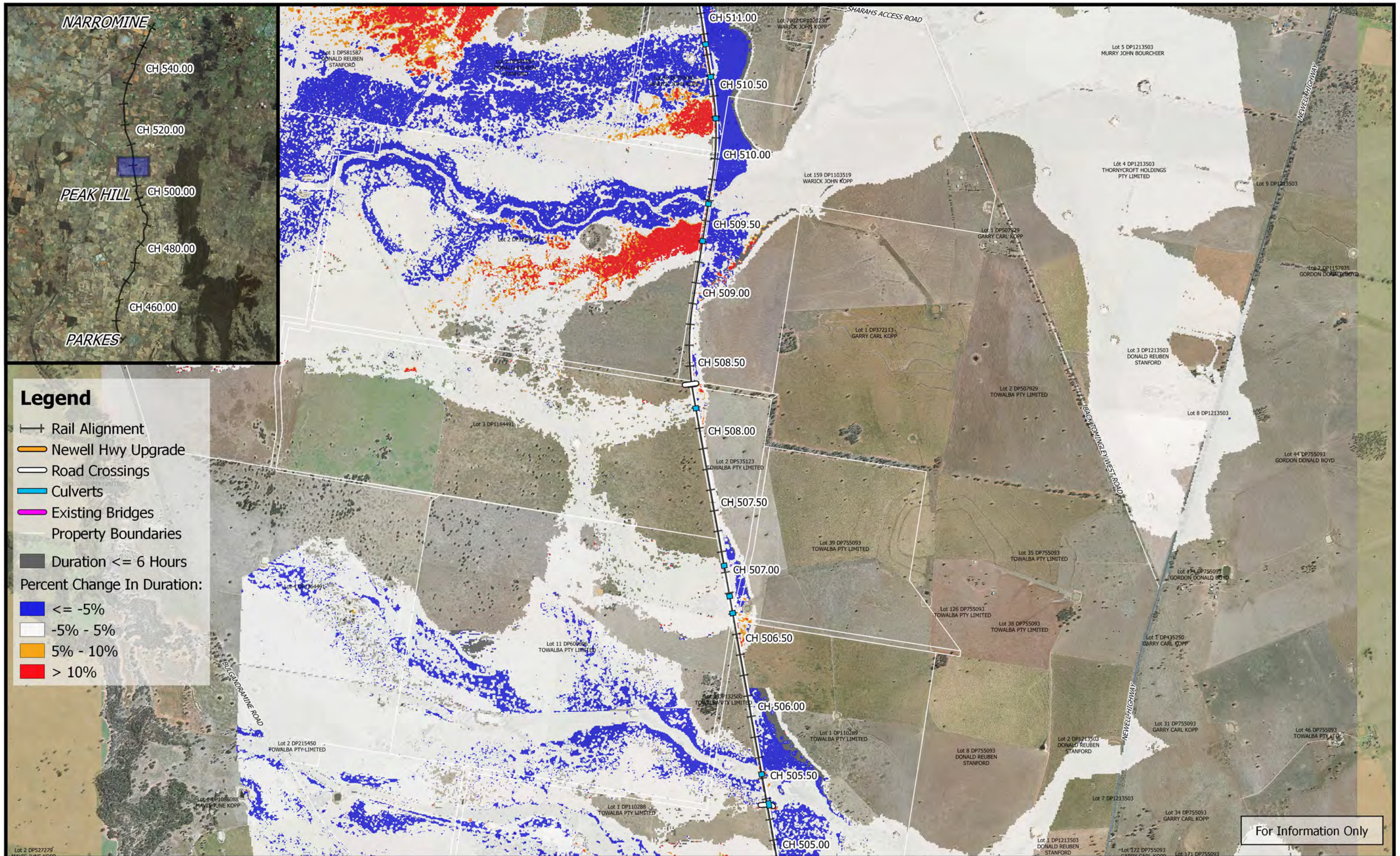
For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		<p>Date: 12/10/2018</p> <p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p>	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE1DC13</b> 1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 500.00</p>
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For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
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			Prepared By: YeohM	

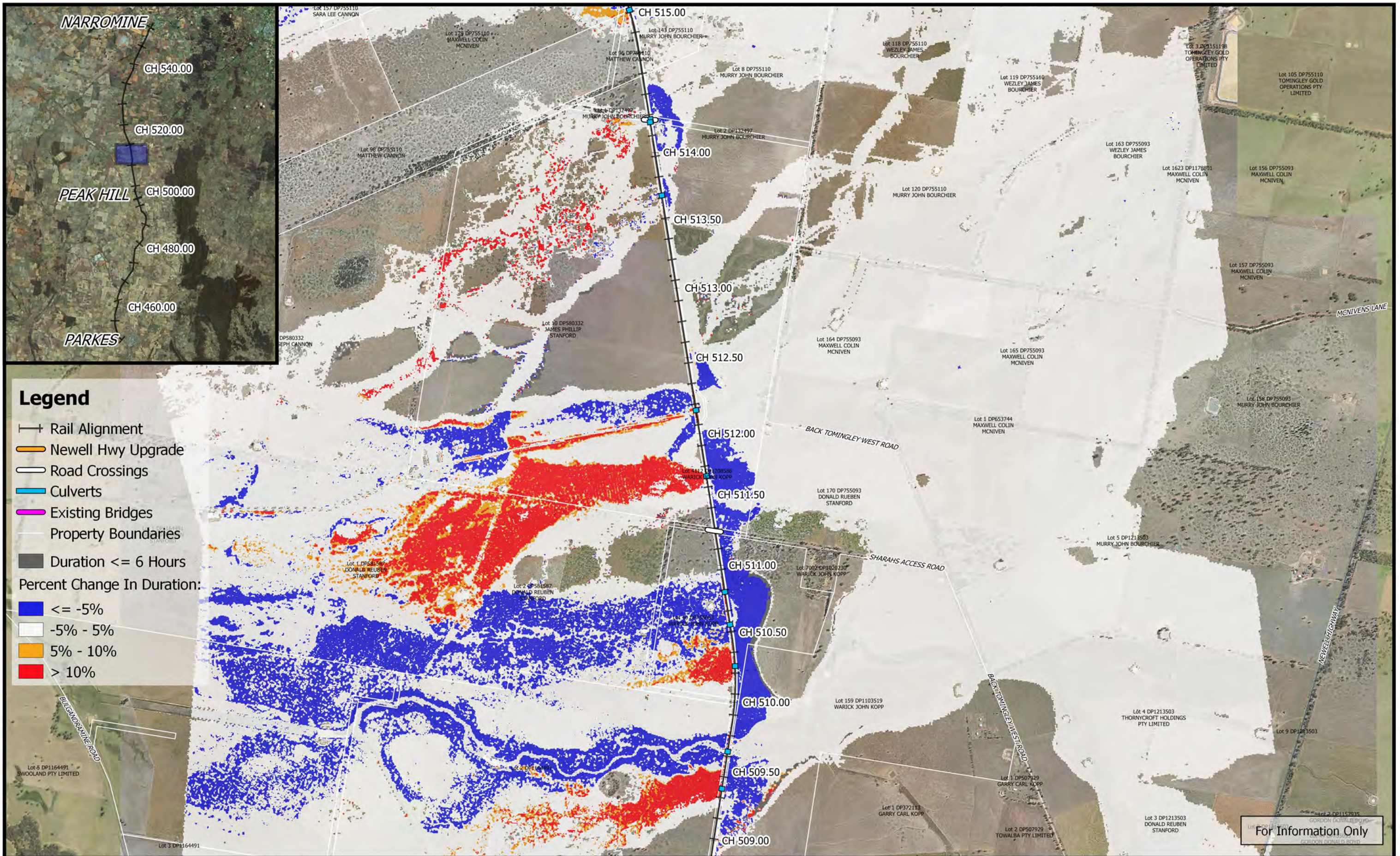


For Information Only

	0 250 500 750 1000 m 1:25,000		Date: 12/10/2018	<b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
			Prepared By: YeohM	

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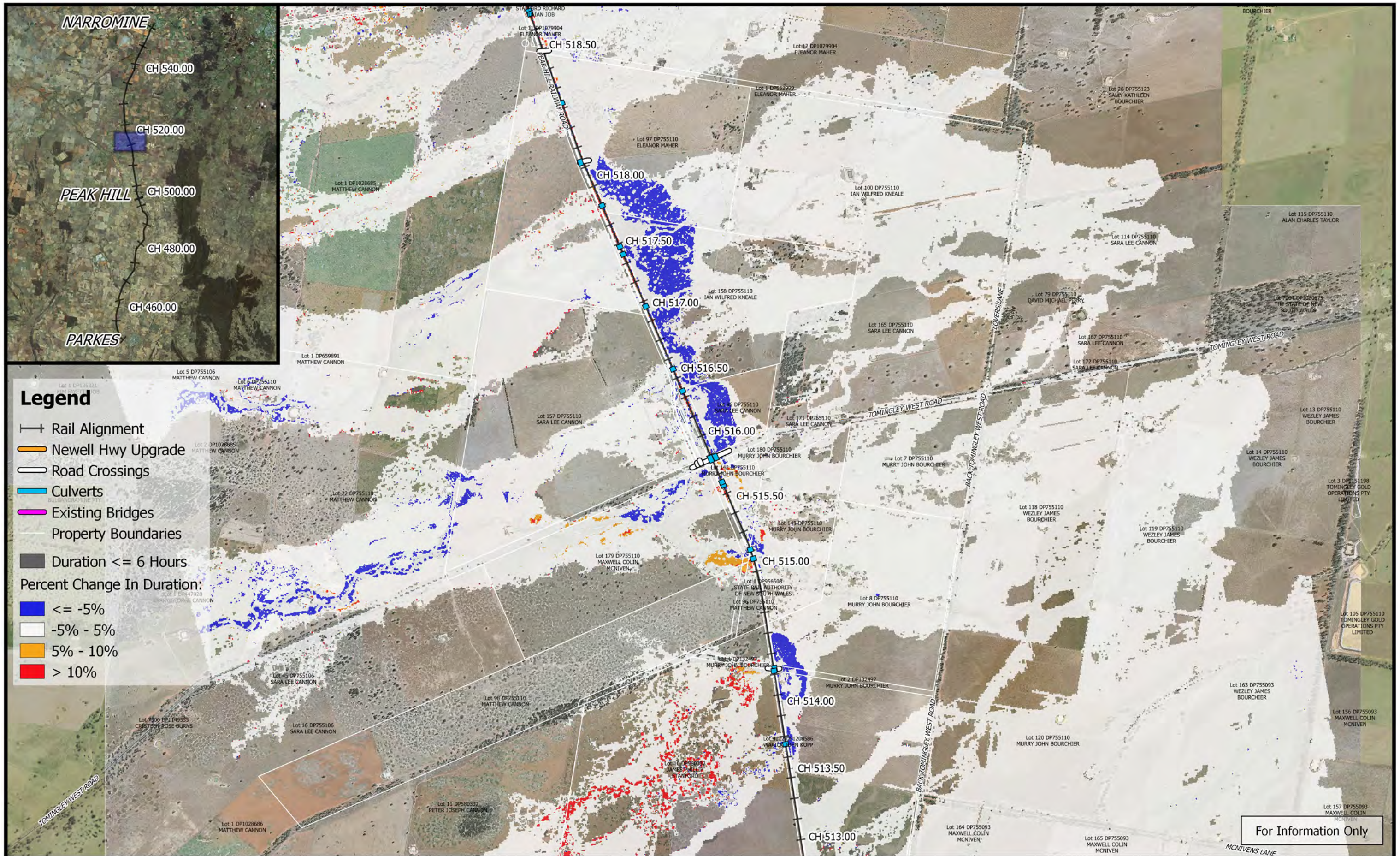
**Legend**

- +— Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE1DC16</b> <i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 512.00</i></p>
			Rev: A - For Information Only	
			Prepared By: YeohM	

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**Legend**

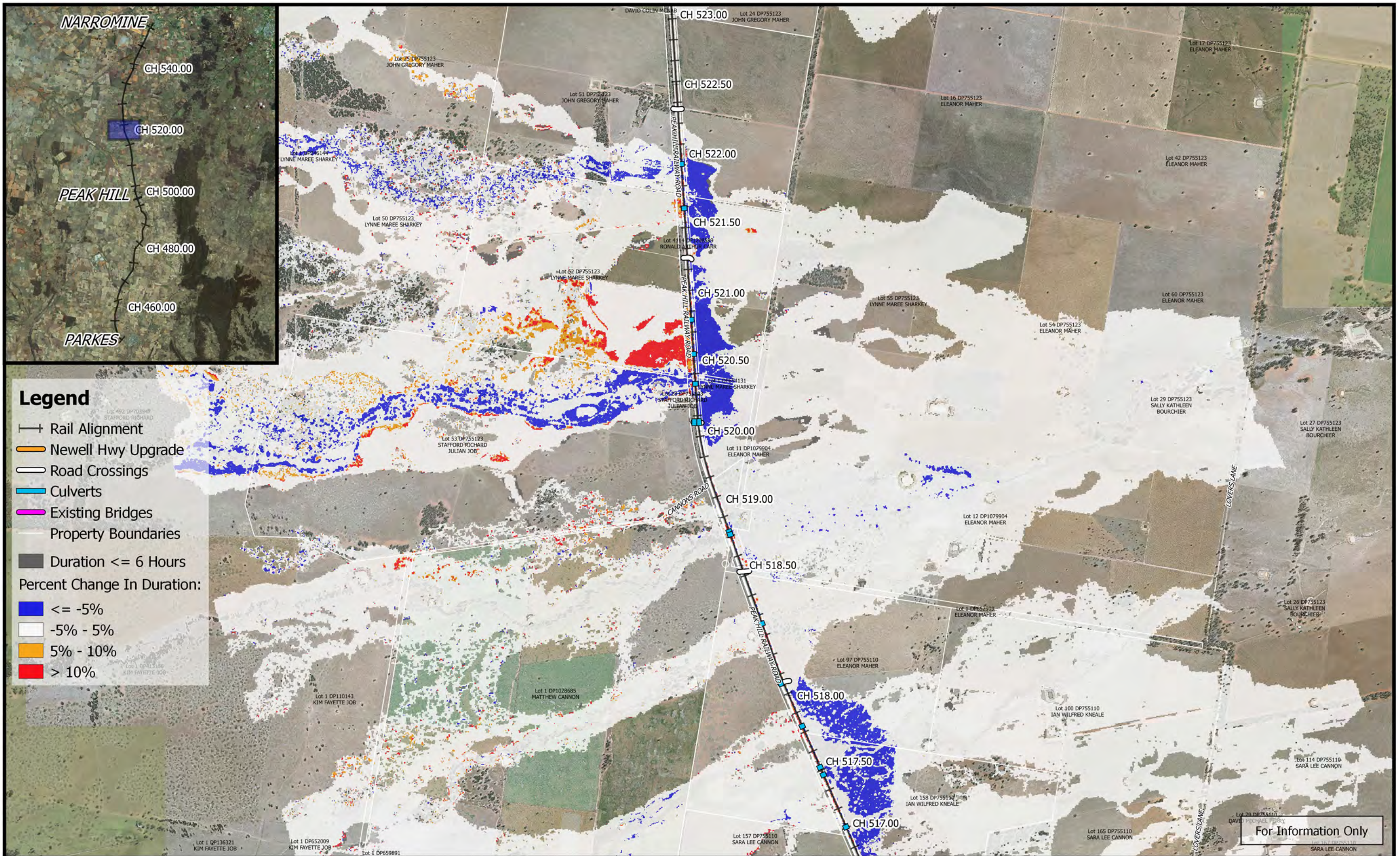
- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours


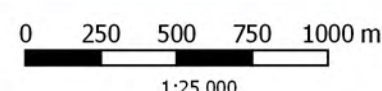

**Percent Change In Duration:**

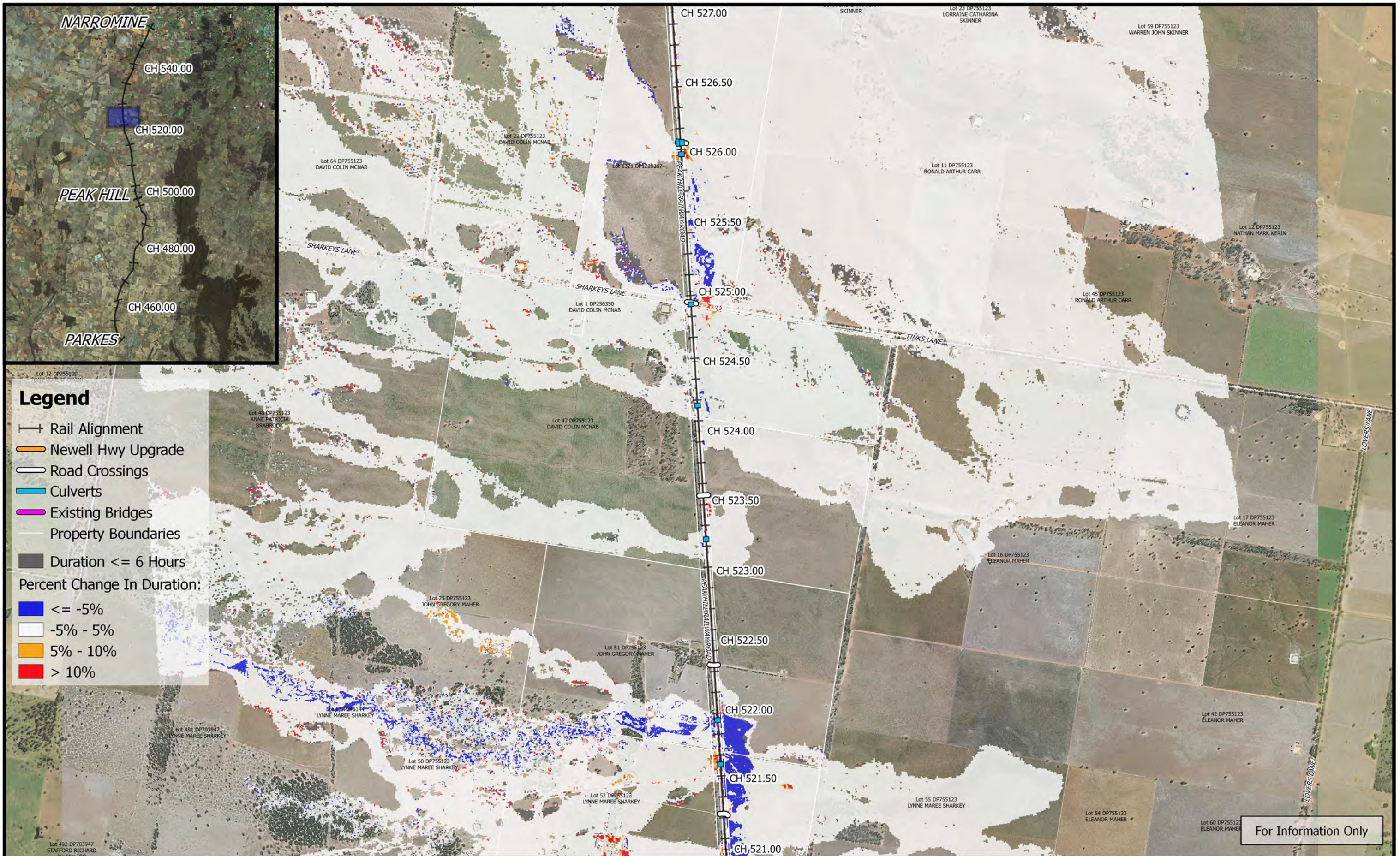
- <= -5%
- 5% - 5%
- 5% - 10%
- > 10%

For Information Only

	 1:25,000		Date: 12/10/2018	<p style="margin: 0;"><b>Inland Rail - Parkes to Narromine</b></p> <p style="margin: 0;">IFC - Cross Drainage Flood Impact Assessment Results</p> <p style="margin: 0;"><b>Figure DE1DC17</b></p> <p style="margin: 0;"><i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 515.00</i></p>	
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only		
			Prepared By: YeohM		



	 <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results
			Rev: A - For Information Only	
			Prepared By: YeohM	

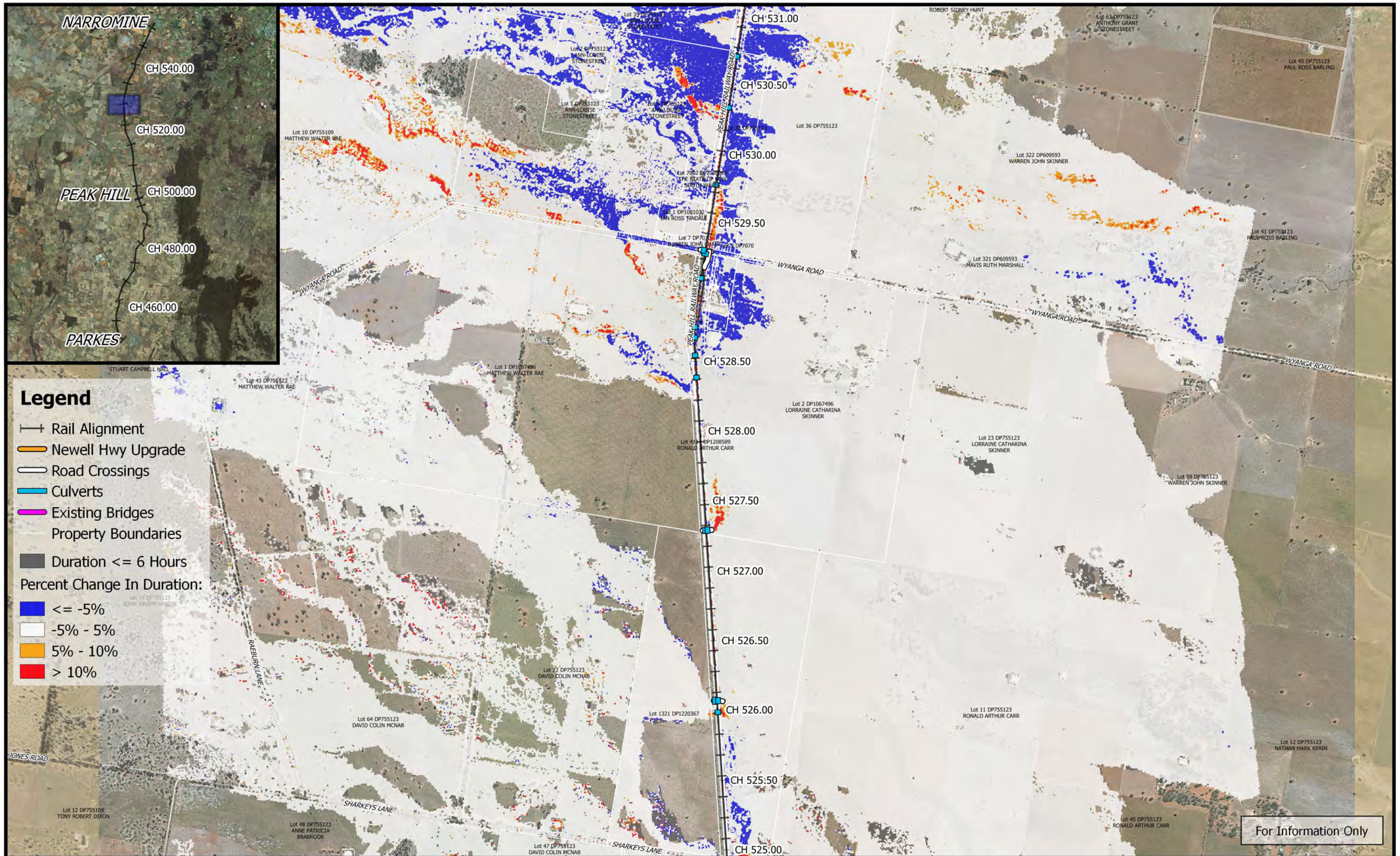


**Legend**

- +— Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE1DC19</b> <i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 525.00</i></p>
			Rev: A - For Information Only	

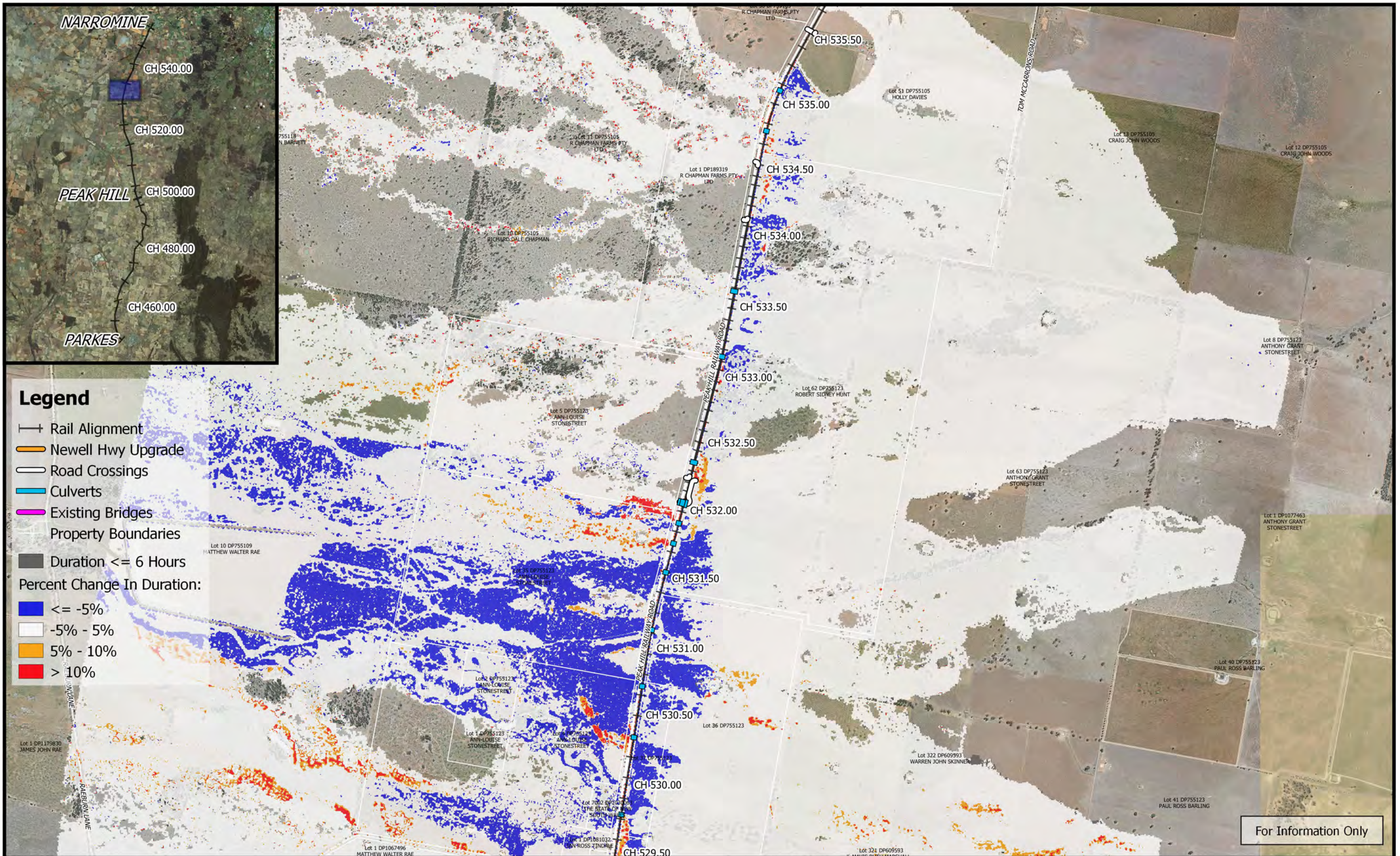


**Legend**

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
  - <= -5%
  - 5% - 5%
  - 5% - 10%
  - > 10%

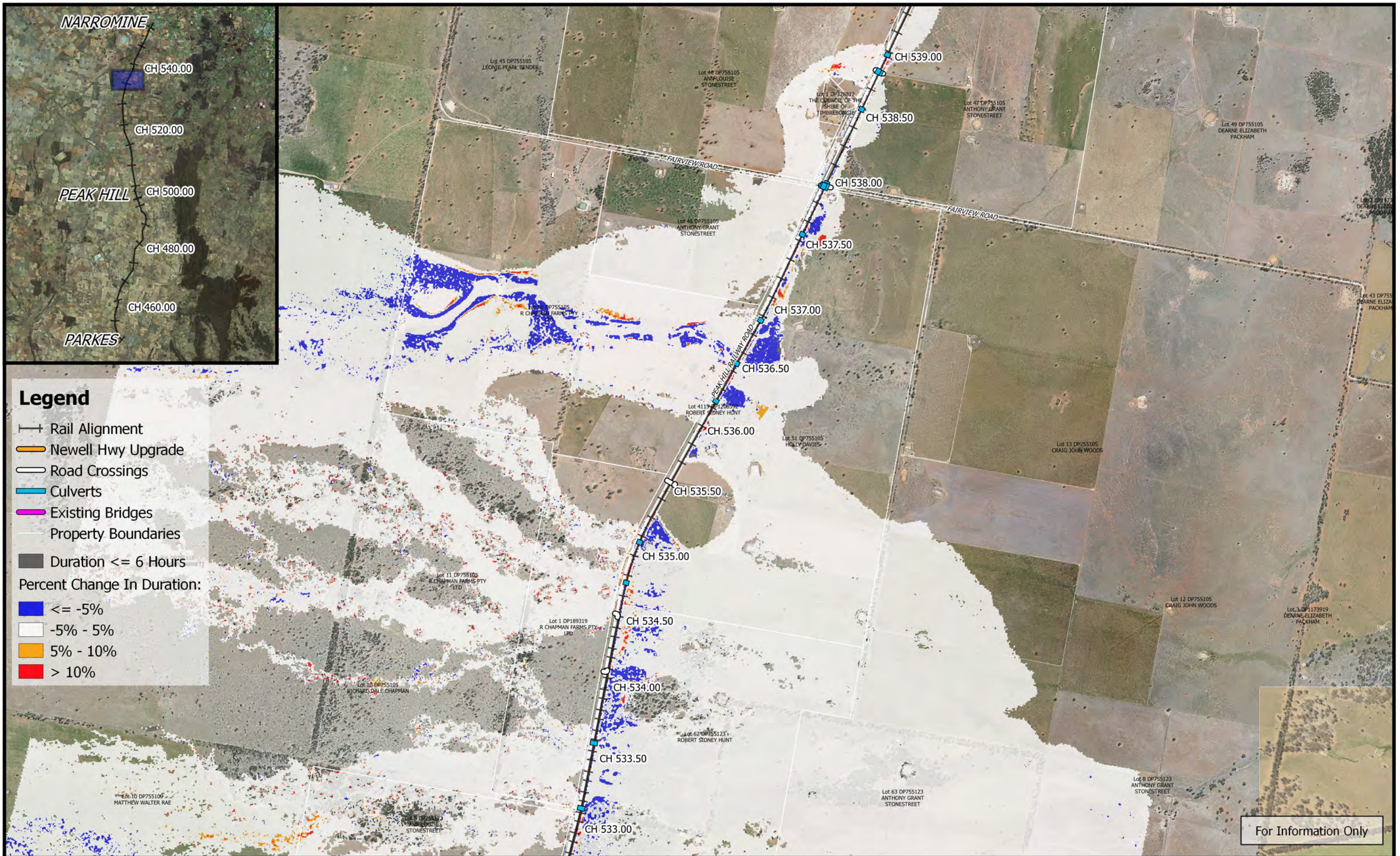
For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p>	<p><b>M</b> MOTT MACDONALD</p>	Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	
<p><b>Figure DE1DC20</b> 1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 530.00</p>				



For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	



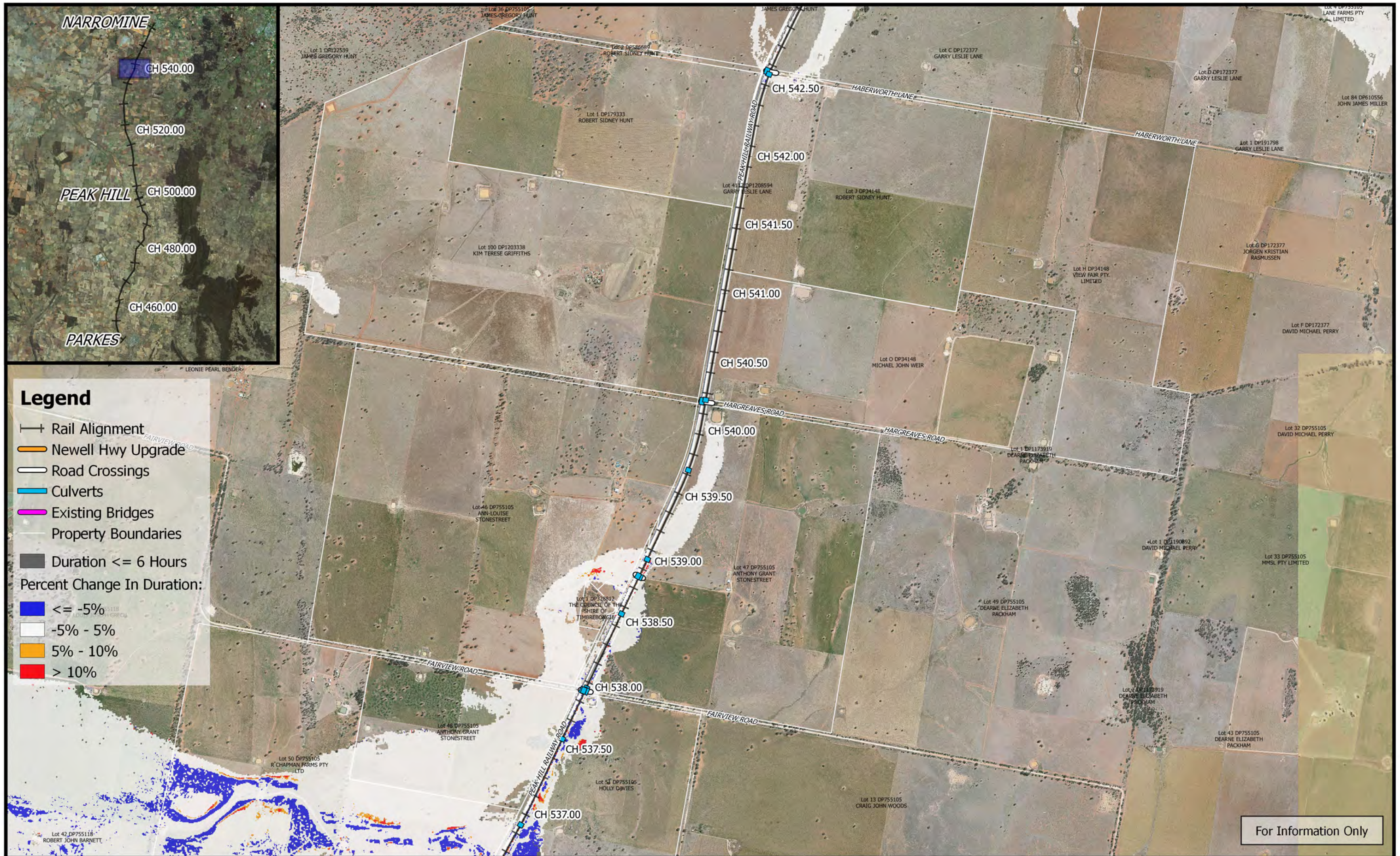
**Legend**

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
  - <= -5%
  - 5% - 5%
  - 5% - 10%
  - > 10%

For Information Only

	<p>1:25,000</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	

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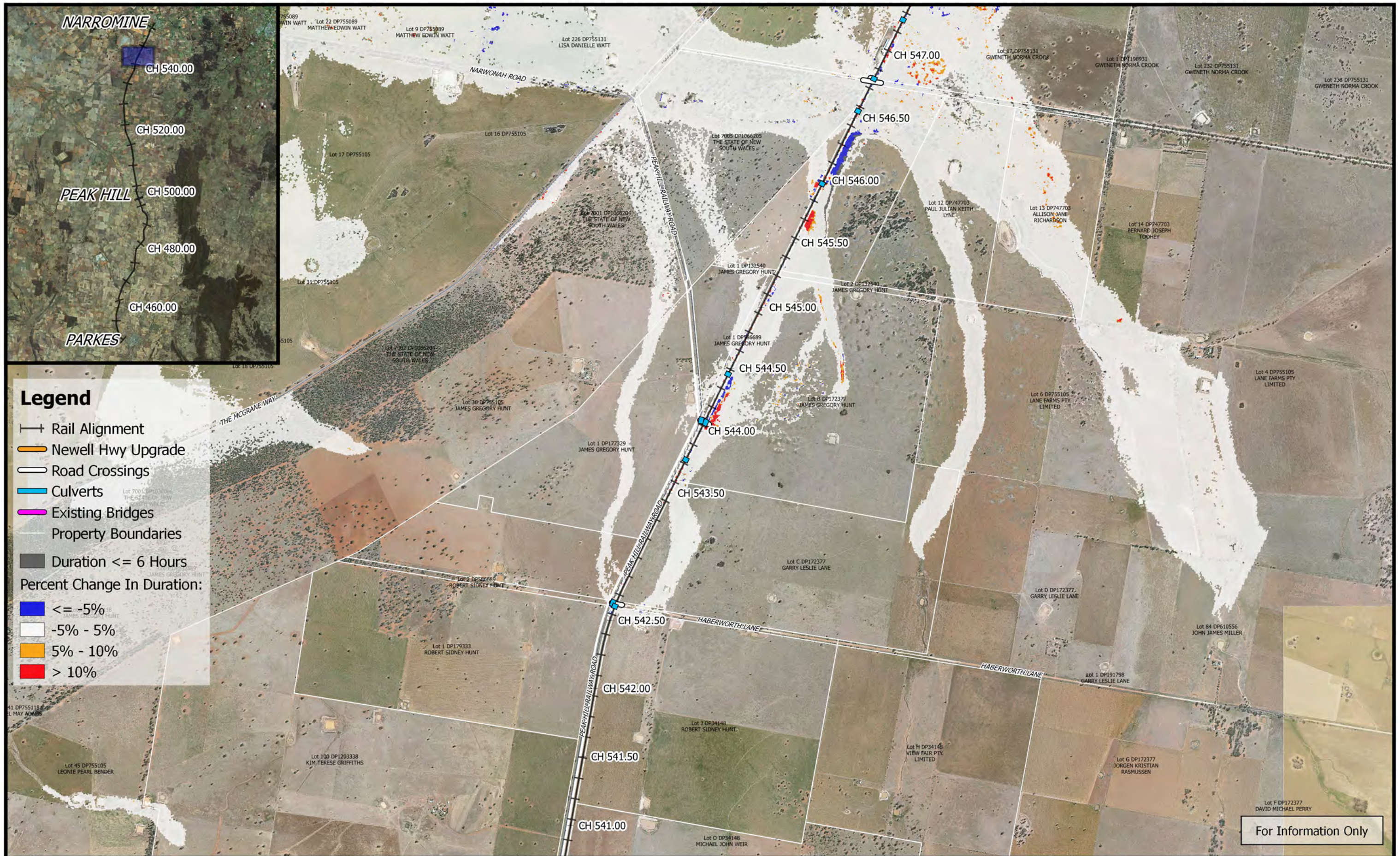
**Legend**

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
- <= -5%
- 5% - 5%
- 5% - 10%
- > 10%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	





**Legend**

- +— Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration <= 6 Hours
- Percent Change In Duration:
- <= -5%
- -5% - 5%
- 5% - 10%
- > 10%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p>	<p><b>M</b> MOTT MACDONALD</p>	Date: 12/10/2018	<p><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p>
	Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Rev: A - For Information Only	



For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Date: 12/10/2018	<p align="center"><b>Inland Rail - Parkes to Narromine</b> IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right"><b>Figure DE1DC25</b> <i>1% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 550.00</i></p>
			Rev: A - For Information Only	