

# 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*



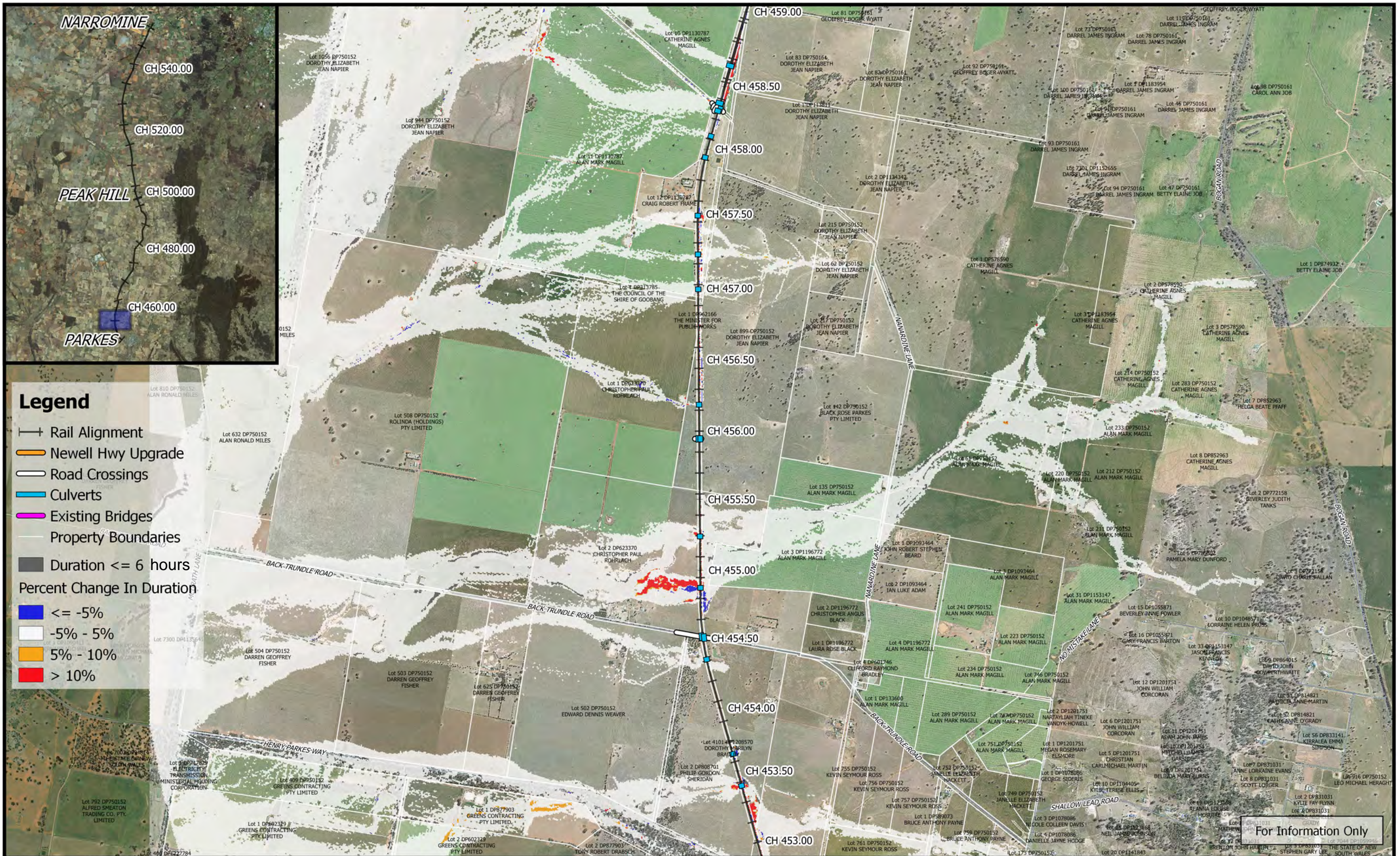




For Information Only

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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018   | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC1</b><br/>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 450.00</p> |
|   |  |  | <p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p> |  |

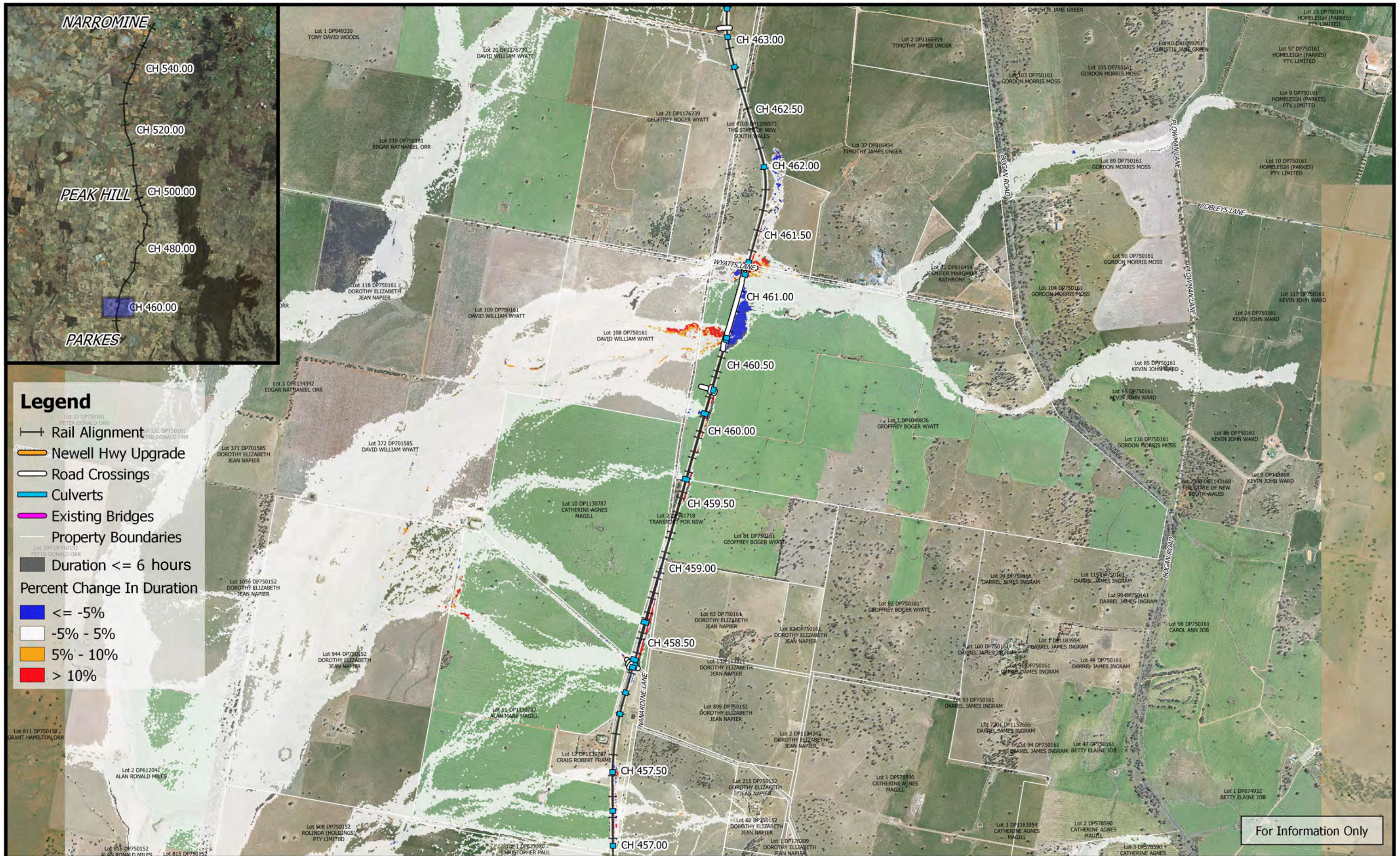





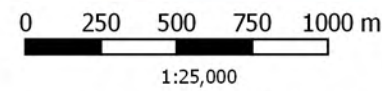

For Information Only

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|                    | <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p align="center"><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right"><b>Figure DE10DC2</b></p> <p align="center"><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 455.00</i></p> |
|                    |  |  | Rev: A - For Information Only |  |
| Prepared By: YeohM |  |  |                               |  |

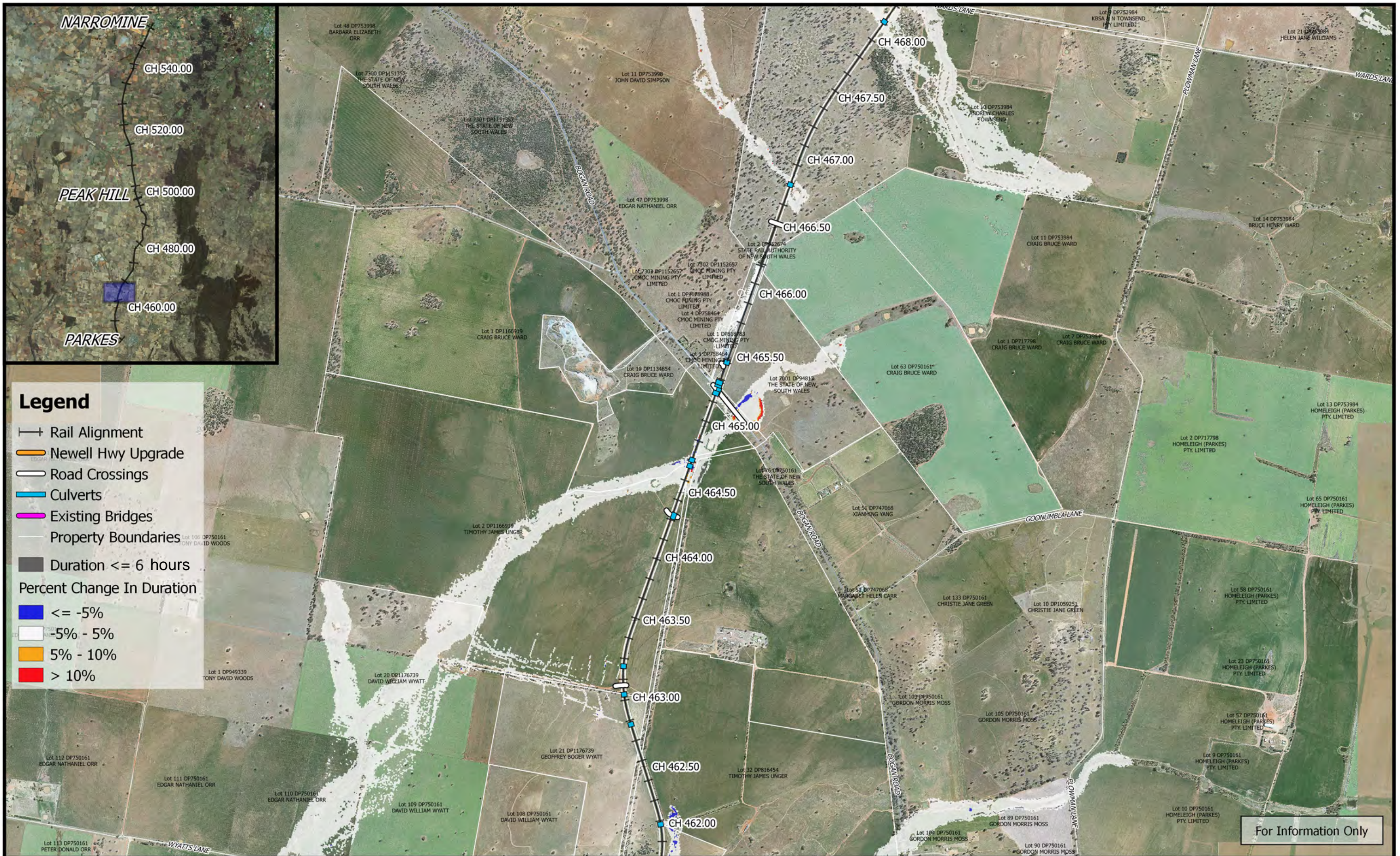




For Information Only

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

|  |   |  |                               |  |
|--|---|--|-------------------------------|--|
|  | <br>1:25,000  |  | Date: 12/10/2018              | <b>Inland Rail - Parkes to Narromine</b><br>IFC - Cross Drainage Flood Impact Assessment Results |
|  | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>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<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018 | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC5</b><br/><i>10% 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>   |  |                  |   |

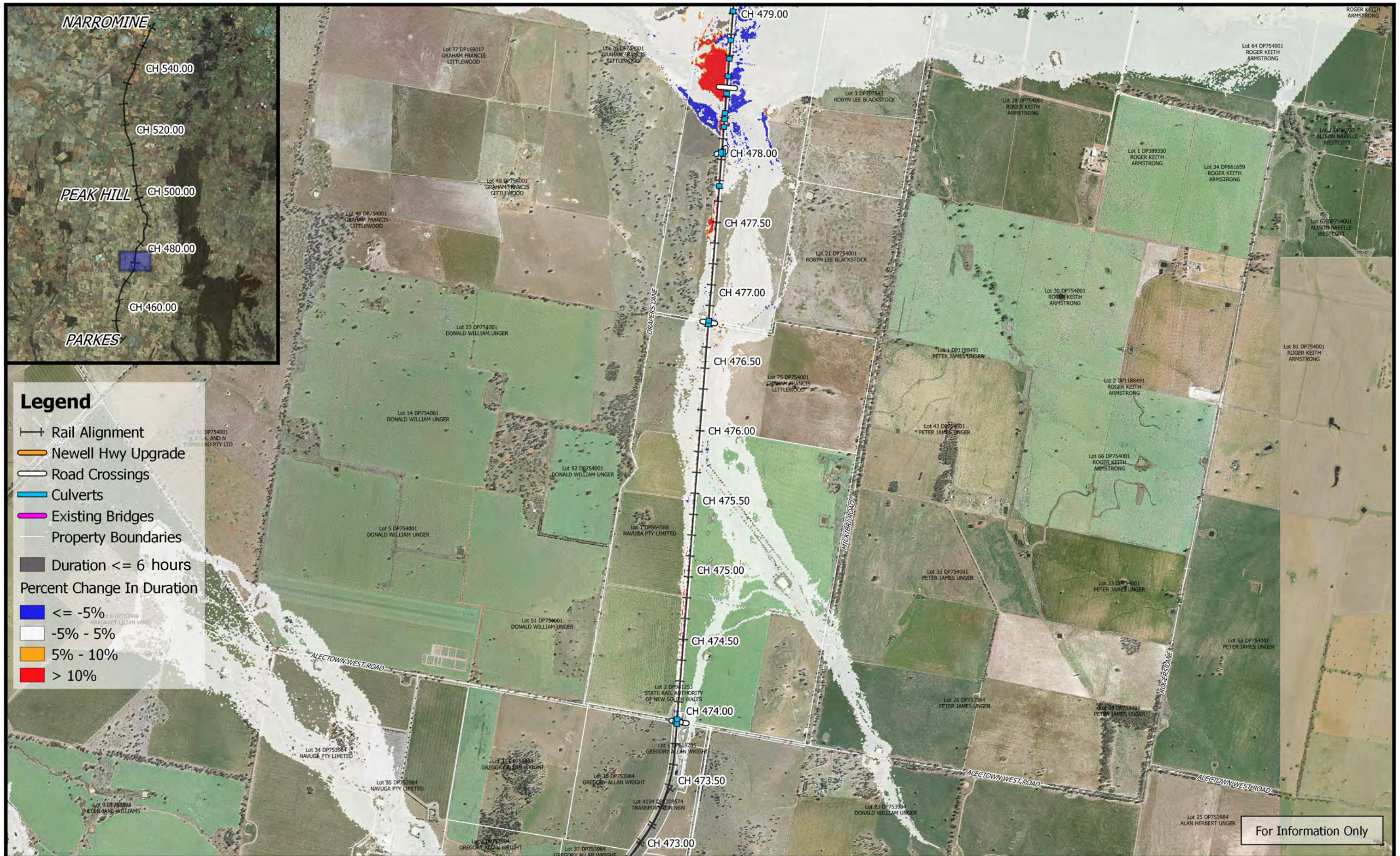




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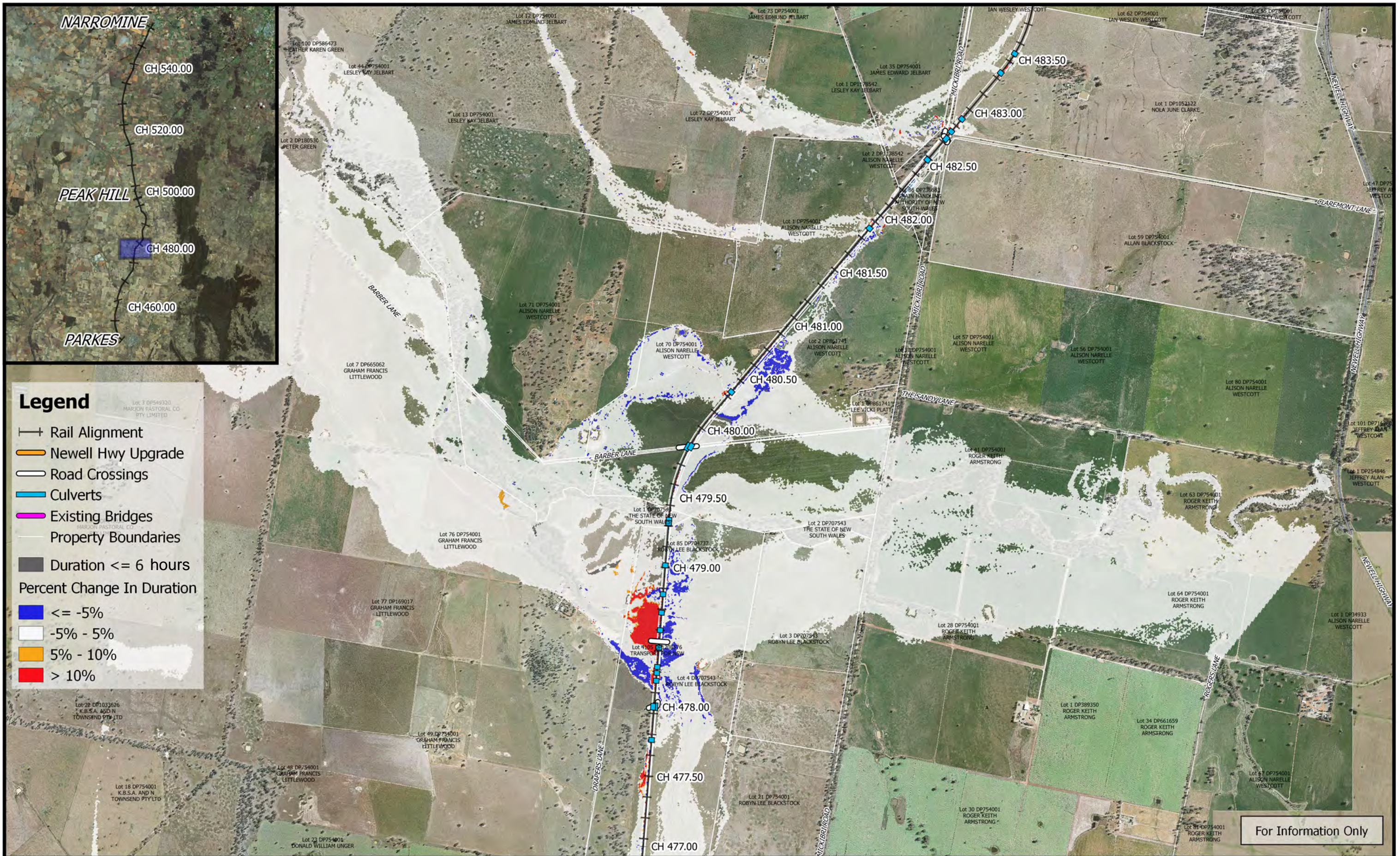






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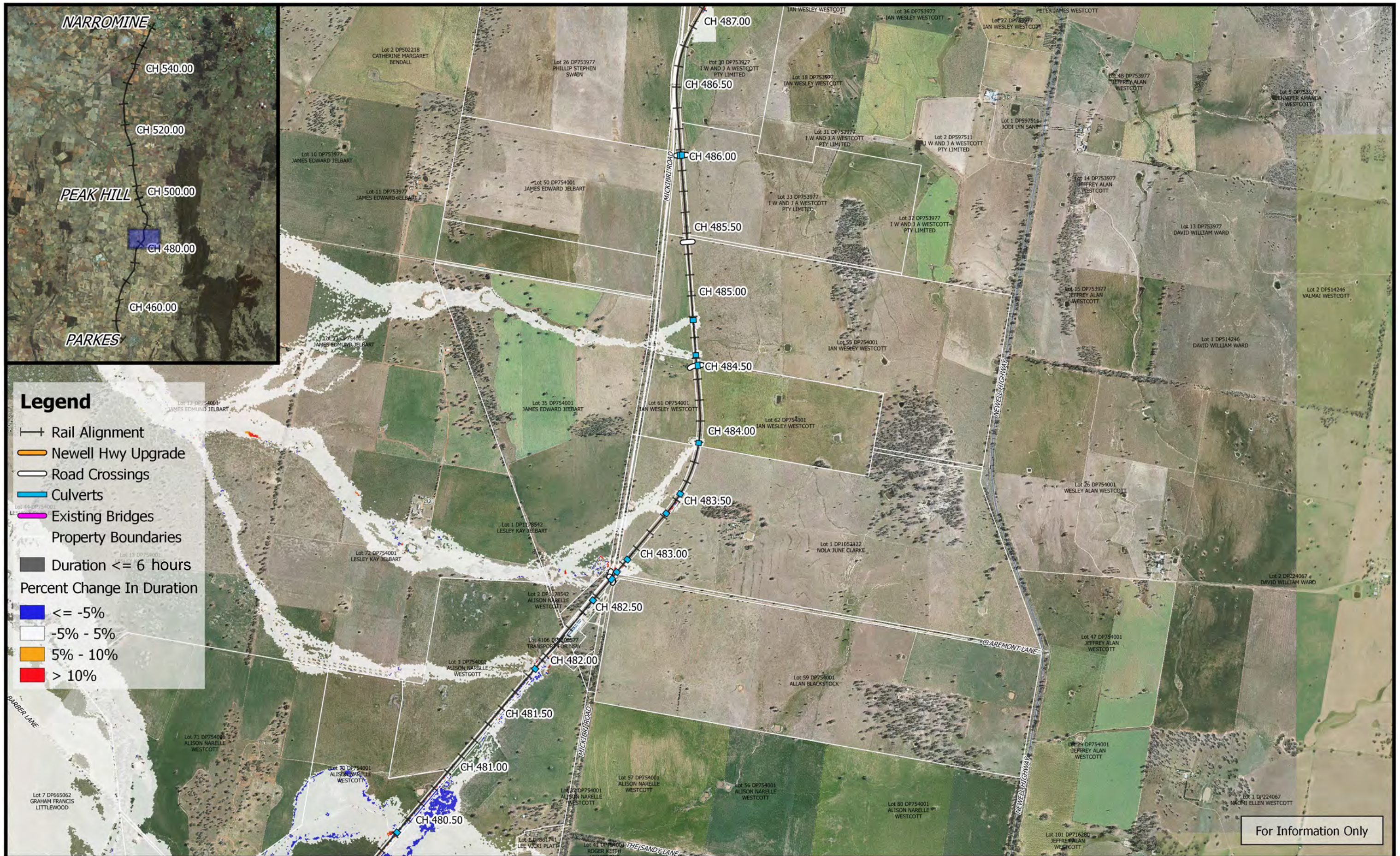
|                    |  |  |   |   |
|--------------------|--|--|---|---|
|                    | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018  | <p align="center"><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> |
|                    |  |  | Rev: A - For Information Only   |   |
| Prepared By: YeohM |  |  | <p align="center"><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 475.00</i></p> |   |





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|---|---|--|-------------------------------|--|
|  | 0 250 500 750 1000 m<br>1:25,000  |  | Date: 12/10/2018              | <b>Inland Rail - Parkes to Narromine</b><br>IFC - Cross Drainage Flood Impact Assessment Results<br><br><b>Figure DE10DC8</b><br><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 480.00</i> |
|   | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>Scale ratio correct when printed at A3 |  | Rev: A - For Information Only |  |
|   | Prepared By: YeohM  |  |                               |  |





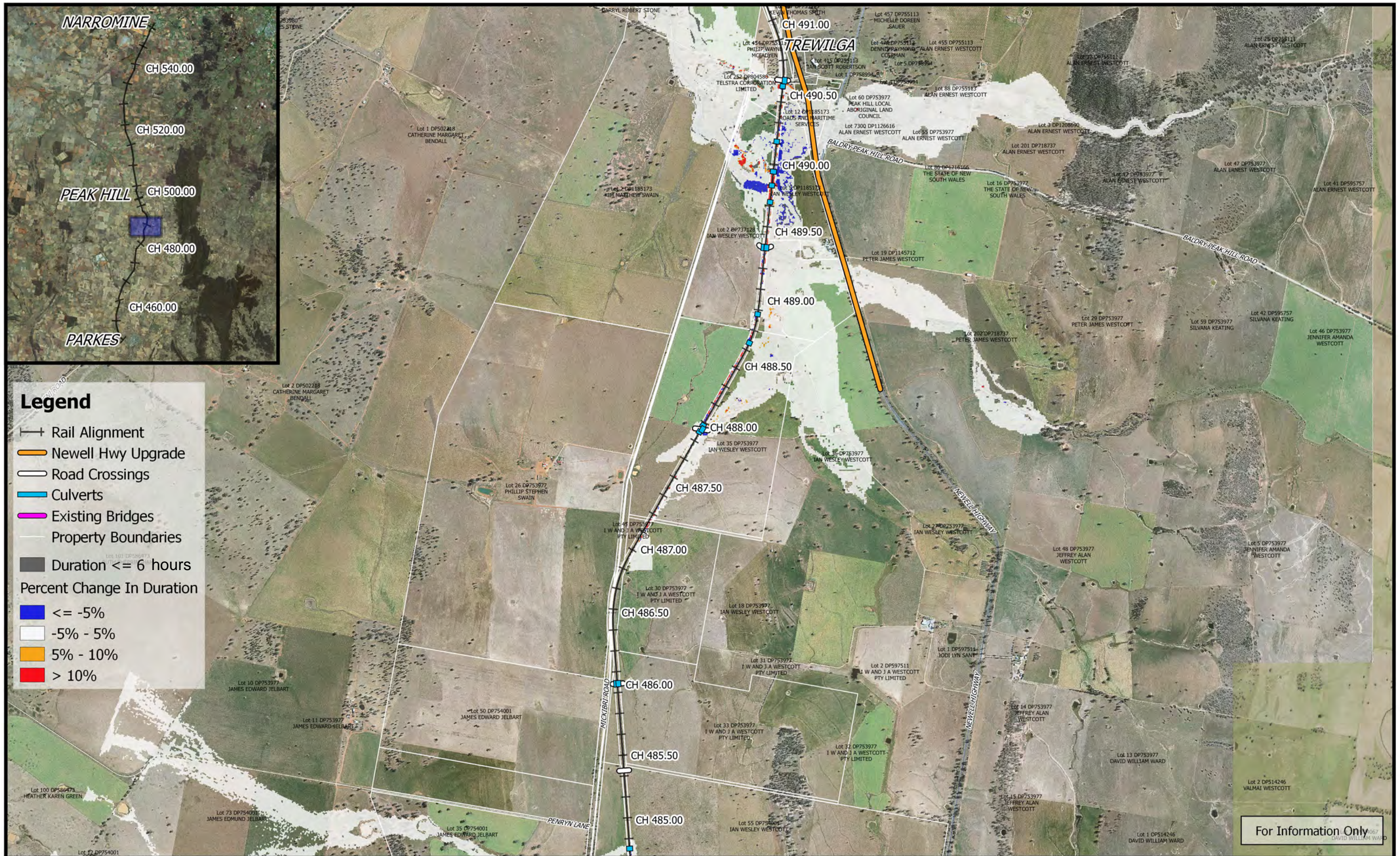
**Legend**

- +— 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

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





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|   |  |  |                               |   |
|---|--|--|-------------------------------|---|
|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC10</b><br/>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 490.00</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>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018 | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC11</b><br/><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 492.00</i></p> |
|  | <p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p>   |  |                  |  |





**Legend**

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Duration  $\le 6$  hours

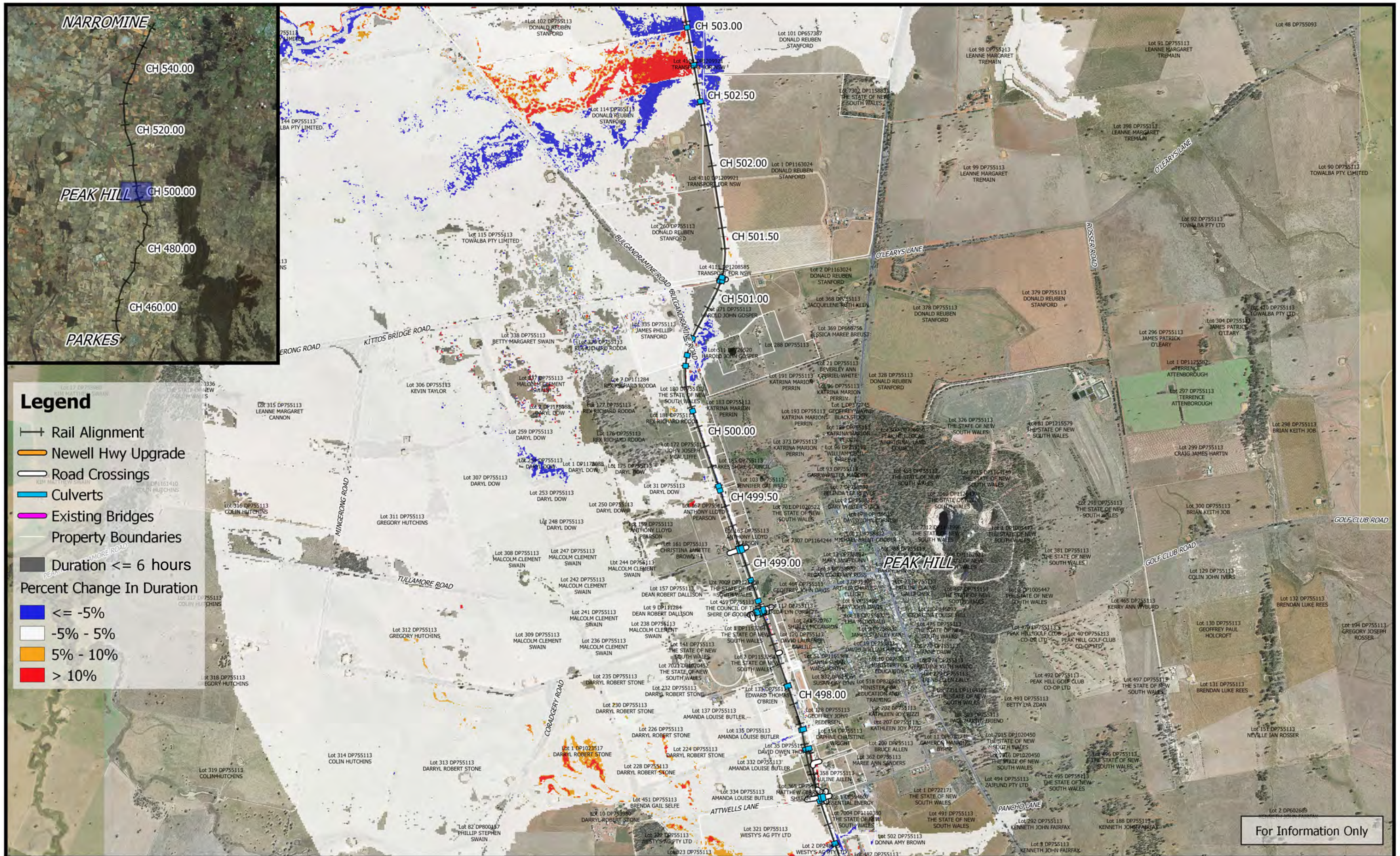
**Percent Change In Duration**

- $\le -5\%$
- $-5\% - 5\%$
- $5\% - 10\%$
- $> 10\%$

For Information Only

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|  | <p>1:25,000</p>   |  | Date: 12/10/2018              | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC12</b><br/><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 495.00</i></p> |
|  | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>Scale ratio correct when printed at A3 |  | Rev: A - For Information Only |  |





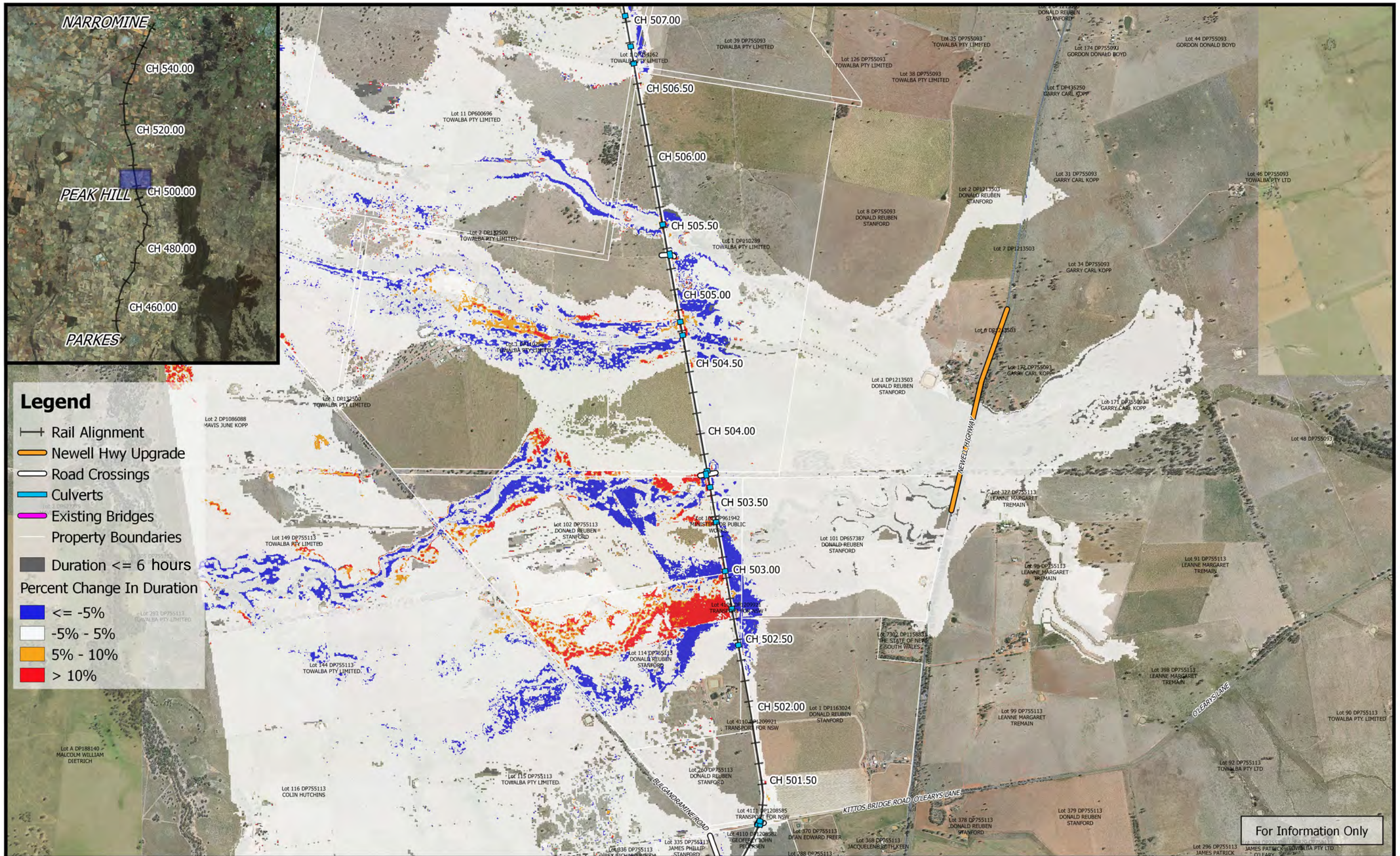
**Legend**

- 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%


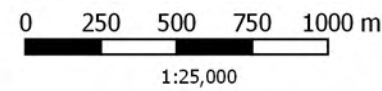

For Information Only

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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>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 DE10DC13</b></p> <p><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 500.00</i></p> |
|--|--|--|--|--|

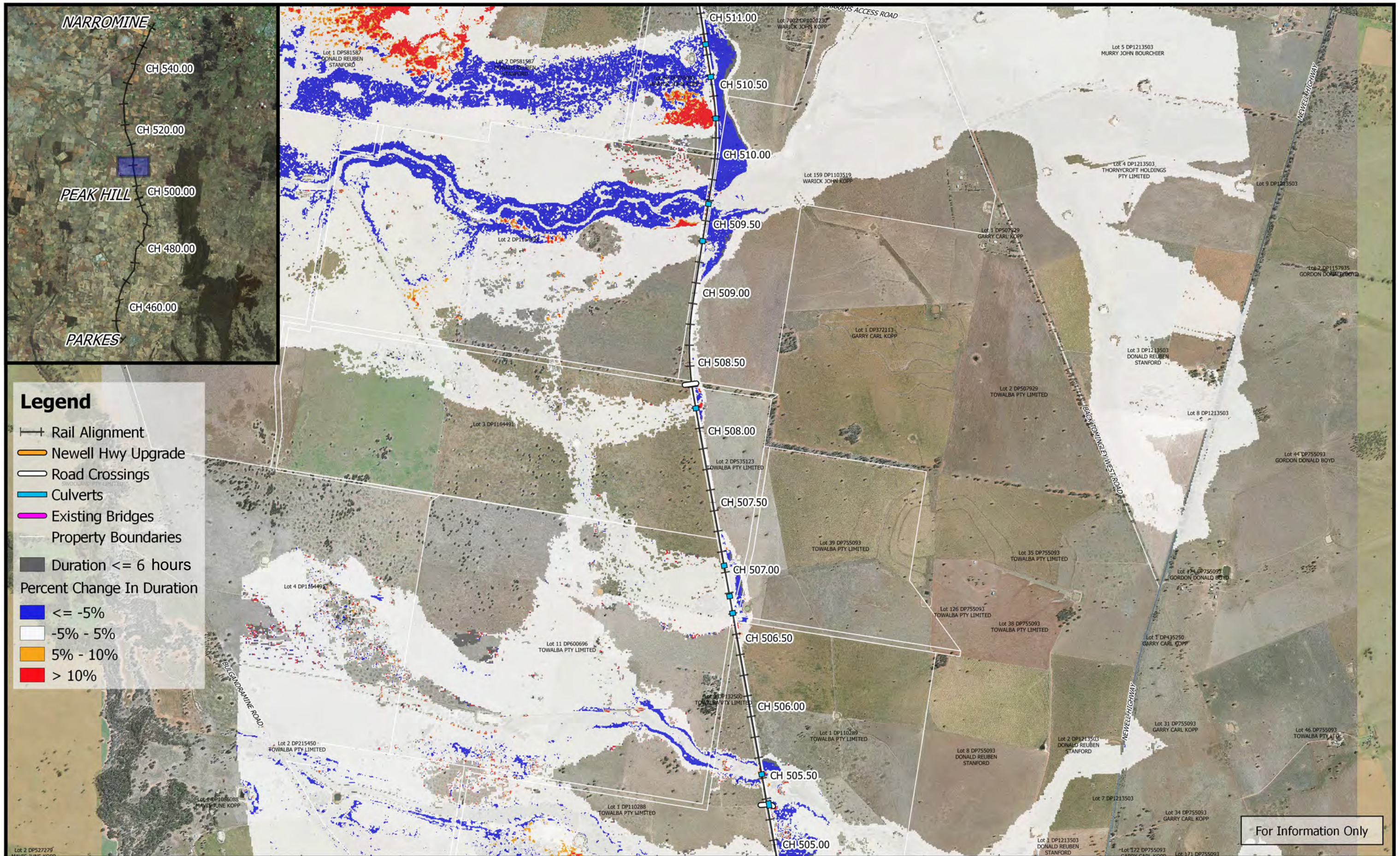




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|  | <br>1:25,000                       |  | Date: 12/10/2018              | <b>Inland Rail - Parkes to Narromine</b><br>IFC - Cross Drainage Flood Impact Assessment Results<br><br><b>Figure DE10DC14</b><br><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 505.00</i> |  |
|   | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>Scale ratio correct when printed at A3 |  | Rev: A - For Information Only |   |  |
|   |   |  | Prepared By: YeohM            |   |  |

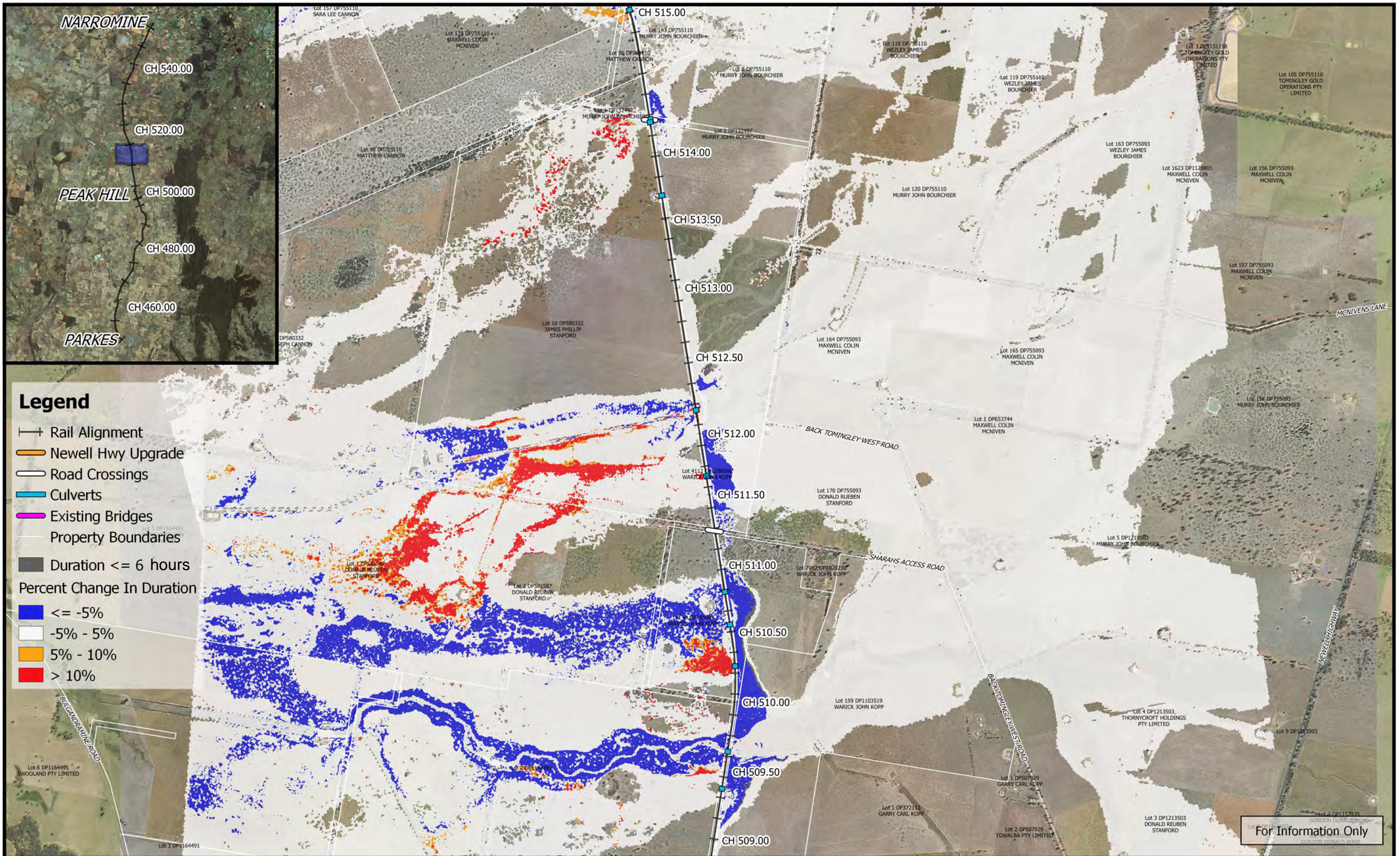




For Information Only

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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p><b>Inland Rail - Parkes to Narromine</b><br/>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

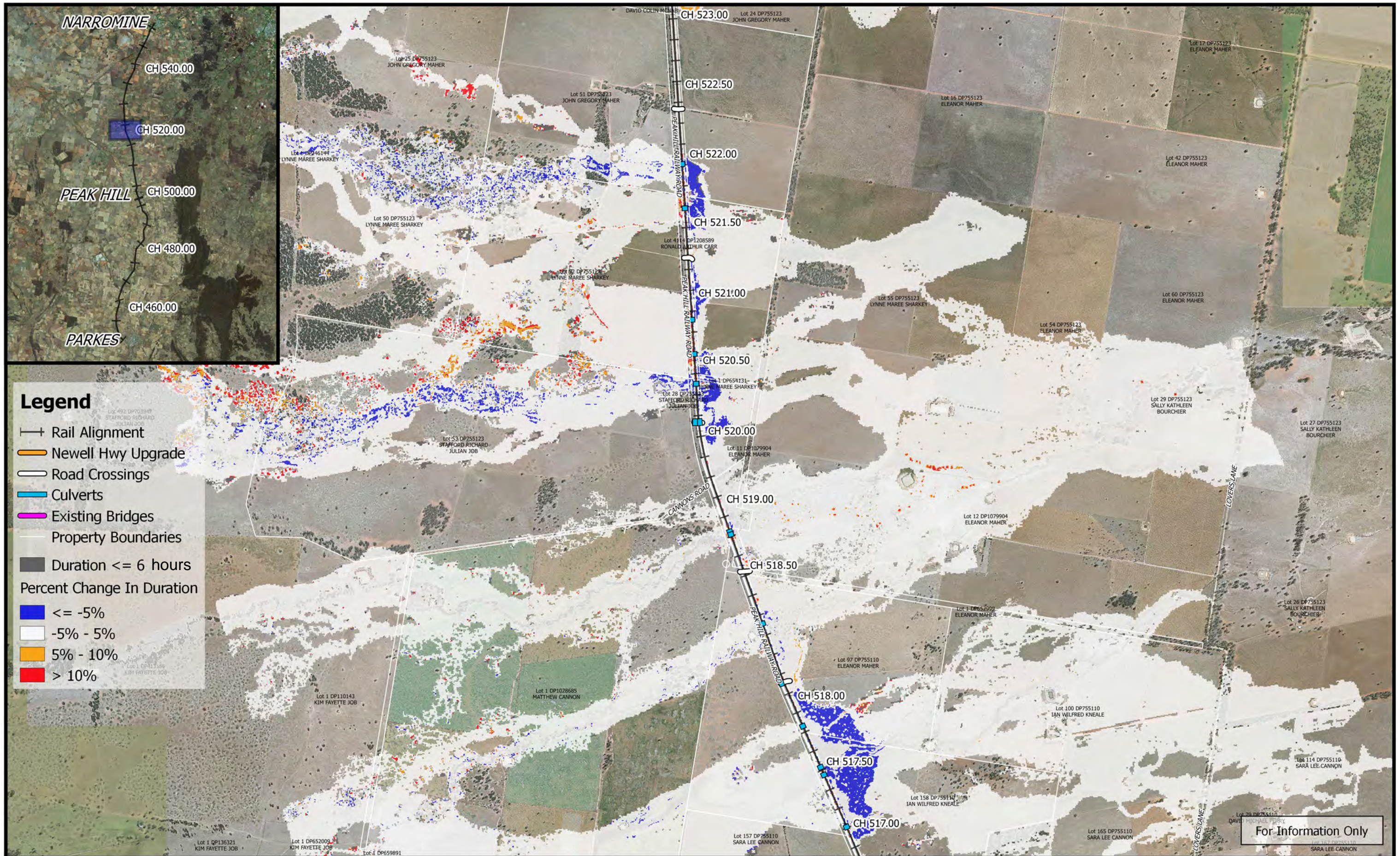
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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p align="center"><b>Inland Rail -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





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|  | 0 250 500 750 1000 m<br>1:25,000  |   | Date: 12/10/2018              | <b>Inland Rail - Parkes to Narromine</b><br>IFC - Cross Drainage Flood Impact Assessment Results<br><br><b>Figure DE10DC17</b><br><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 515.00</i> |
|   | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>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

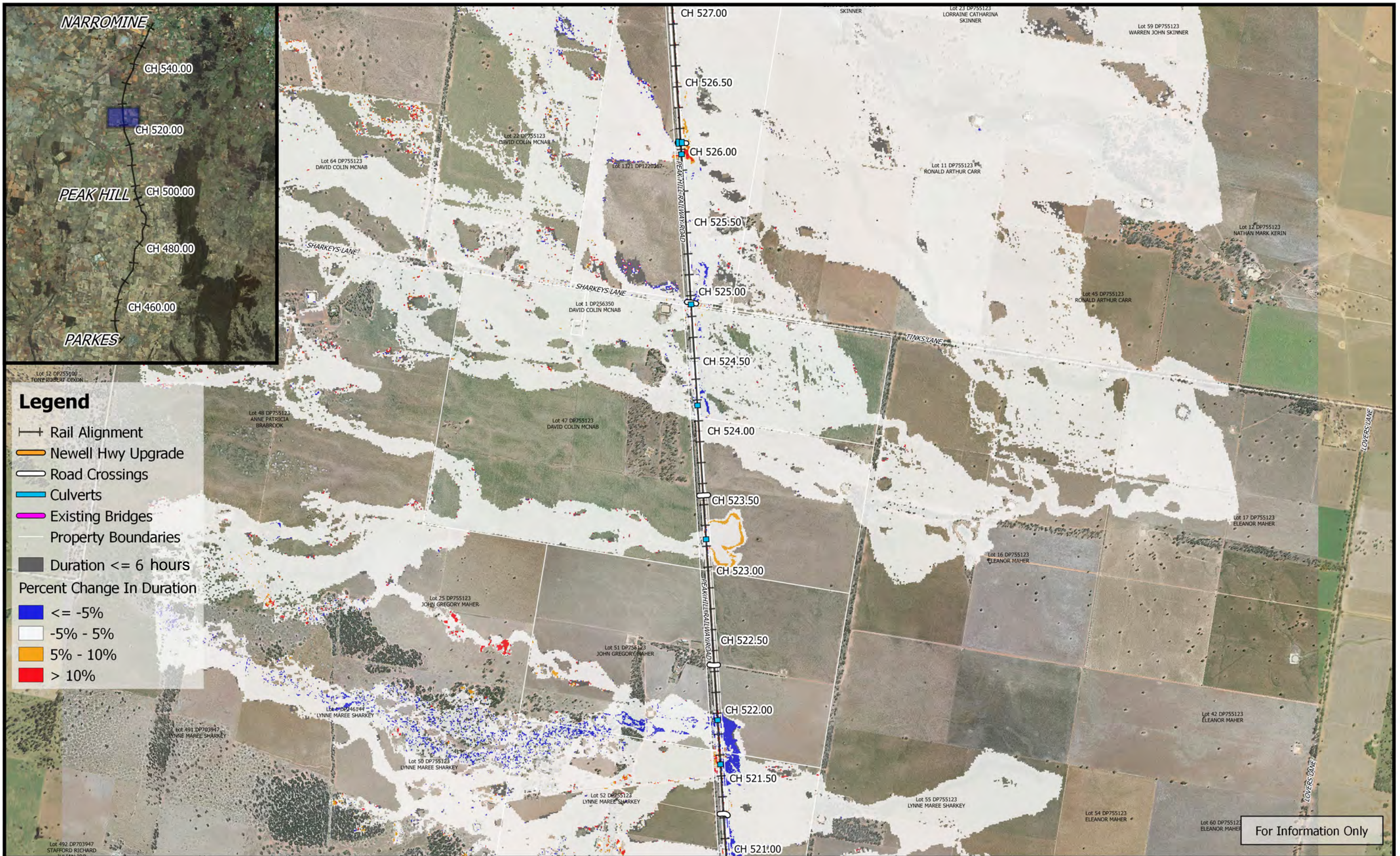
**Percent Change In Duration**

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

For Information Only

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|--|---|--|--|--|--------------------|
|  | <p>1:25,000</p>   |  | Date: 12/10/2018   | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> |                    |
|  | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>Scale ratio correct when printed at A3 |  | Rev: A - For Information Only  |  | Prepared By: YeohM |
|  |   |  | <p><b>Figure DE10DC18</b><br/>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 520.00</p> |  |                    |





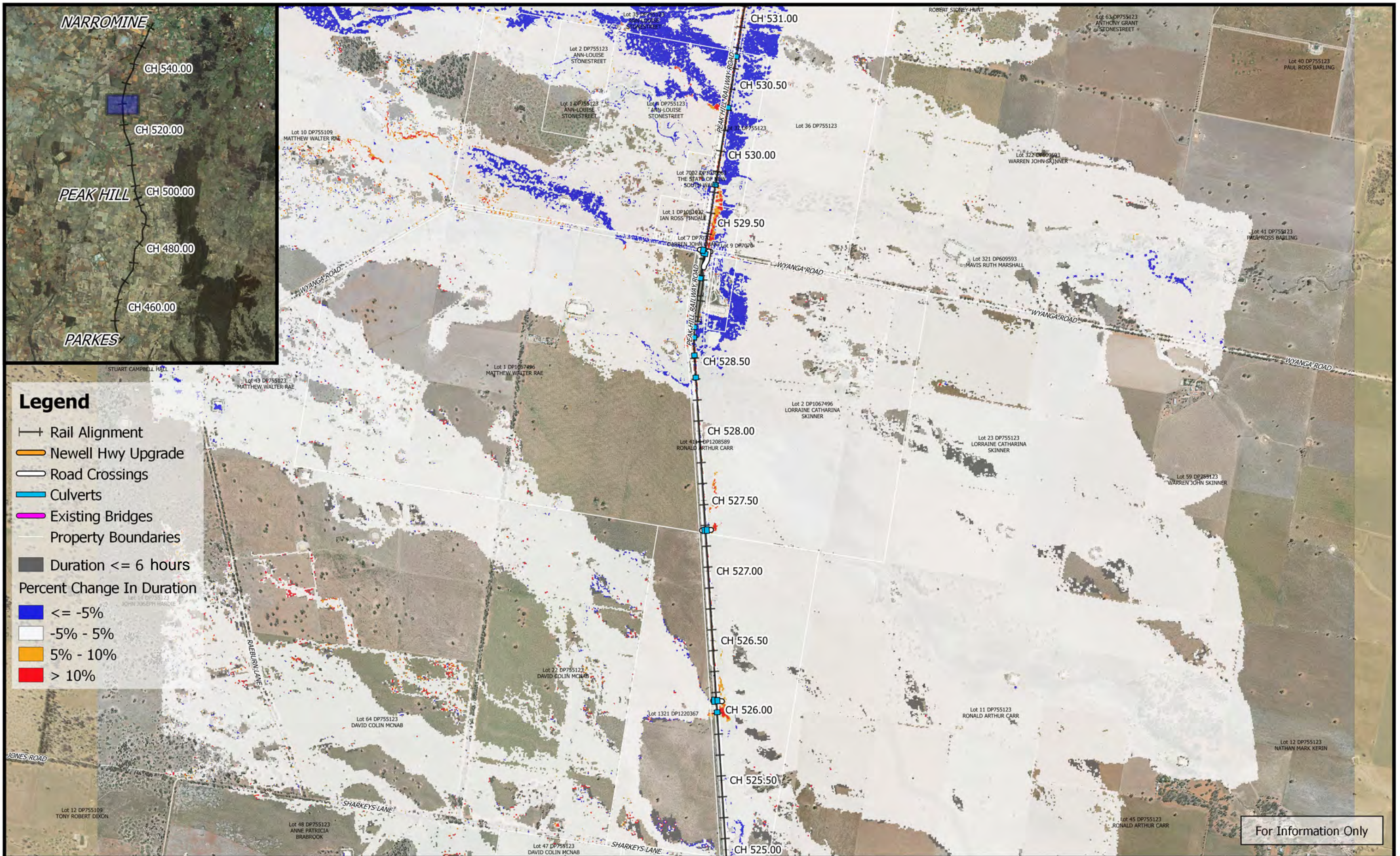
**Legend**

- 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><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> |
|  | Coordinate system: GDA 1994 MGA Zone 55<br>Inset Aerial Source: NSW Six Map<br>Scale ratio correct when printed at A3 |                    | Rev: A - For Information Only |  |
|  |   | Prepared By: YeohM |                               |  |

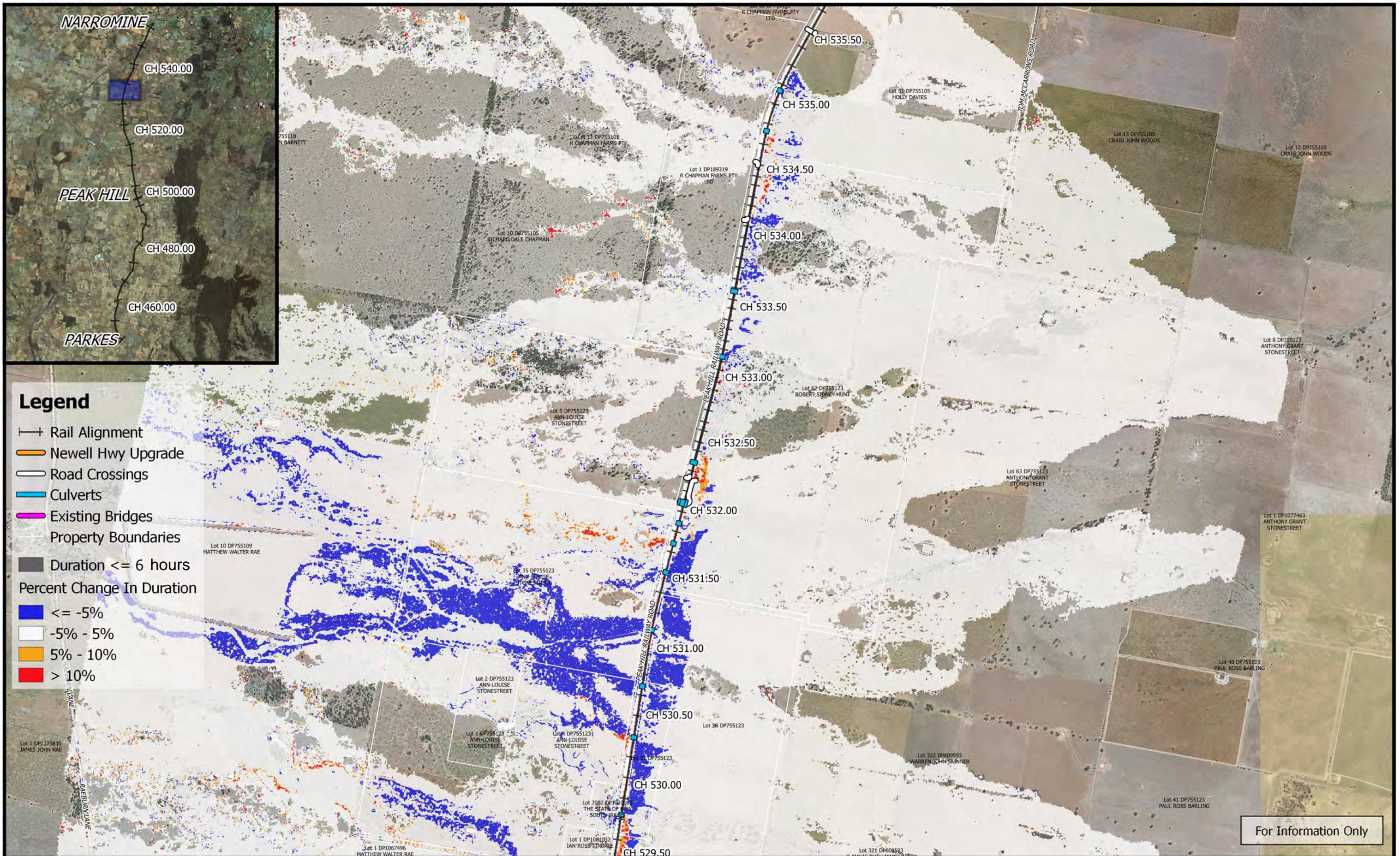




For Information Only

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

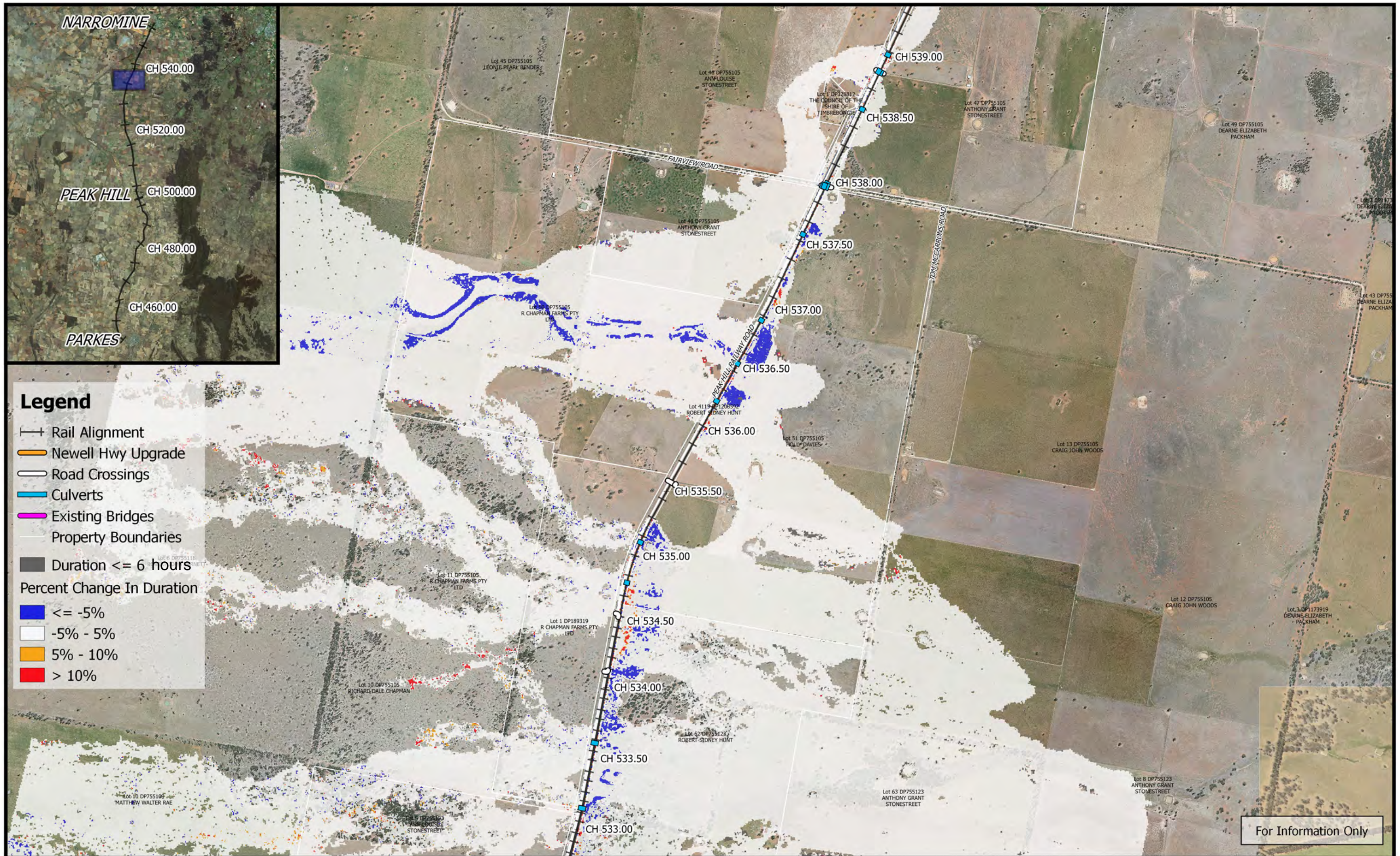






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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p><b>Inland Rail - Parkes to Narromine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





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|---|--|--|-------------------------------|---|
|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p align="center"><b>Inland Rail - Parkes to Narromine</b><br/>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
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- <= -5%
- -5% - 5%
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- > 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<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p><b>Figure DE10DC23</b><br/><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 540.00</i></p> |
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|   |  |  |   |   |
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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018  | <p align="center"><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> |
|   |  |  | Rev: A - For Information Only   |   |
| Prepared By: YeohM  |  |  | <p align="center"><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 545.00</i></p> |   |





For Information Only

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|  | <p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55<br/>Inset Aerial Source: NSW Six Map<br/>Scale ratio correct when printed at A3</p> |  | Date: 12/10/2018              | <p align="center"><b>Inland Rail - Parkes to Narromine</b><br/>IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="center"><b>Figure DE10DC25</b></p> <p align="center"><i>10% AEP Percentage Change In Duration For Flood Depths &gt;200mm - CH 550.00</i></p> |
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|  |  |  | Prepared By: YeohM            |  |