



Technical and Approvals Consultancy
Services: Parkes to Narromine
Flood Study Report Volume 2

December 2018

3-0001-240-IHY-00-RP-0004



Appendix A

Existing Conditions Flood Maps

A01 - Existing Flood Depth 18% AEP

A02 – Existing Flood Depth 5% AEP

A03 – Existing Flood Depth 2% AEP

A04 – Existing Flood Depth 0.05% AEP

A05 – Existing Flood Velocity 18% AEP

A06 – Existing Flood Velocity 5% AEP

A07 – Existing Flood Velocity 2% AEP

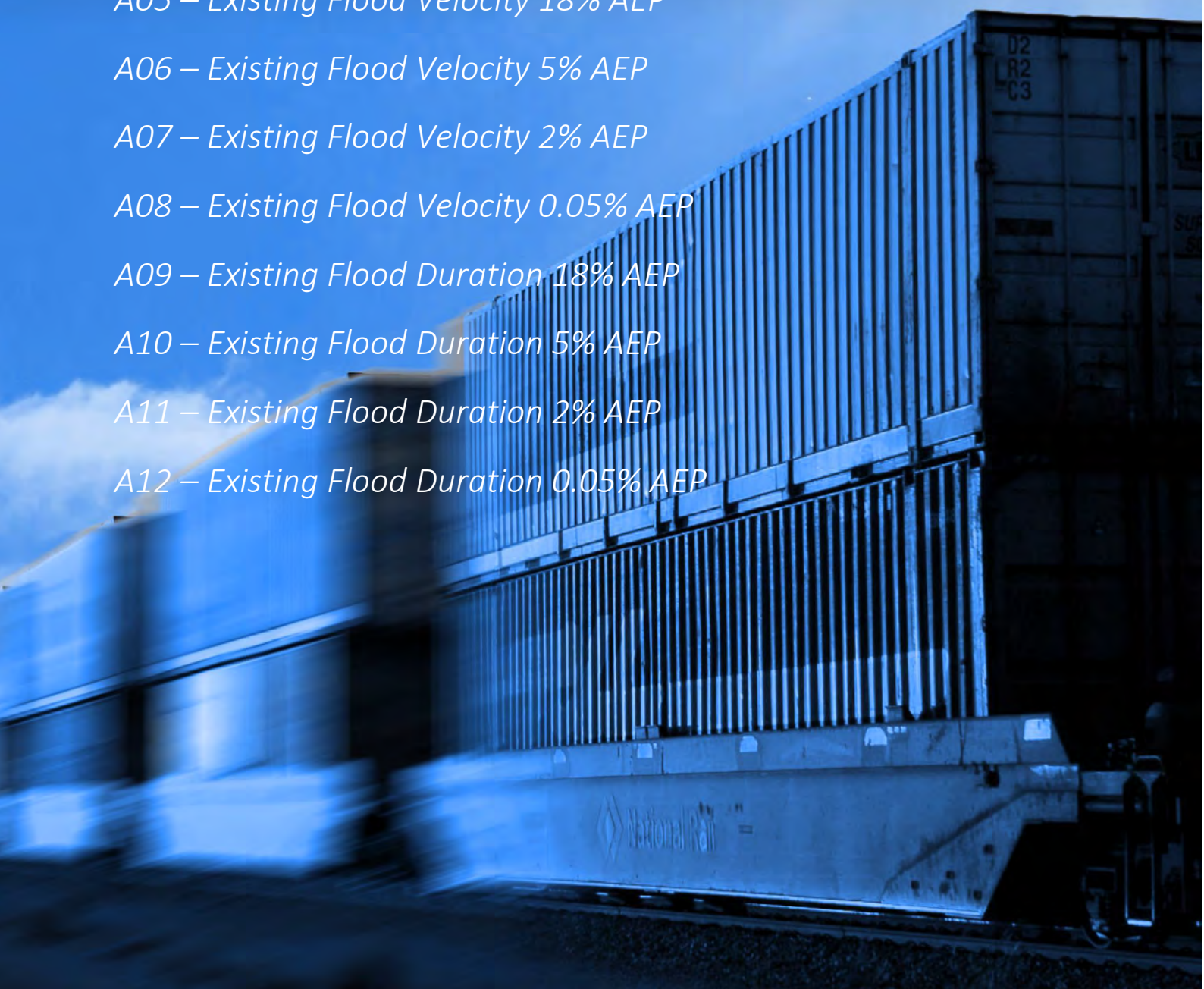
A08 – Existing Flood Velocity 0.05% AEP

A09 – Existing Flood Duration 18% AEP

A10 – Existing Flood Duration 5% AEP

A11 – Existing Flood Duration 2% AEP

A12 – Existing Flood Duration 0.05% AEP





Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

0 250 500 750 1000 m

1:25,000

Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



Date: 18/10/2018

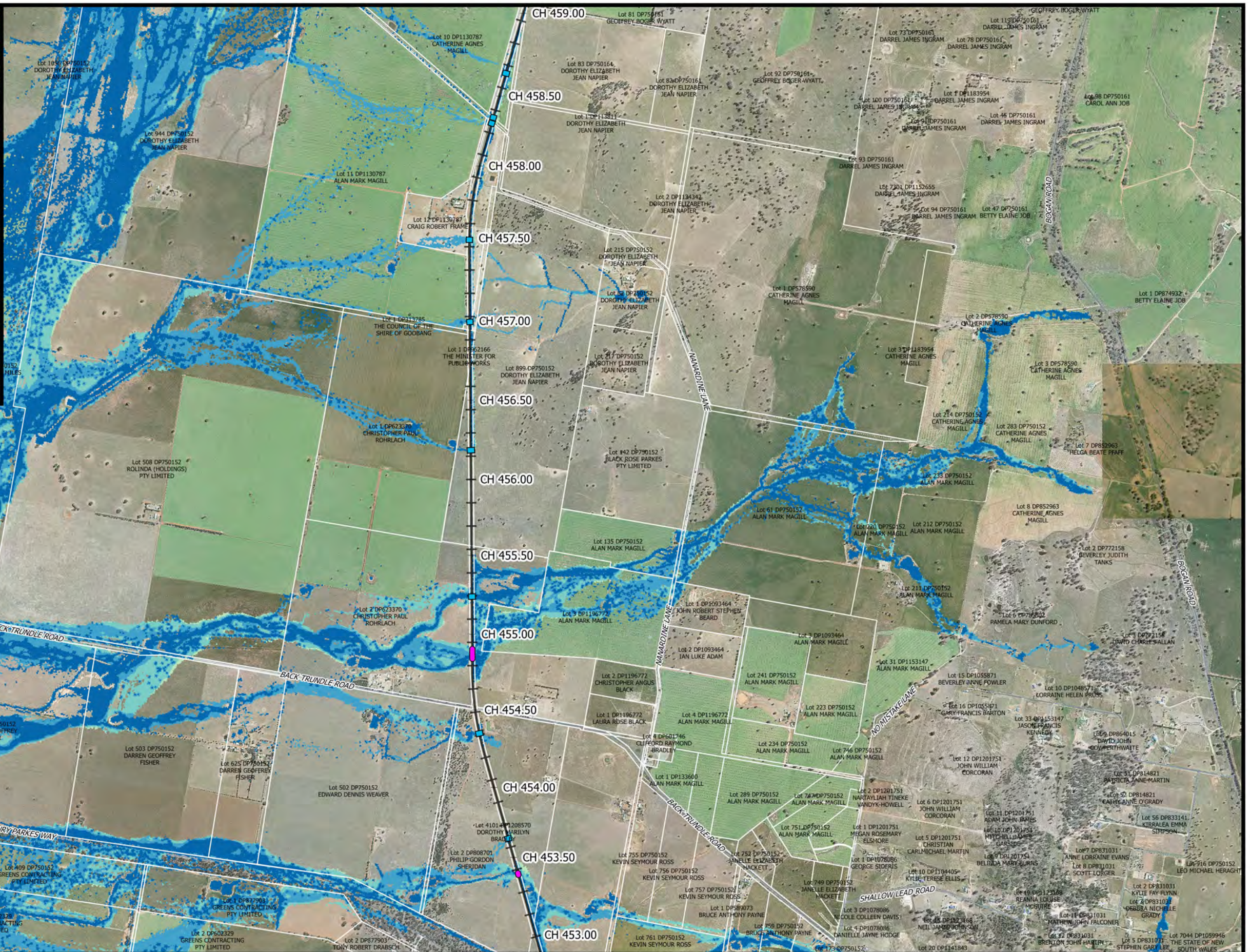
Rev: B

Prepared By: YeohM

Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D1

18% AEP Existing Flood Duration - CH 450.00

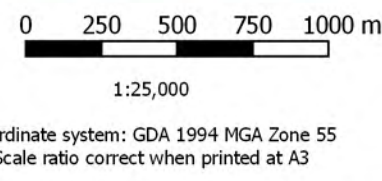


Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

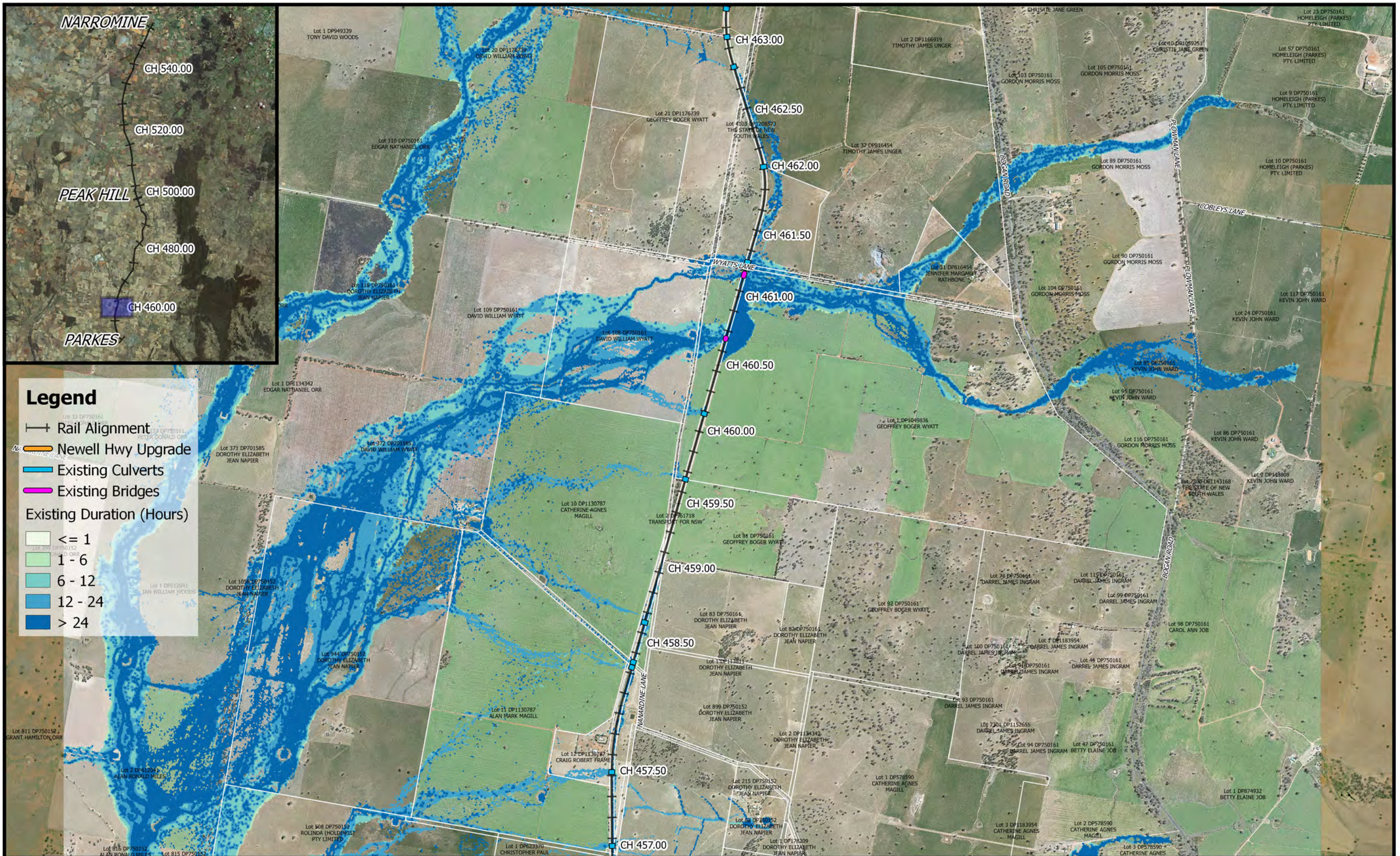
- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24



Date: 18/10/2018
 Rev: B
 Prepared By: YeohM

Parkes to Narromine
 DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D2
 18% AEP Existing Flood Duration - CH 455.00



Legend

- Rail Alignment
 - Newell Hwy Upgrade
 - Existing Culverts
 - Existing Bridges
- Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

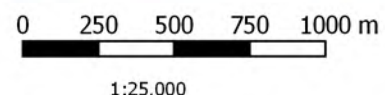
Date: 18/7/2018

Rev: A

Prepared By: YeohM

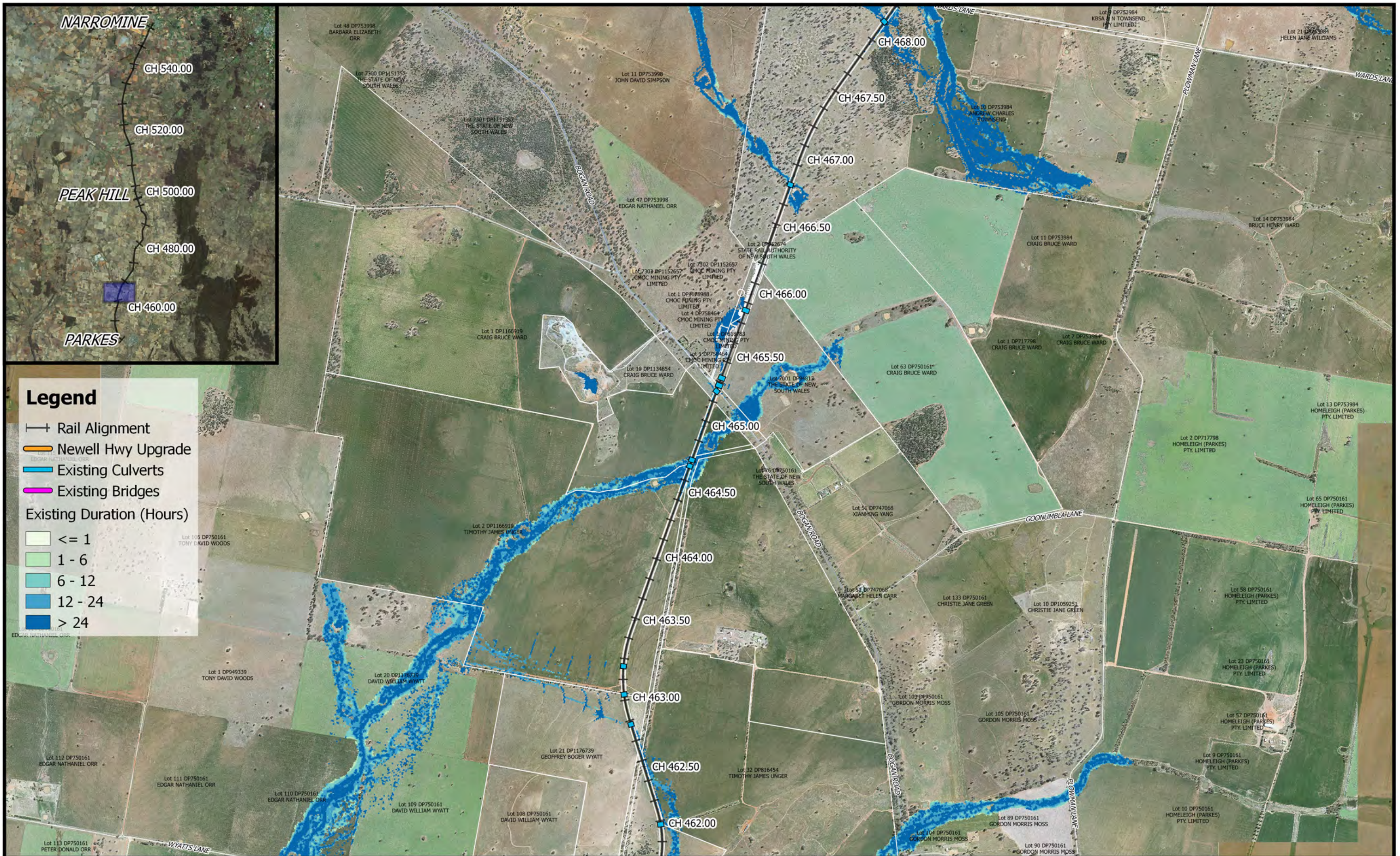
Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D3
18% AEP Existing Flood Duration - CH 460.00



Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3





Legend

- Rail Alignment
 - Newell Hwy Upgrade
 - Existing Culverts
 - Existing Bridges
- Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24



0 250 500 750 1000 m
1:25,000

Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



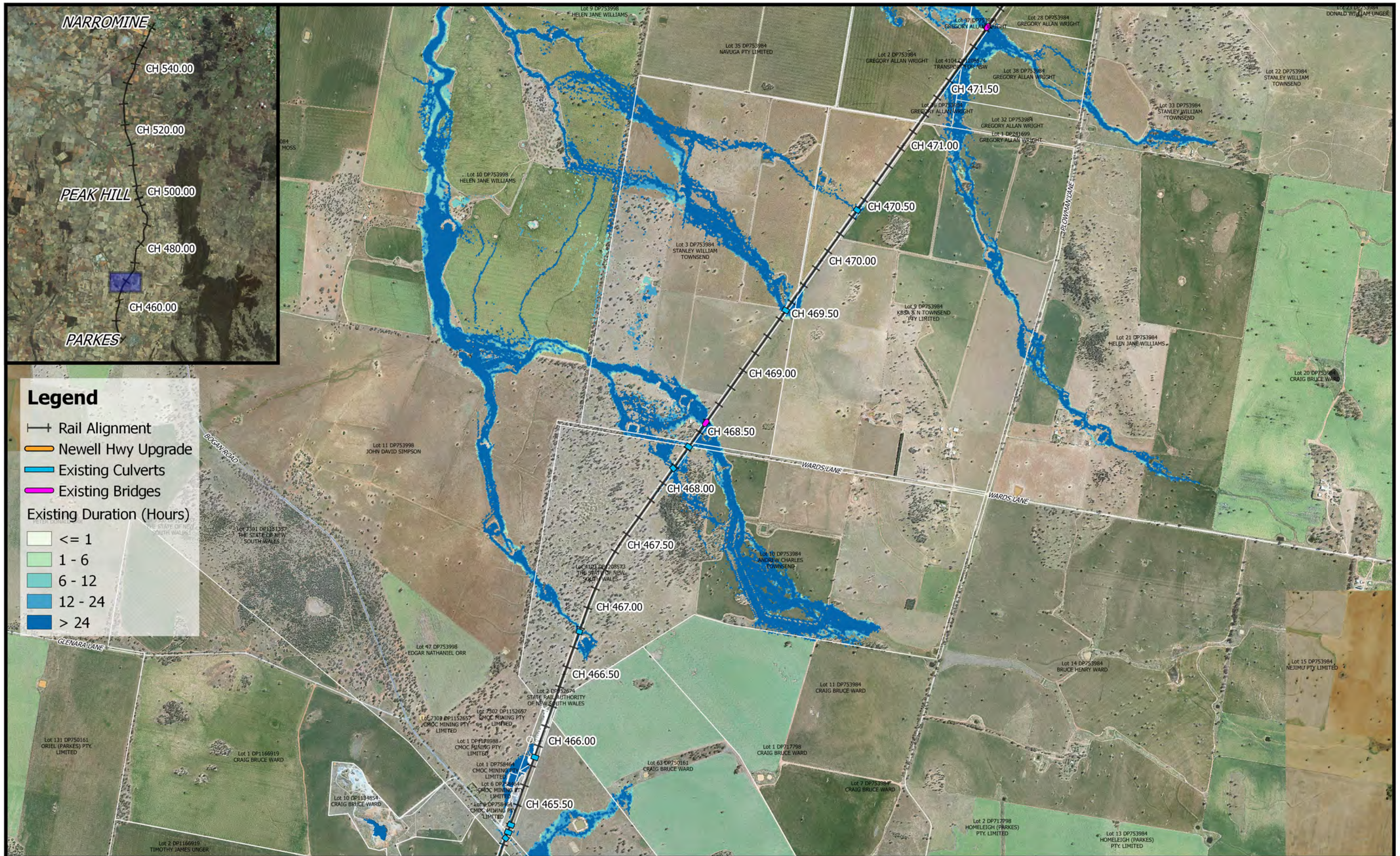
Date: 18/10/2018

Rev: B

Prepared By: YeohM

Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D4
18% AEP Existing Flood Duration - CH 465.00



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/10/2018	<p align="center">Parkes to Narromine</p> <p align="center">DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX18D5</p> <p align="right"><i>18% AEP Existing Flood Duration - CH 470.00</i></p>
			Rev: B	
			Prepared By: YeohM	



Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

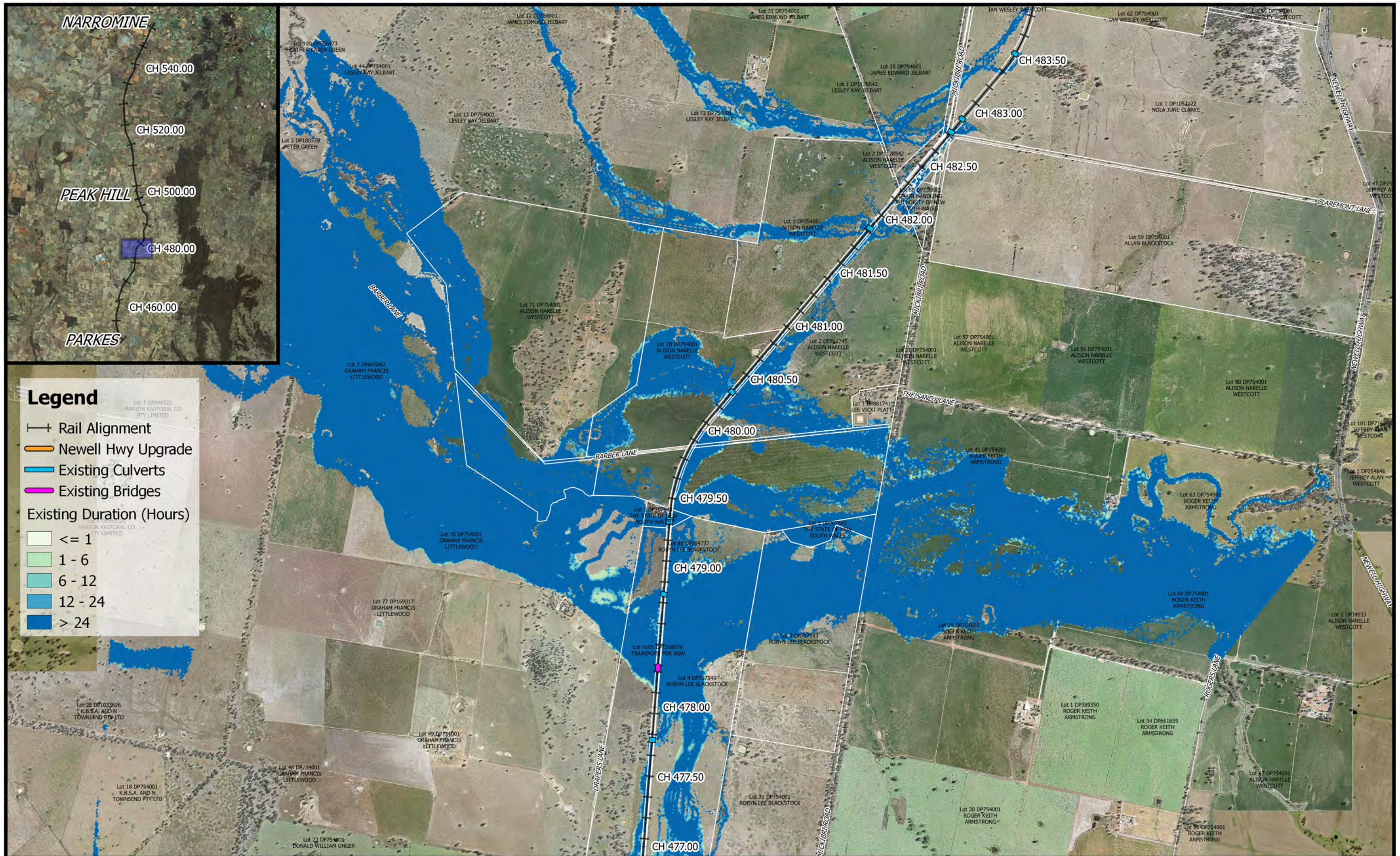
Existing Duration (Hours)

- ≤ 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

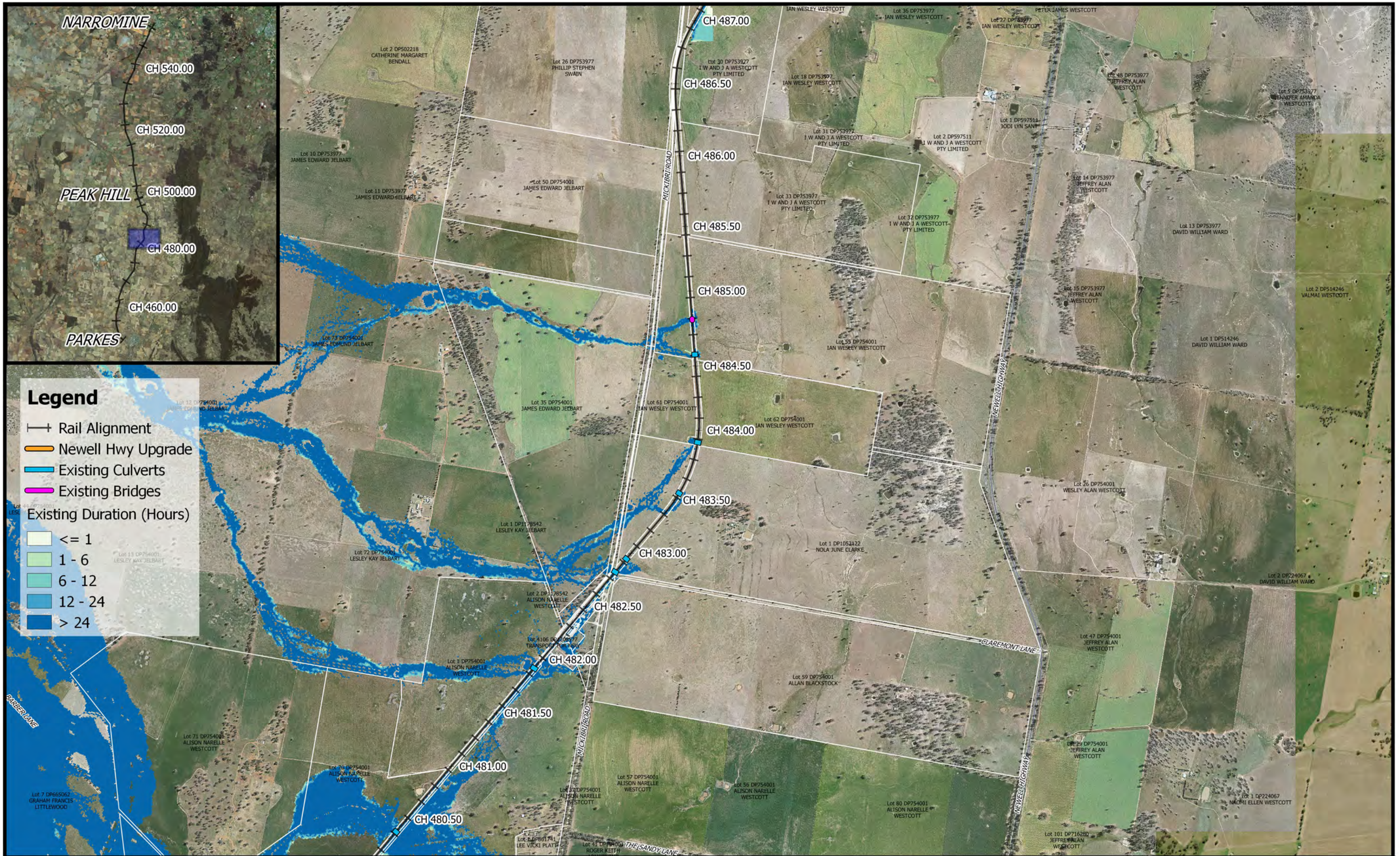
	<p>1:25,000</p>		Date: 18/10/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D6 18% AEP Existing Flood Duration - CH 472.00</p>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: B	
	Prepared By: YeohM			



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/10/2018	<p align="center">Parkes to Narromine</p> <p align="center">DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX18D7</p> <p align="right"><i>18% AEP Existing Flood Duration - CH 475.00</i></p>
			Rev: B	
			Prepared By: YeohM	



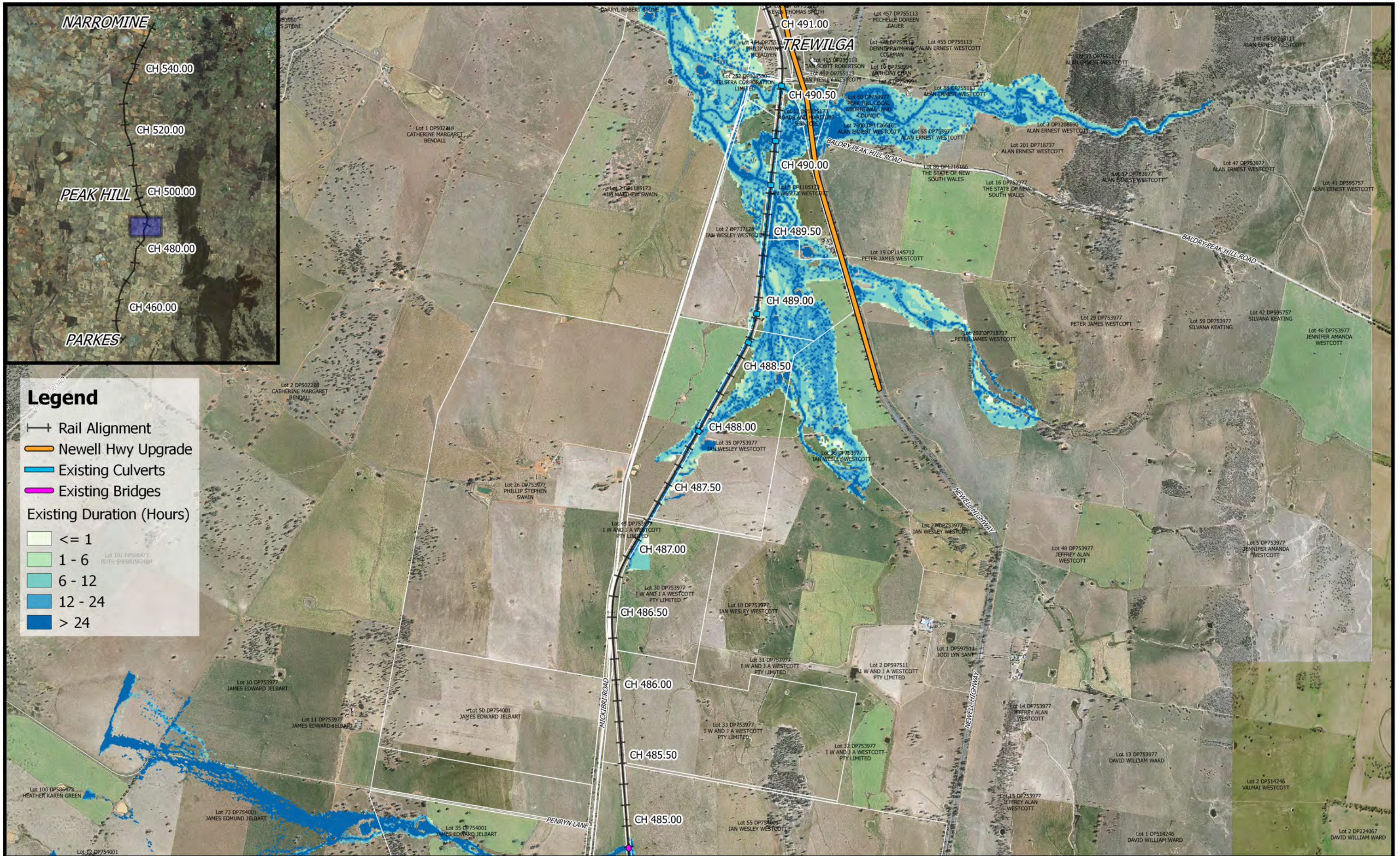
	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/10/2018	<p align="center">Parkes to Narromine</p> <p align="center">DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX18D8</p> <p align="right"><i>18% AEP Existing Flood Duration - CH 480.00</i></p>
			Rev: B	
			Prepared By: YeohM	



Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges
- Existing Duration (Hours)
- ≤ 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	 1:25,000		Date: 18/10/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX18D1 <i>18% AEP Existing Flood Duration - CH 485.00</i>	
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: B		
			Prepared By: YeohM		



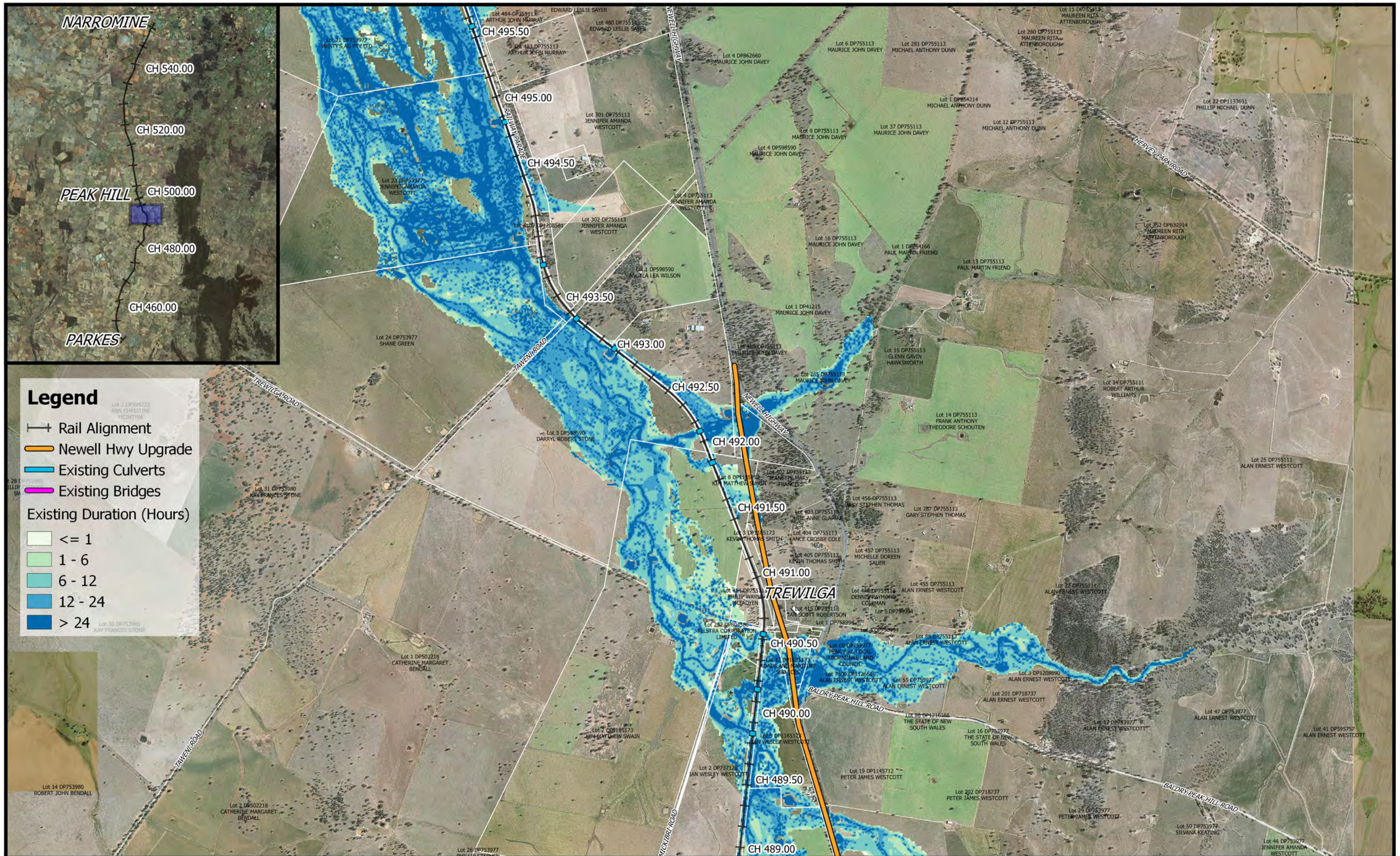
Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	 1:25,000		Date: 18/10/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX18D2 <i>18% AEP Existing Flood Duration - CH 490.00</i>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: B	
	Prepared By: YeohM			



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24



0 250 500 750 1000 m

1:25,000

Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



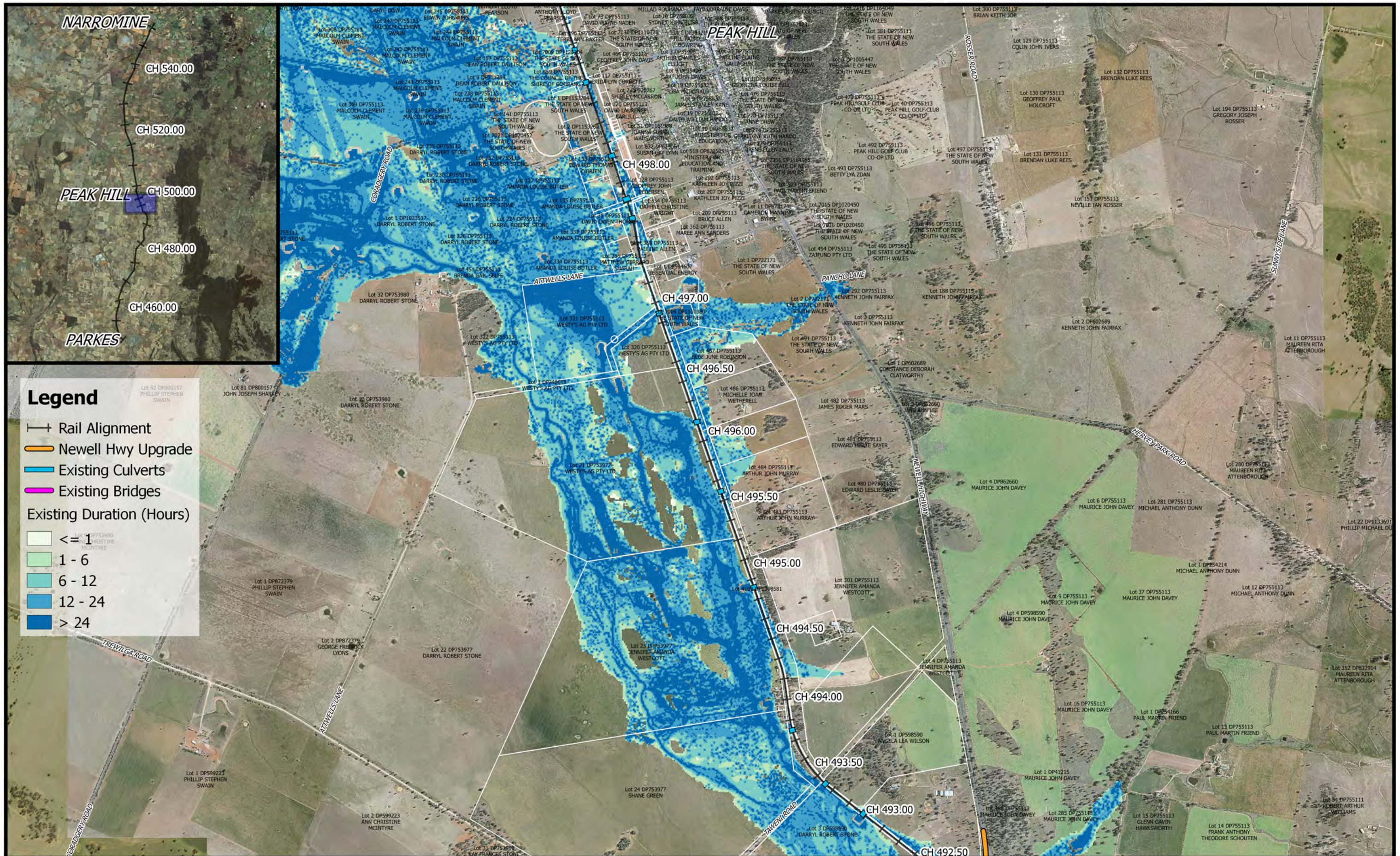
Date: 18/7/2018

Rev: A

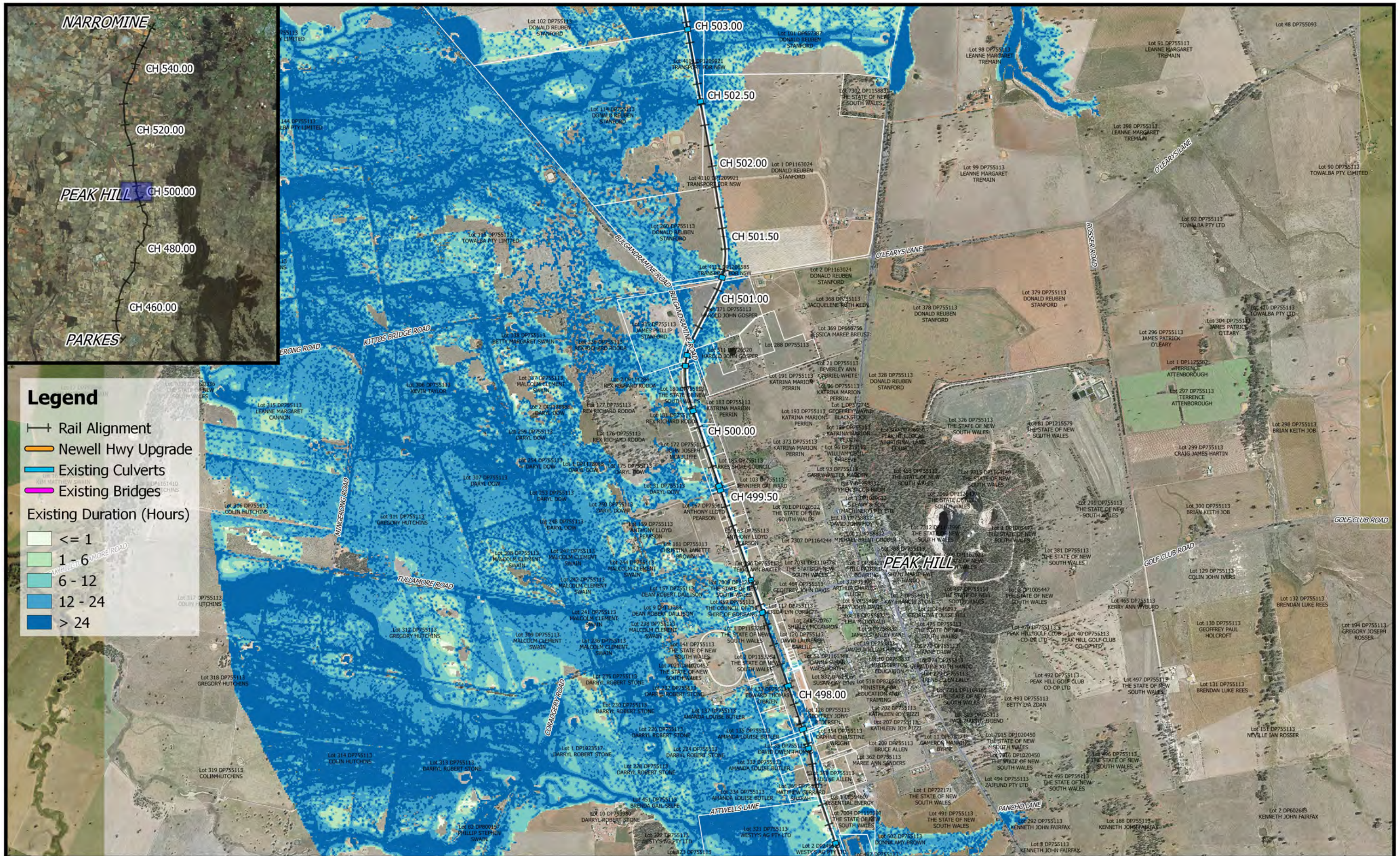
Prepared By: YeohM

Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D11
18% AEP Existing Flood Duration - CH 492.00



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p align="right">Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX18D12 18% AEP Existing Flood Duration - CH 495.00</p>
	Rev: A			
	Prepared By: YeohM			



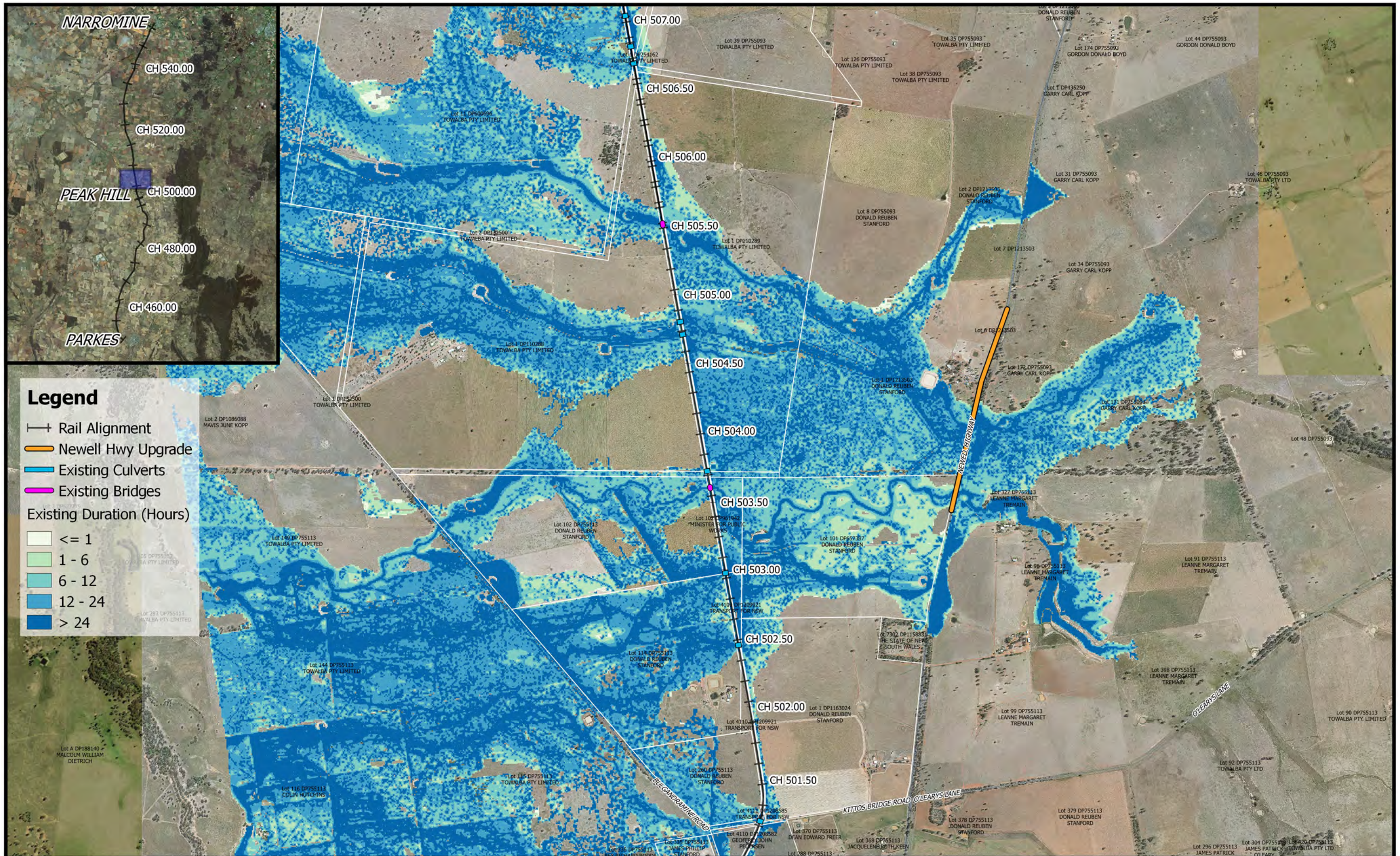
Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

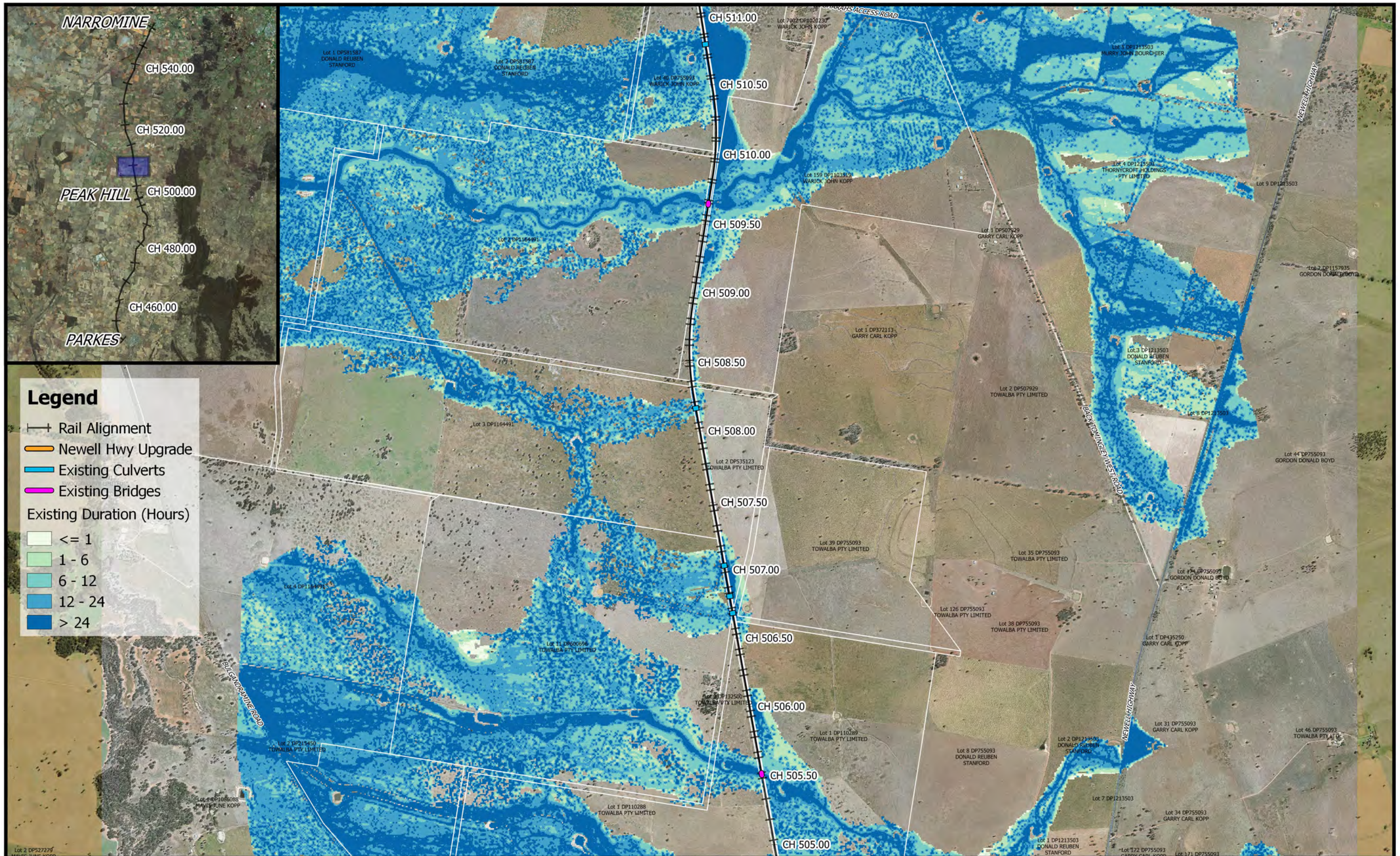
Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

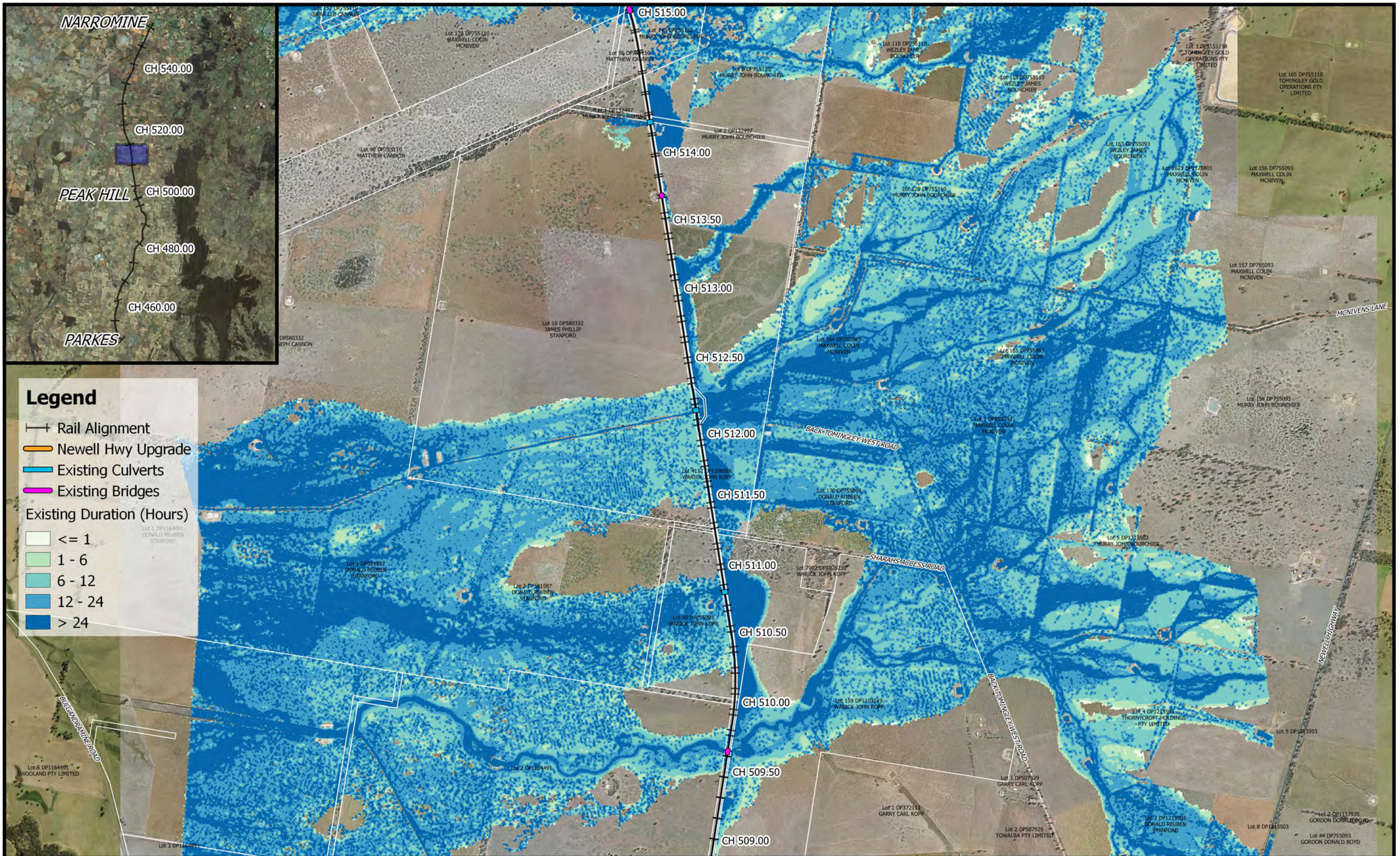
	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		<p>Date: 18/7/2018</p> <p>Rev: A</p> <p>Prepared By: YeohM</p>	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D13</p> <p><i>18% AEP Existing Flood Duration - CH 500.00</i></p>
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	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 18/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX18D14 18% AEP Existing Flood Duration - CH 505.00
			Rev: A	
			Prepared By: YeohM	



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p align="center">Parkes to Narromine</p> <p align="center">DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX18D15</p> <p align="right"><i>18% AEP Existing Flood Duration - CH 510.00</i></p>
			Rev: A	
			Prepared By: YeohM	



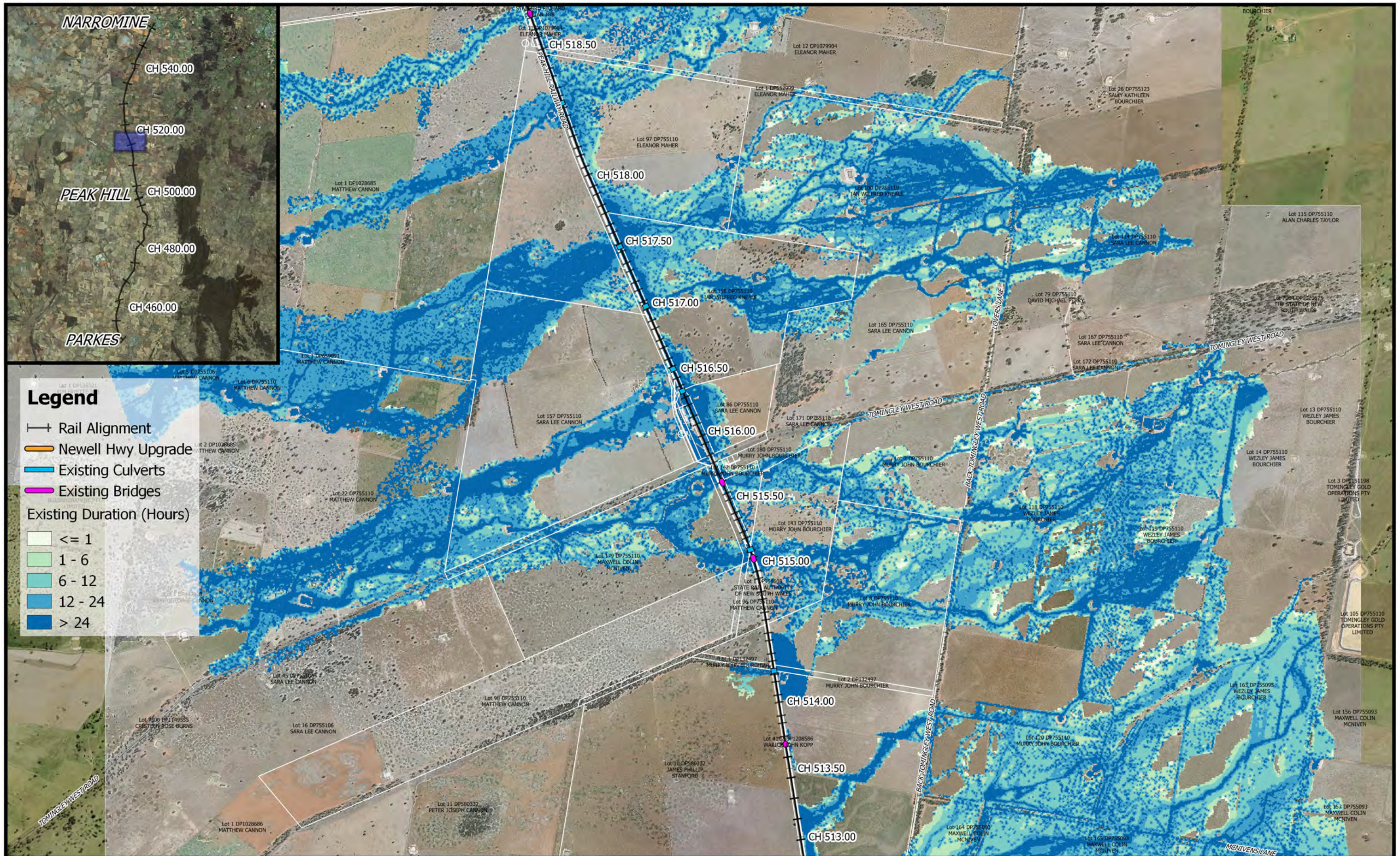
Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	 1:25,000		Date: 18/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX18D16 <i>18% AEP Existing Flood Duration - CH 512.00</i>
			Rev: A	
			Prepared By: YeohM	

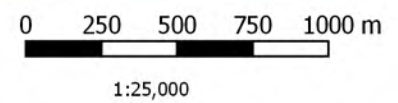


Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24



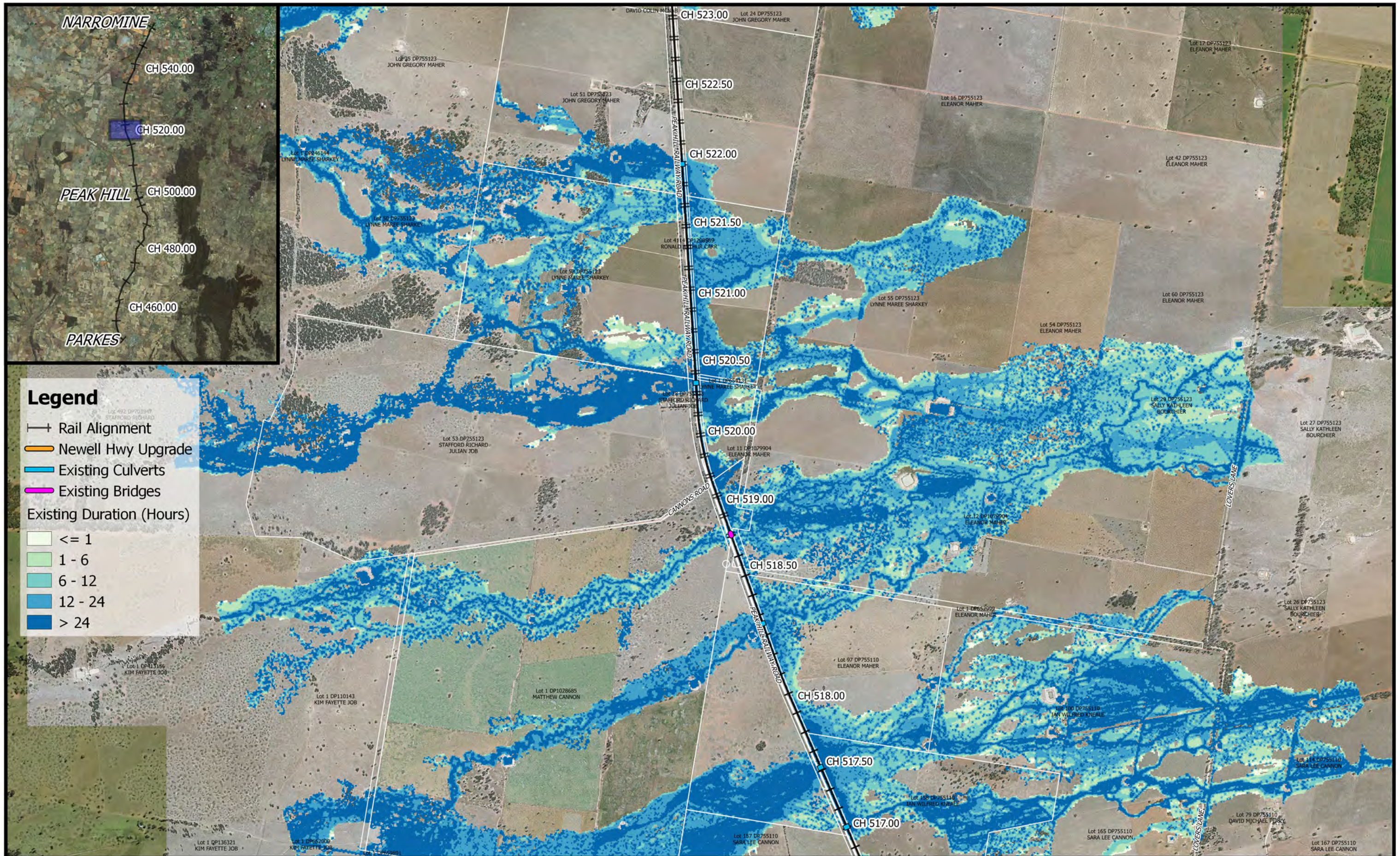
Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



Date: 18/7/2018
Rev: A
Prepared By: YeohM

Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D17
18% AEP Existing Flood Duration - CH 515.00



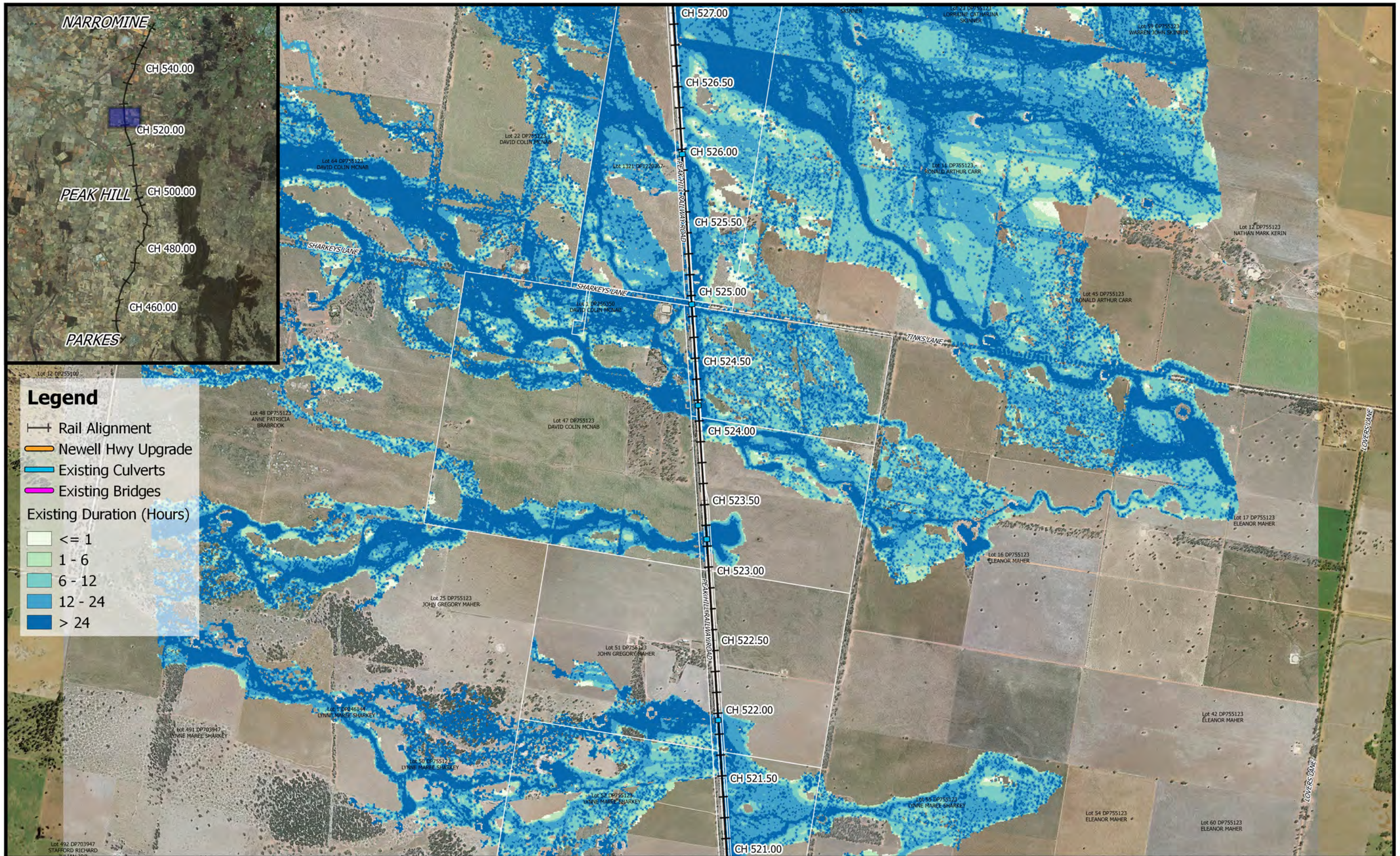
Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	<p>1:25,000</p>		Date: 18/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D18 18% AEP Existing Flood Duration - CH 520.00</p>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: A	
	Prepared By: YeohM			



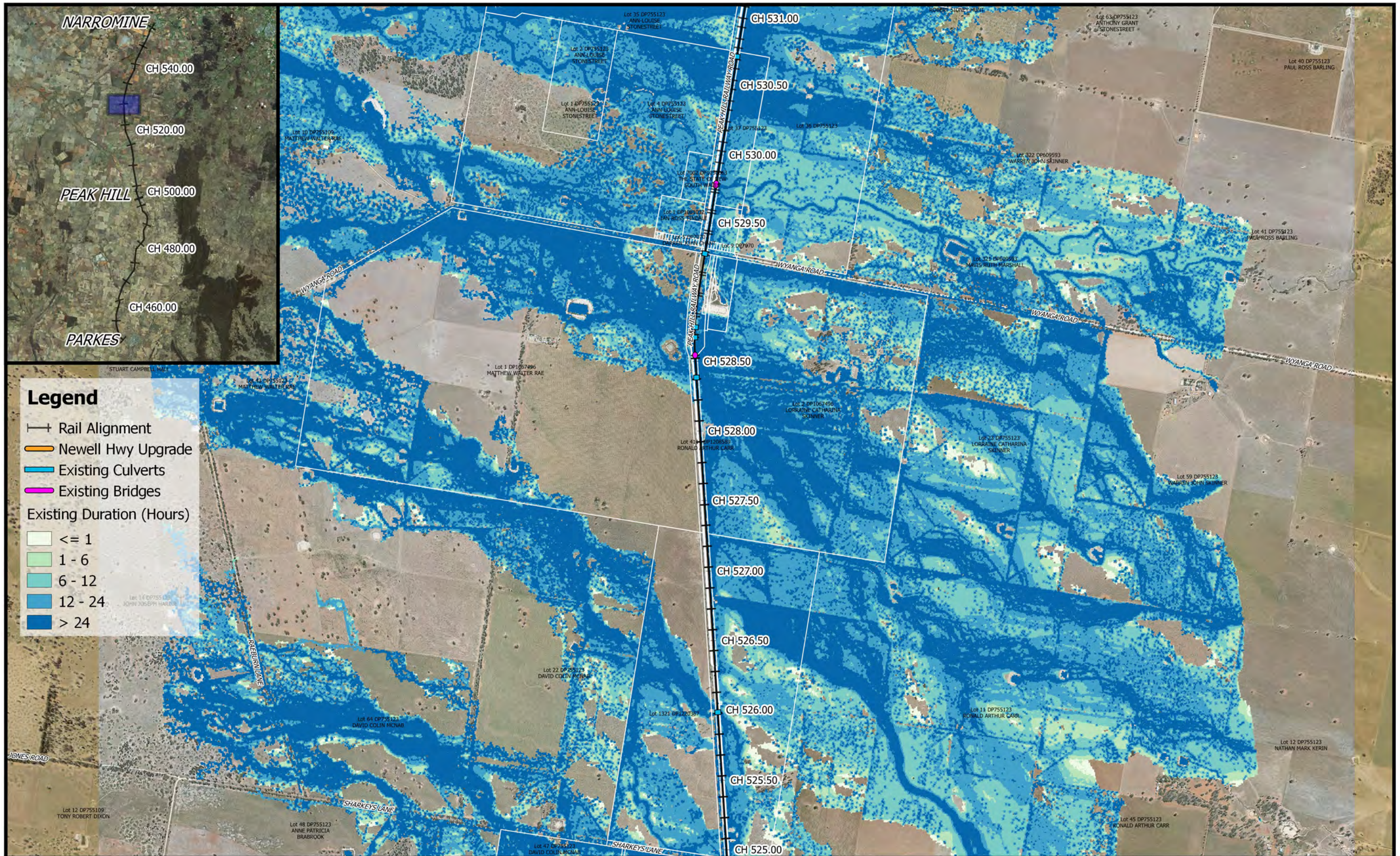
Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D19 18% AEP Existing Flood Duration - CH 525.00</p>
	Rev: A			
	Prepared By: YeohM			

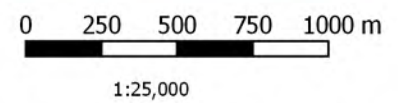


Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24



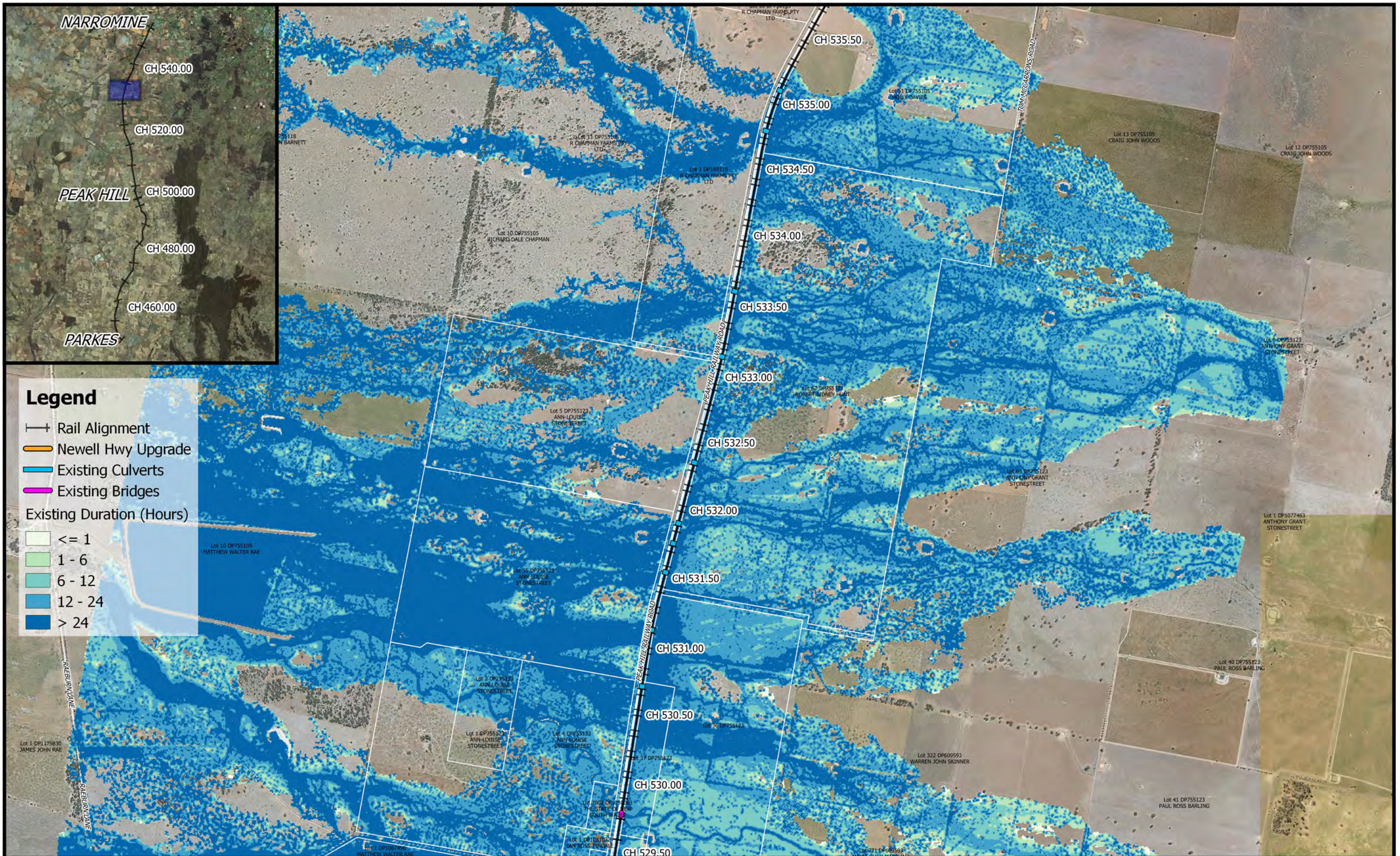
Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



Date: 18/7/2018
Rev: A
Prepared By: YeohM

Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX18D20
18% AEP Existing Flood Duration - CH 530.00



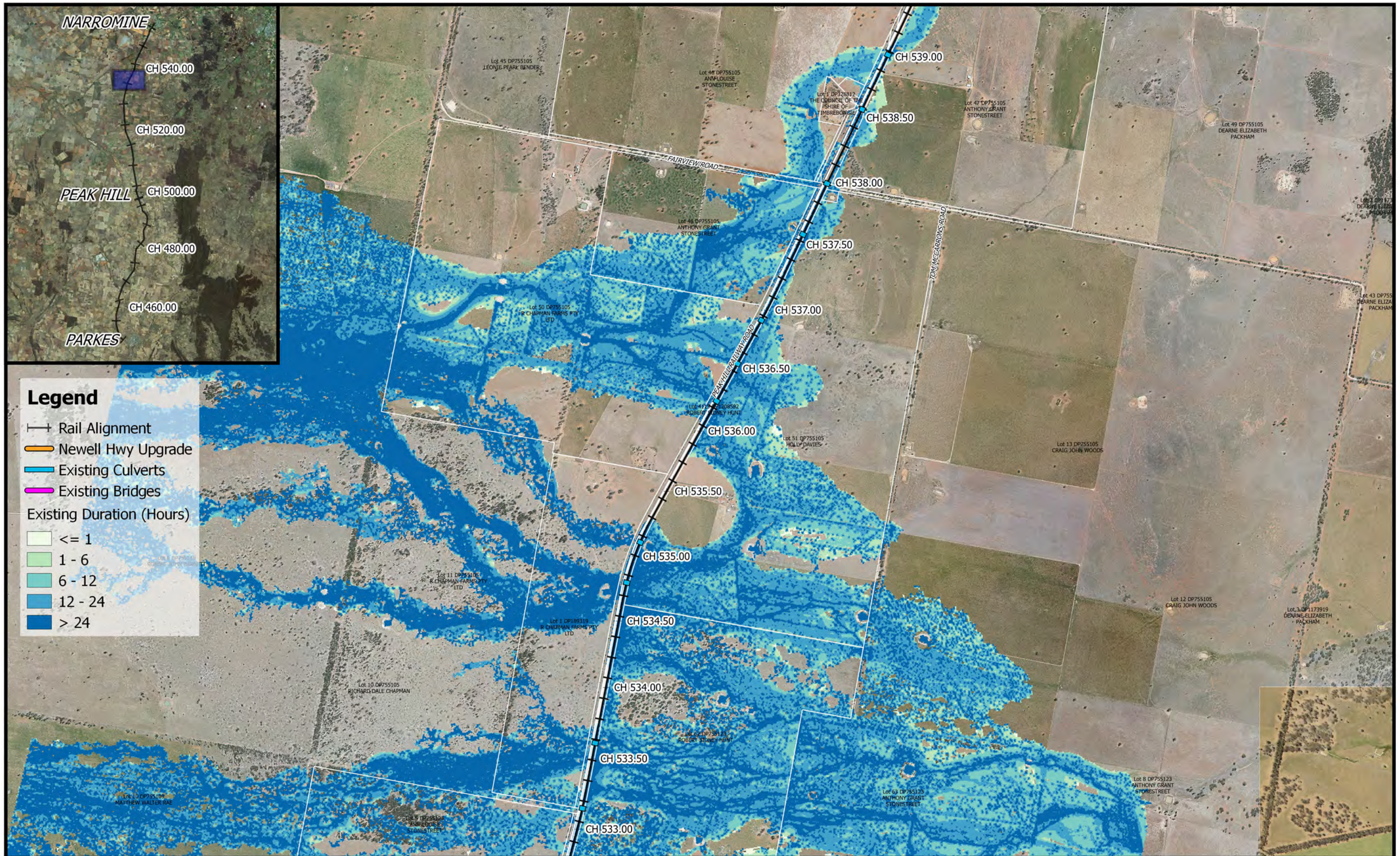
Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

Light Yellow	<= 1
Yellow-Green	1 - 6
Green	6 - 12
Blue-Green	12 - 24
Dark Blue	> 24

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D21 18% AEP Existing Flood Duration - CH 533.00</p>
	Rev: A			
	Prepared By: YeohM			



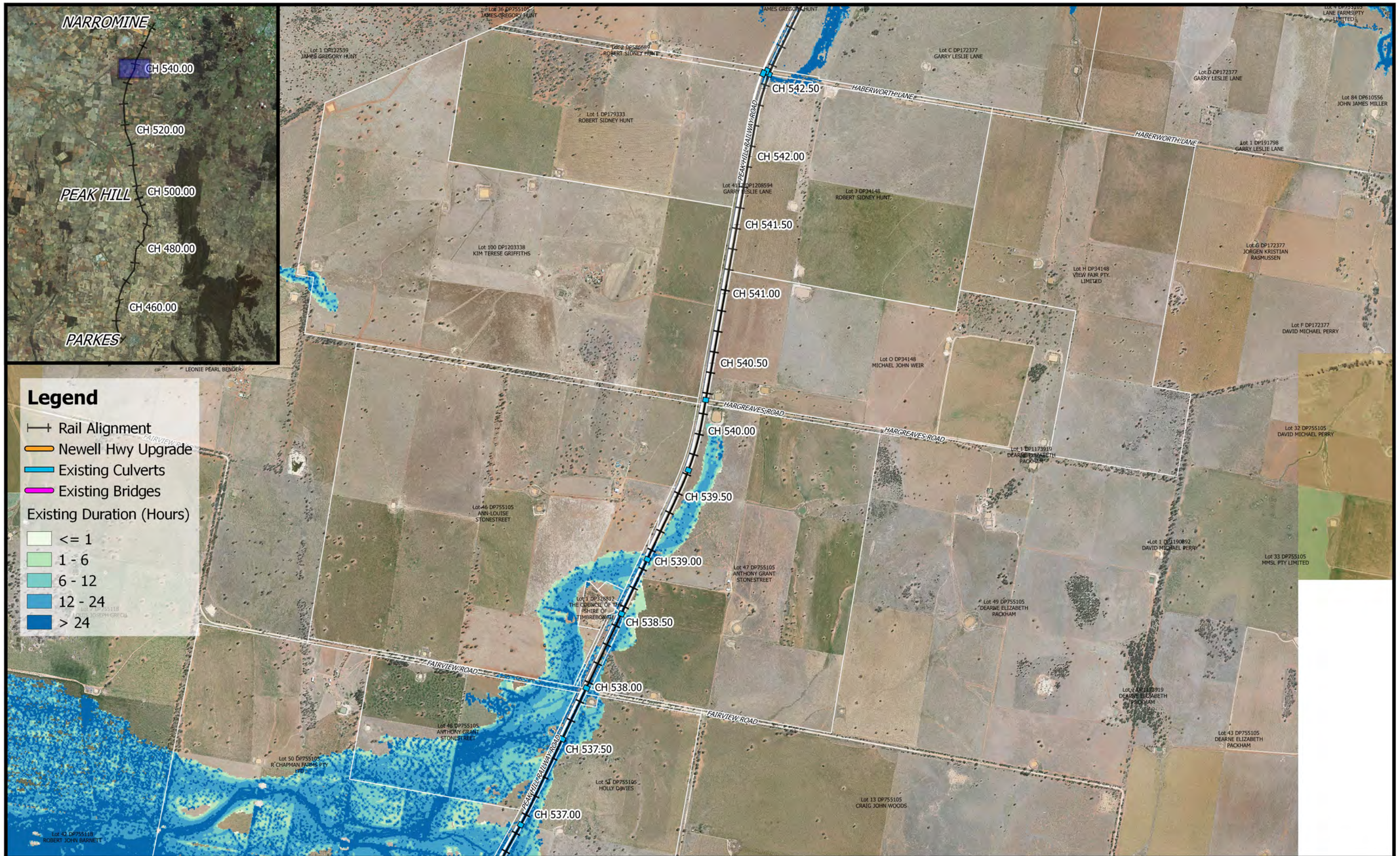
Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

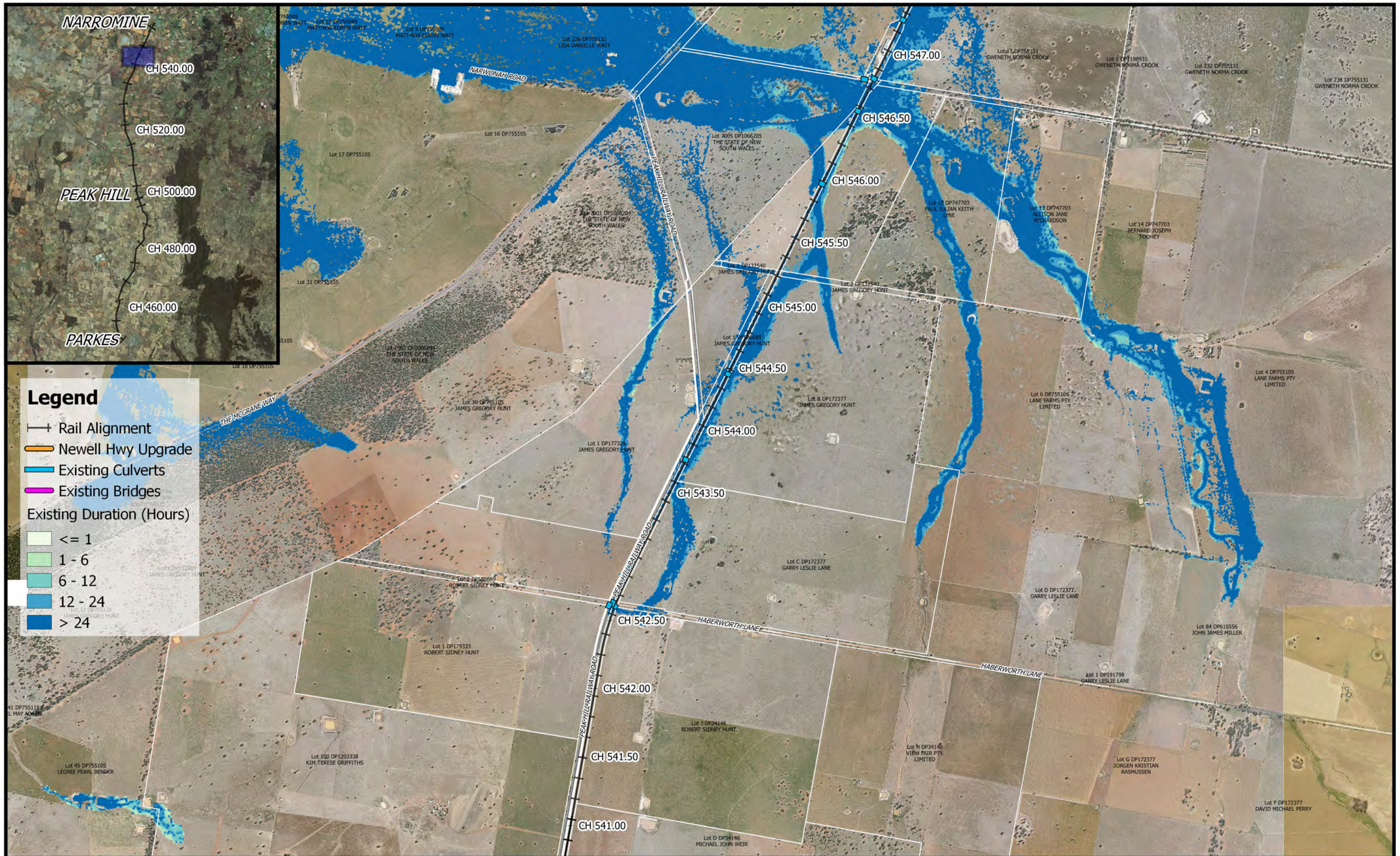
Existing Duration (Hours)

Lightest Blue	<= 1
Light Blue	1 - 6
Medium Blue	6 - 12
Dark Blue	12 - 24
Very Dark Blue	> 24

	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018 Rev: A Prepared By: YeohM	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D22 18% AEP Existing Flood Duration - CH 535.00</p>
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	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55</p> <p>Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D23</p> <p>18% AEP Existing Flood Duration - CH 540.00</p>
			Rev: A	
			Prepared By: YeohM	



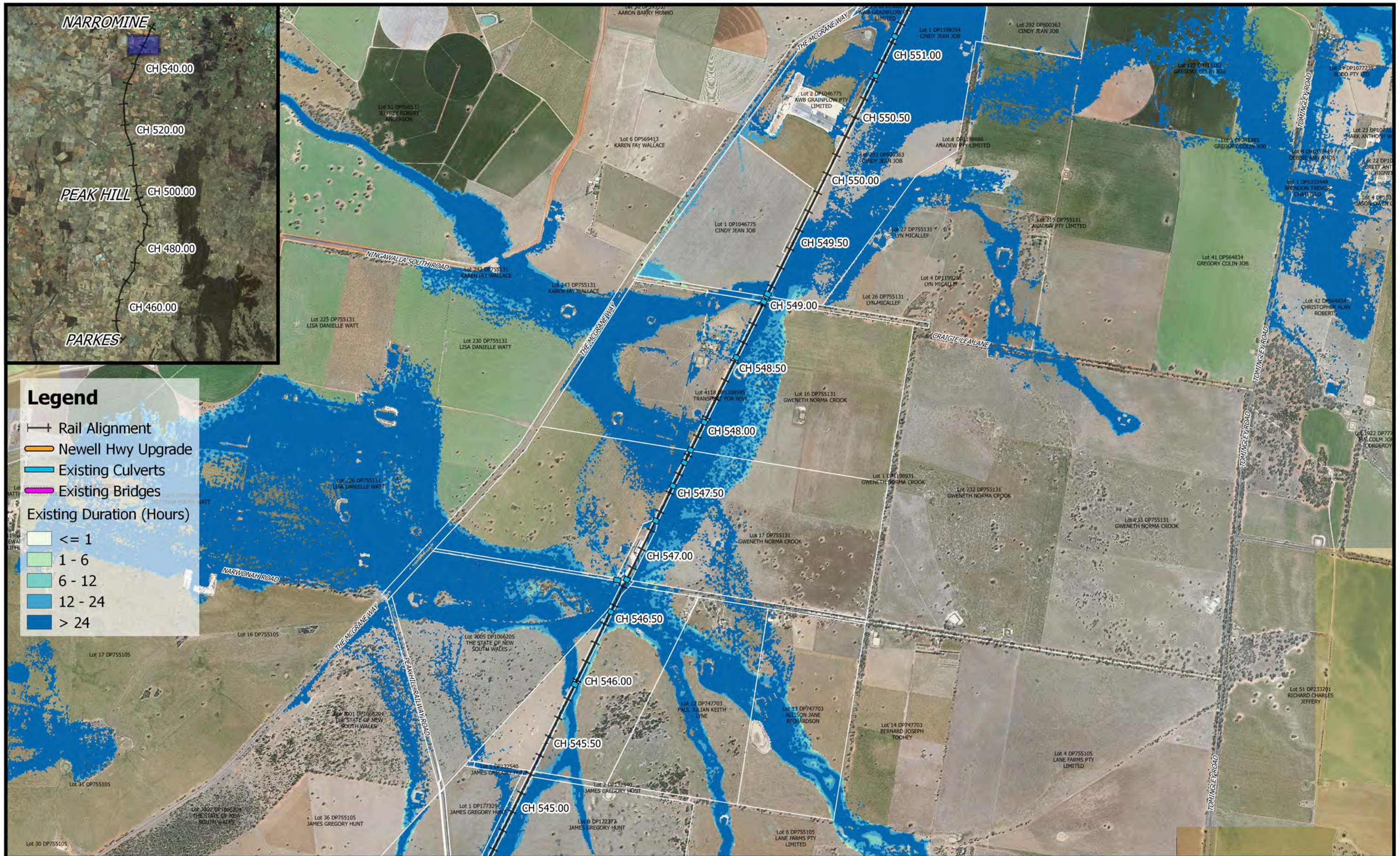
Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

	<p>1:25,000</p>		Date: 18/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D24 18% AEP Existing Flood Duration - CH 545.00</p>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: A	
	Prepared By: YeohM			



Legend

- +— Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

- Light Yellow: <= 1
- Light Green: 1 - 6
- Medium Green: 6 - 12
- Dark Green: 12 - 24
- Blue: > 24

	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 18/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX18D25 <i>18% AEP Existing Flood Duration - CH 550.00</i></p>
	Rev: A		Prepared By: YeohM	