



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

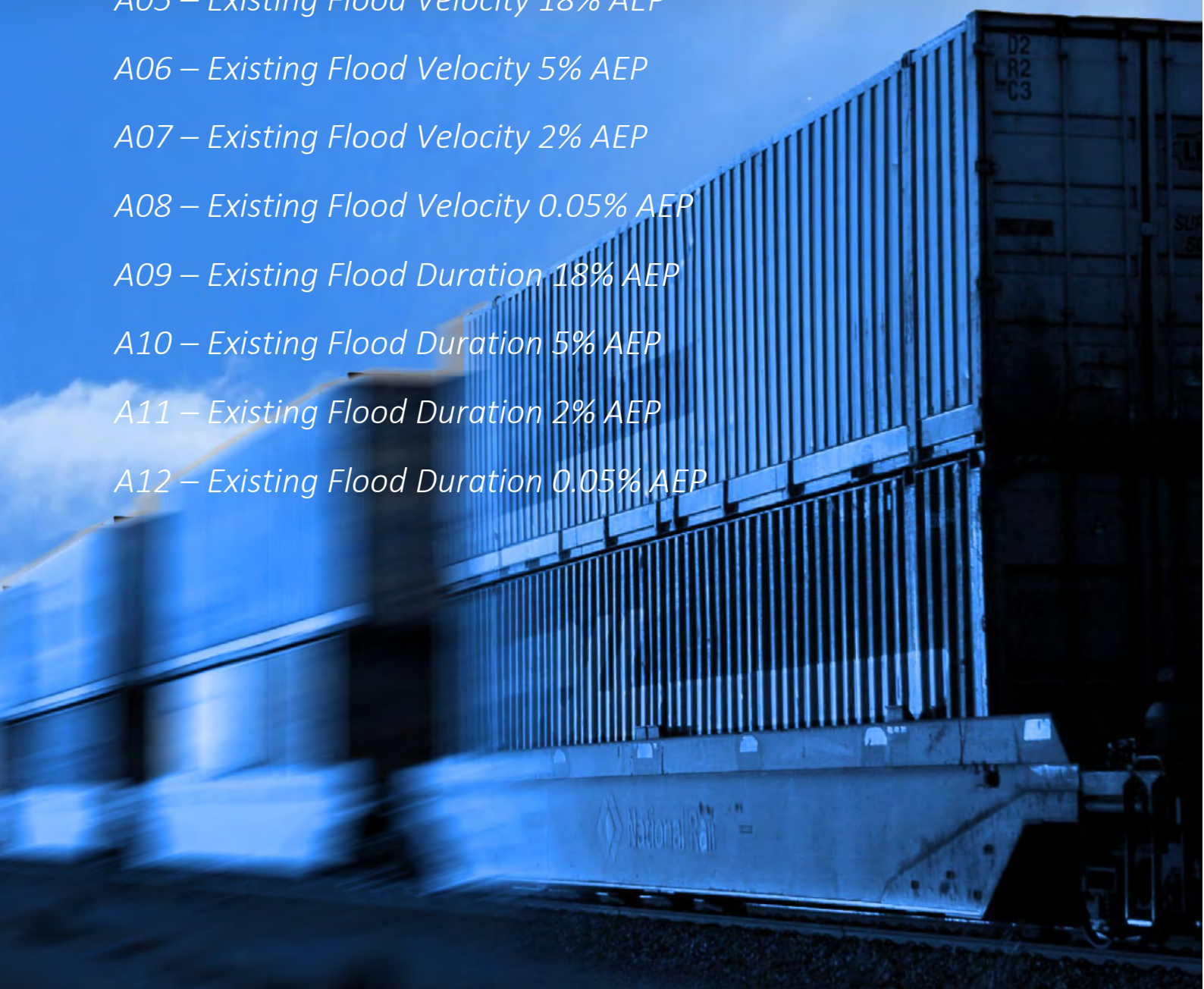
A08 – Existing Flood Velocity 0.05% AEP

A09 – Existing Flood Duration 18% AEP


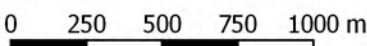

A10 – Existing Flood Duration 5% AEP

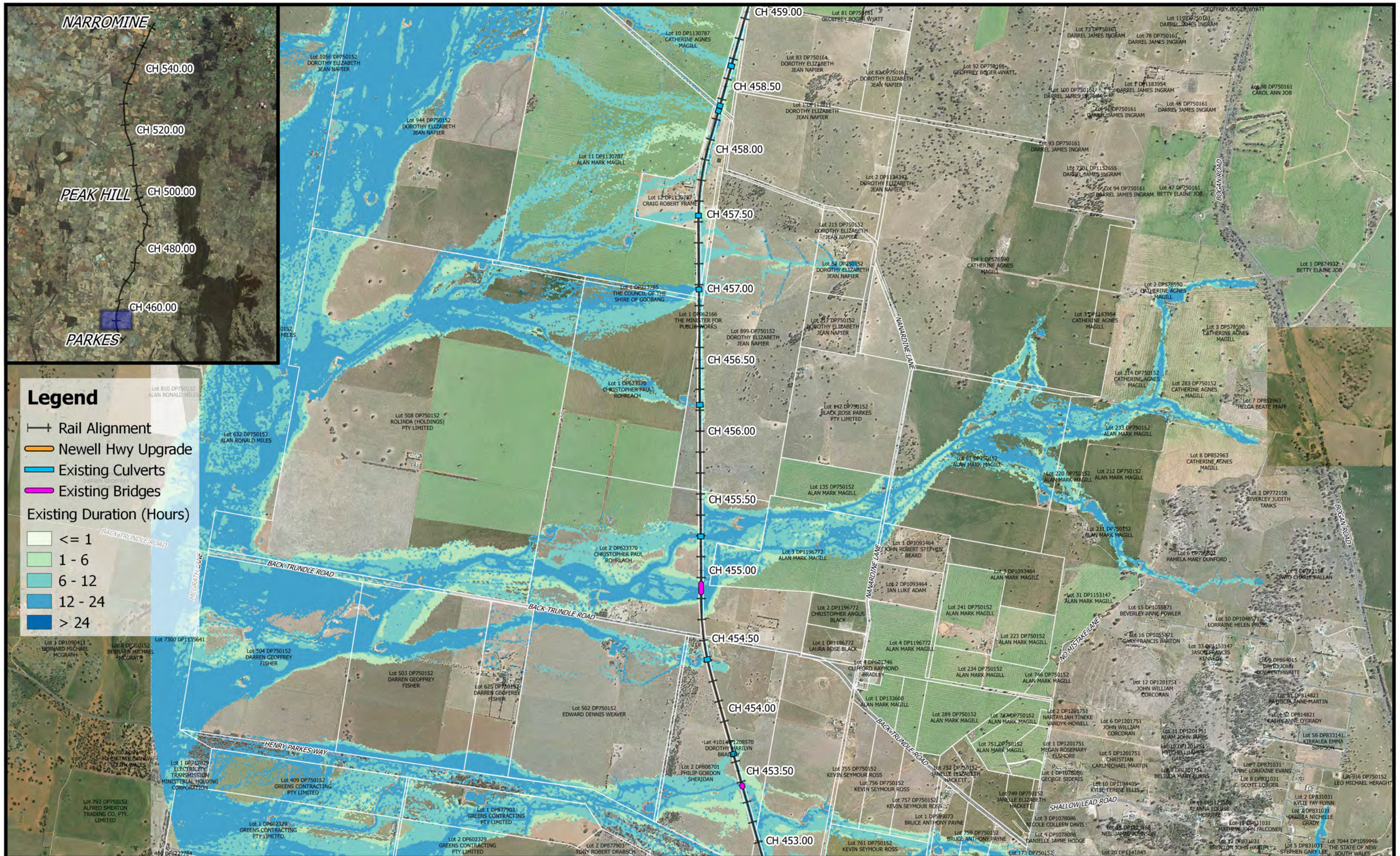
A11 – Existing Flood Duration 2% AEP

A12 – Existing Flood Duration 0.05% AEP





	 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 EX2D1 2% AEP Existing Flood Duration - CH 450.00
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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

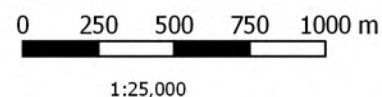
Rev: B

Prepared By: YeohM

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

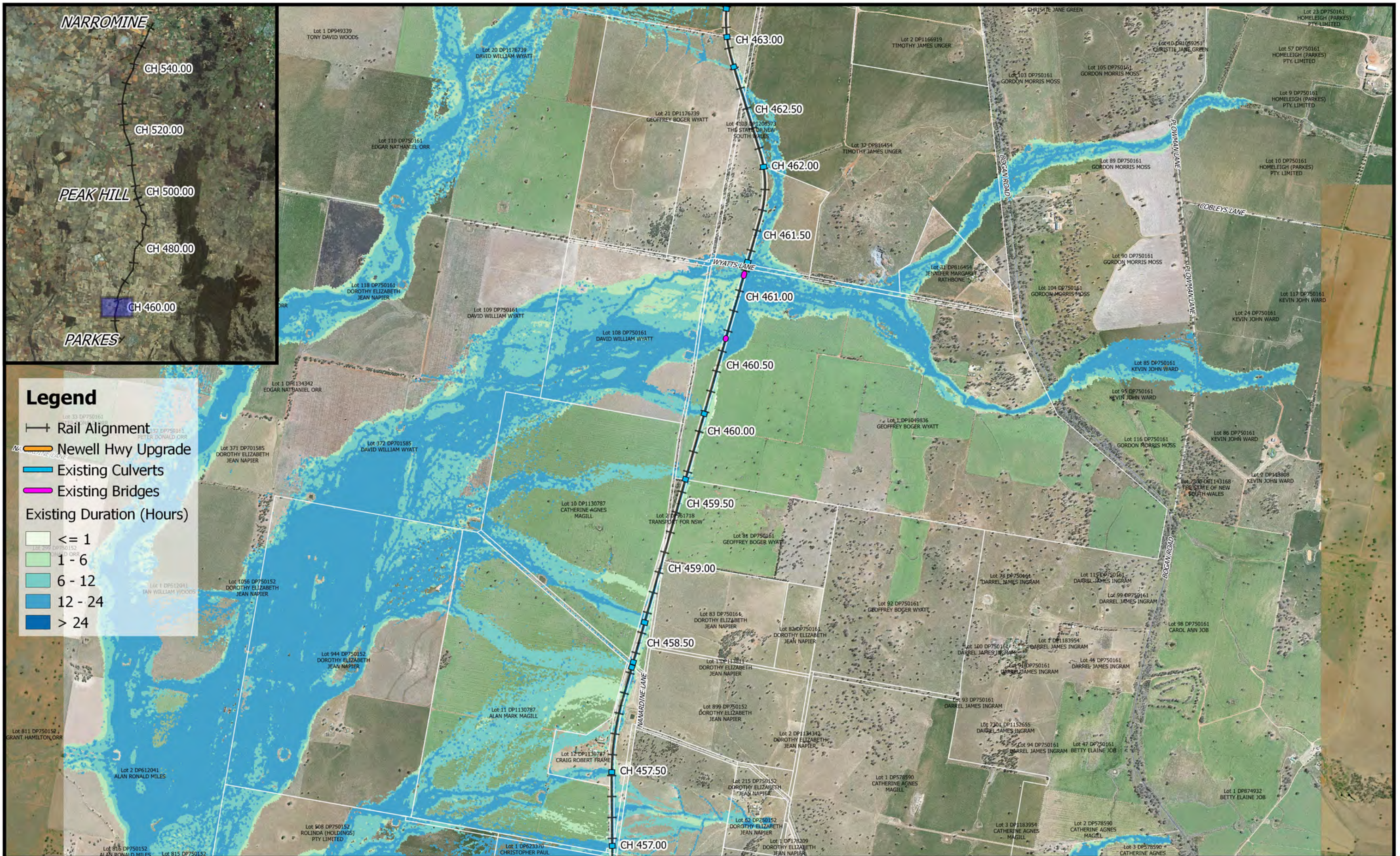
Figure EX2D2

2% AEP Existing Flood Duration - CH 455.00



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

	<p>1:25,000</p>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D3 <i>2% AEP Existing Flood Duration - CH 460.00</i></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>1:25,000</p>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D4 2% AEP Existing Flood Duration - CH 465.00</p>	
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Rev: A		
			Prepared By: YeohM		



Legend

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

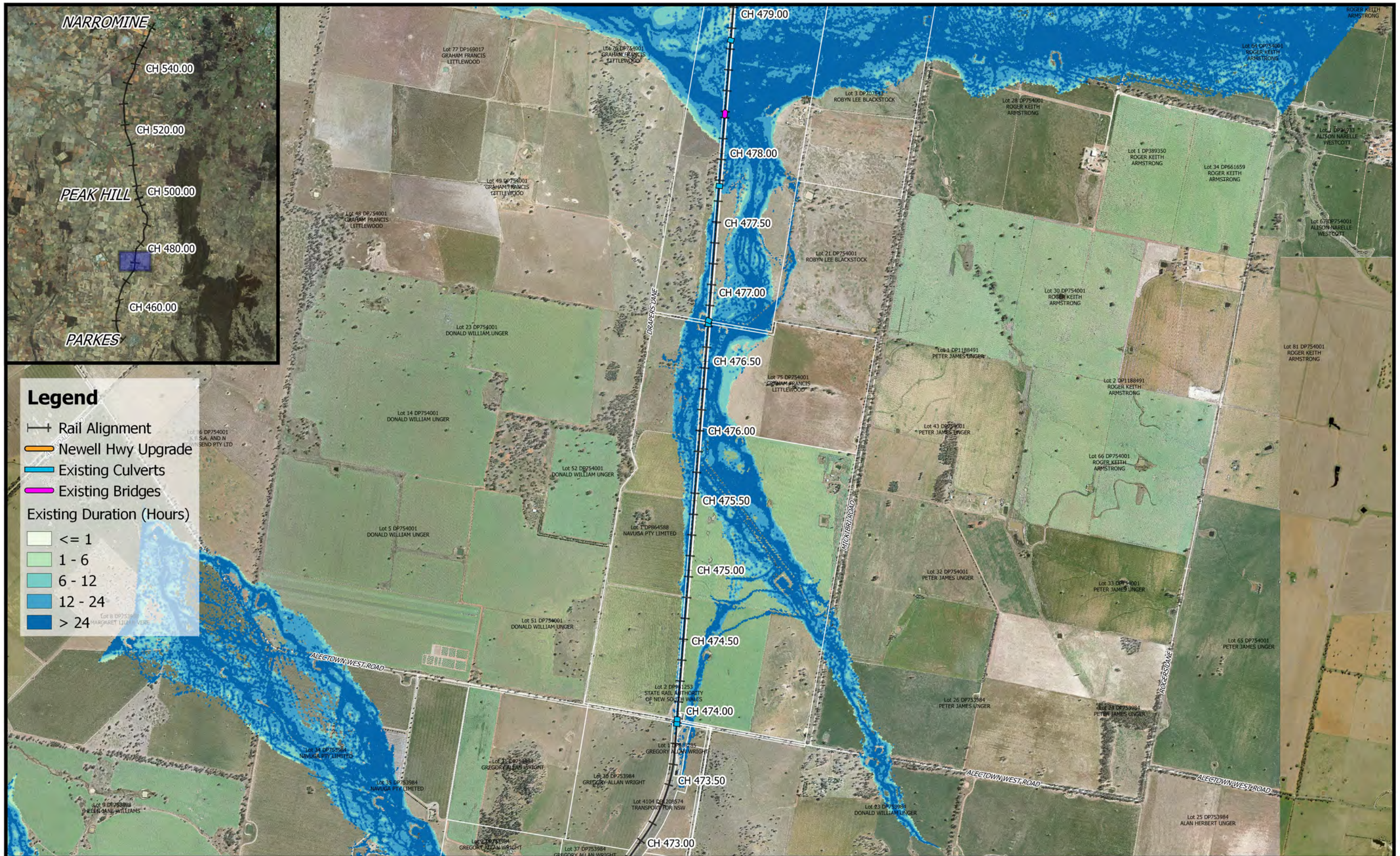
Existing Duration (Hours)

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

	<p>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>		<p>Date: 17/7/2018</p>	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D5 2% AEP Existing Flood Duration - CH 470.00</p>	
			<p>Rev: A</p>		
			<p>Prepared By: YeohM</p>		



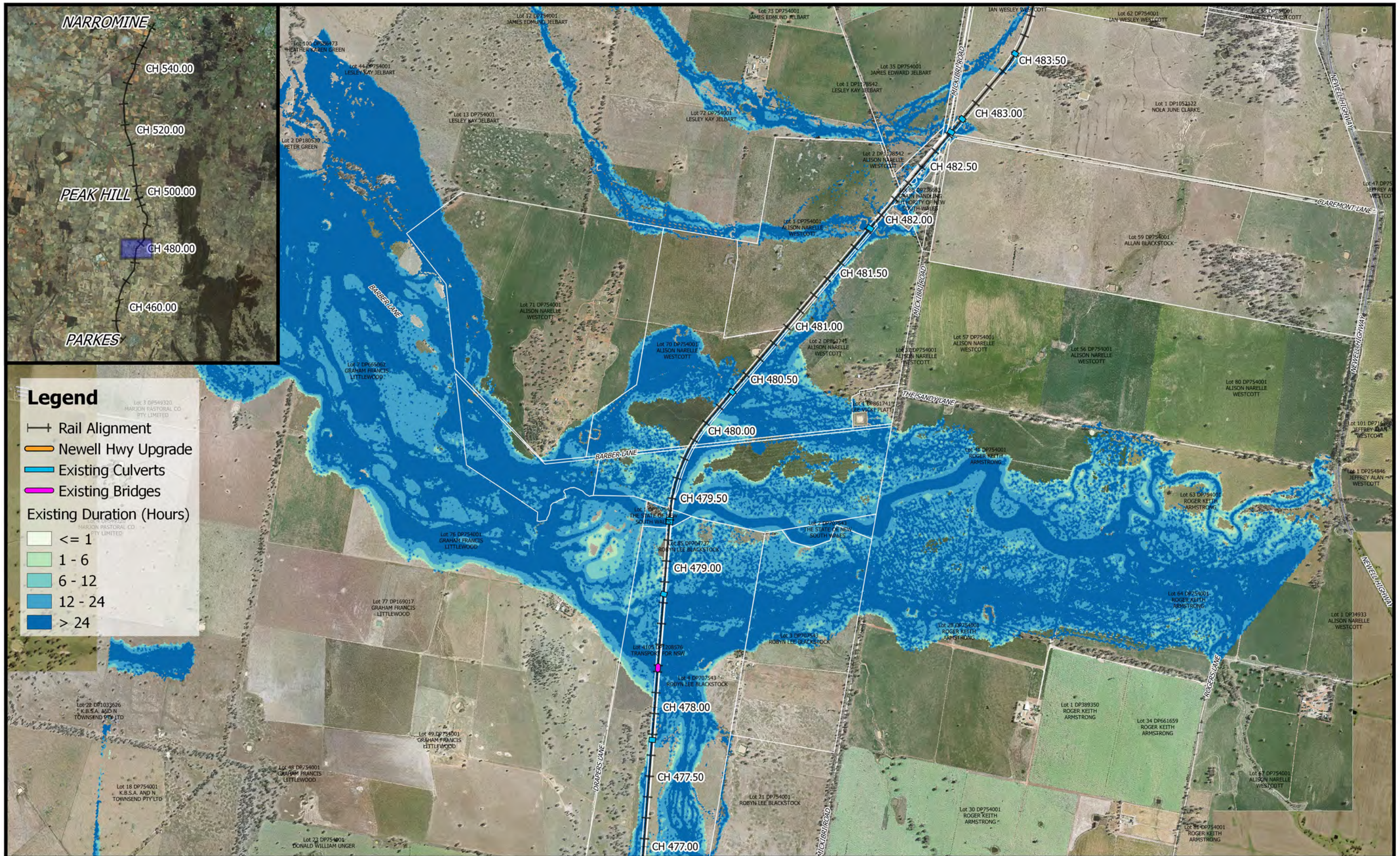
	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 17/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX2D6 2% AEP Existing Flood Duration - CH 472.00
			Rev: A	
			Prepared By: YeohM	



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: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D7 <i>2% AEP Existing Flood Duration - CH 475.00</i></p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Rev: A	
	Prepared By: YeohM			



Legend

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

Existing Duration (Hours)


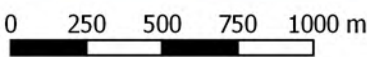

	<= 1
	1 - 6
	6 - 12
	12 - 24
	> 24

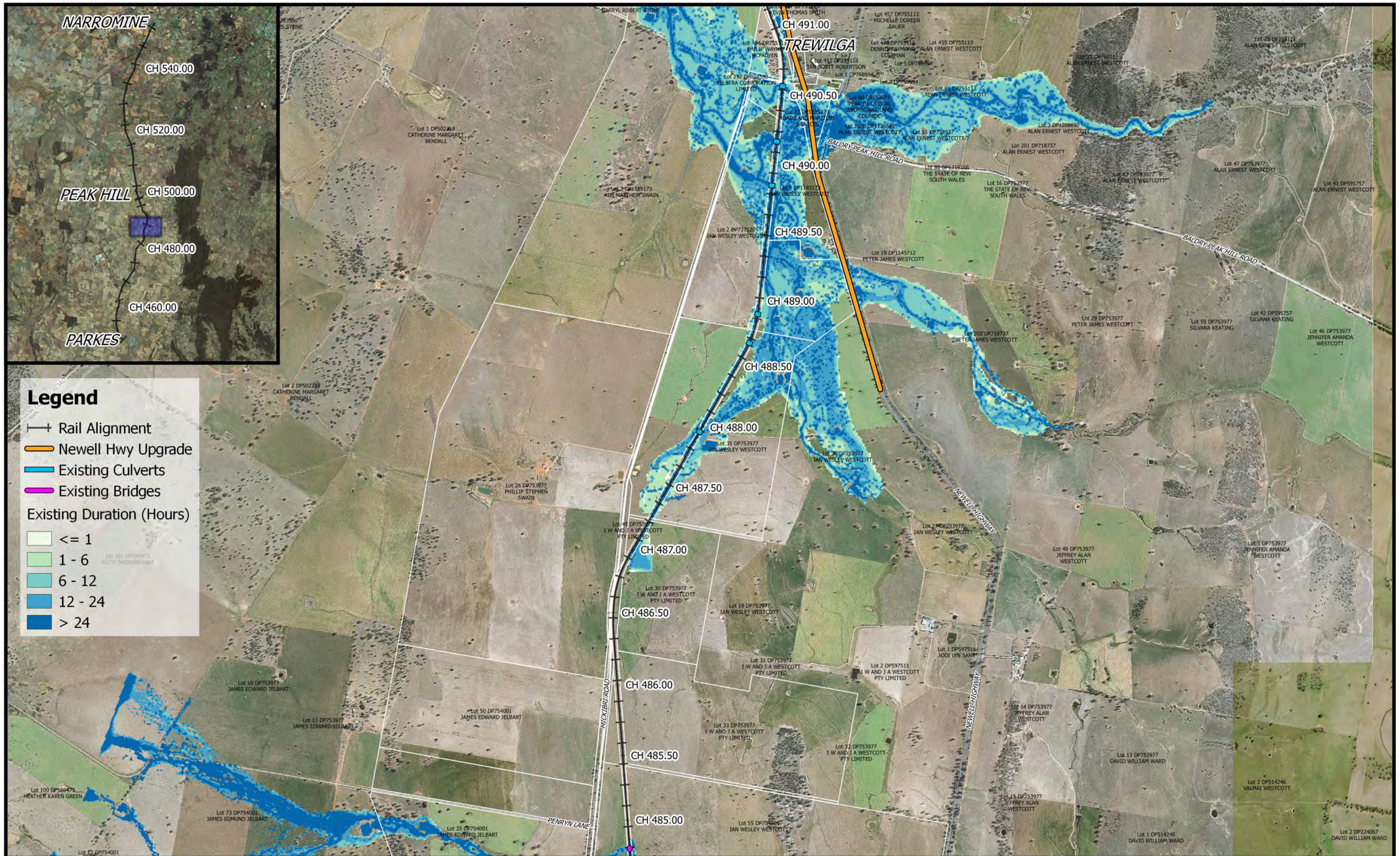
Date: 17/7/2018
 Rev: A
 Prepared By: YeohM

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

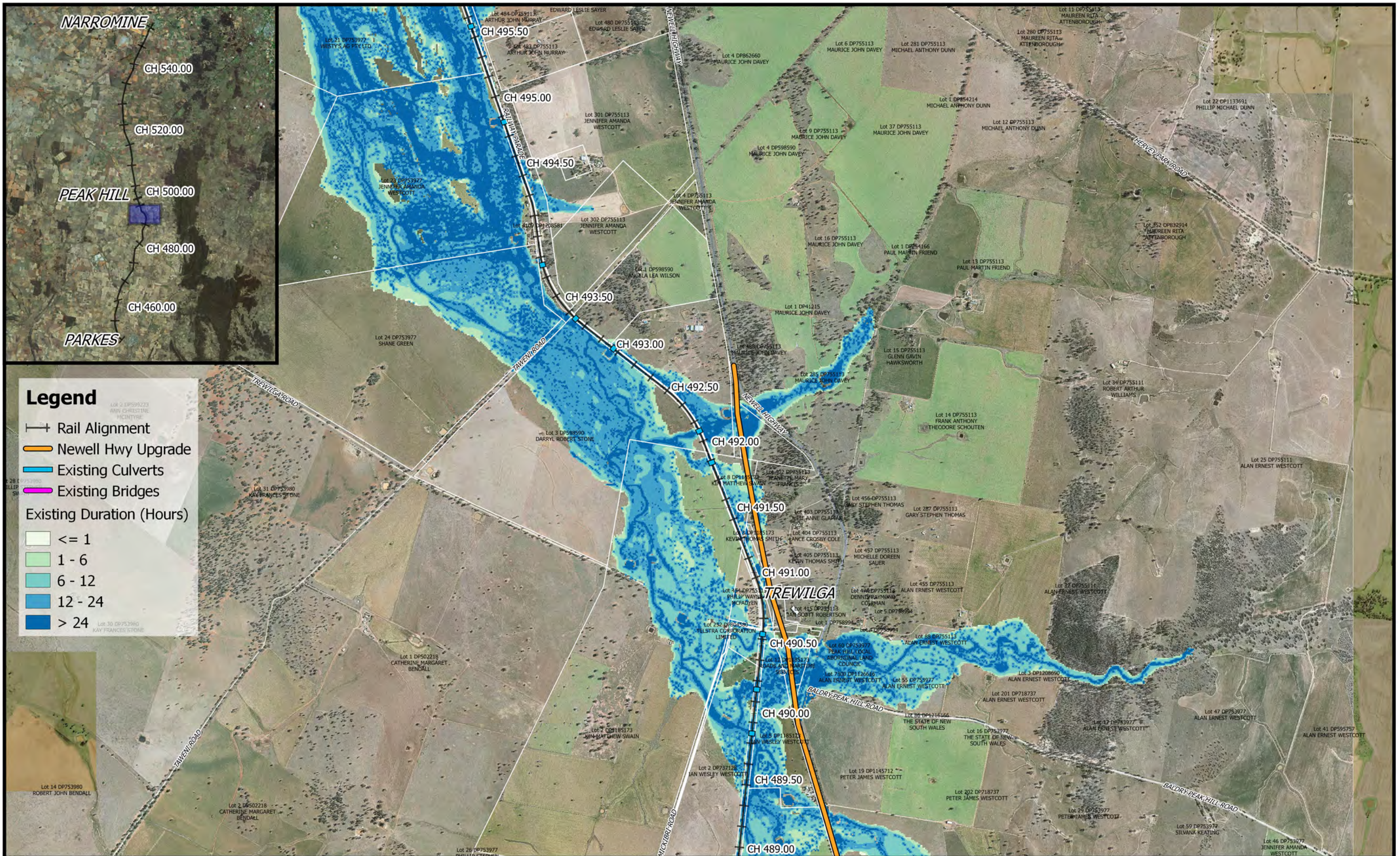
Figure EX2D8
 2% AEP Existing Flood Duration - CH 480.00



	 1:25,000		Date: 17/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: A	
			Prepared By: YeohM	Figure EX2D9 2% AEP Existing Flood Duration - CH 485.00



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 17/7/2018	<p align="right">Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX2D10 2% AEP Existing Flood Duration - CH 490.00</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

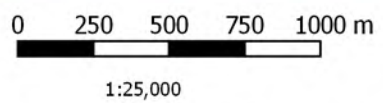
Date: 17/7/2018

Rev: A

Prepared By: YeohM

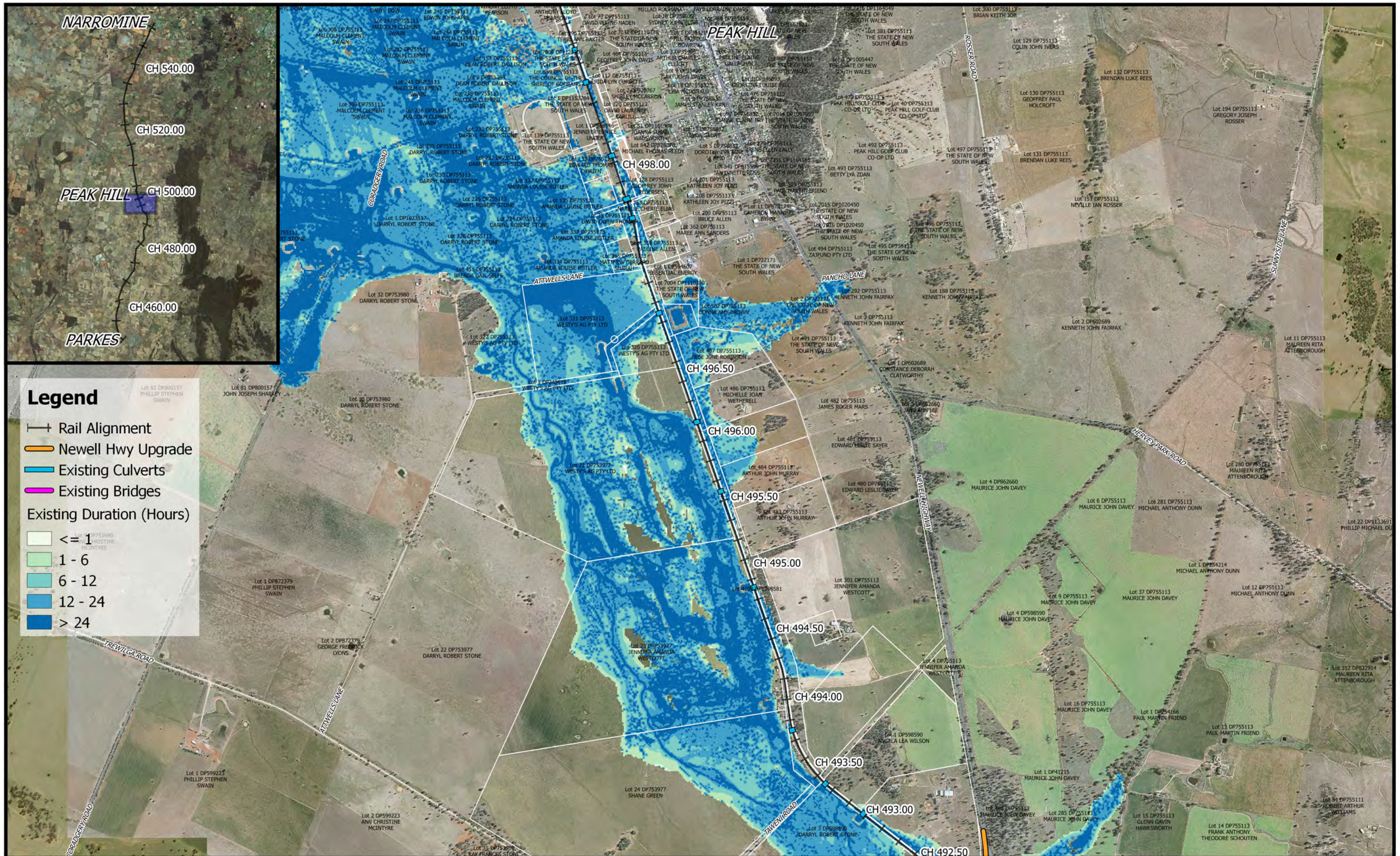
Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX2D11
2% AEP Existing Flood Duration - CH 492.00



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



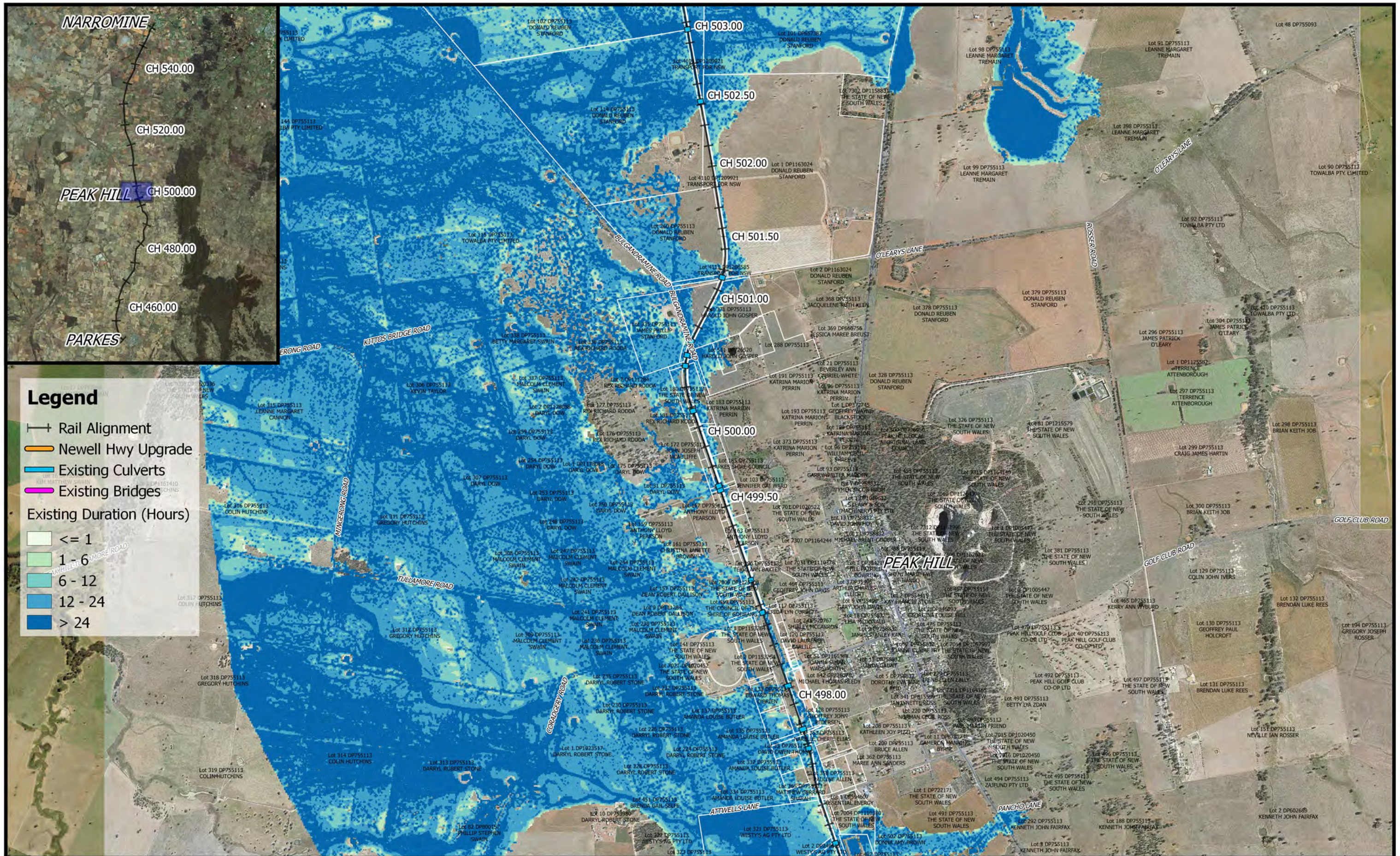


Legend

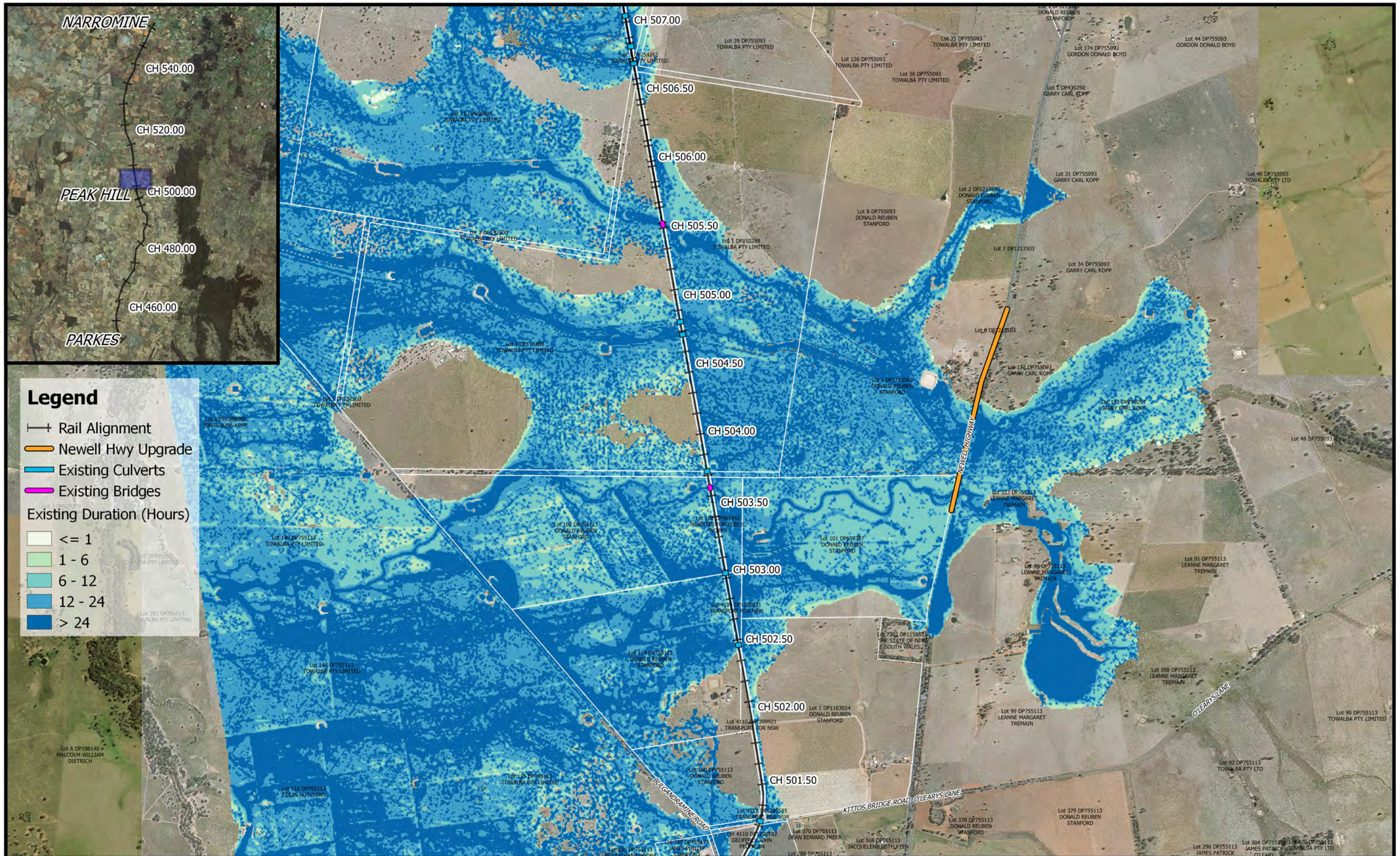
- Rail Alignment
 - Newell Hwy Upgrade
 - Existing Culverts
 - Existing Bridges
- Existing Duration (Hours)

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

	<p>1:25,000</p>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D12 2% AEP Existing Flood Duration - CH 495.00</p>	
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		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: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D13 2% AEP Existing Flood Duration - CH 500.00</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



0 250 500 750 1000 m

1:25,000

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



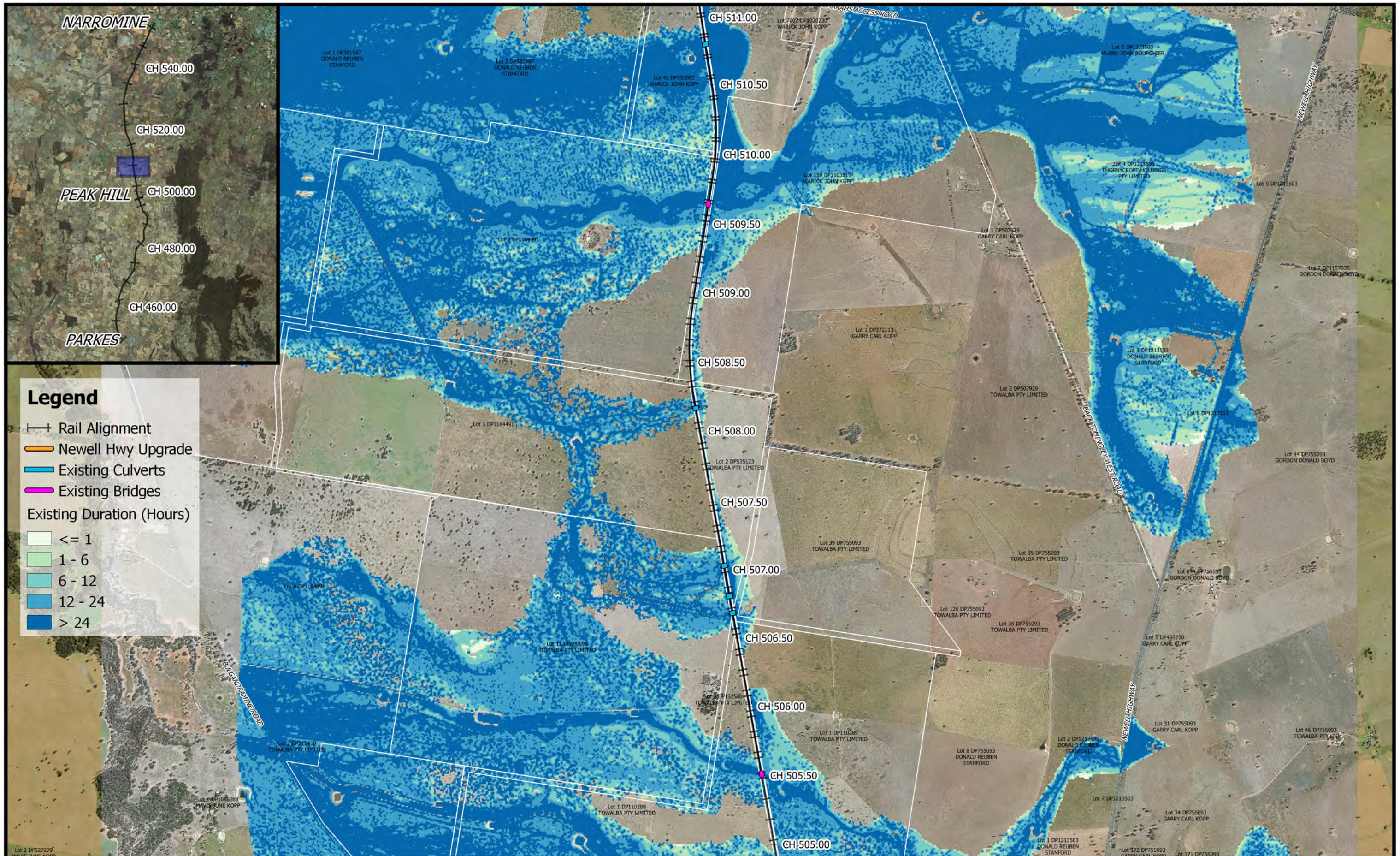
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX2D14
2% AEP Existing Flood Duration - CH 505.00



Legend

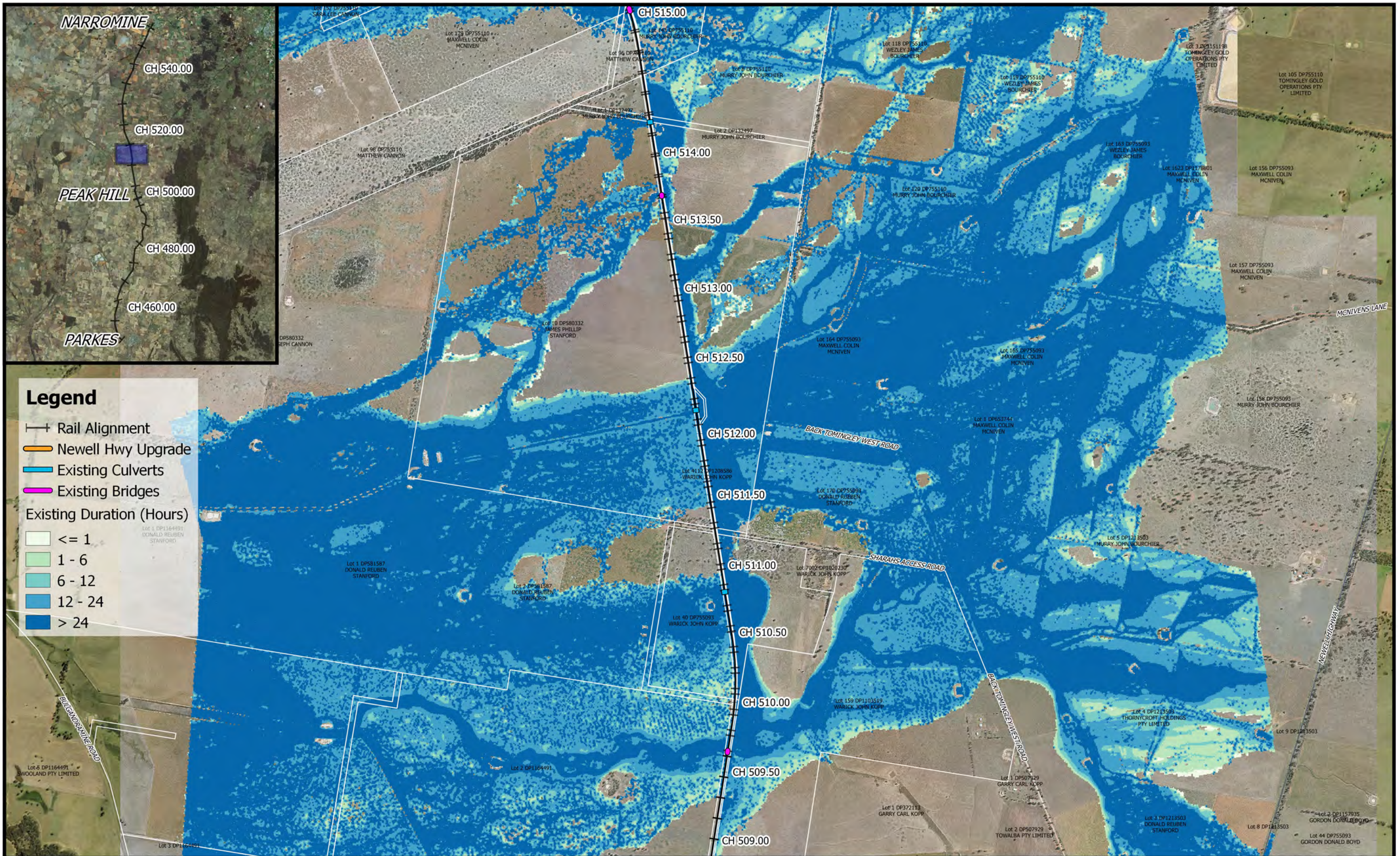
- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

Existing Duration (Hours)

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

	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 17/7/2018 Rev: A Prepared By: YeohM	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX2D15 <i>2% AEP Existing Flood Duration - CH 510.00</i>
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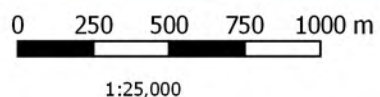


Legend

- 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



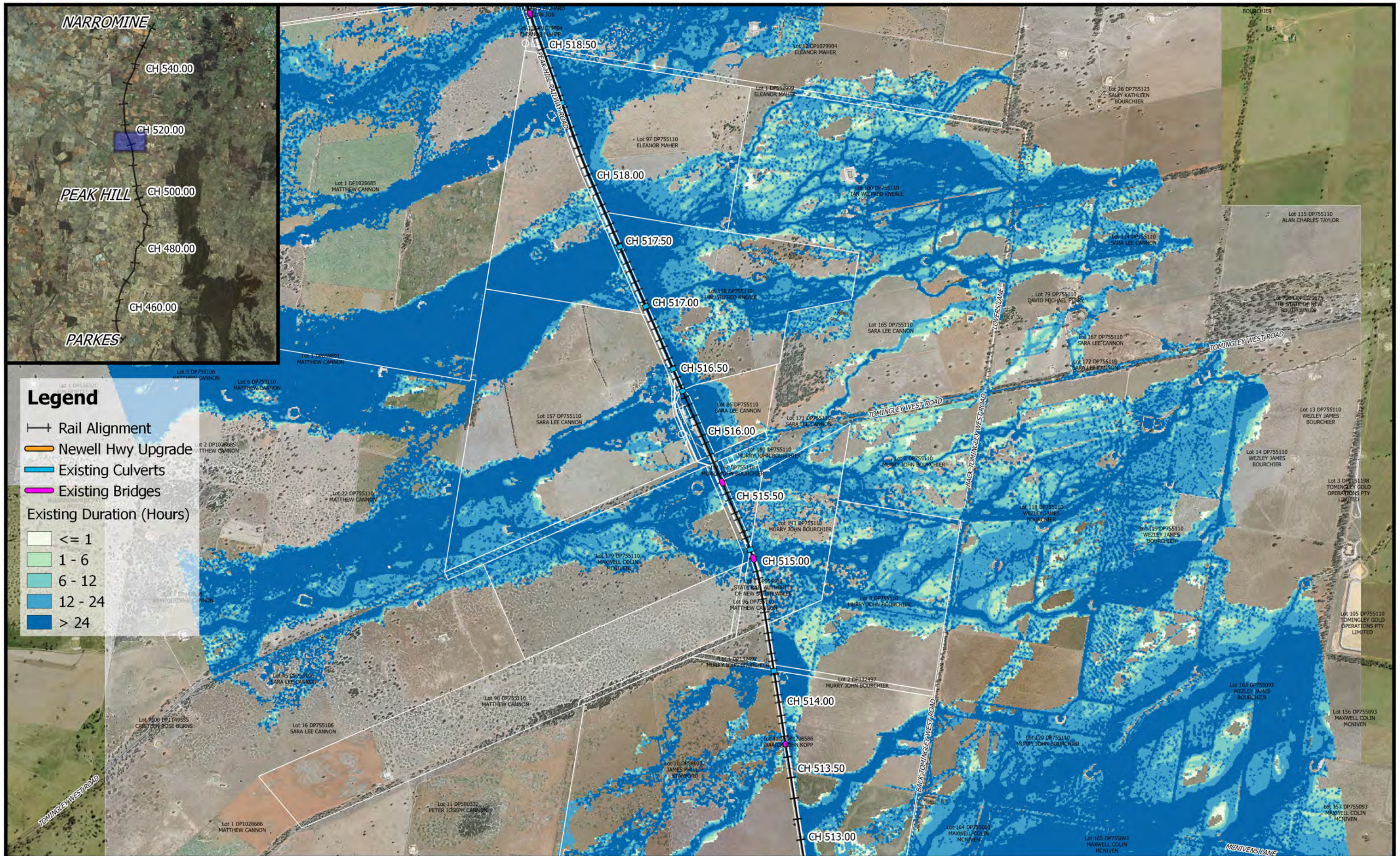
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX2D16
2% AEP Existing Flood Duration - CH 512.00



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



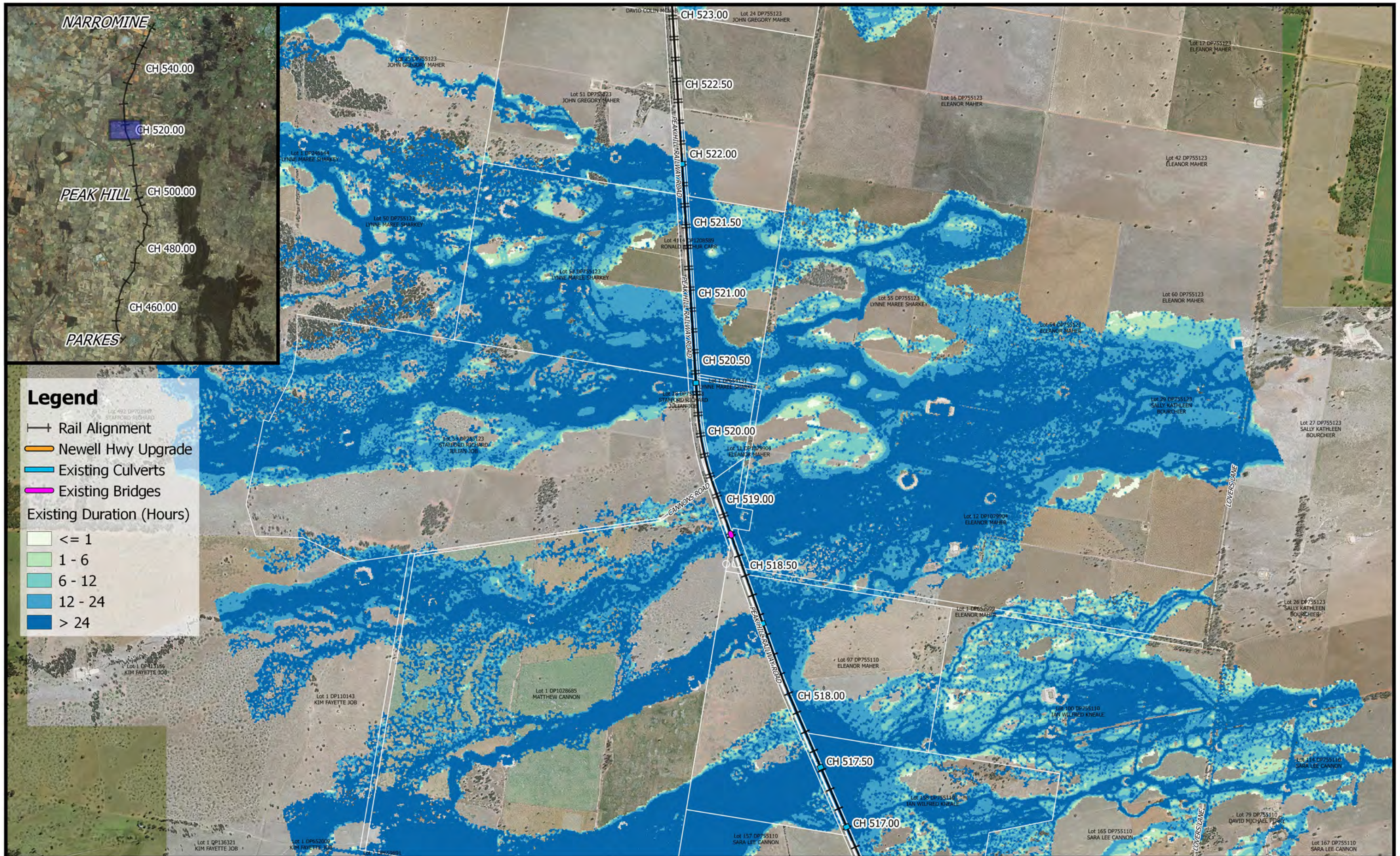
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX2D17
2% 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

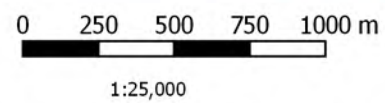
Date: 17/7/2018

Rev: A

Prepared By: YeohM

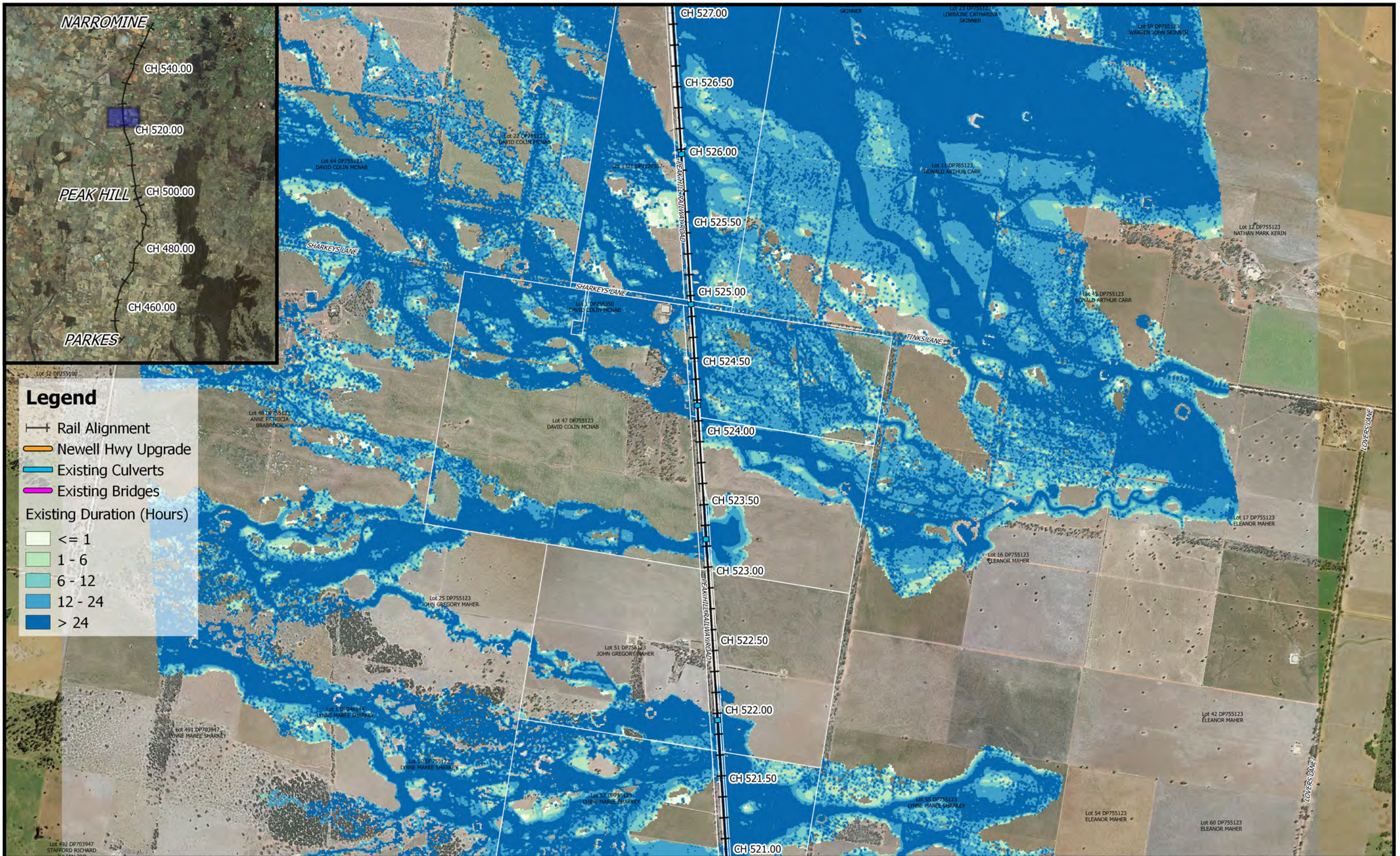
Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX2D18
2% AEP Existing Flood Duration - CH 520.00



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





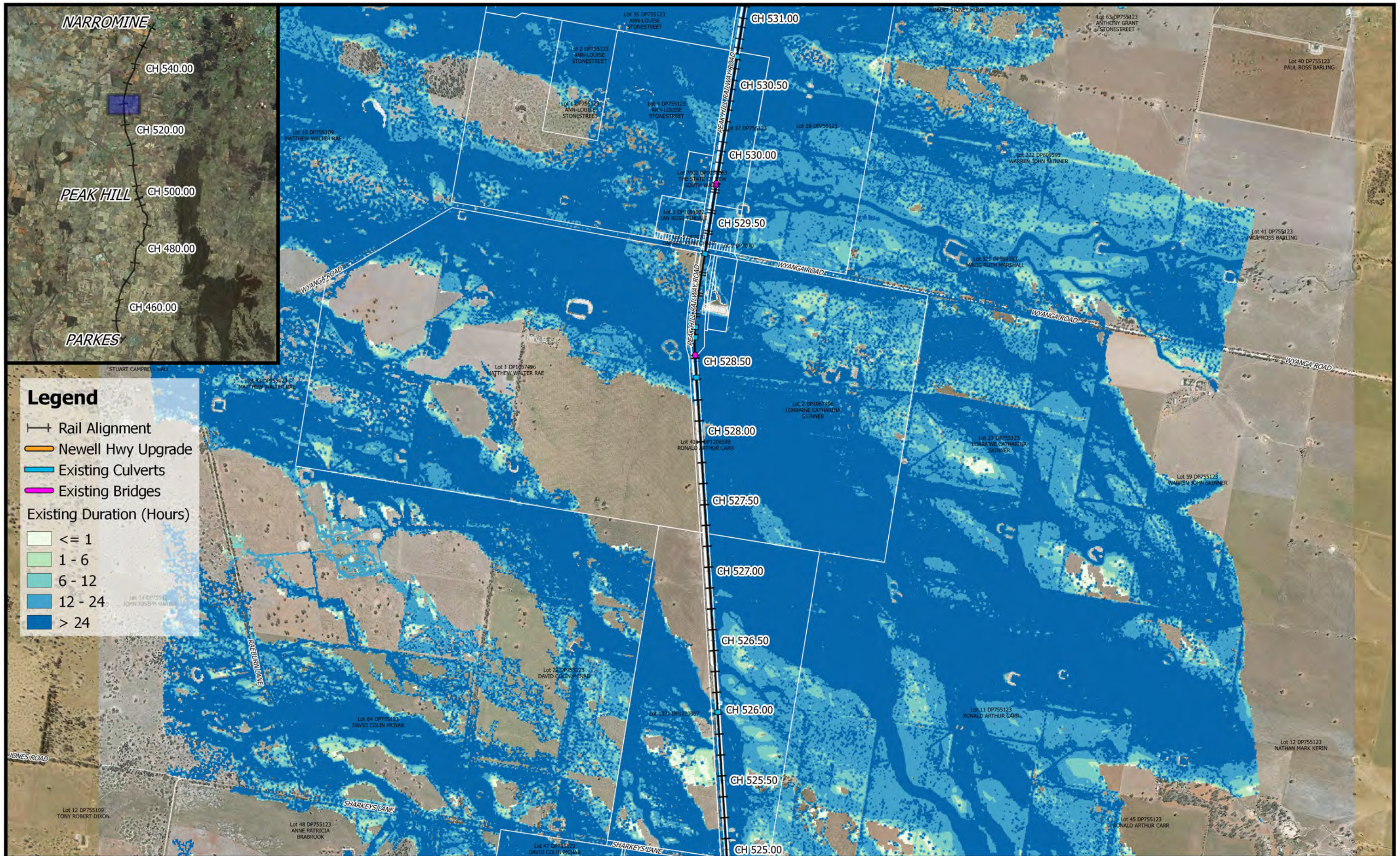
Legend

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

Existing Duration (Hours)

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

	<p>1:25,000</p>	<p>M M MOTT MACDONALD</p>	Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D19 <i>2% AEP Existing Flood Duration - CH 525.00</i></p>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: A	
	Prepared By: YeohM			



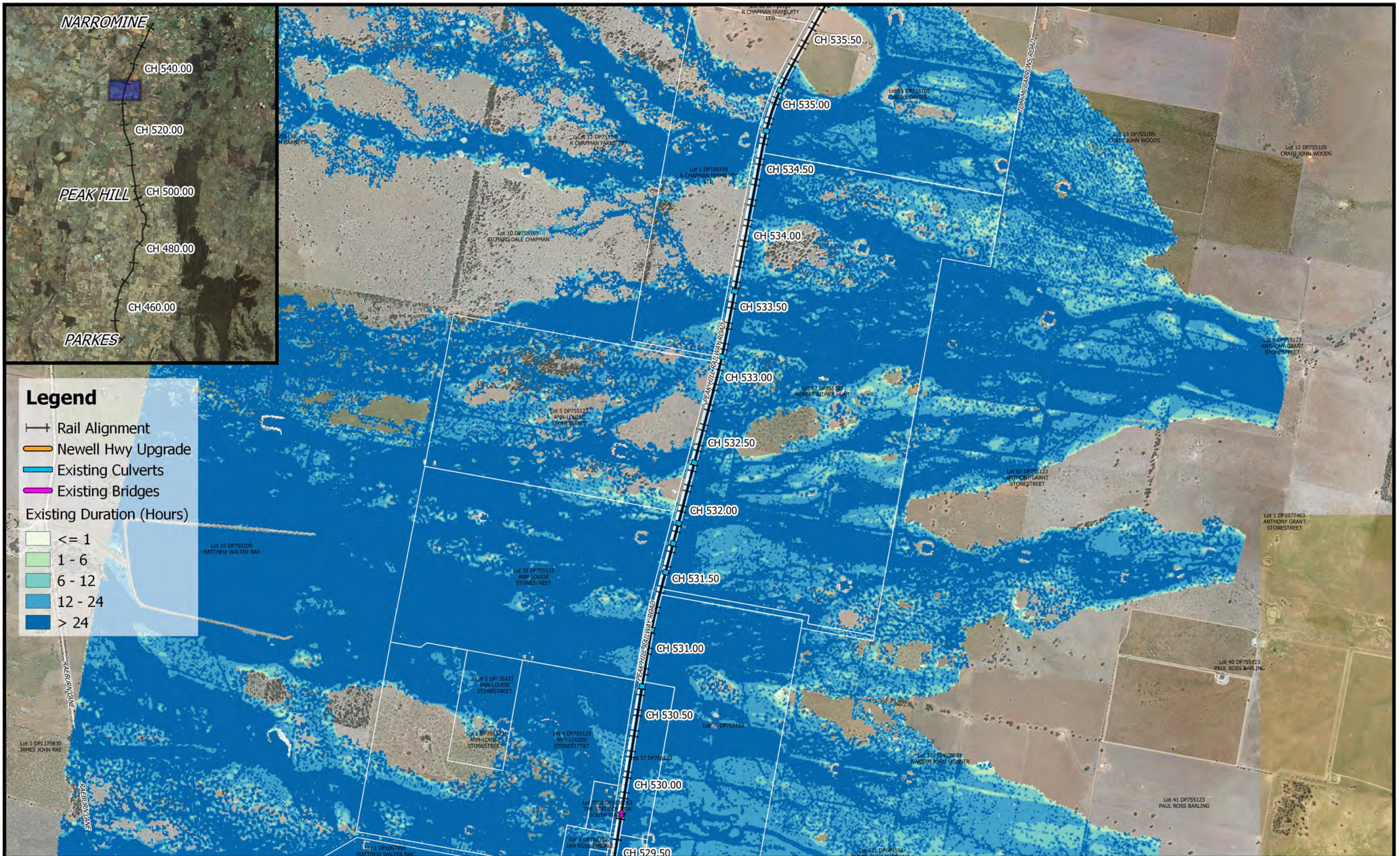
Legend

- 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: 17/7/2018	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D20</p> <p><i>2% AEP Existing Flood Duration - CH 530.00</i></p>
	Rev: A			
	Prepared By: YeohM			



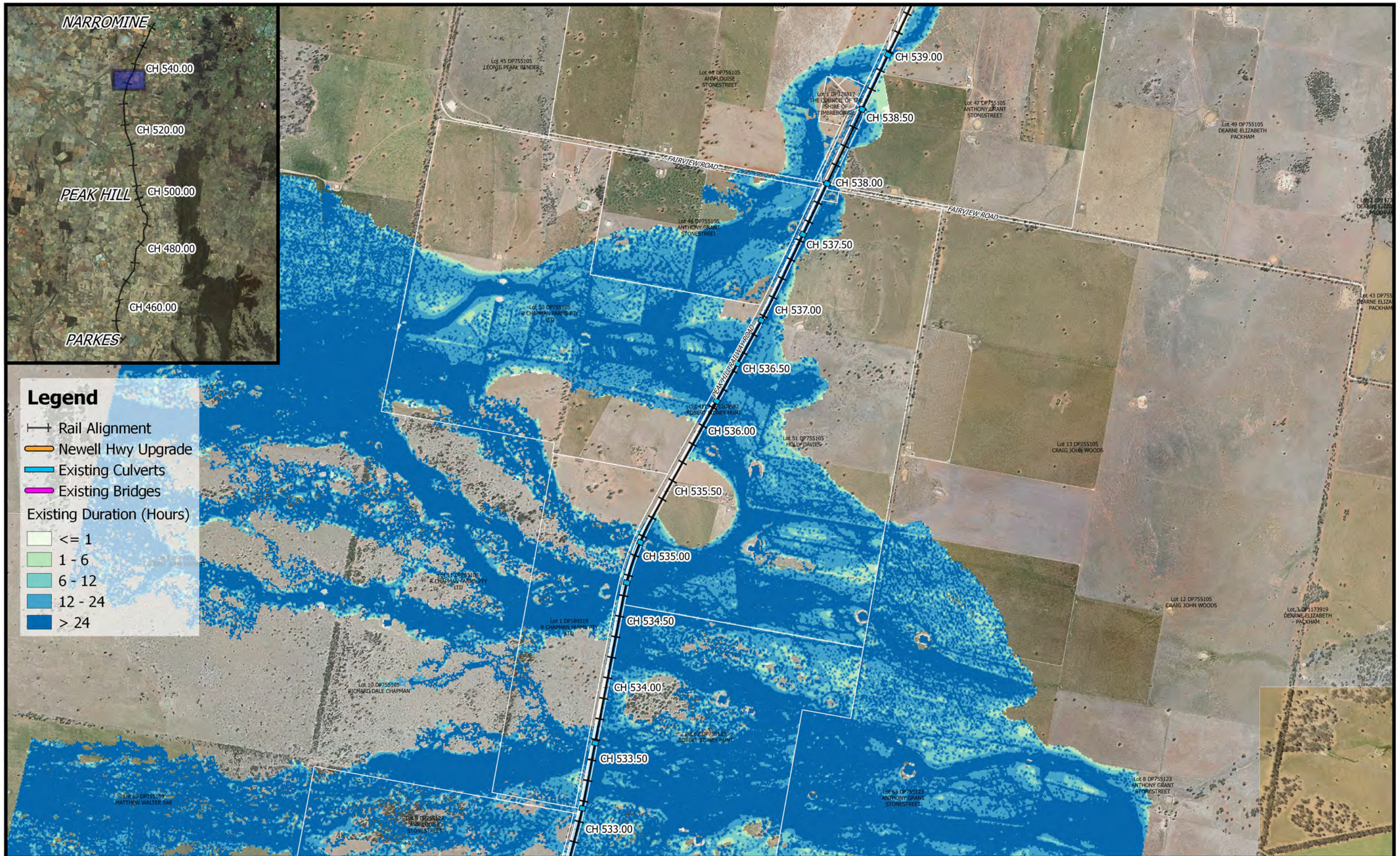
Legend

- +— 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
Darkest Blue	> 24

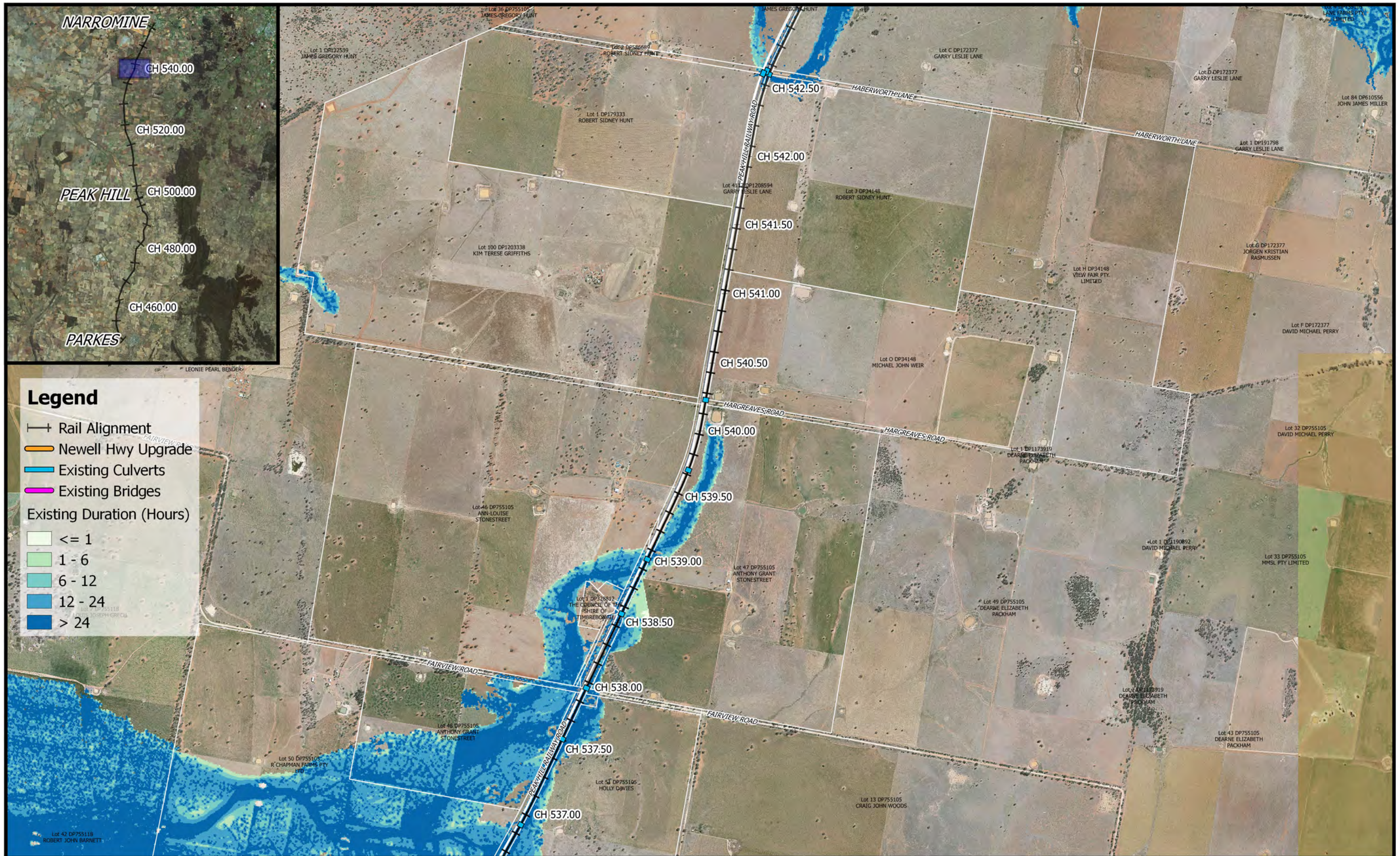
	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 17/7/2018 Rev: A Prepared By: YeohM	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D21 2% AEP Existing Flood Duration - CH 533.00</p>
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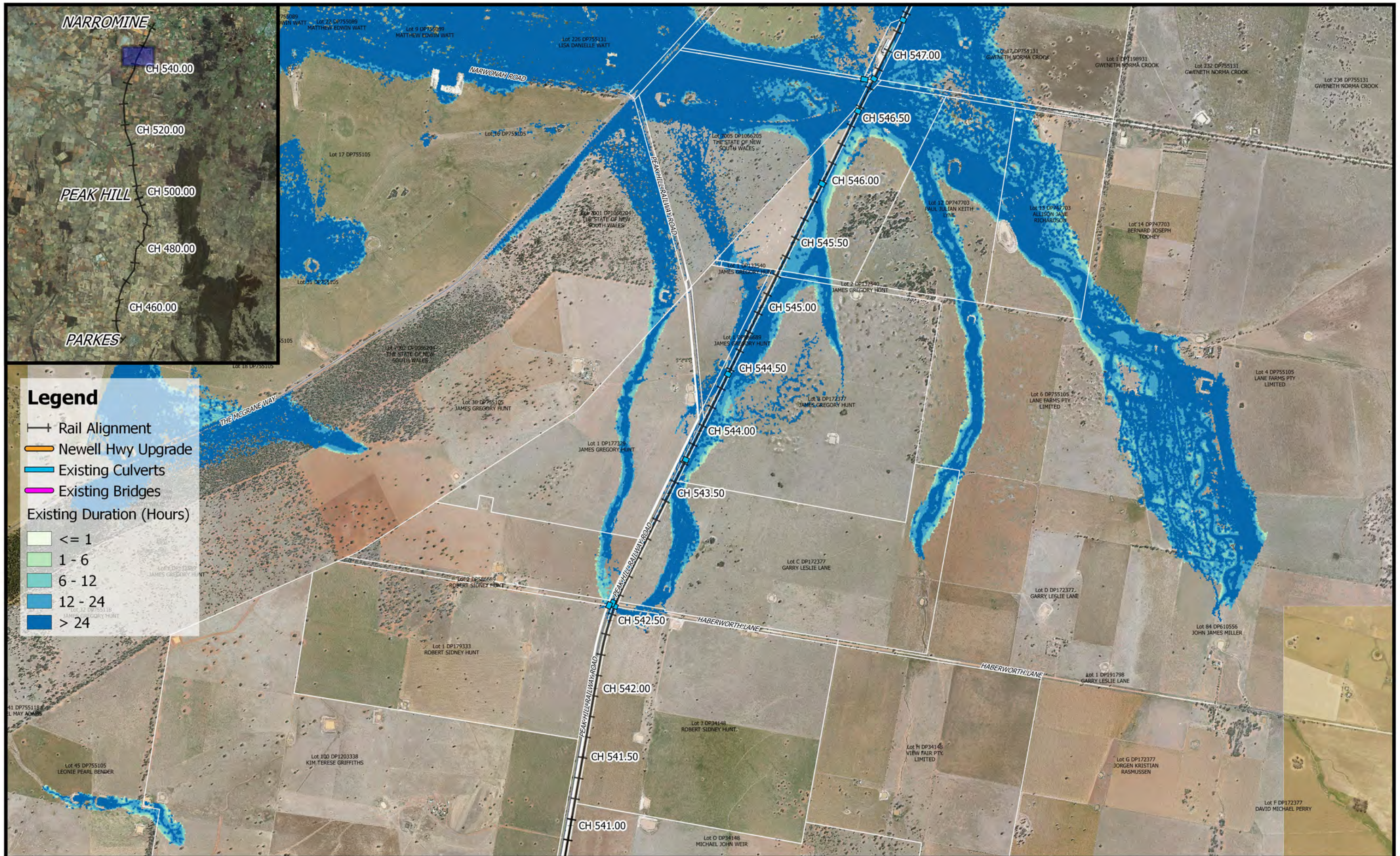
Legend

- 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>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D22 2% AEP Existing Flood Duration - CH 535.00</p>
	Rev: A			
	Prepared By: YeohM			



	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55</p> <p>Scale ratio correct when printed at A3</p>		Date: 17/7/2018	<p align="center">Parkes to Narromine</p> <p align="center">DD100% - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure EX2D23</p> <p align="right">2% AEP Existing Flood Duration - CH 540.00</p>
			Rev: A	
			Prepared By: YeohM	



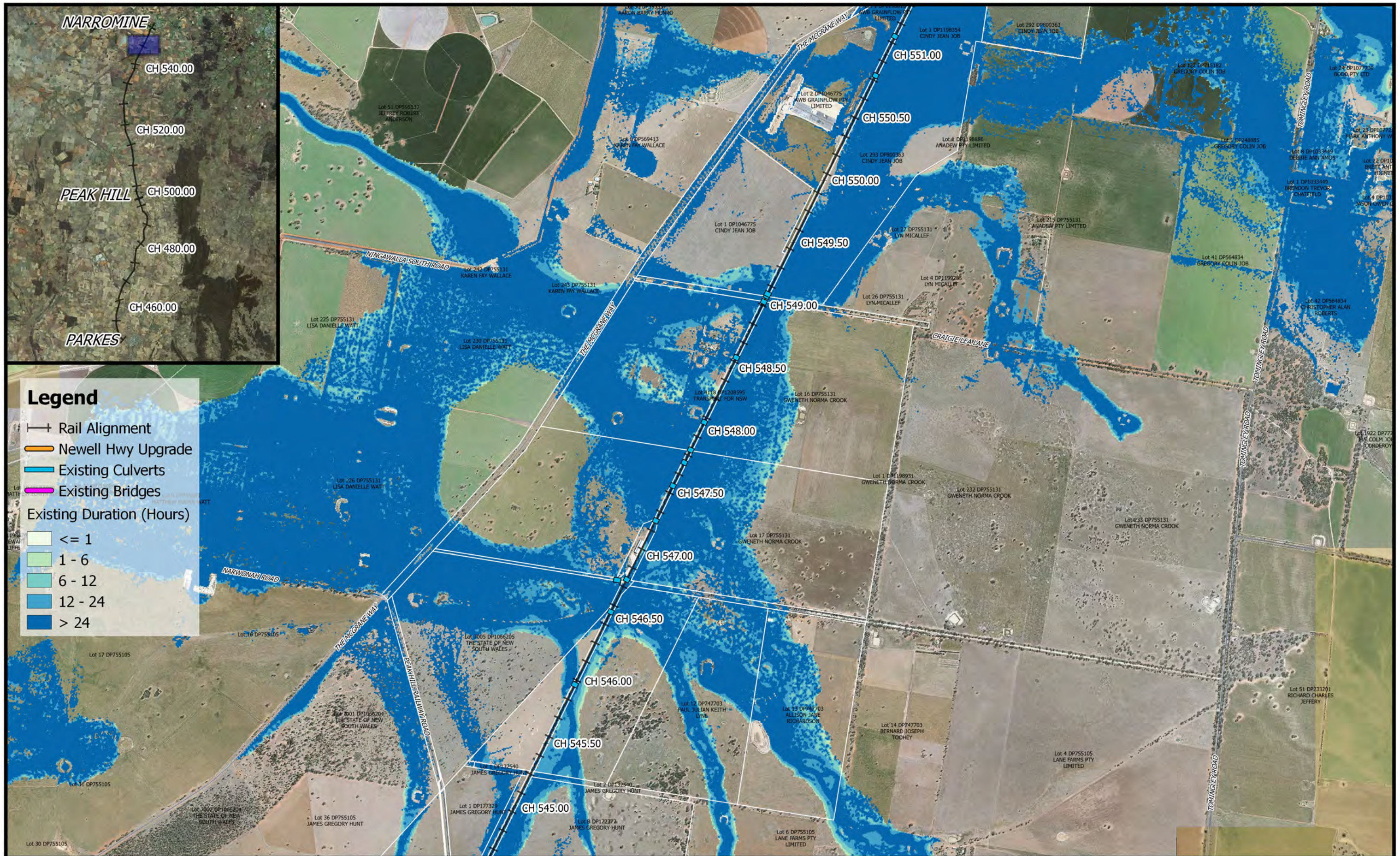
Legend

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

Existing Duration (Hours)

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

	 1:25,000		Date: 17/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results
	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>1:25,000</p>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX2D25 2% AEP Existing Flood Duration - CH 550.00</p>	
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Rev: A		
			Prepared By: YeohM		