



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

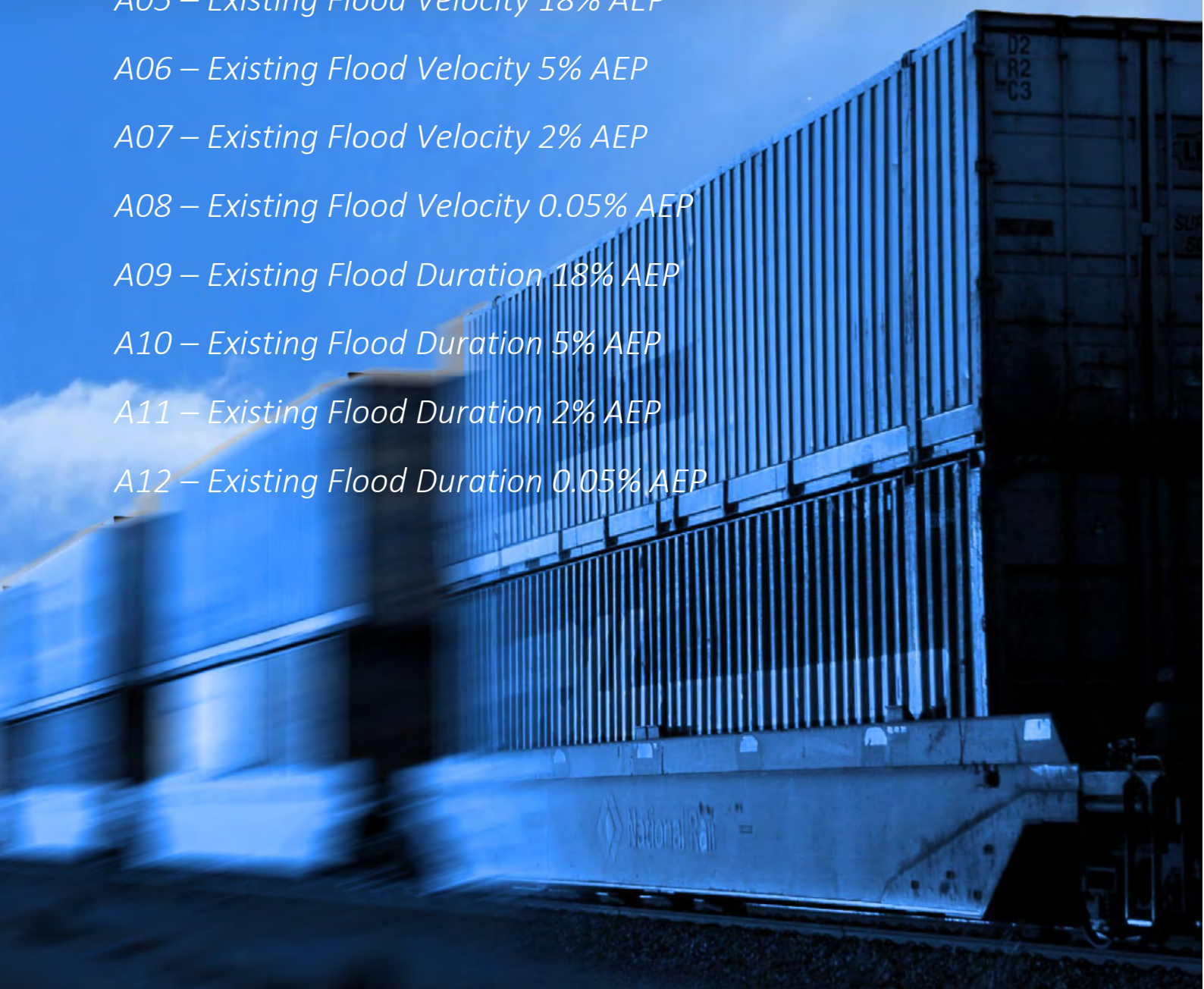
A08 – Existing Flood Velocity 0.05% AEP

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





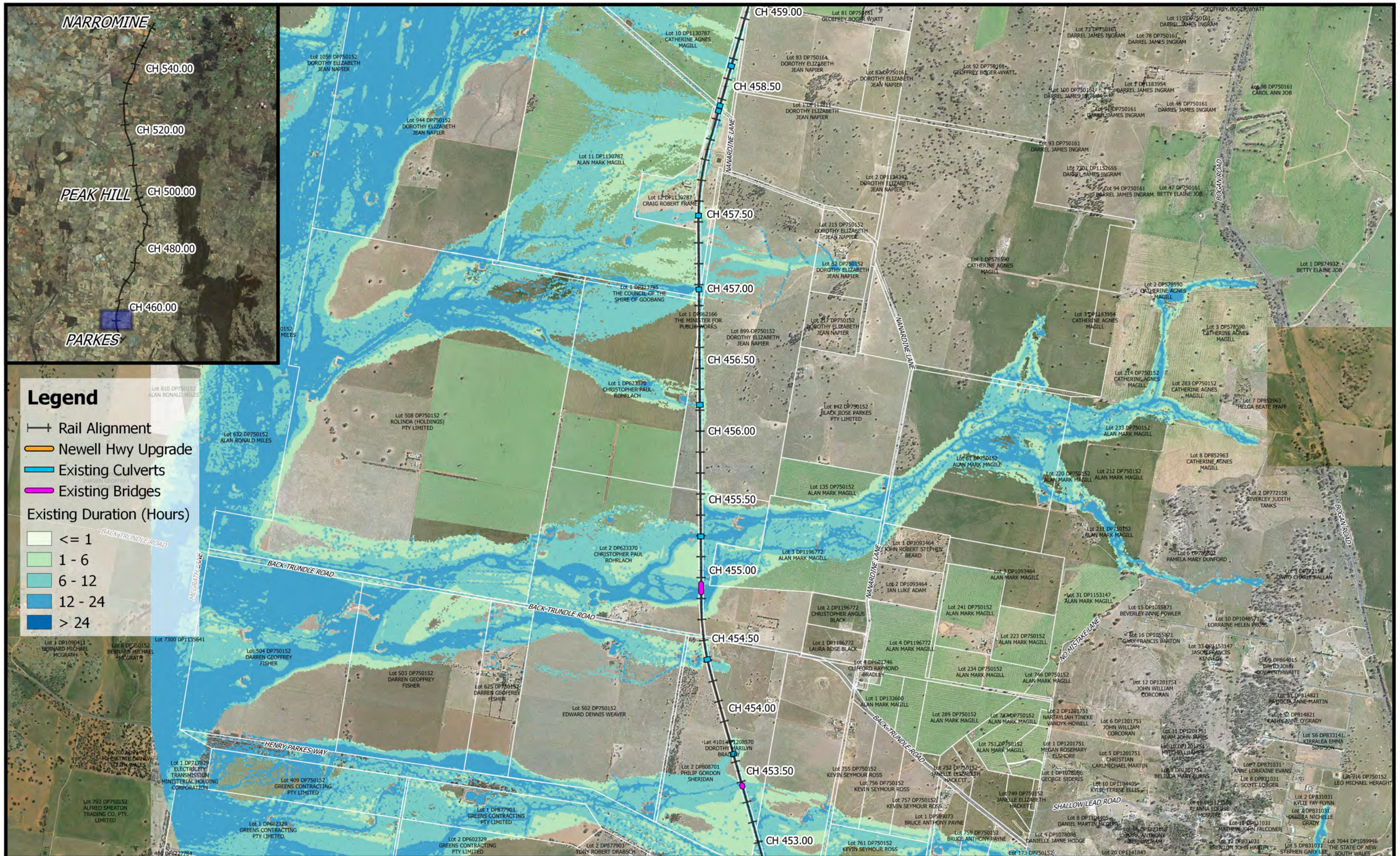
Legend

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

Existing Duration (Hours)

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

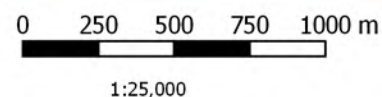
	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>	<p>M MOTT MACDONALD</p>	<p>Date: 18/10/2018</p> <p>Rev: B</p> <p>Prepared By: YeohM</p>	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D1</p> <p>0.05% AEP Existing Flood Duration - CH 450.00</p>
--	---------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------	-----------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



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: 18/10/2018

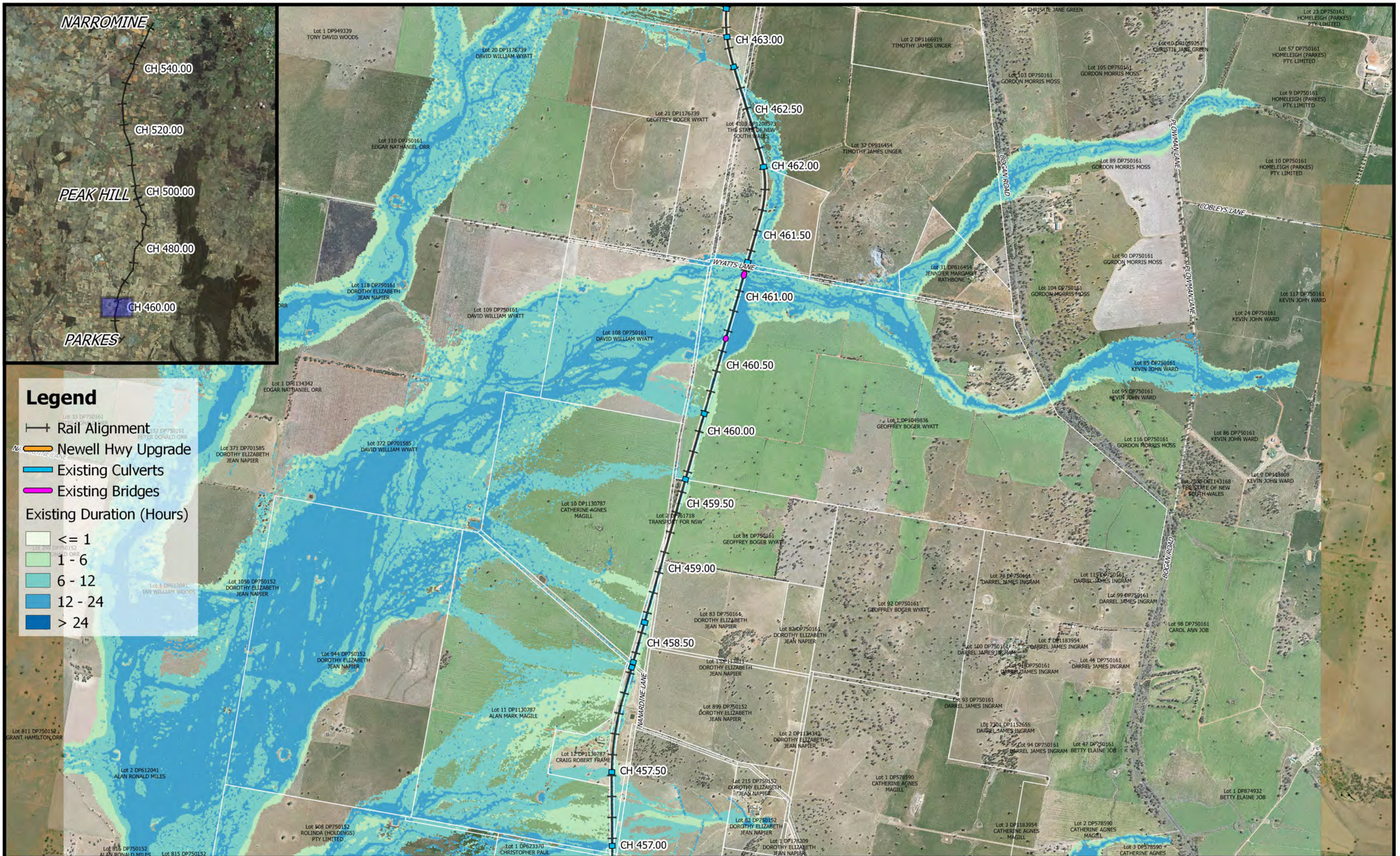
Rev: B

Prepared By: YeohM

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

Figure EX0.05D2

0.05% 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

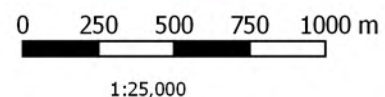
Date: 19/7/2018

Rev: A

Prepared By: YeohM

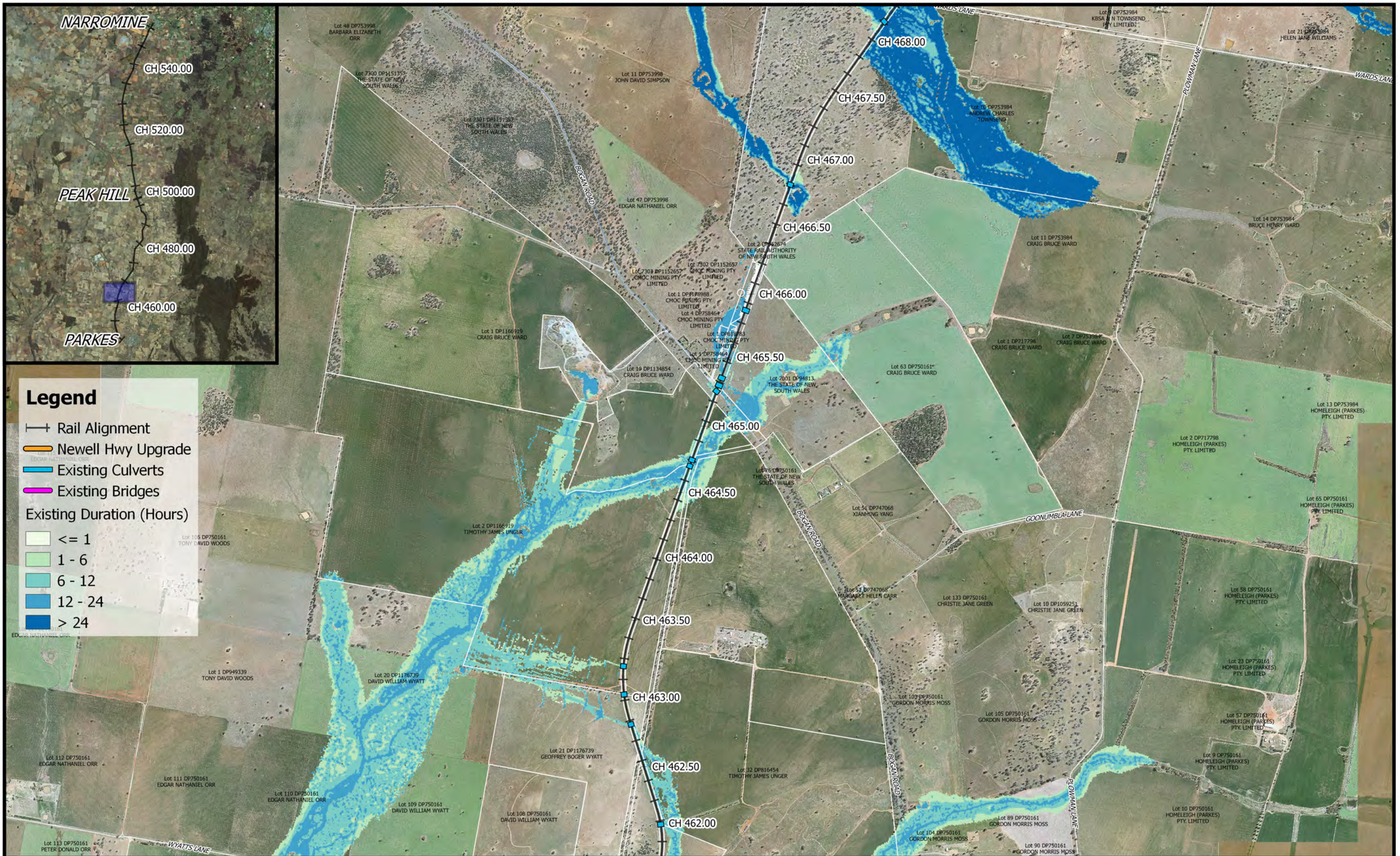
Parkes to Narromine
DD100% - Cross Drainage Flood Impact Assessment Results

Figure EX0.05D3
0.05% 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

	<p>1:25,000</p>		Date: 19/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D4 <i>0.05% AEP Existing Flood Duration - CH 465.00</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

	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 19/7/2018	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D5</p> <p><i>0.05% AEP Existing Flood Duration - CH 470.00</i></p>
	Rev: A			
	Prepared By: YeohM			



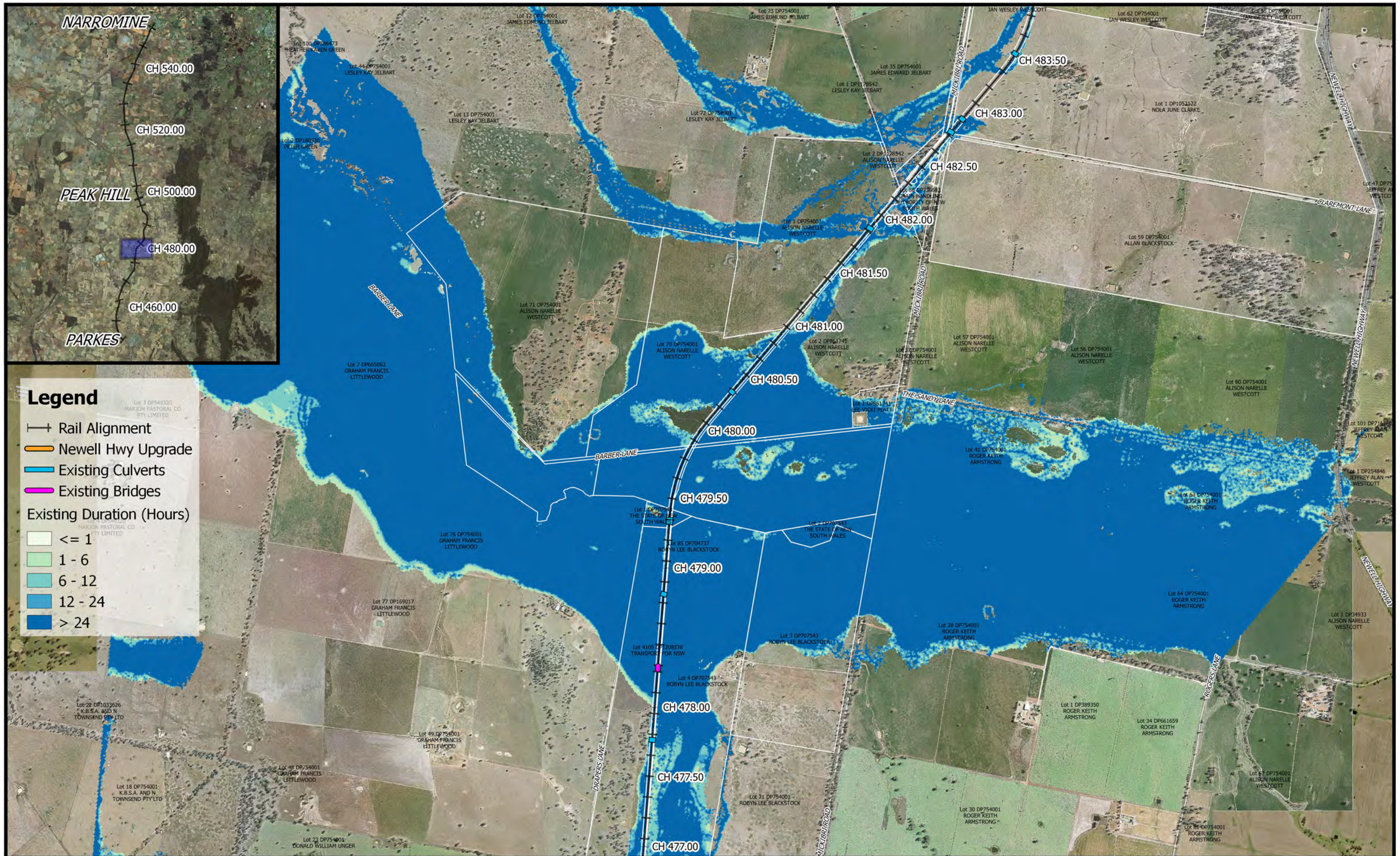
Legend

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

Existing Duration (Hours)

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

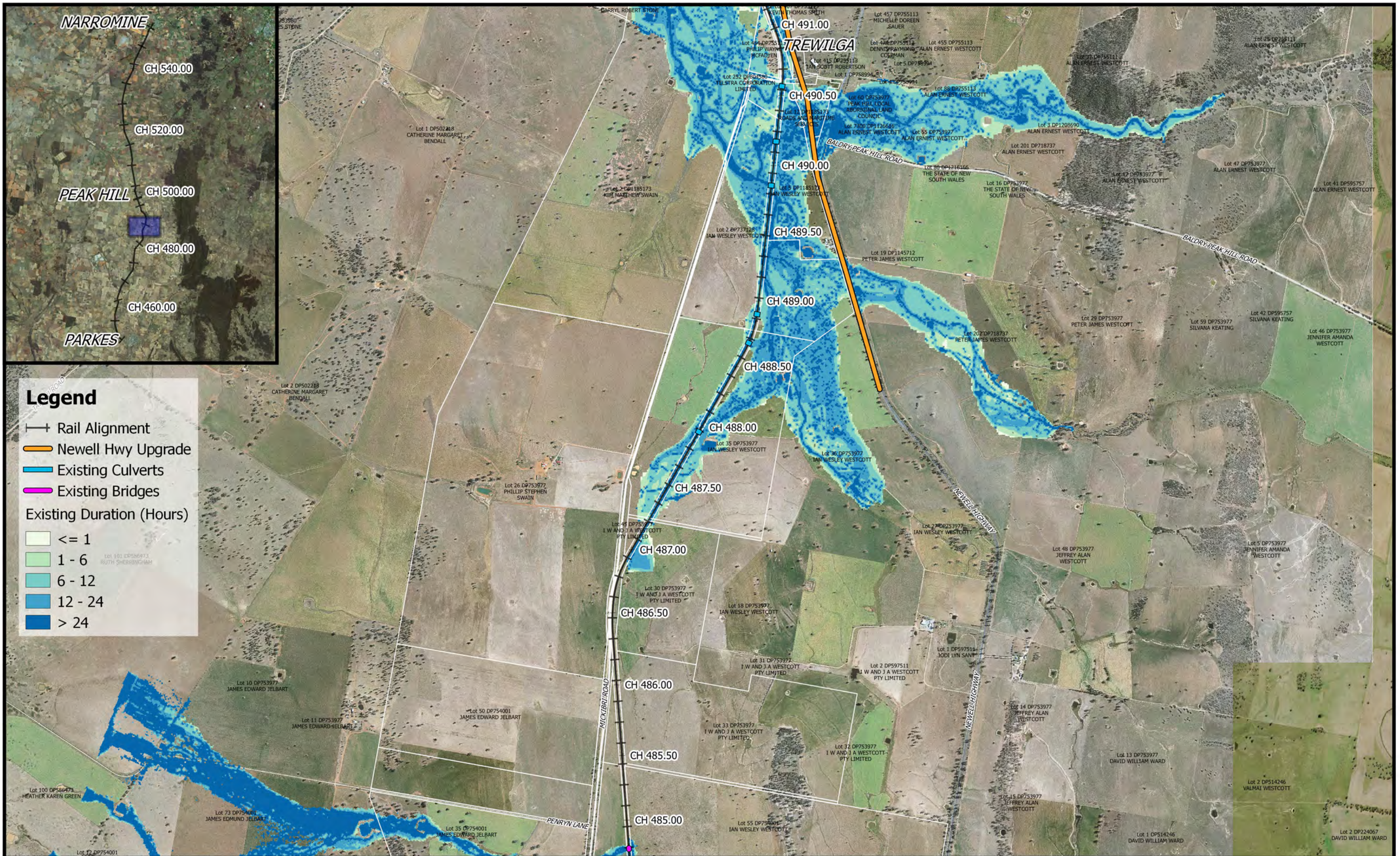
	<p>0 250 500 750 1000 m</p> <p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 19/7/2018	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D7</p> <p><i>0.05% AEP Existing Flood Duration - CH 475.00</i></p>
	Rev: A			
	Prepared By: YeohM			



	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 19/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX0.05D8 0.05% AEP Existing Flood Duration - CH 480.00
			Rev: A	
			Prepared By: YeohM	



	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Date: 19/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results
			Rev: A	
			Prepared By: YeohM	Figure EX0.05D9 <i>0.05% AEP Existing Flood Duration - CH 485.00</i>



Legend

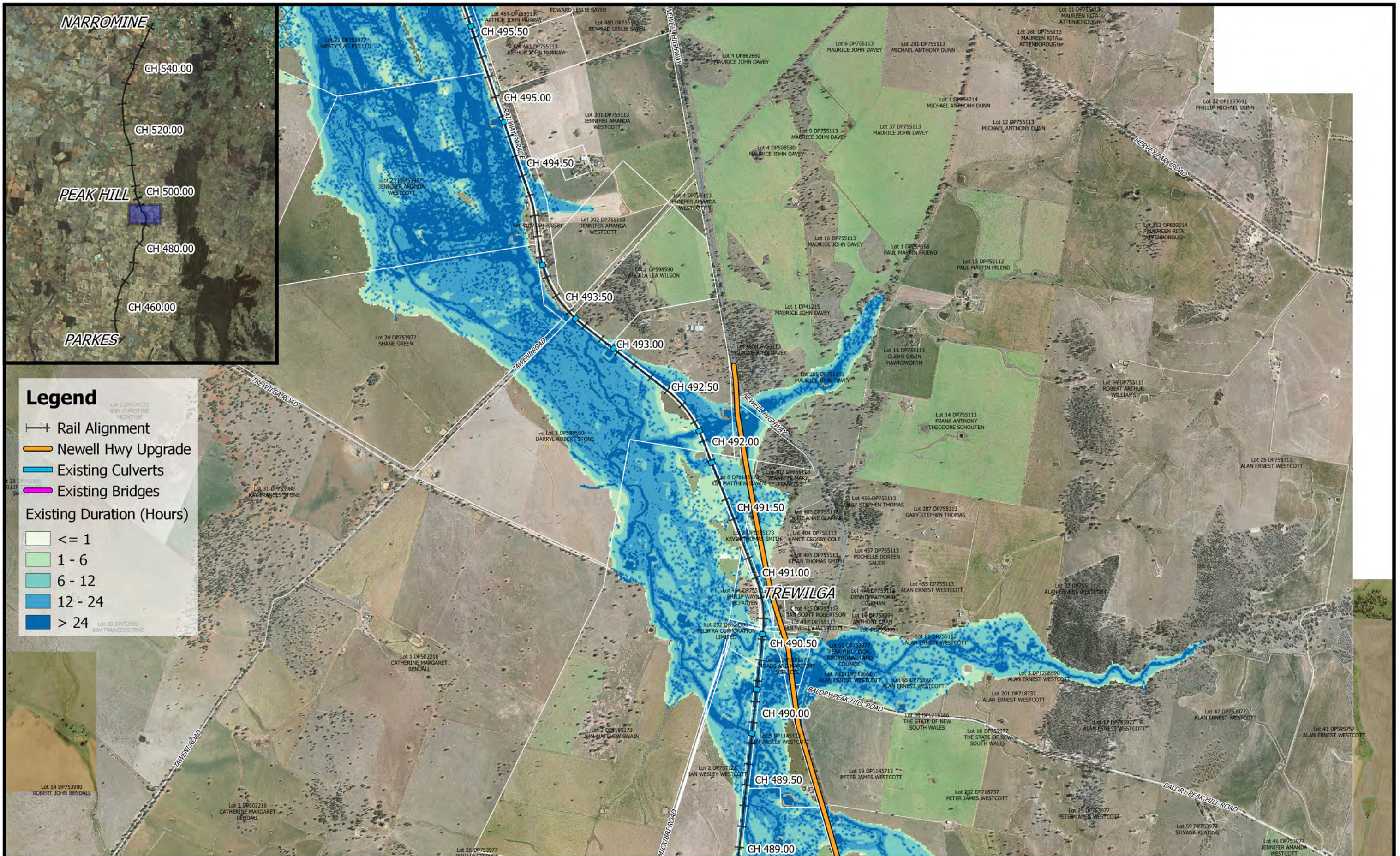
- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges

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: 19/7/2018</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 EX0.05D10</p> <p><i>0.05% AEP Existing Flood Duration - CH 490.00</i></p>
--	---------------------------------------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

E:\22dsynergy\3\IR P2N_1\01 WIP\Flooding and Drainage\GIS Mapping\Individual Property Maps\Mapping_Full_Project.gis - 2.18.17



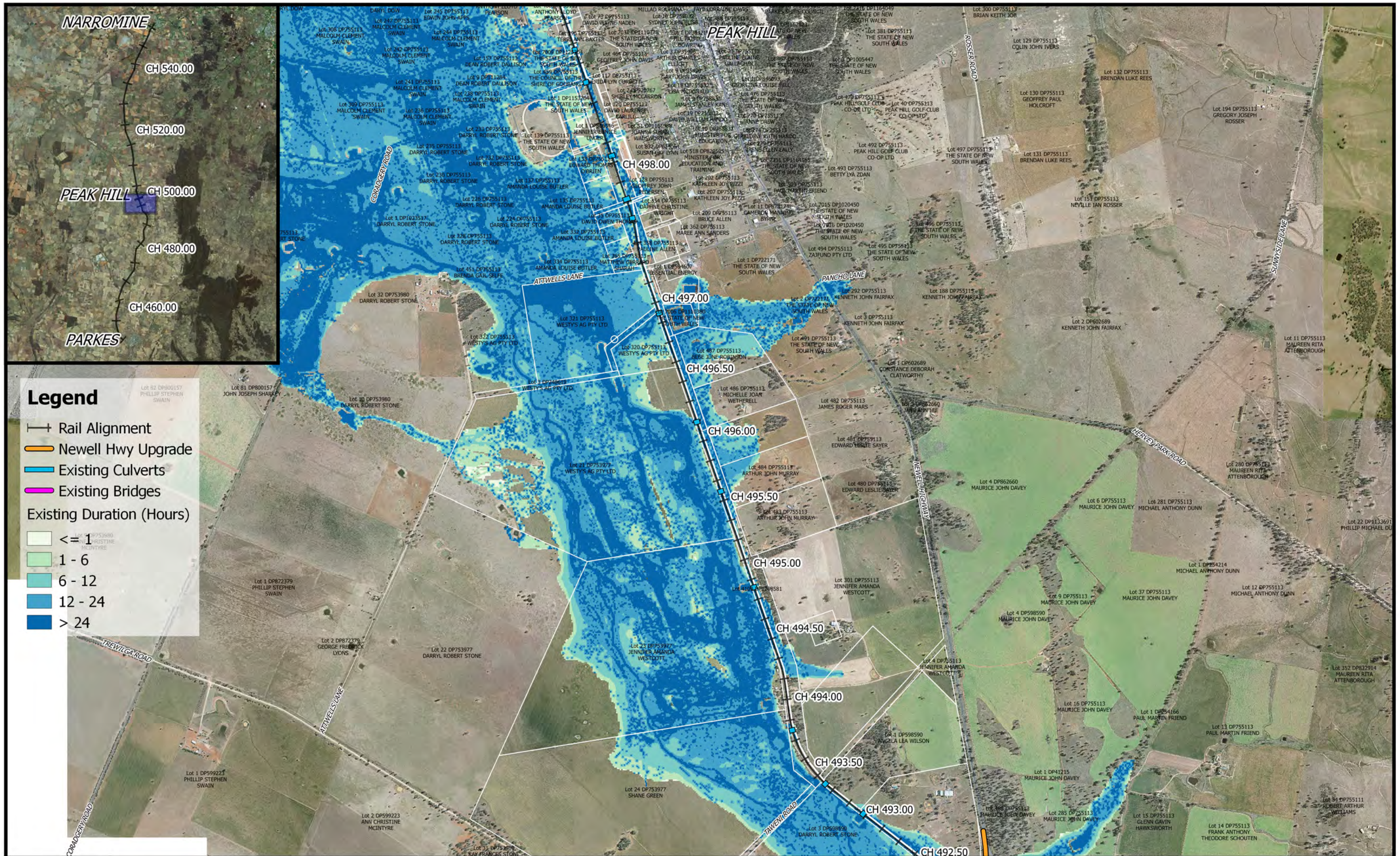
Legend

- 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: 19/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D11 <i>0.05% AEP Existing Flood Duration - CH 492.00</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



0 250 500 750 1000 m

1:25,000

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



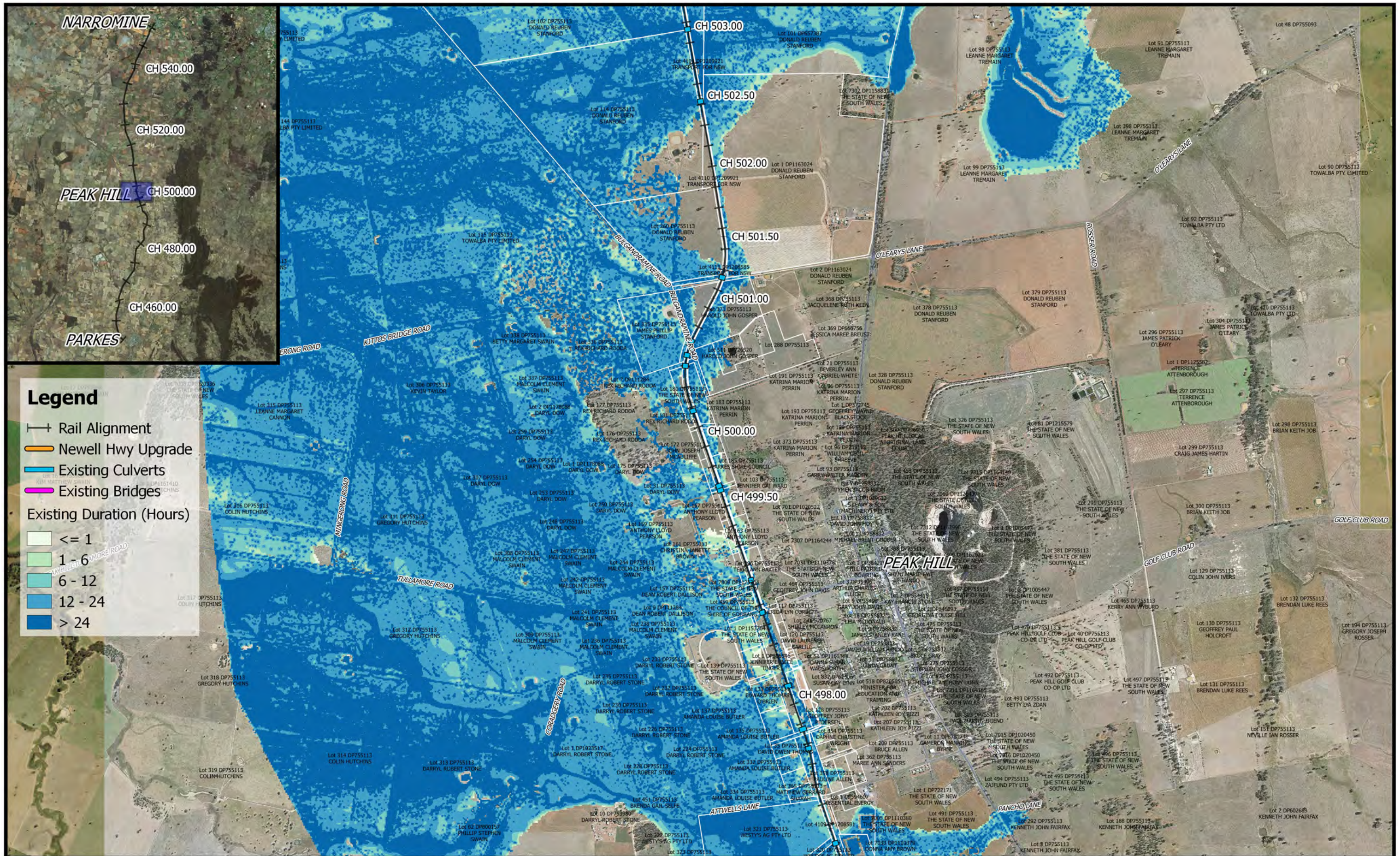
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX0.05D12
0.05% AEP Existing Flood Duration - CH 495.00



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



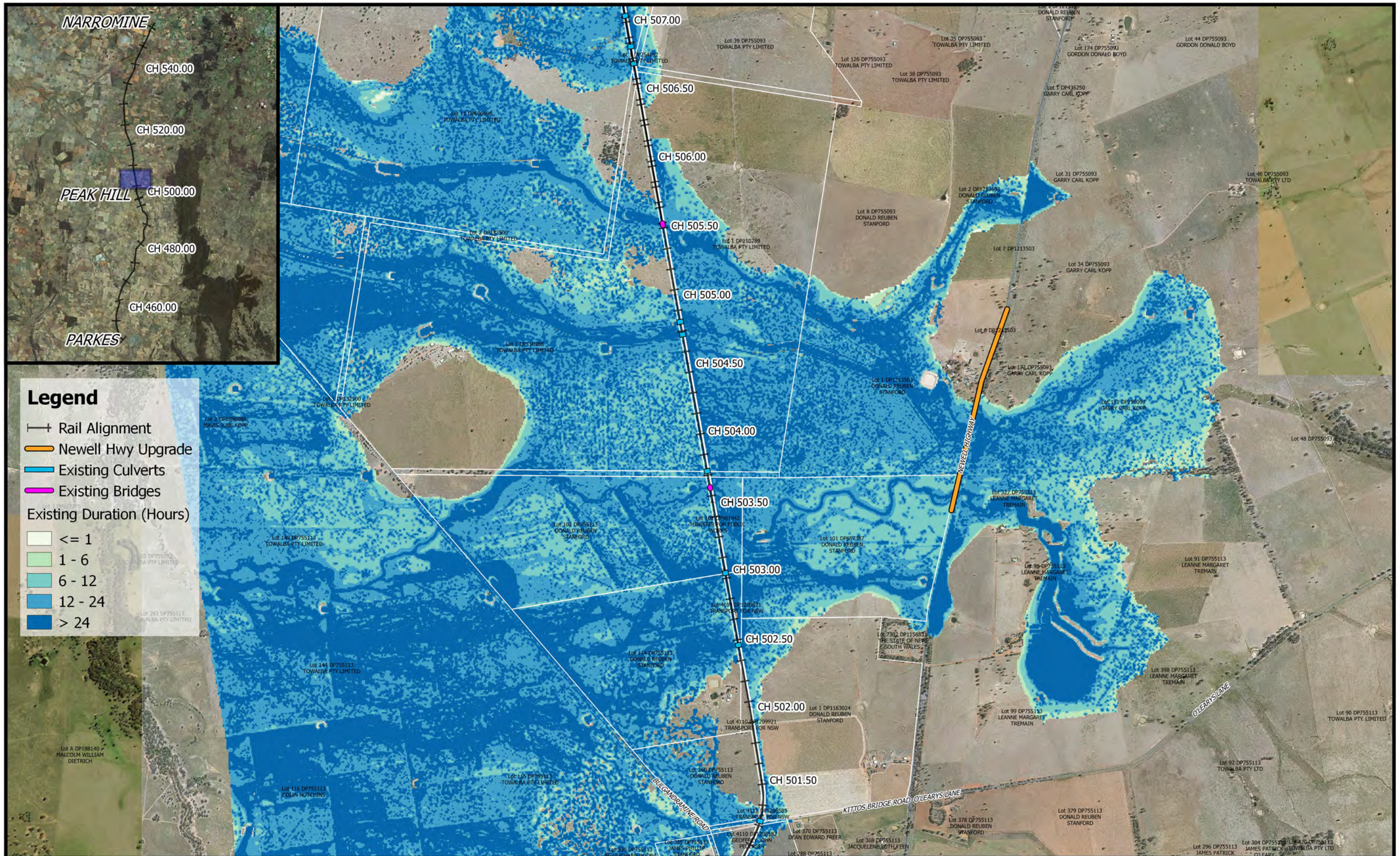
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX0.05D13
0.05% AEP Existing Flood Duration - CH 500.00



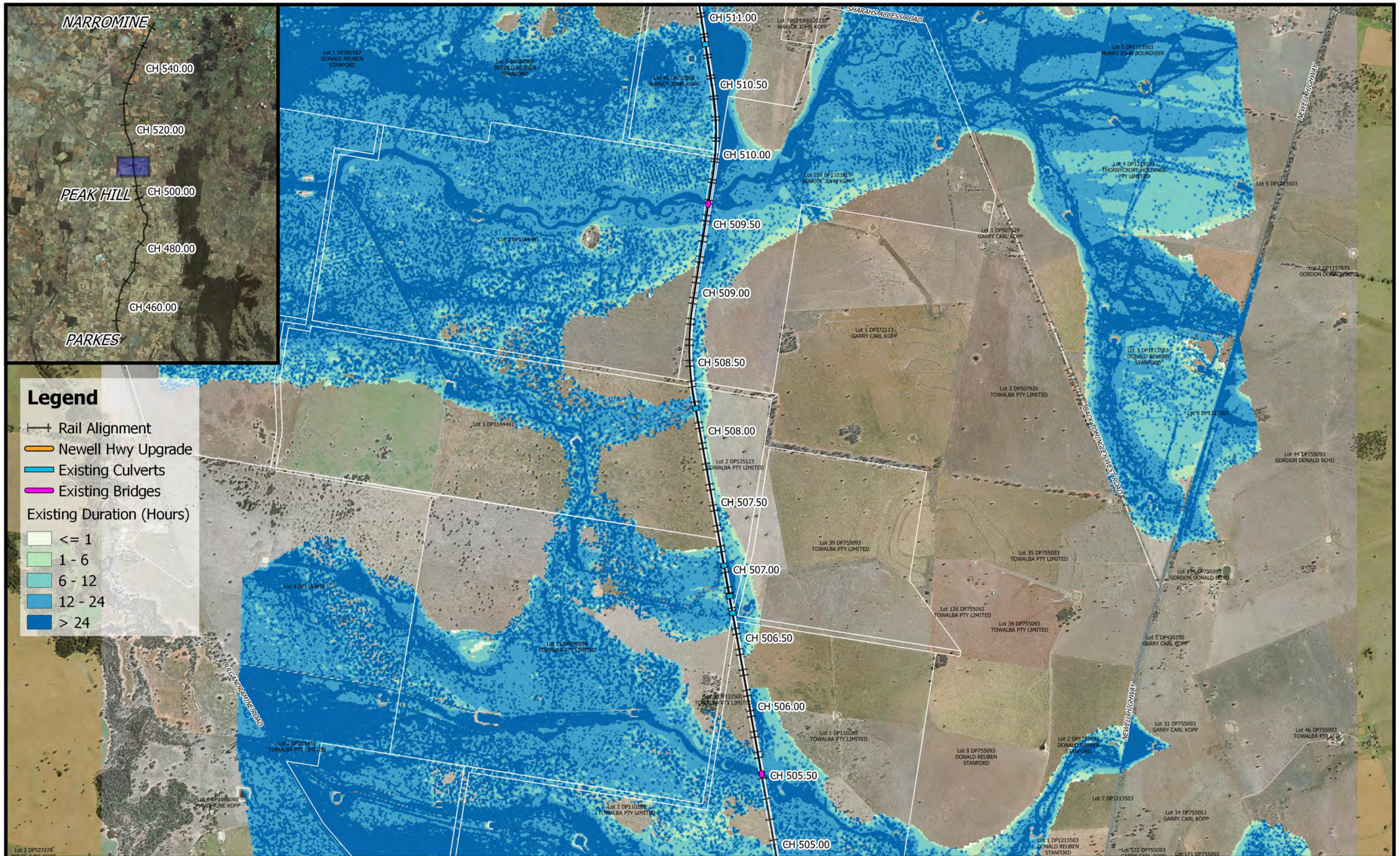
Legend

- 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> <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 EX0.05D14 0.05% AEP Existing Flood Duration - CH 505.00</p>
	Rev: A			
	Prepared By: YeohM			



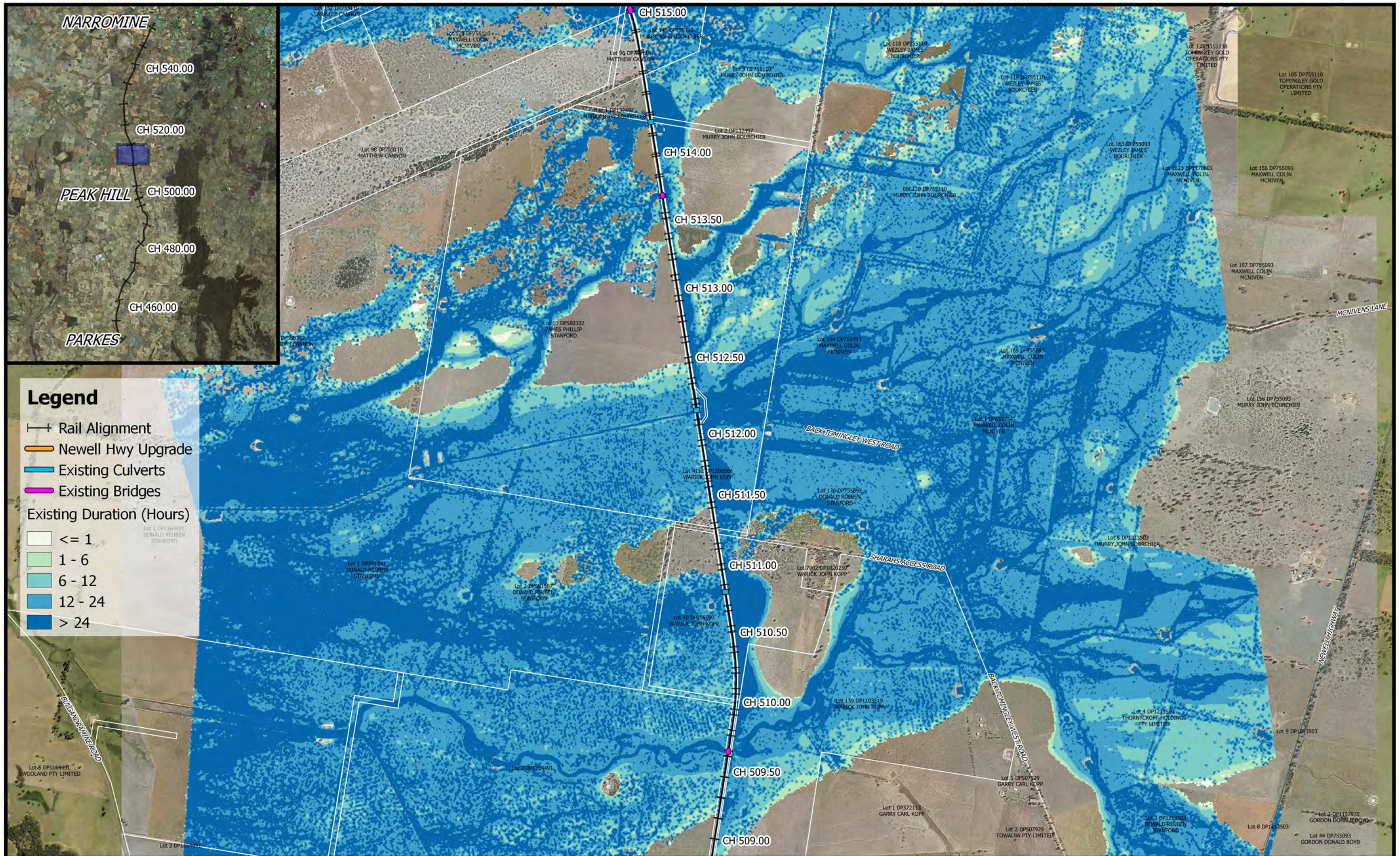
Legend

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

Existing Duration (Hours)

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

	<p>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>M M MOTT MACDONALD</p>	Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D15 <i>0.05% AEP Existing Flood Duration - CH 510.00</i></p>
	Rev: A			
	Prepared By: YeohM			



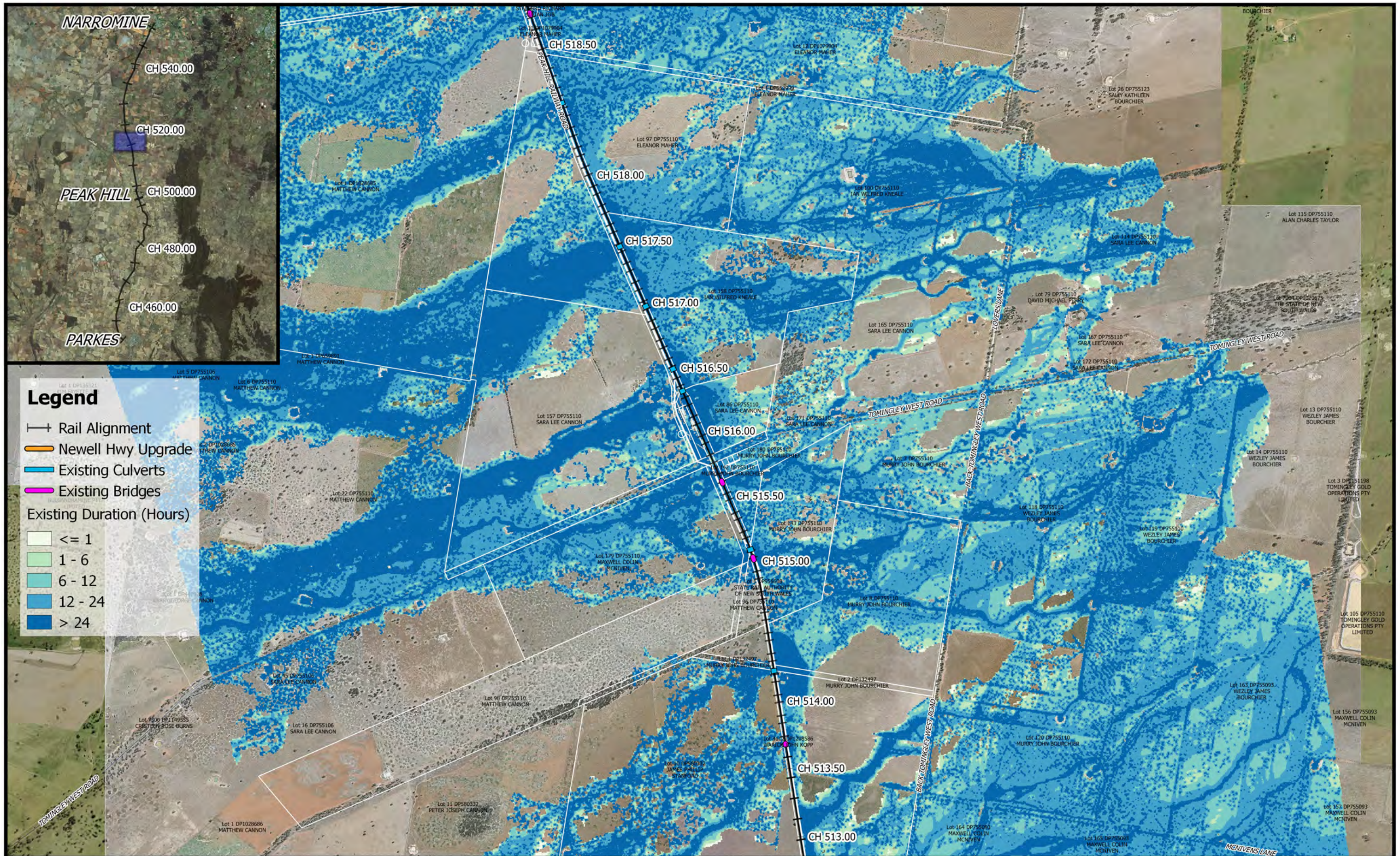
Legend

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

Existing Duration (Hours)

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

	 1:25,000		Date: 17/7/2018	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX0.05D16 <i>0.05% AEP Existing Flood Duration - CH 512.00</i>
	Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3		Rev: A	
	Prepared By: YeohM			



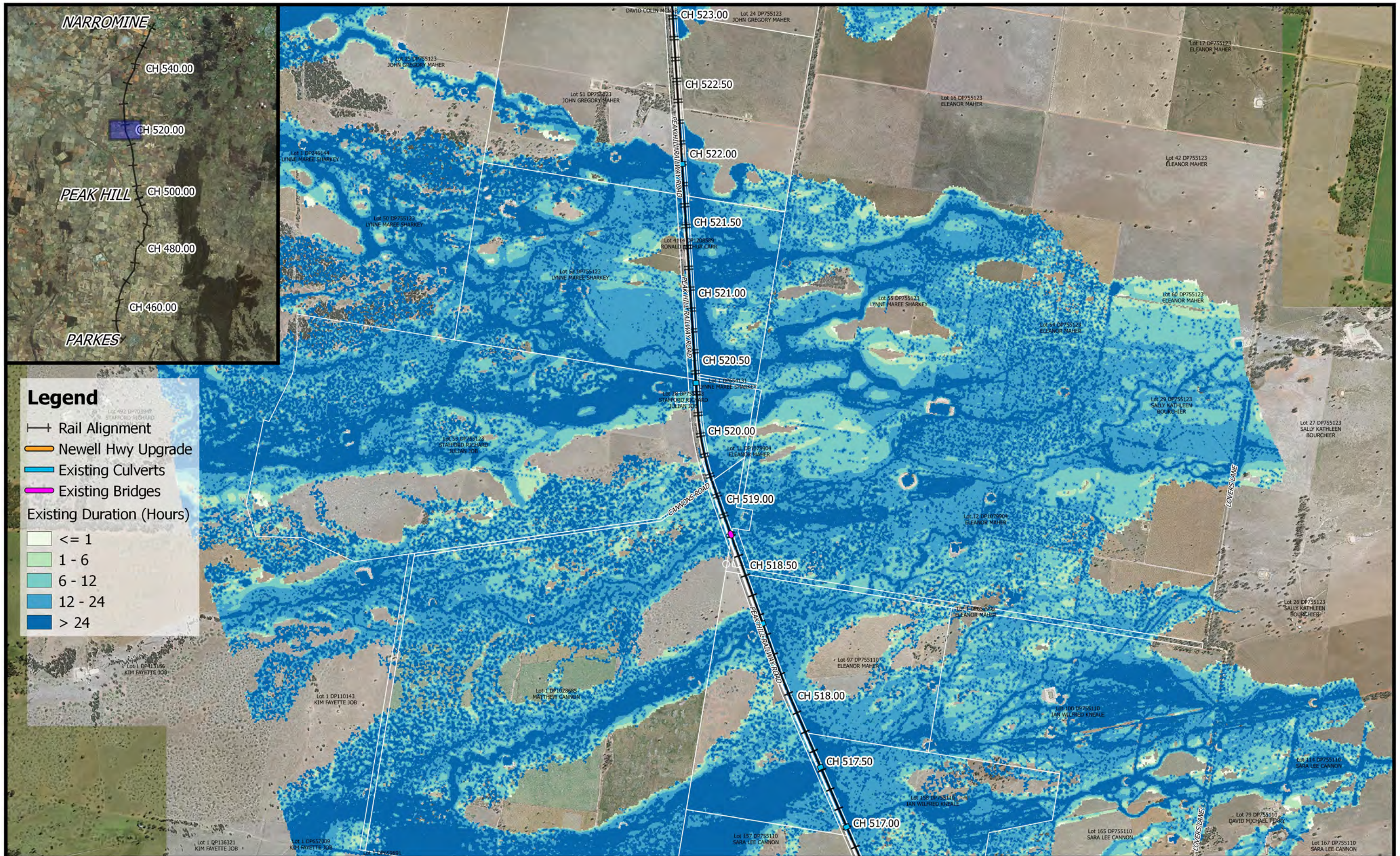
Legend

- 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>Date: 17/7/2018</p>	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		<p>Rev: A</p>	
<p>Prepared By: YeohM</p>				



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Existing Culverts
- Existing Bridges
- Existing Duration (Hours)
- <= 1
- 1 - 6
- 6 - 12
- 12 - 24
- > 24

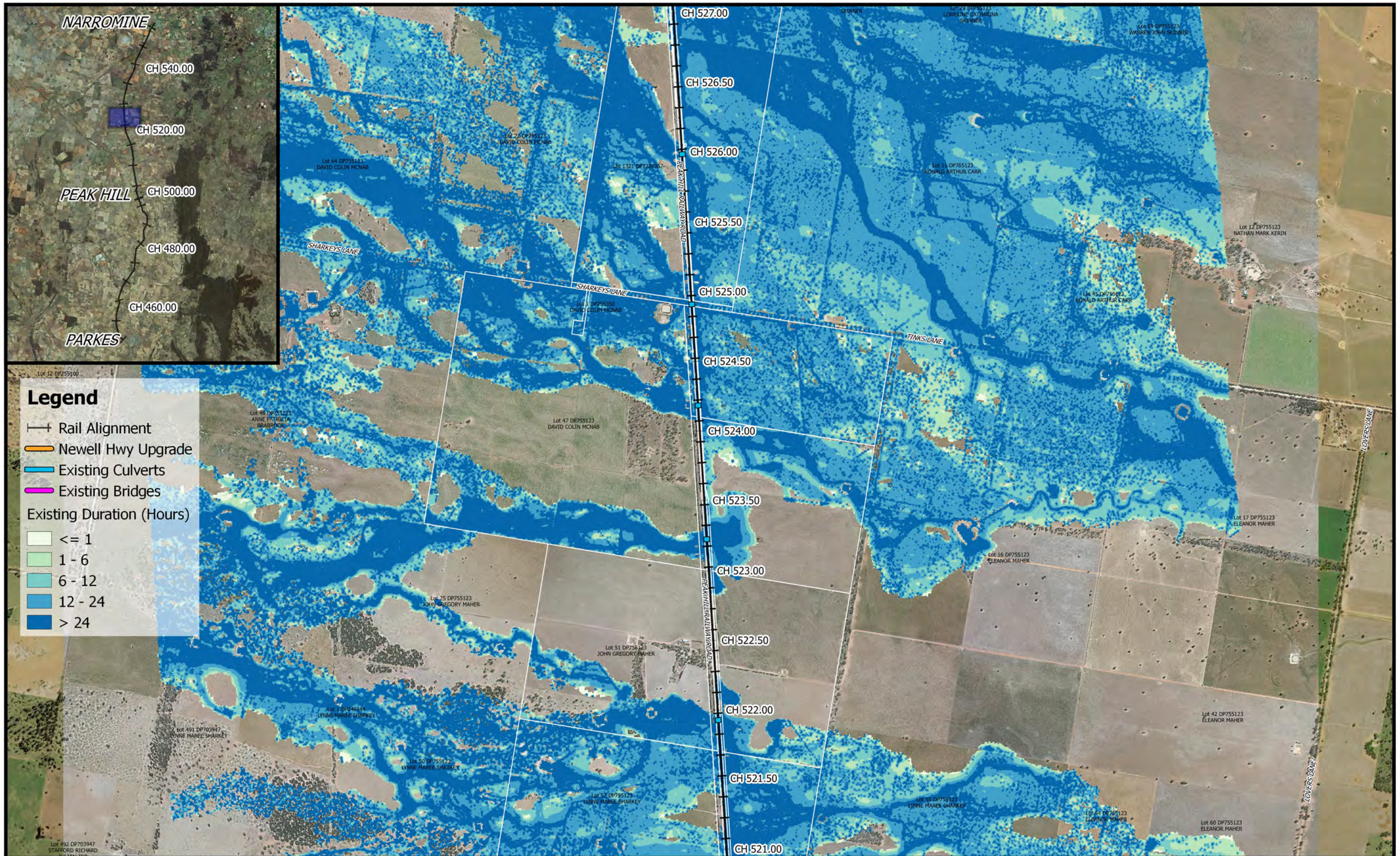
Date: 17/7/2018

Rev: A

Prepared By: YeohM

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

Figure EX0.05D18
0.05% AEP Existing Flood Duration - CH 520.00



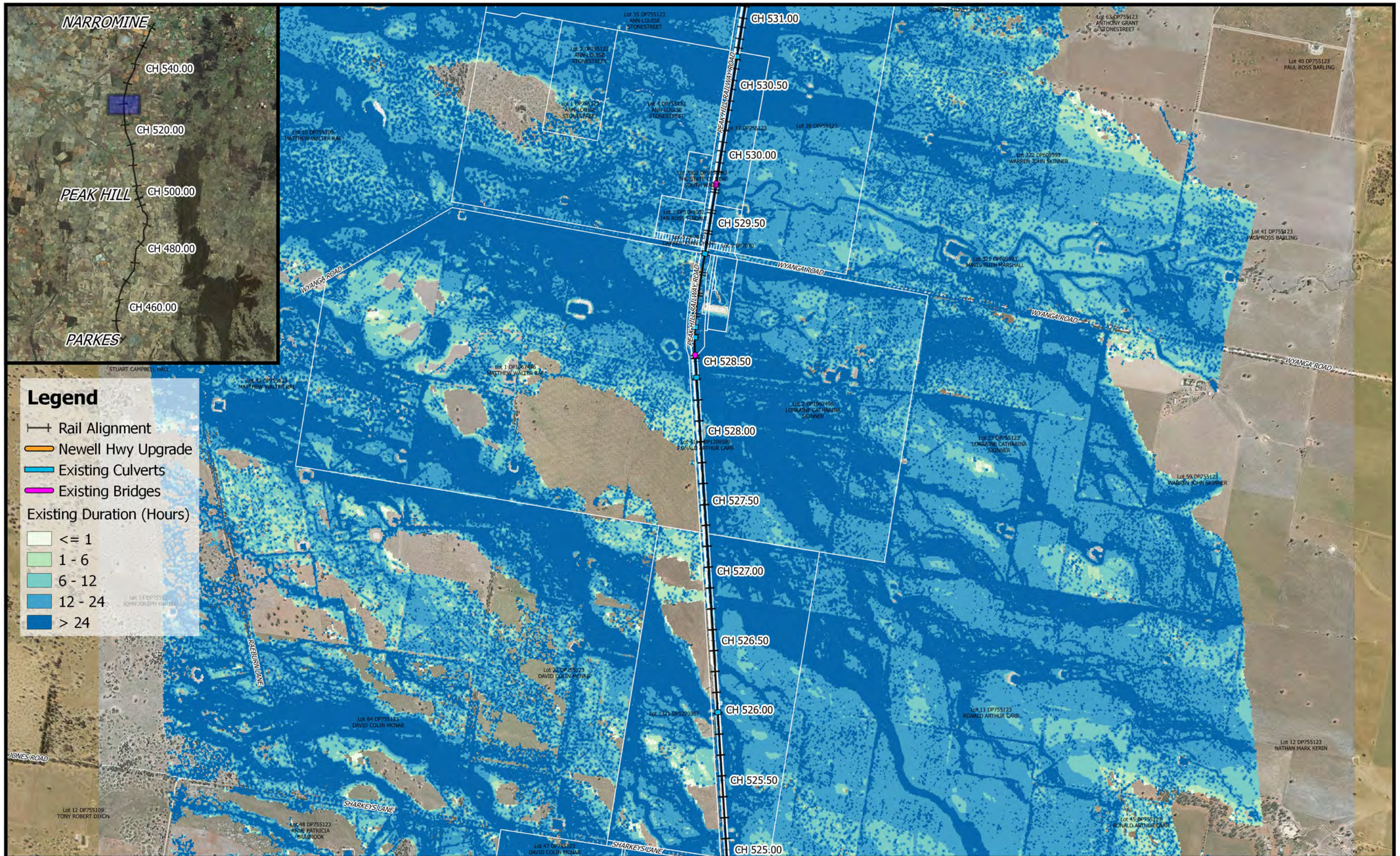
Legend

- 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: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D19 <i>0.05% 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			

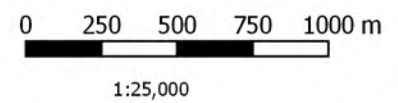


Legend

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

Existing Duration (Hours)

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



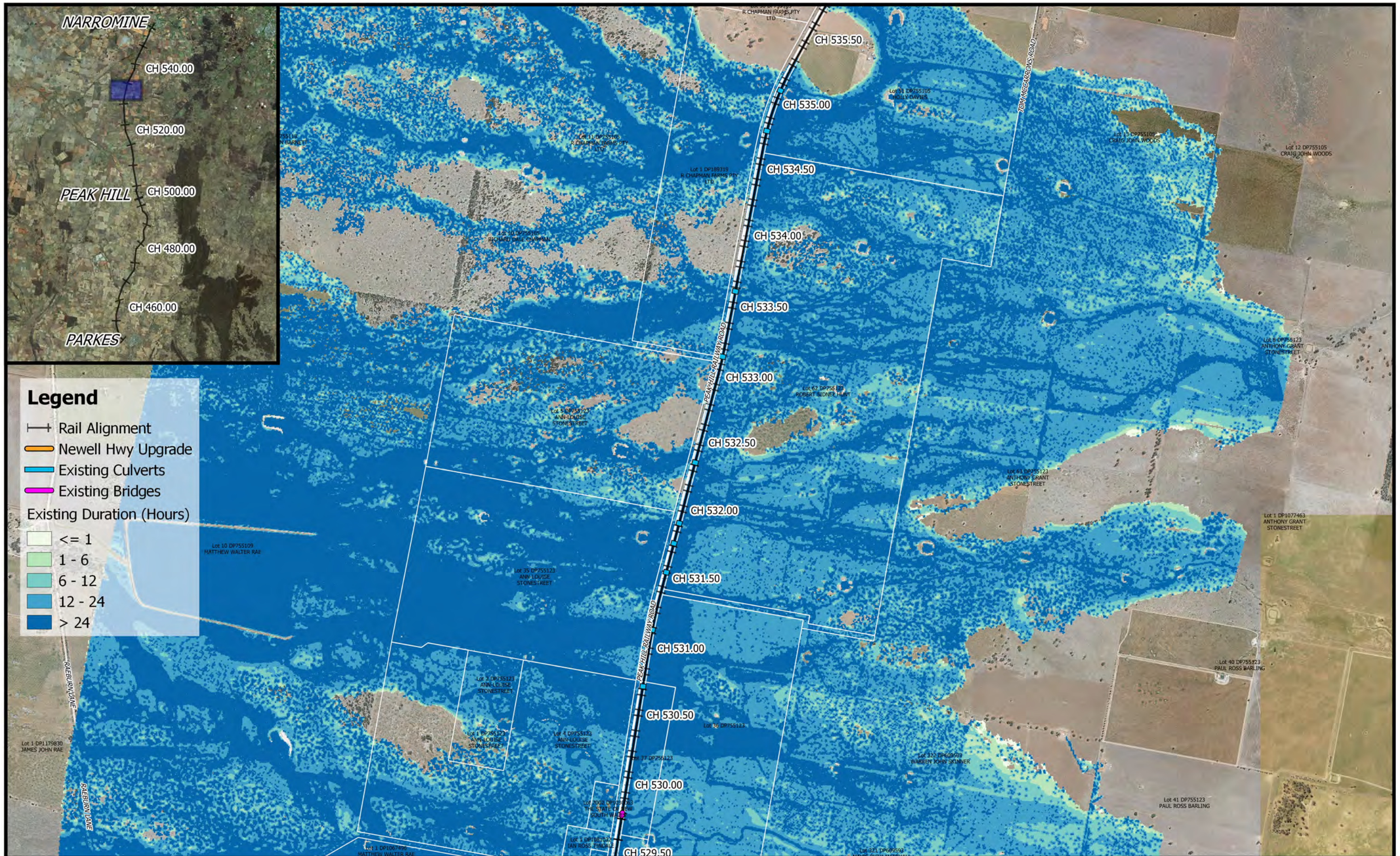
Coordinate system: GDA 1994 MGA Zone 55
Scale ratio correct when printed at A3



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

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

Figure EX0.05D20
0.05% AEP Existing Flood Duration - CH 530.00



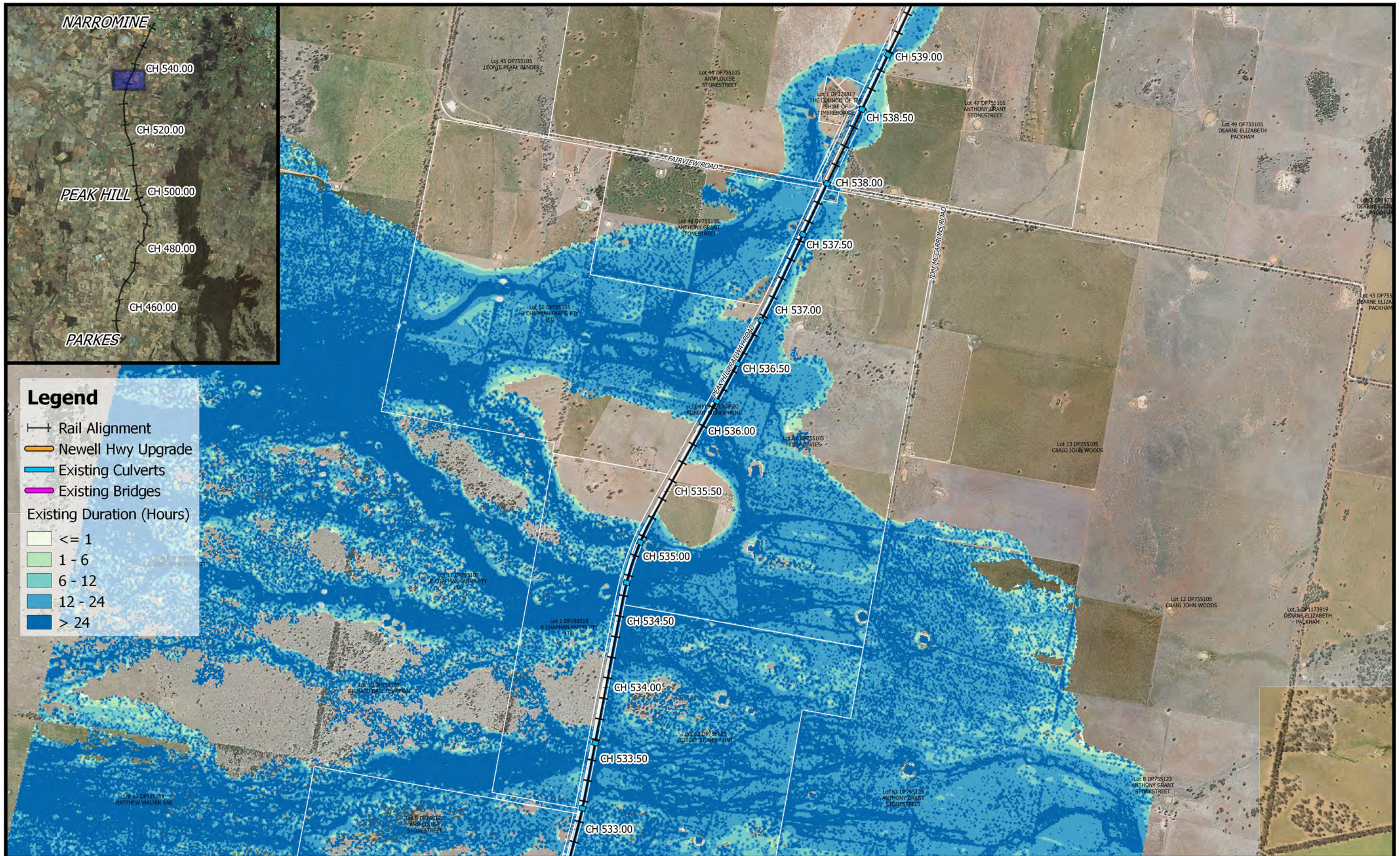
Legend

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

Existing Duration (Hours)

Lightest Green	<= 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: 17/7/2018	<p>Parkes to Narromine</p> <p>DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D21</p> <p><i>0.05% AEP Existing Flood Duration - CH 533.00</i></p>
	Rev: A			
	Prepared By: YeohM			



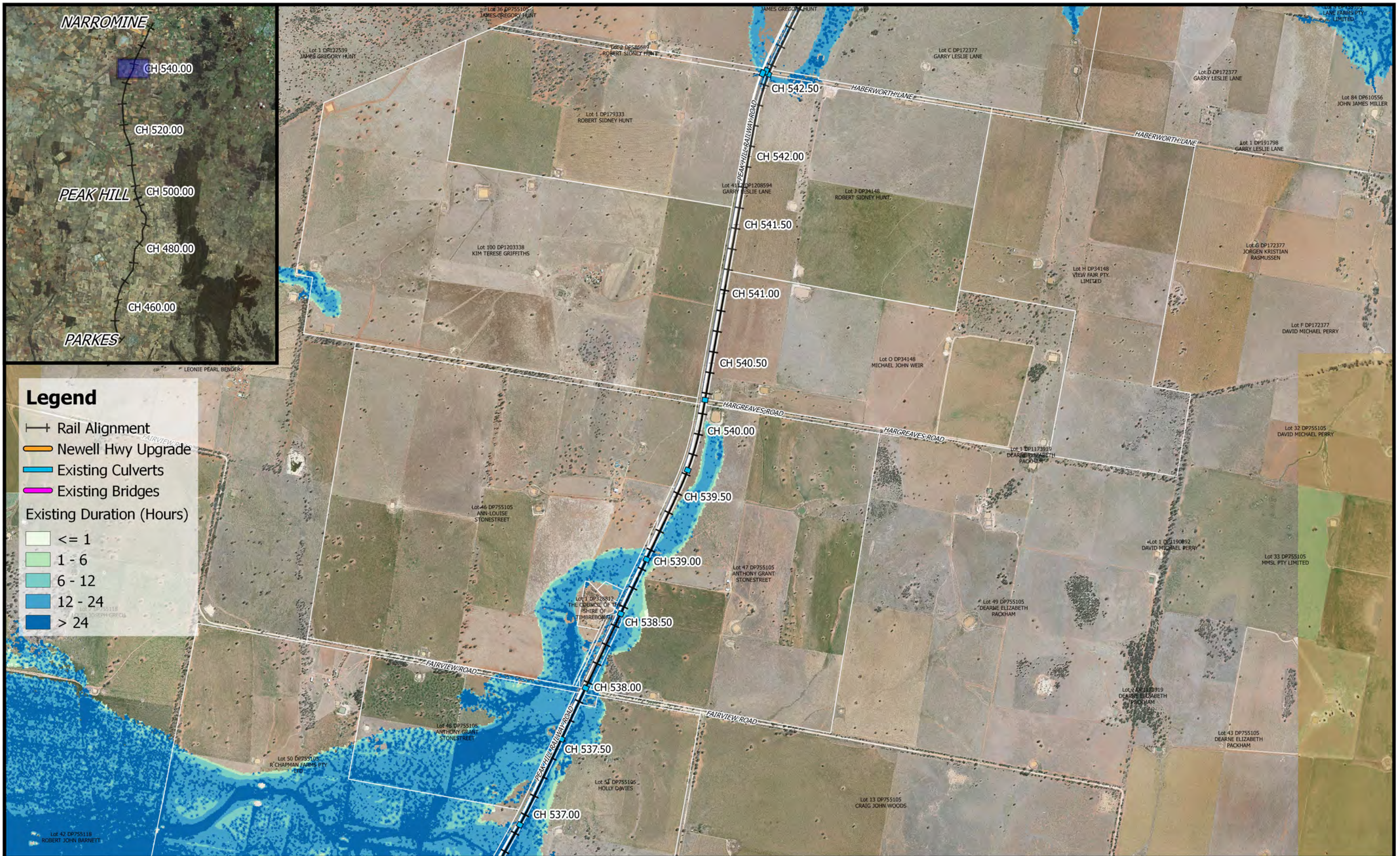
Legend

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

Existing Duration (Hours)

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

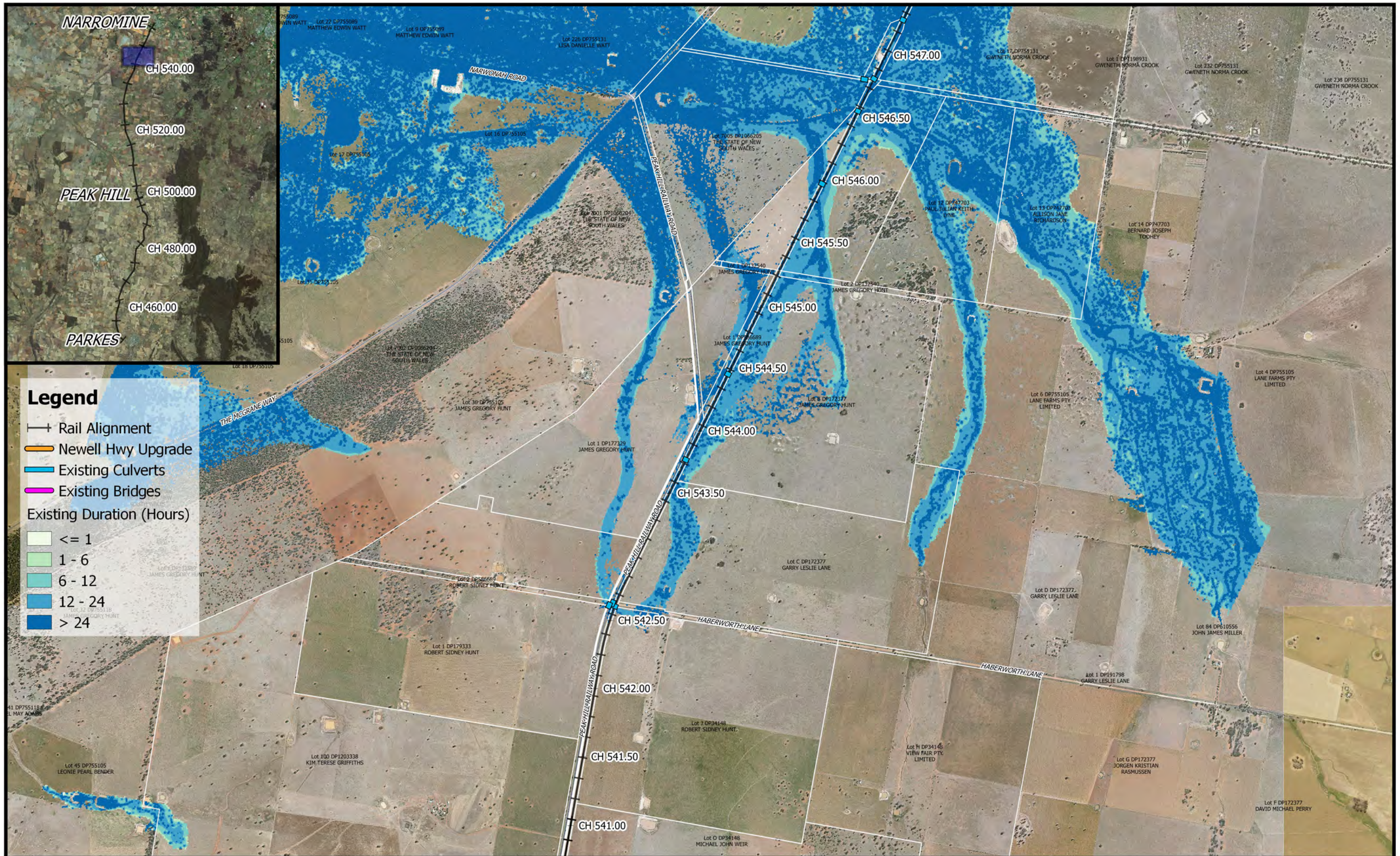
	<p>1:25,000</p> <p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Date: 17/7/2018 Rev: A Prepared By: YeohM	Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results Figure EX0.05D22 <i>0.05% AEP Existing Flood Duration - CH 535.00</i>
--	-----------------------------------------------------------------------------------------------------------	--	-------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------



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 EX0.05D23 <i>0.05% AEP Existing Flood Duration - CH 540.00</i></p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Scale ratio correct when printed at A3</p>		Rev: A	
	Prepared By: YeohM			



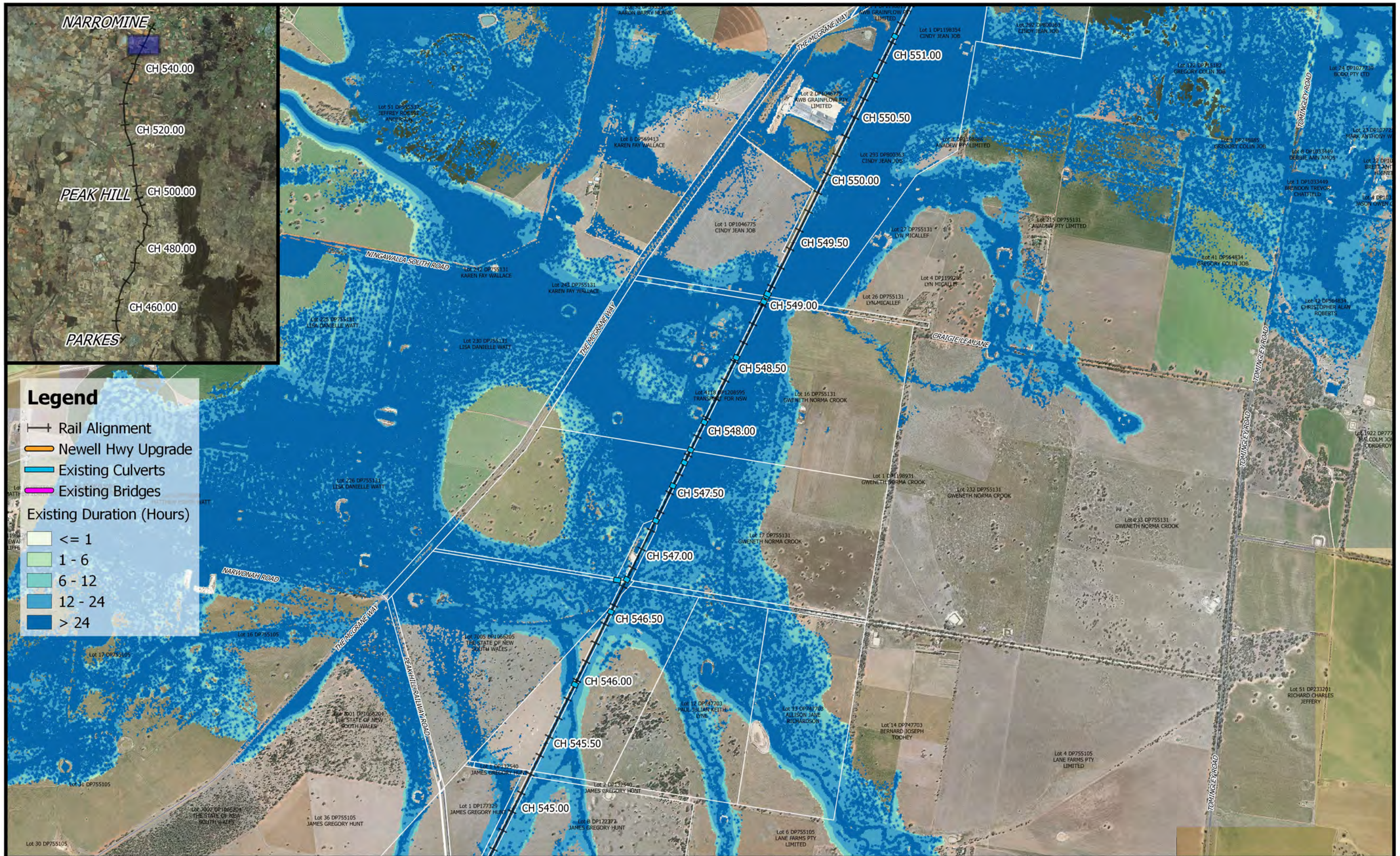
Legend

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

Existing Duration (Hours)

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

	<p>1:25,000</p>		Date: 17/7/2018	<p>Parkes to Narromine DD100% - Cross Drainage Flood Impact Assessment Results</p> <p>Figure EX0.05D24 <i>0.05% AEP Existing Flood Duration - CH 545.00</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> <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 EX0.05D25</p> <p><i>0.05% AEP Existing Flood Duration - CH 550.00</i></p>
	Rev: A			
Prepared By: YeohM				