

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
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC1 39% AEP Percentage Change In Velocity - CH 450.00</p>
	Rev: A - For Information Only			
	Prepared By: YeohM			
Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3				

E:\2\dsynergy\2\IR_P2N_1\01\WIP\Flooding and Drainage\GIS Mapping\Individual Property Maps\Maping_Full_Project.ags - 2.18.18



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries

Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

Date: 16/10/2018

Rev: A - For Information Only

Prepared By: YeohM

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

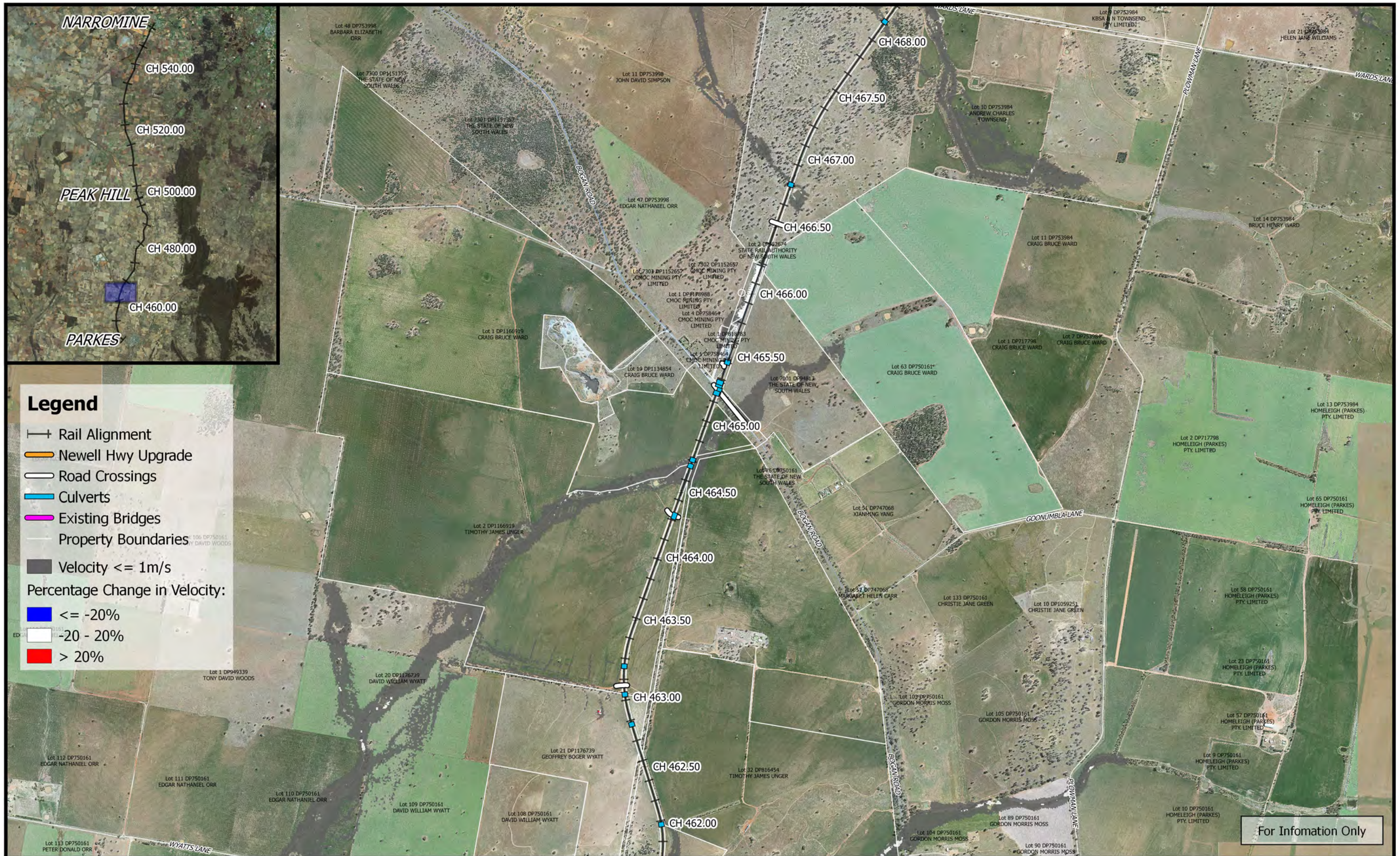
Figure DE39VC2

39% AEP Percentage Change In Velocity - CH 455.00



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: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC3 39% AEP Percentage Change In Velocity - CH 460.00</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity $\leq 1\text{m/s}$

Percentage Change in Velocity:

- $\leq -20\%$
- $-20 - 20\%$
- $> 20\%$

For Information Only

	<p>1:25,000</p>	 	Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC4 <i>39% AEP Percentage Change In Velocity - CH 465.00</i></p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		<p>Rev: A - For Information Only</p>	



Legend

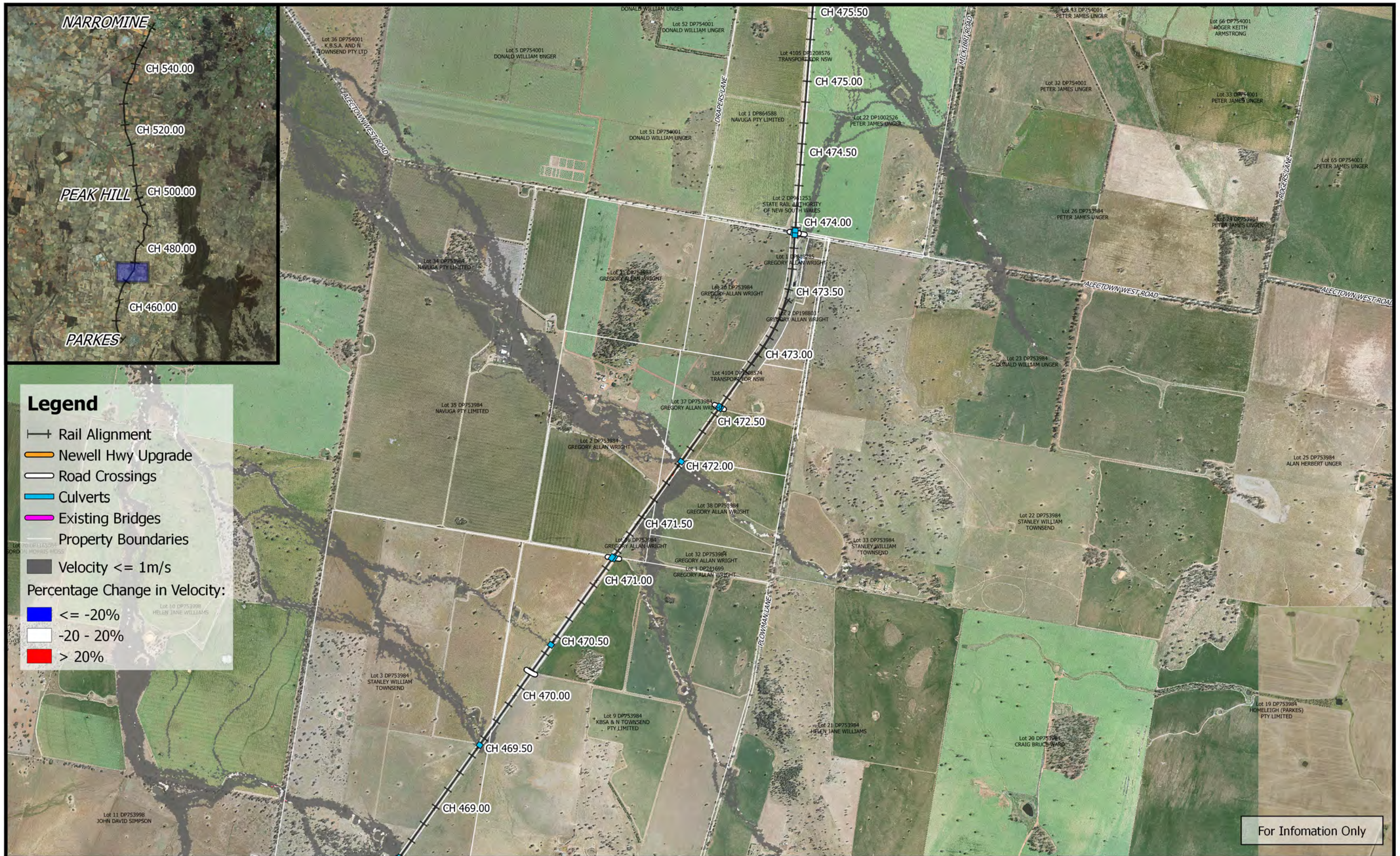
- +— Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- -20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC5 39% AEP Percentage Change In Velocity - CH 470.00</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
- Velocity <= 1m/s

Percentage Change in Velocity:



- Blue: <= -20%
- White: -20 - 20%
- Red: > 20%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p>	 	Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine</p> <p>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		



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: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC7 <i>39% AEP Percentage Change In Velocity - CH 475.00</i></p>
			Rev: A - For Information Only	
			Prepared By: YeohM	



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC8 <i>39% AEP Percentage Change In Velocity - CH 480.00</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		



Legend

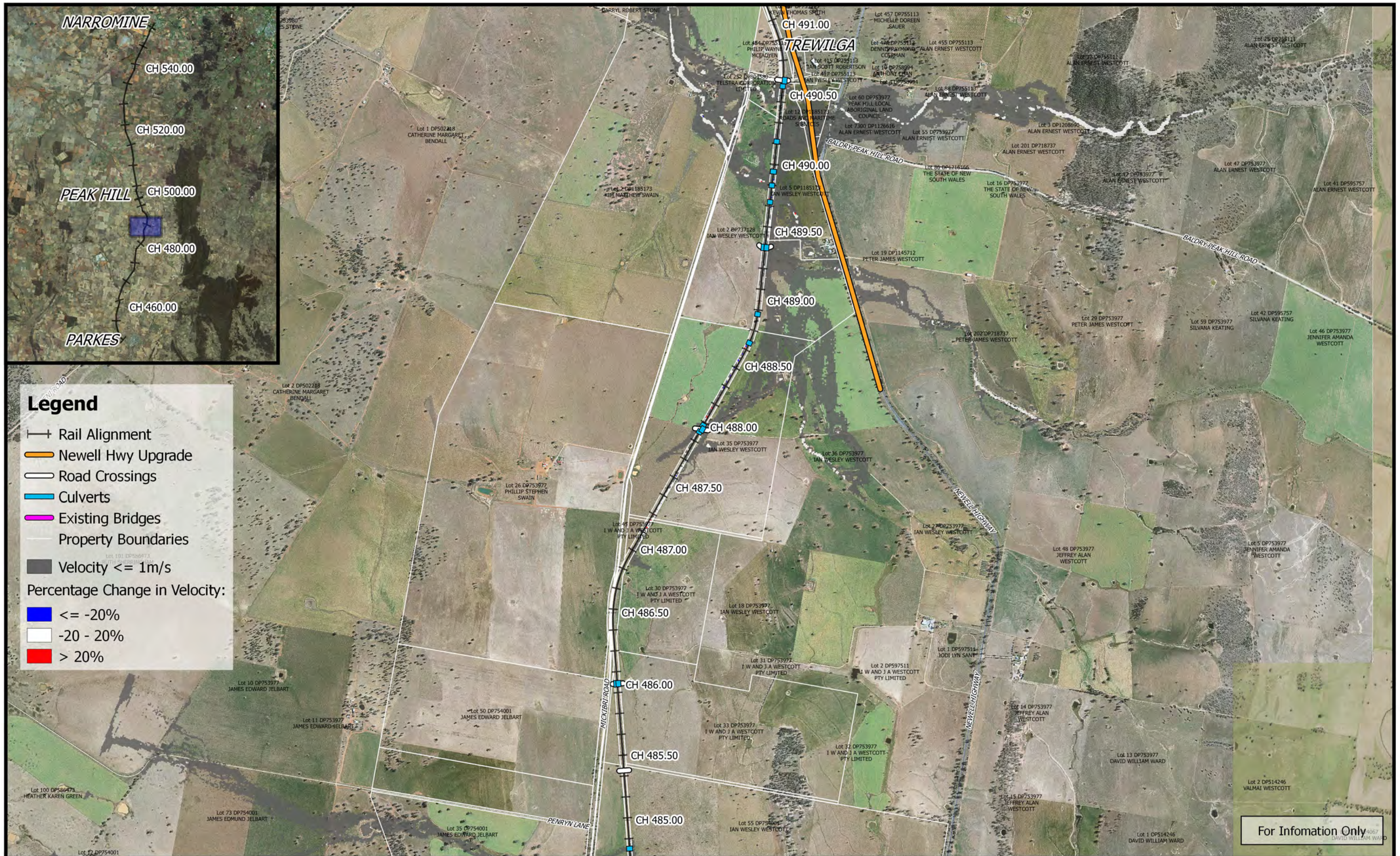
- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	 1:25,000		Date: 16/10/2018	Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results Figure DE39VC9 <i>39% AEP Percentage Change In Velocity - CH 485.00</i>	
	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
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC10 39% AEP Percentage Change In Velocity - CH 490.00</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	



	0 250 500 750 1000 m 1:25,000	 M M MOTT MACDONALD	Date: 16/10/2018	Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results Figure DE39VC11 39% AEP Percentage Change In Velocity - CH 492.00
	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
- Velocity <= 1m/s

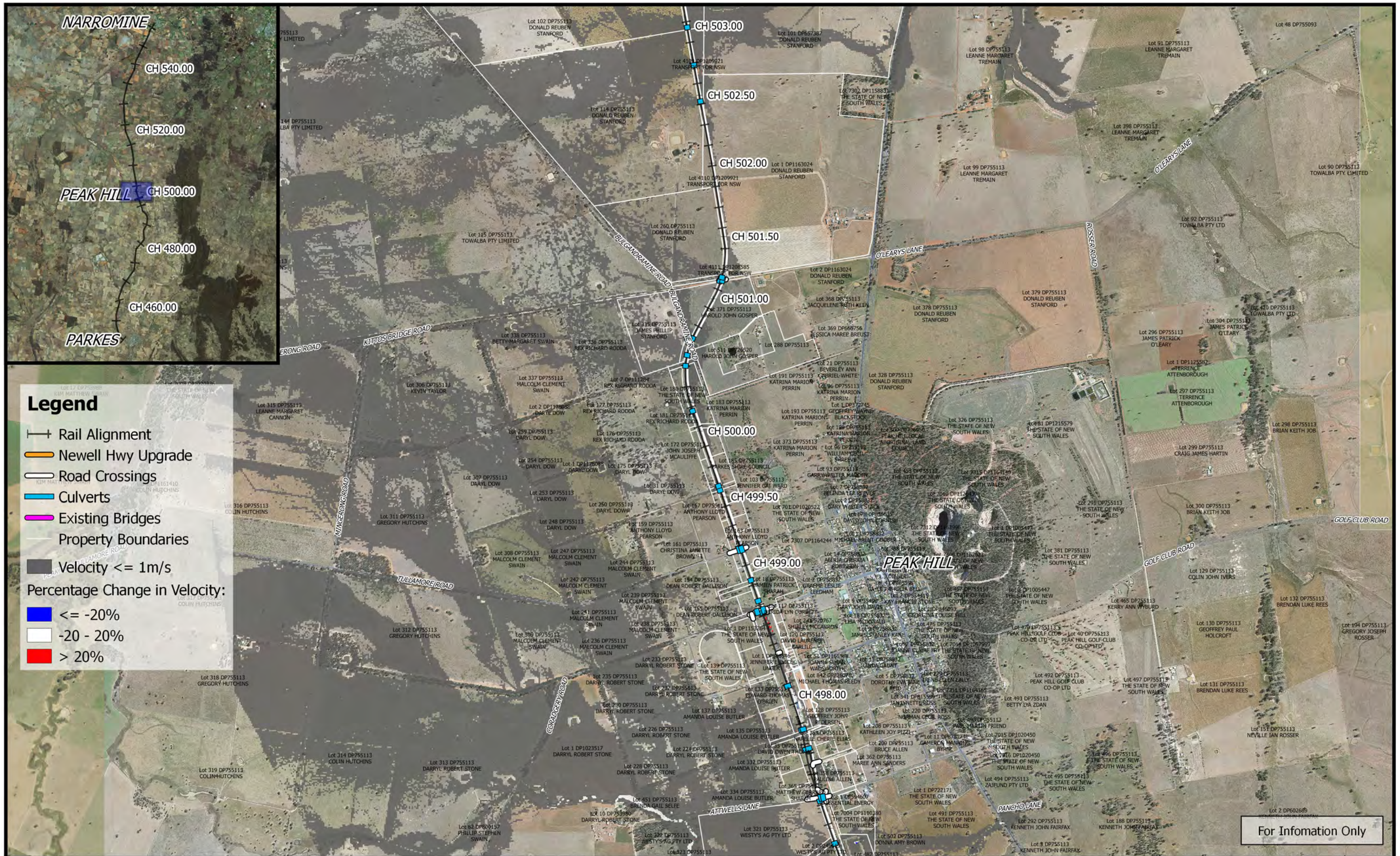
Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>0 250 500 750 1000 m</p> <p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine</p> <p>IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC12</p> <p>39% AEP Percentage Change In Velocity - CH 495.00</p>
	<p>Coordinate system: GDA 1994 MGA Zone 55</p> <p>Inset Aerial Source: NSW Six Map</p> <p>Scale ratio correct when printed at A3</p>		<p>Rev: A - For Information Only</p> <p>Prepared By: YeohM</p>	

E:\12d\Synergy\2\IR P2N_1\01 WIP\Flooding and Drainage\GIS Mapping\Individual Property Maps\Mapping_Full_Project.gps - 2.18.18



For Information Only

	<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: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC13 39% AEP Percentage Change In Velocity - CH 500.00</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	

E:\2d\synergy\2\IR_P2N_1\01 WIP\Flooding and Drainage\GIS Mapping\Individual Property Maps\Mapping_Full_Project.gvs - 2.18.18


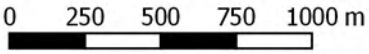



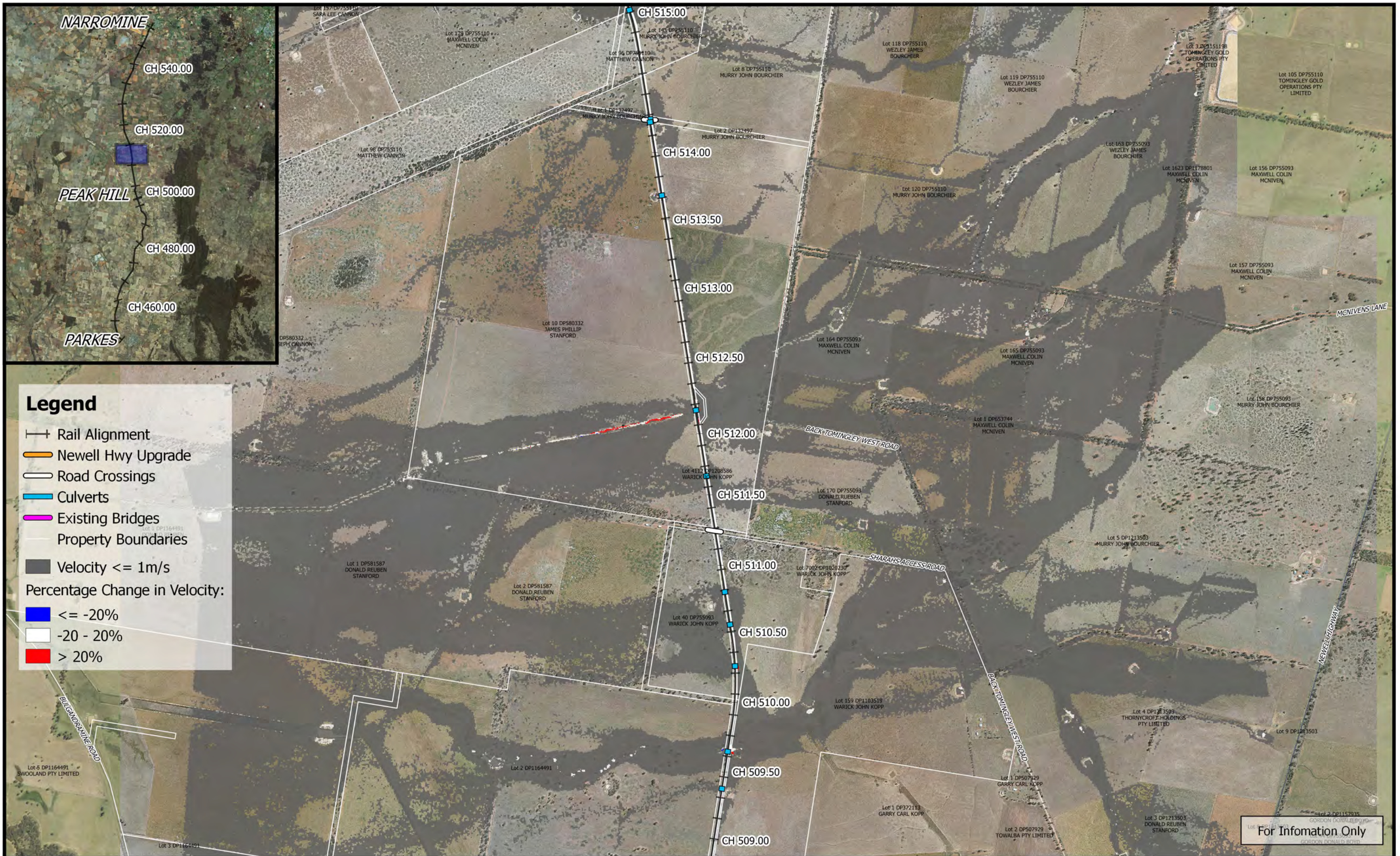
For Information Only

	<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: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC14 39% AEP Percentage Change In Velocity - CH 505.00</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	



For Information Only

	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3		Date: 16/10/2018 Rev: A - For Information Only Prepared By: YeohM	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="center">Figure DE39VC15 39% AEP Percentage Change In Velocity - CH 510.00</p>
---	--	--	---	--



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity $\le 1\text{m/s}$

Percentage Change in Velocity:

- $\le -20\%$
- $-20 - 20\%$
- $> 20\%$

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine 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
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>	 	Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC17 <i>39% AEP Percentage Change In Velocity - 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		

E:\2d\Synergy\2\IR_P2N_1\01 WPI\Flooding and Drainage\GIS Mapping\Individual Property Maps\Mapping_Full_Project.ags - 2.18.18



For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC18 <i>39% AEP Percentage Change In Velocity - CH 520.00</i></p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</p>		Rev: A - For Information Only	
	Prepared By: YeohM			



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC19 <i>39% AEP Percentage Change In Velocity - CH 525.00</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		

E:\12d\Synergy\2\IR P2\1\01 WIP\Flooding and Drainage\GIS Mapping\Individual Property Maps\Mapping_Full_Project.ags - 2.18.18



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity $\leq 1\text{m/s}$

Percentage Change in Velocity:

- $\leq -20\%$
- $-20 - 20\%$
- $> 20\%$

For Information Only

	 1:25,000 Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3	 	Date: 16/10/2018	Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results Figure DE39VC20 <i>39% AEP Percentage Change In Velocity - CH 530.00</i>
	Rev: A - For Information Only Prepared By: YeohM			

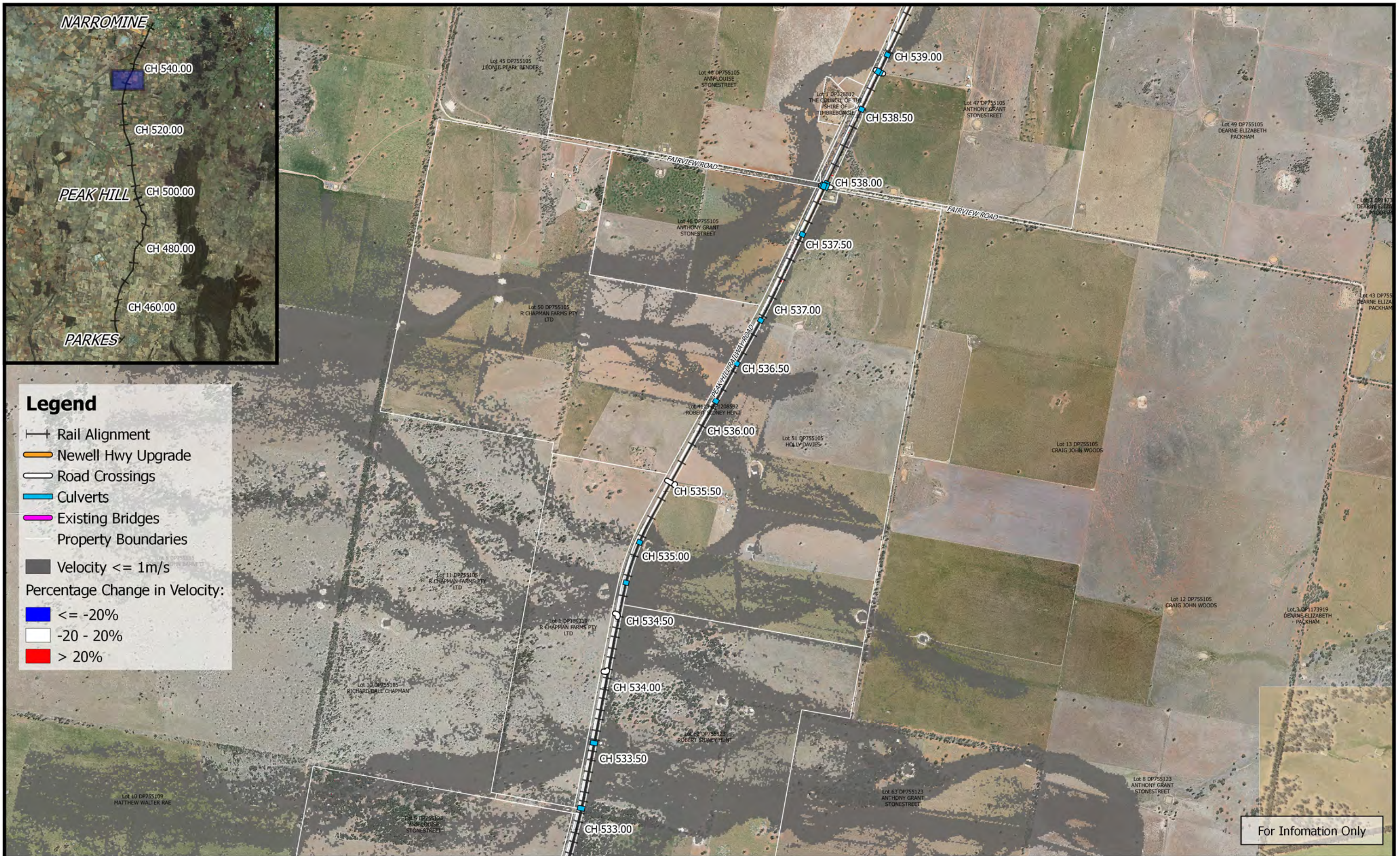


Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s
- Percentage Change in Velocity:
 - <= -20%
 - 20 - 20%
 - > 20%

For Information Only

	 1:25,000		Date: 16/10/2018	<p style="margin: 0;">Inland Rail - Parkes to Narromine</p> <p style="margin: 0;">IFC - Cross Drainage Flood Impact Assessment Results</p> <p style="margin: 0;">Figure DE39VC21</p> <p style="margin: 0;"><i>39% AEP Percentage Change In Velocity - CH 533.00</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		



Legend

- Rail Alignment
- Newell Hwy Upgrade
- Road Crossings
- Culverts
- Existing Bridges
- Property Boundaries
- Velocity <= 1m/s

Percentage Change in Velocity:

- <= -20%
- 20 - 20%
- > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC22 <i>39% AEP Percentage Change In Velocity - CH 535.00</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		



For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC23 <i>39% AEP Percentage Change In Velocity - CH 540.00</i></p>
	<p>Coordinate system: GDA 1994 MGA Zone 55 Inset Aerial Source: NSW Six Map Scale ratio correct when printed at A3</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
- Velocity <= 1m/s

Percentage Change in Velocity:

- Blue: <= -20%
- White: -20 - 20%
- Red: > 20%

For Information Only

	<p>1:25,000</p>		Date: 16/10/2018	<p>Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p>Figure DE39VC24 <i>39% AEP Percentage Change In Velocity - CH 545.00</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	



For Information Only

	<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: 16/10/2018	<p align="center">Inland Rail - Parkes to Narromine IFC - Cross Drainage Flood Impact Assessment Results</p> <p align="right">Figure DE39VC25 39% AEP Percentage Change In Velocity - CH 550.00</p>
			Rev: A - For Information Only	
			Prepared By: YeohM	