

Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- 0.5 Predicted Groundwater Drawdowns (m)
- Garrawilla Volcanics Sub Crop Margin
- Drawdown Cross Section Line

NOTE
MGA Coordinates

0 5 10km

7500000
6595000

Date: 10 November 2009 **Scale:** As Shown

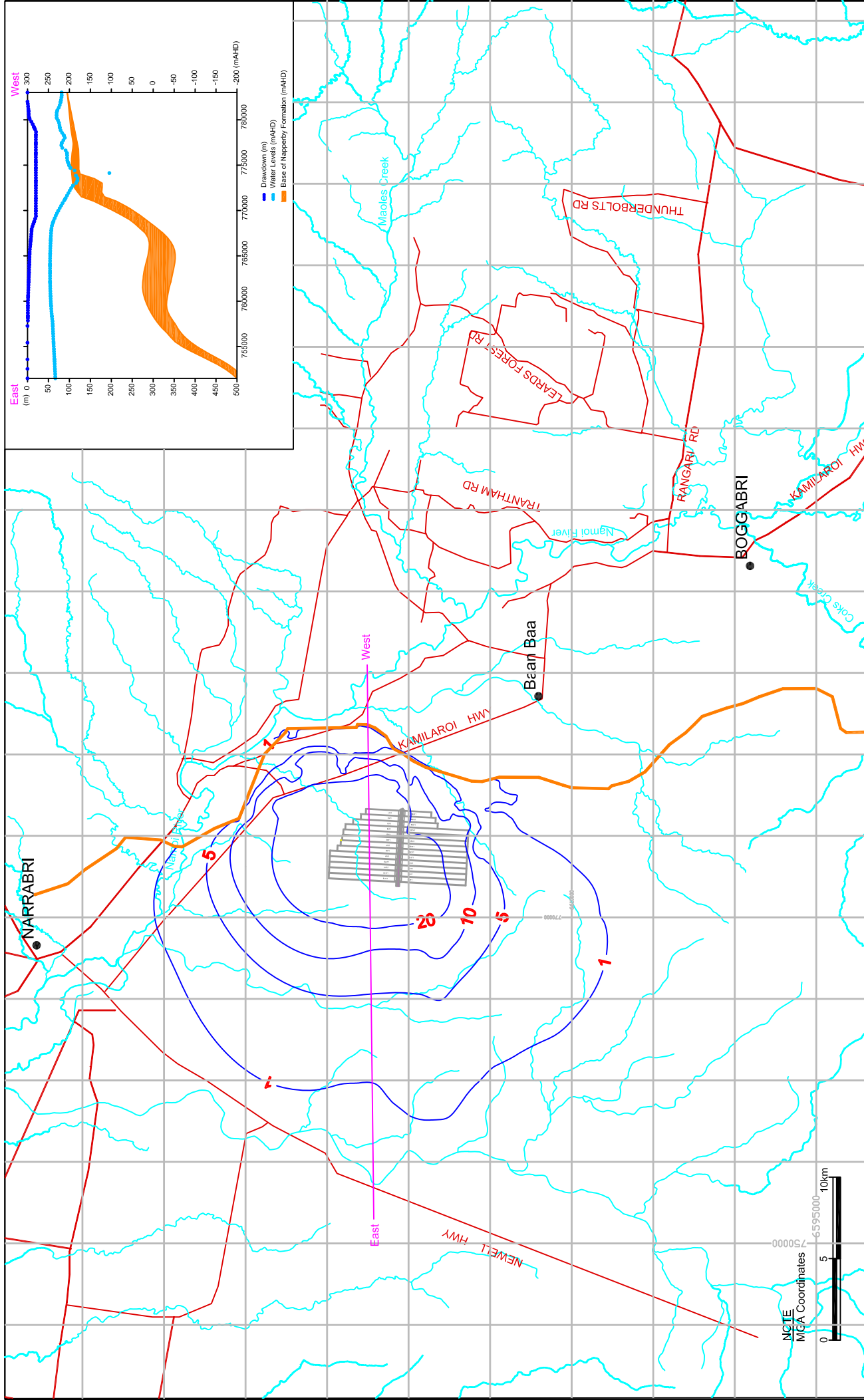
Initials: TL **Job No:** S28

Drawing No: S28-045h **Rev:** H

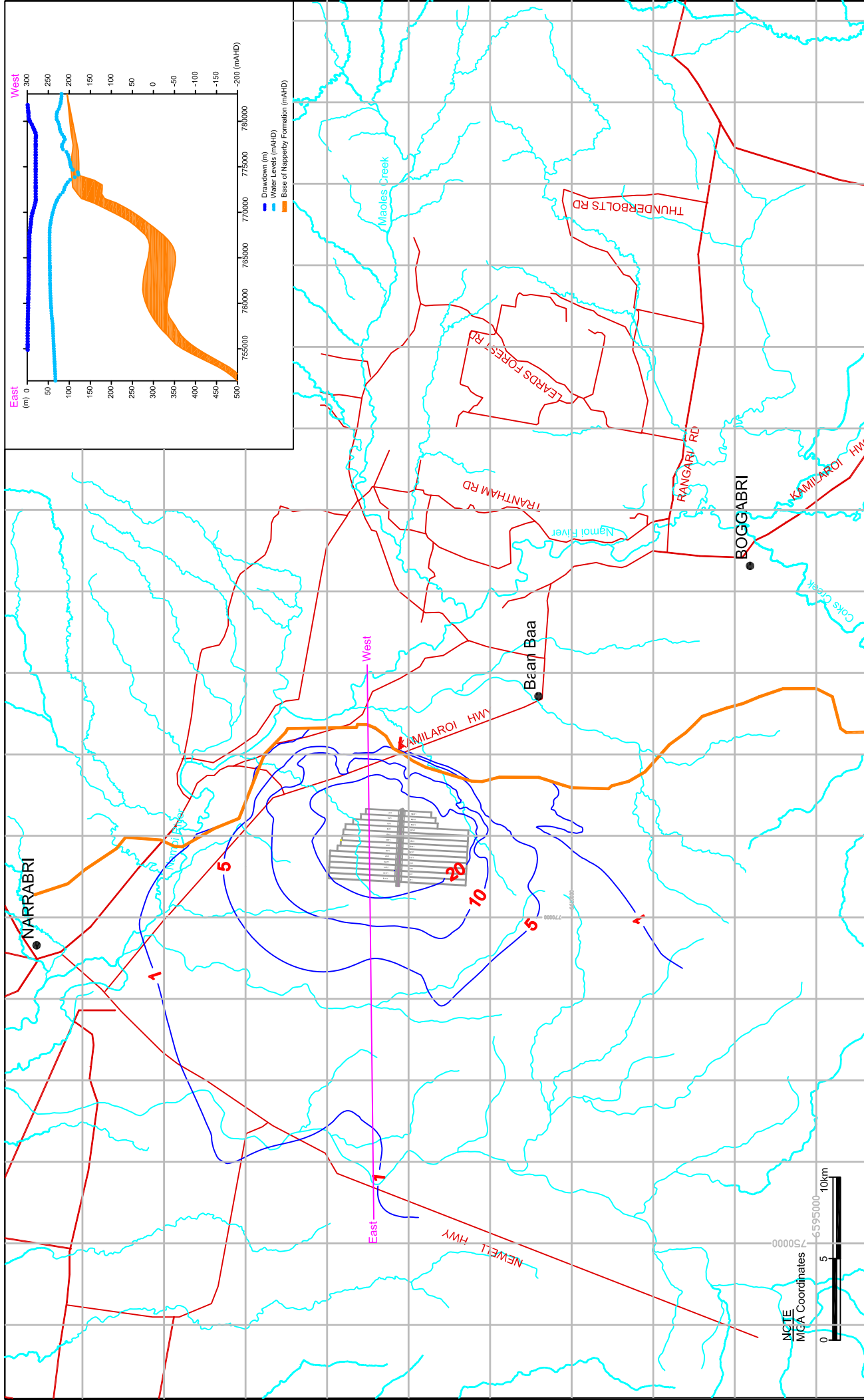
Narrabri Coal Operations Pty Ltd

Drawdown after 29 Year in Garrawilla Volcanics (Layer 4)

Figure 6.16



Legend 		Date: 10 November 2009 Scale: As Shown		Narrabri Coal Operations Pty Ltd	
		Initials: TL	Job No: S28	Drawdown after 15 Year in Napperry Formation (Layer 5)	
Drawing No: S28-038d		Rev: D			
					Figure 6.17



Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- Predicted Groundwater Drawdowns (m)
- Napperby Formation Boundary
- Drawdown Cross Section Line

Date: 10 November 2009 **Scale:** As Shown

Initials: TL **Job No:** S28

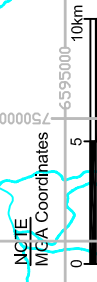
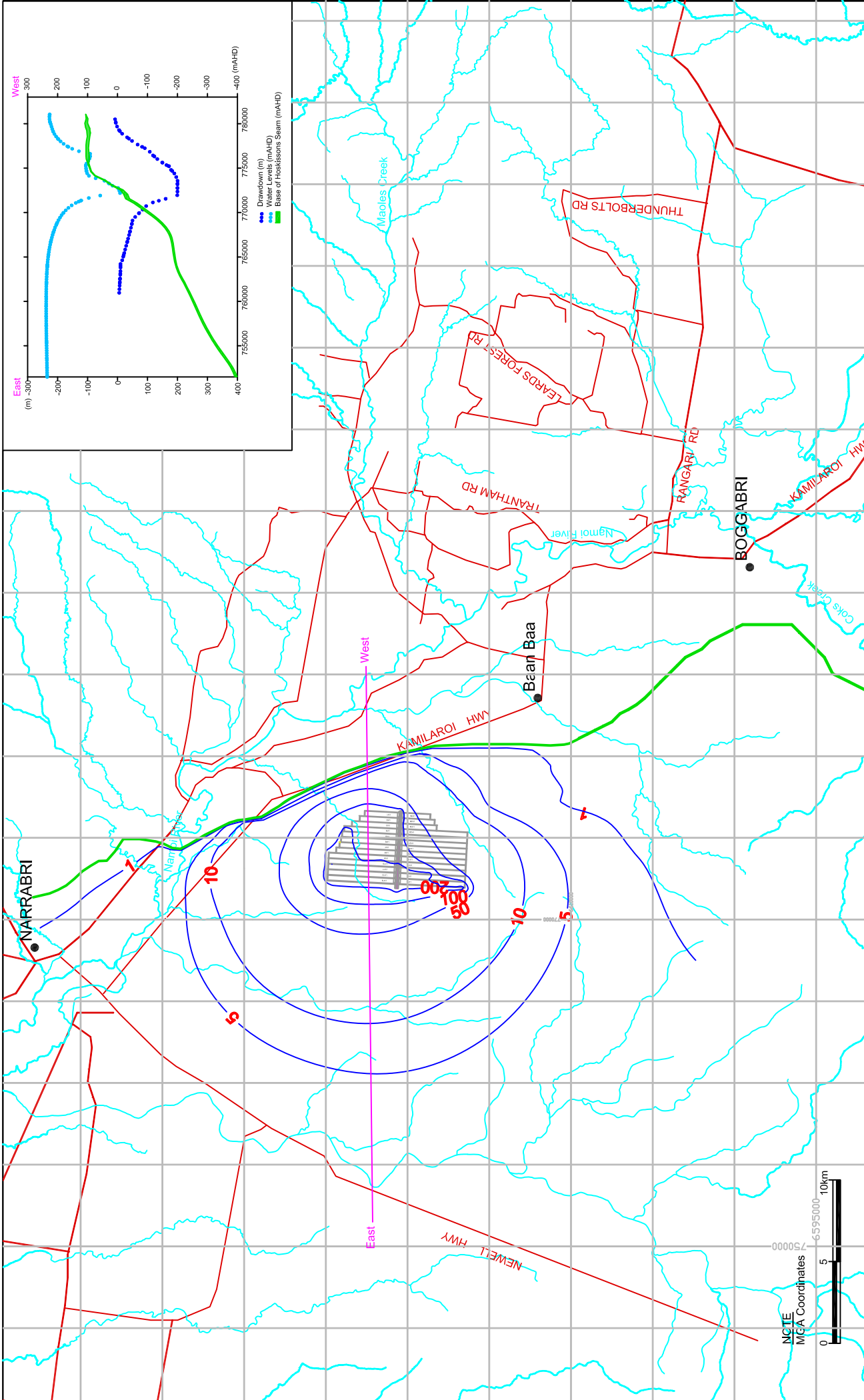
Drawing No: S28-039e **Rev:** E

Narrabri Coal Operations Pty Ltd

Drawdown after 29 Year in Napperby Formation (Layer 5)

Figure 6.18

aquaterra



- Legend**
- Narrabri Underground Outline
 - Roads or tracks
 - Surface Water Drainage (Stream/Creek)
 - Predicted Groundwater Drawdowns (m)
 - Hoskissons Seam Sub Crop Margin
 - Drawdown Cross Section Line

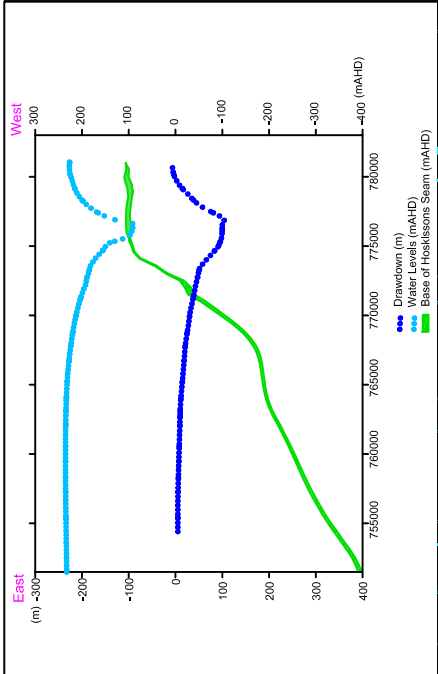
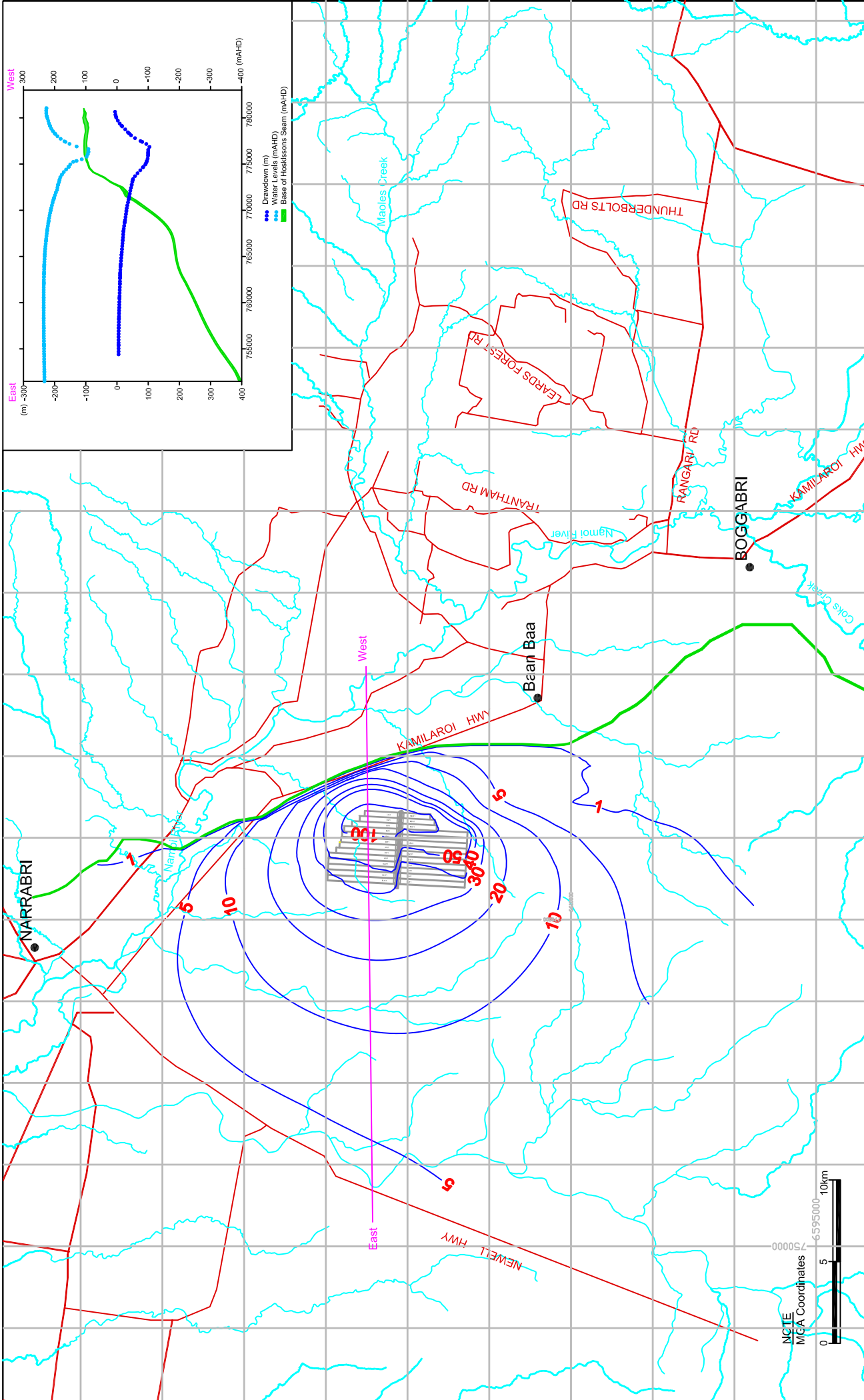
Date:	10 November 2009	Scale:	As Shown
Initials:	PZ	Job No:	S28
Drawing No:	S28-041e	Rev:	E

Narrabri Coal Operations Pty Ltd

Drawdown after 15 Year in Hoskissons Seam (Layer 9)

Figure 6.19





Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- Predicted Groundwater Drawdowns (m)
- Hoskissons Seam Sub Crop Margin
- Drawdown Cross Section Line

NOTE
MGA Coordinates

Scale: As Shown

Date: 10 November 2009

Initials: TL

Job No: S28

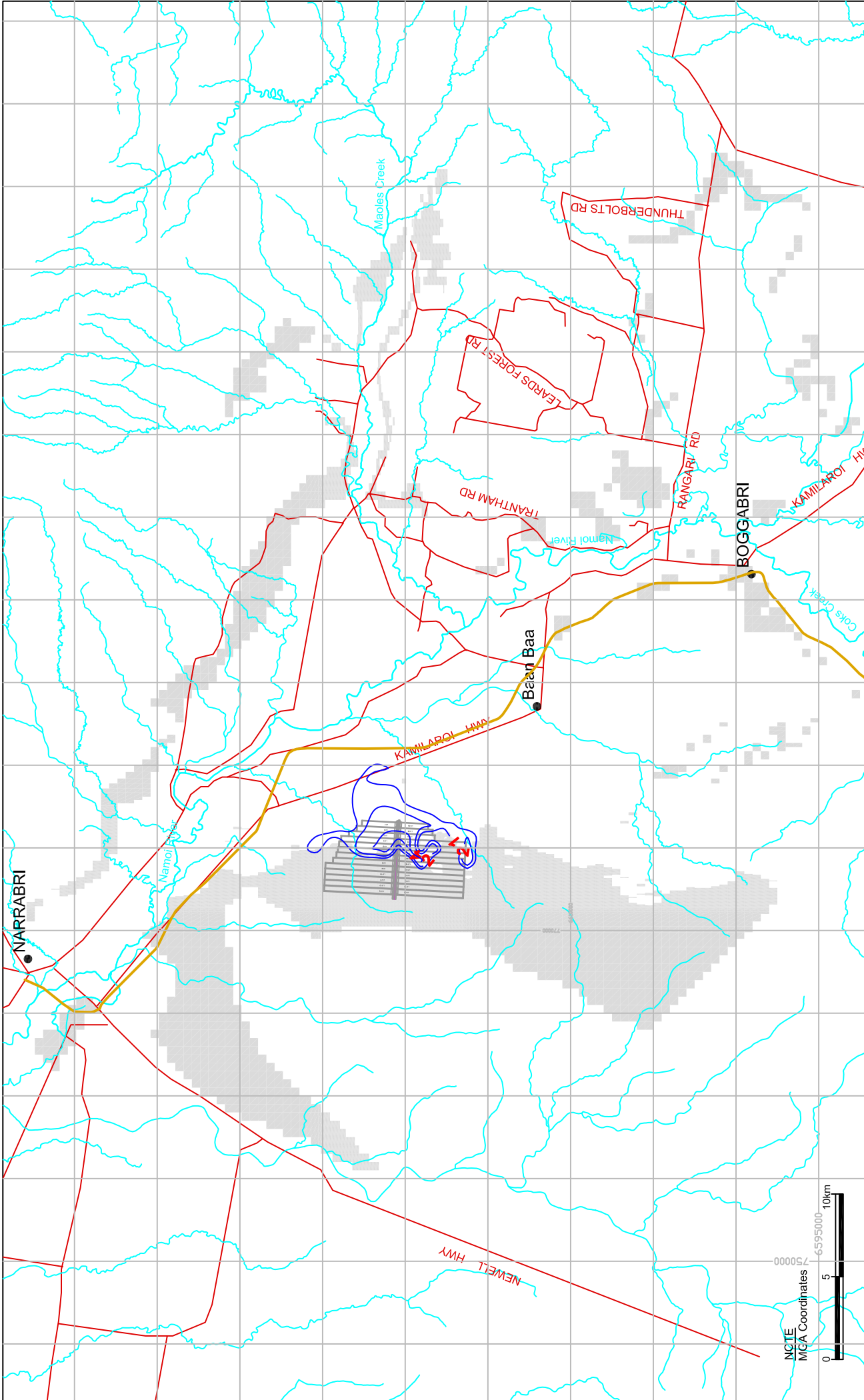
Drawing No: S28-042e

Rev: E

Narrabri Coal Operations Pty Ltd

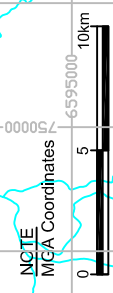
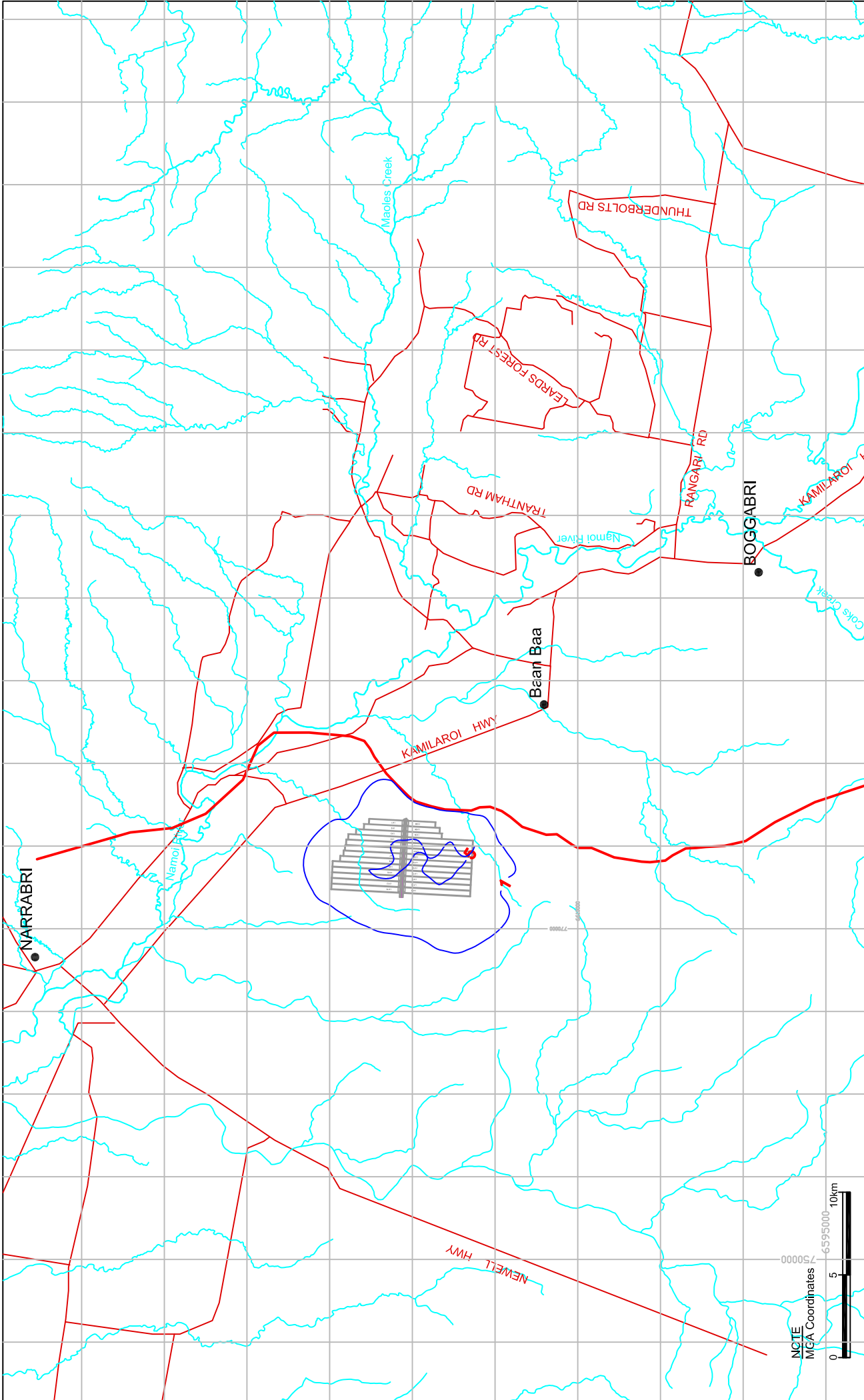
Drawdown after 29 Year in Hoskissons Seam (Layer 9)

Figure 6.20



Legend Narrabri Underground Outline Roads or tracks Surface Water Drainage (Stream/Creek) Predicted Groundwater Drawdowns (m AHD) Unsaturated area	Date: 14 August 2009 Initials: PZ Drawing No: S28-064e	Scale: As Shown Job No: S28 Rev: E	Narrabri Coal Operations Pty Ltd Drawdown after 130 Year in Alluvium / Colluvium / Regolith (Layer 1)

Figure 6.21



- Legend**
- Narrabri Underground Outline
 - Roads or tracks
 - Surface Water Drainage (Stream/Creek)
 - Predicted Groundwater Drawdowns (m AHD)

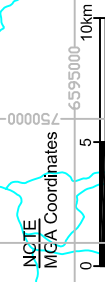
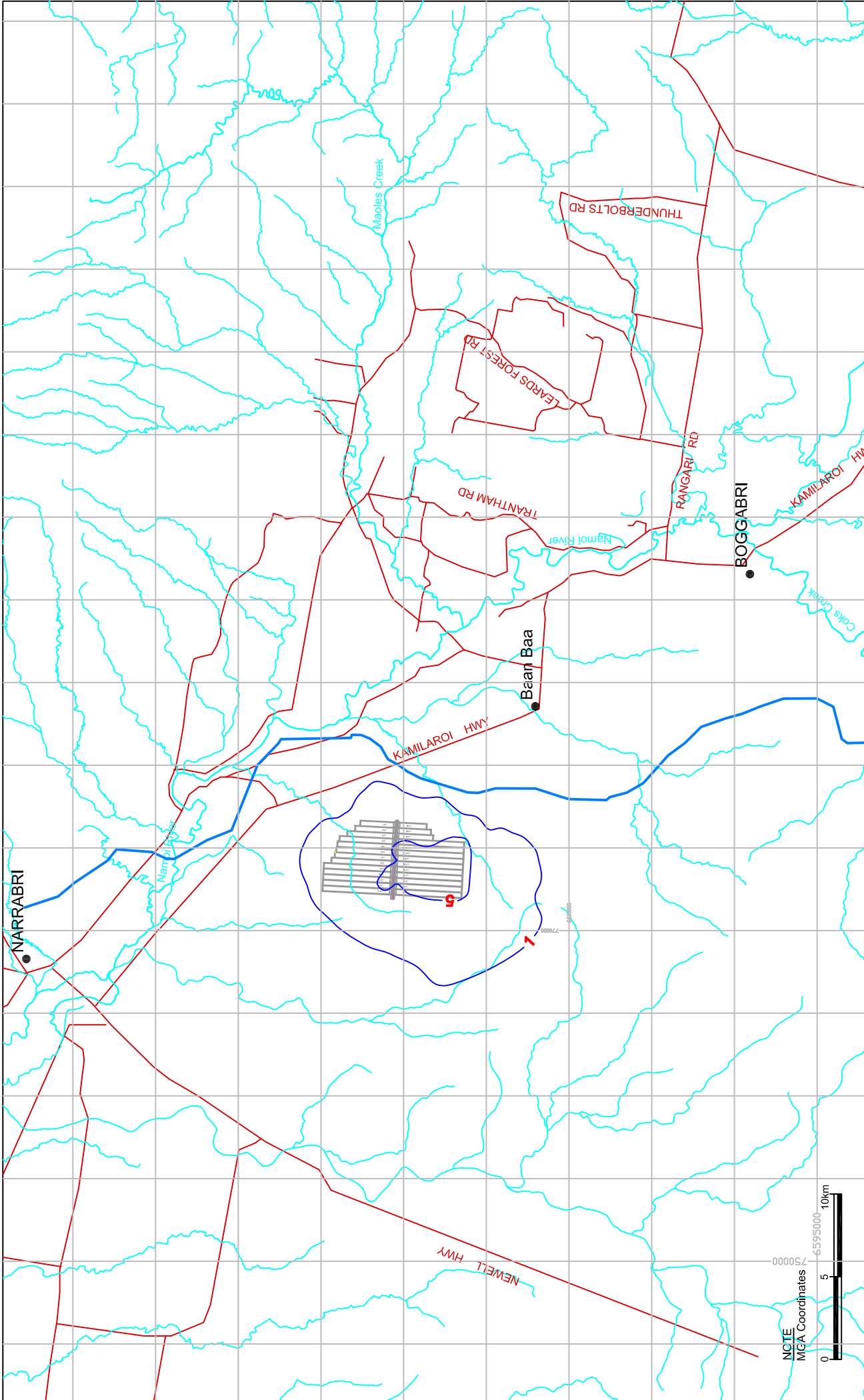
Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- Predicted Groundwater Drawdowns (m AHD)

Garrawilla Volcanics Sub Crop Margin

Date: 14 August 2009		Scale: As Shown		Narrabri Coal Operations Pty Ltd	
Initials: PZ		Job No: S28		Drawdown after 130 Year in Garrawilla Volcanics (Layer 4)	
Drawing No: S28-060h		Rev: H			

Figure 6.22



- Legend**
- Narrabri Underground Outline
 - Roads or tracks
 - Surface Water Drainage (Stream/Creek)
 - Predicted Groundwater Drawdowns (m AHD)

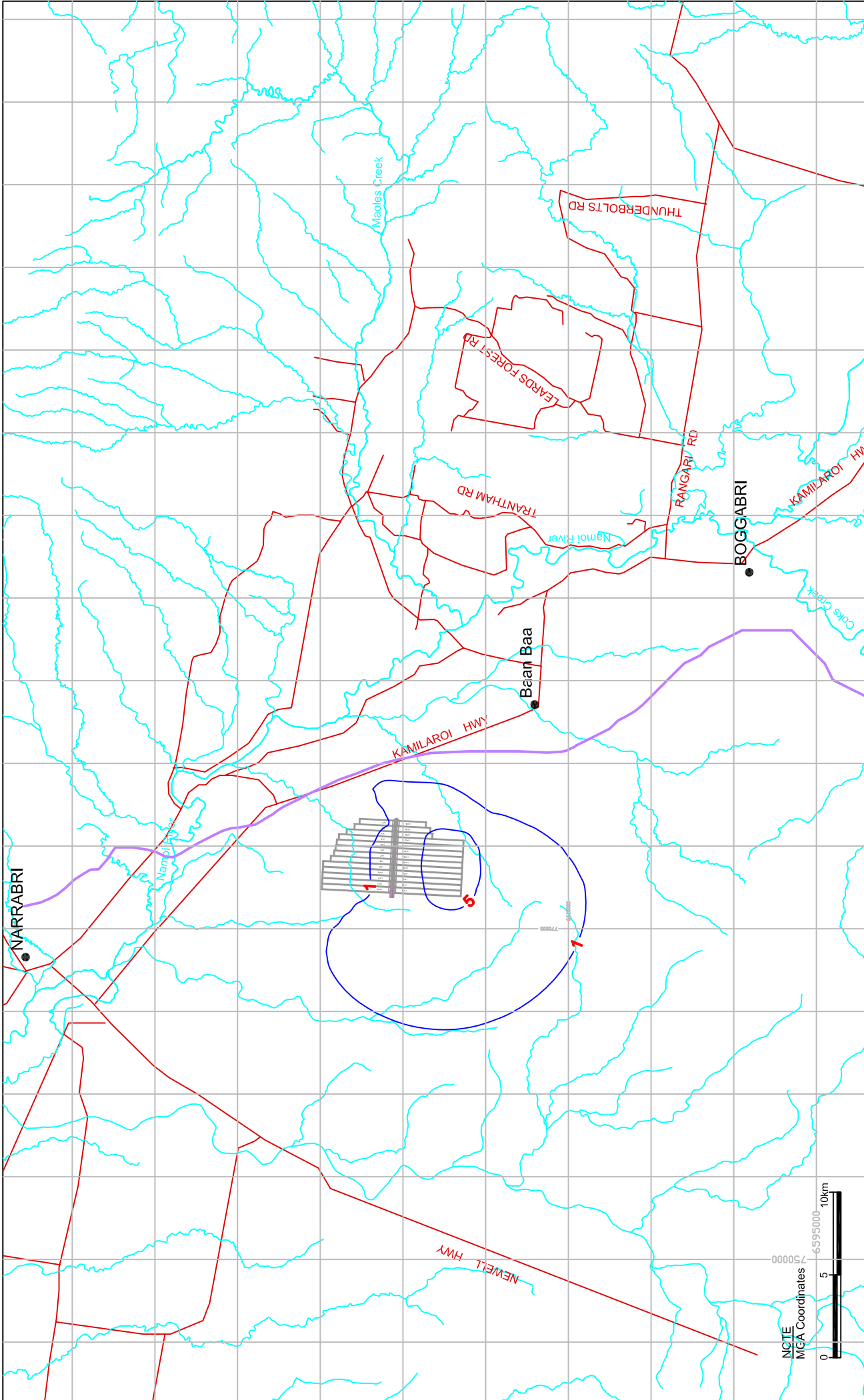
Napperby Formation Sub Crop Margin

Date: 14 August 2009		Scale: As Shown	
Initials: PZ	Job No: S28		
Drawing No: S28-066e	Rev: E		
		aquaterra	

Narrabri Coal Operations Pty Ltd

Drawdown after 130 Year in
Napperby Formation (Layer 5)

Figure 6.23



Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- Predicted Groundwater Drawdowns (m AHD)
- Hoskissons Seam Sub Crop Margin

Date: 20 August 2009 **Scale:** As Shown

Initials: PZ **Job No:** S28

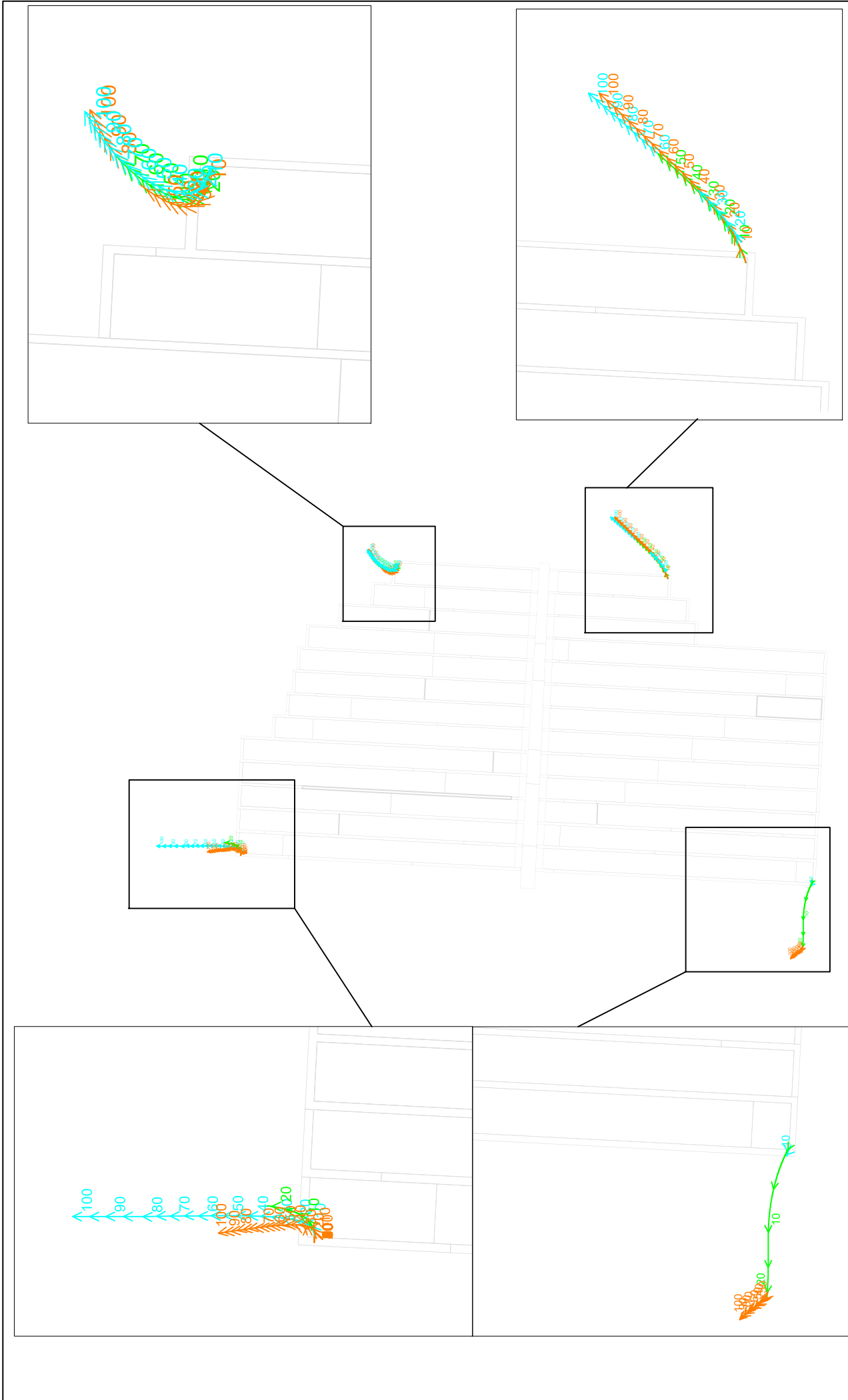
Drawing No: S28-067f **Rev:** F

Narrabri Coal Operations Pty Ltd


Drawdown after 130 Year in Hoskissons Seam (Layer 9)

Figure 6.24

aquaterra



Legend

-  Layer 2 (Year)
-  Layer 3 (Year)
-  Layer 4 (Year)

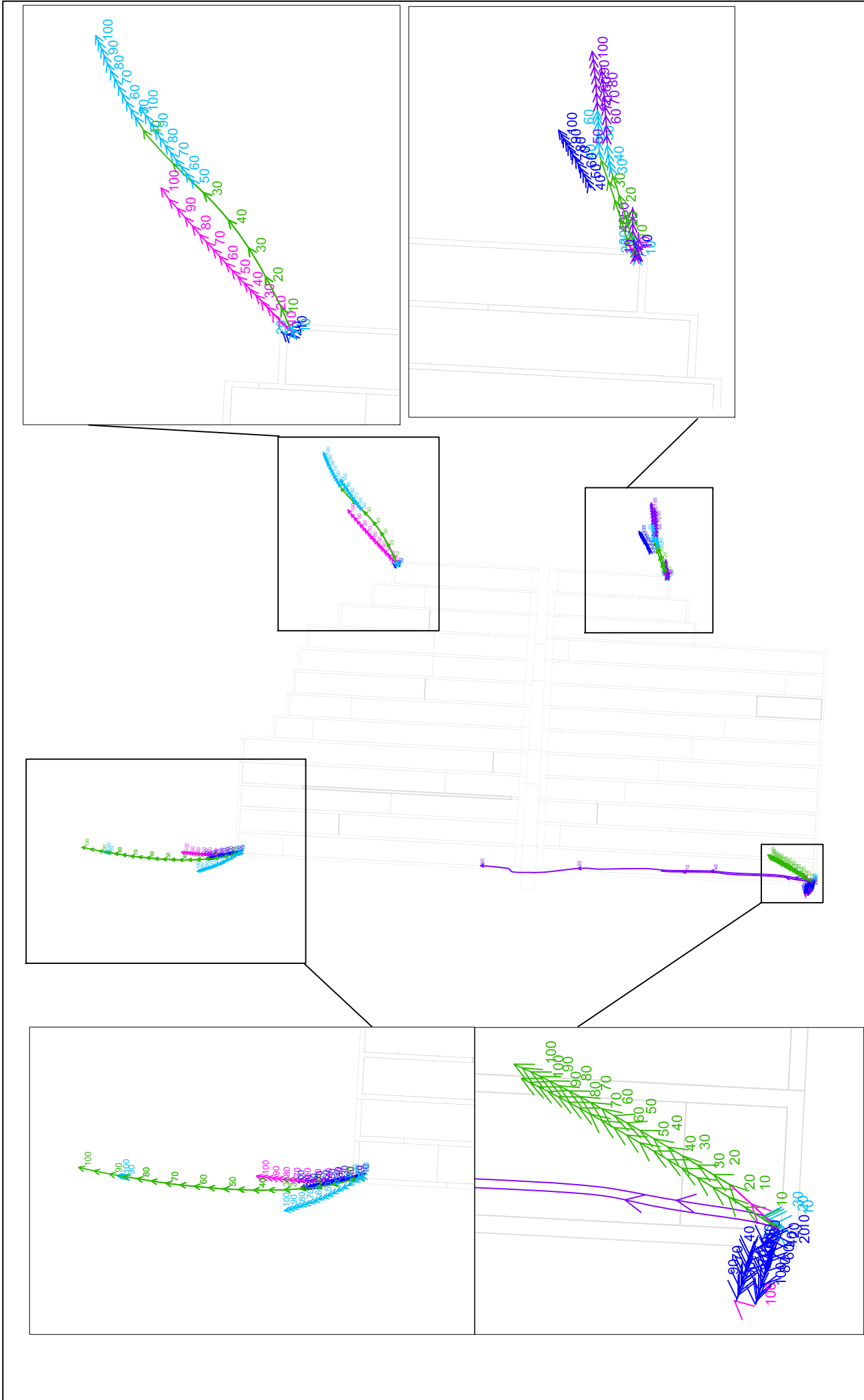
Date: 29 September 2009	Scale: As Shown
Initials: TL	Job No: S28
Drawing No: S28-087a	Rev: A

Narrabri Coal Operations Pty Ltd

Particle Tracking In Layers 2, 3 and 4

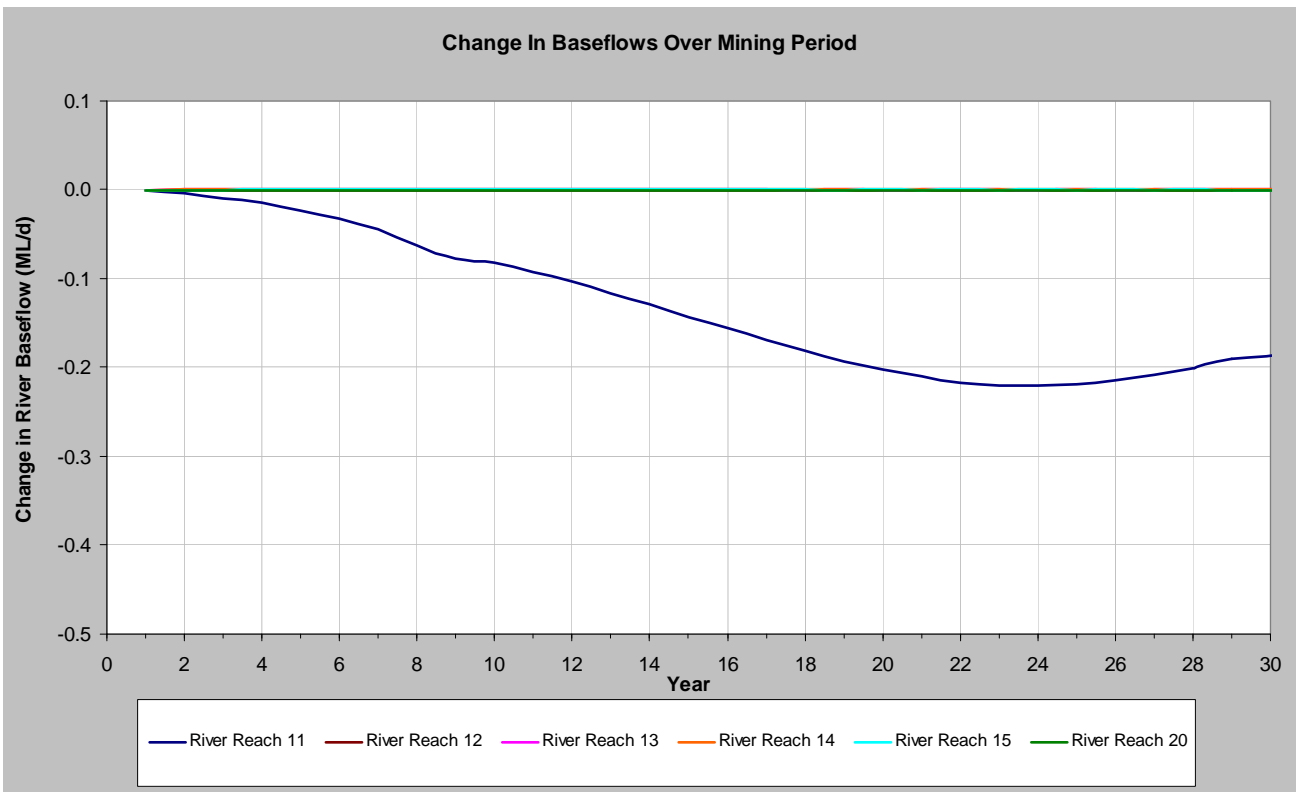
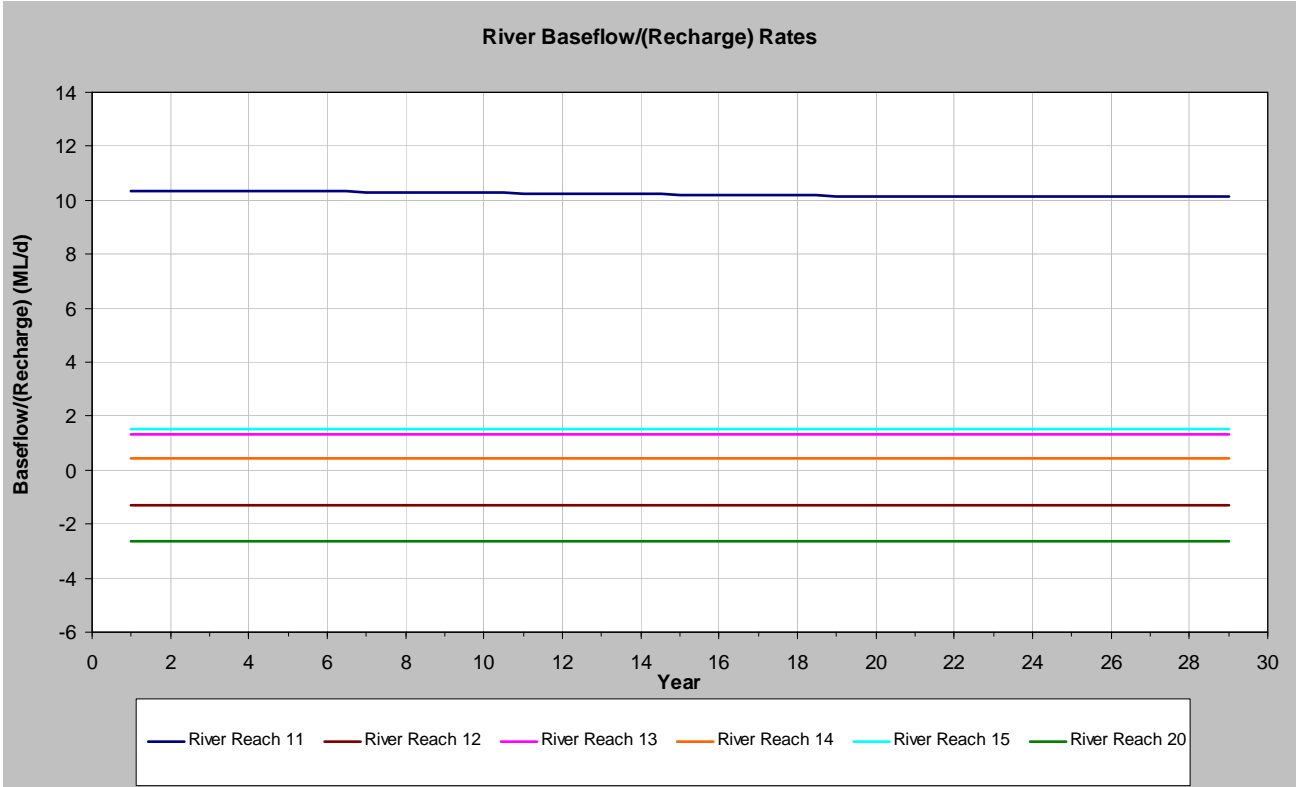
Figure 6.25



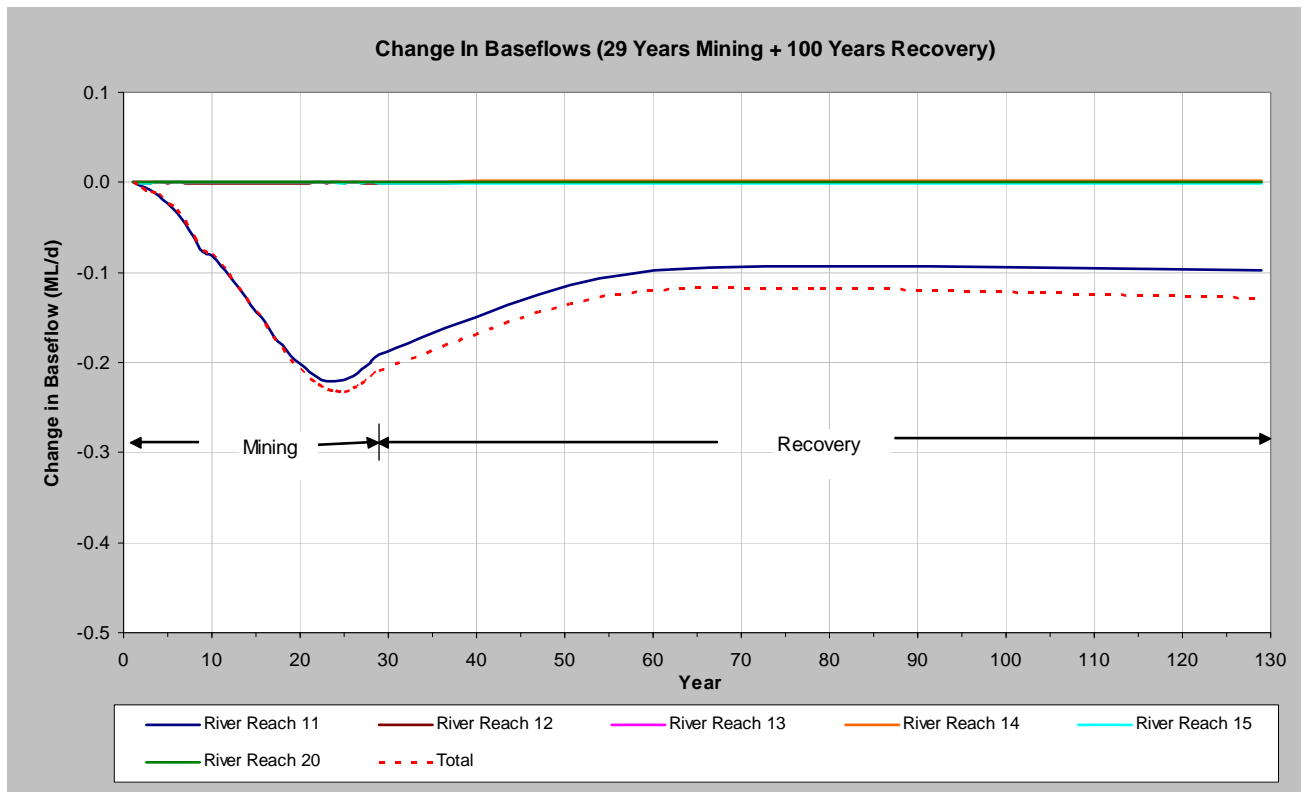
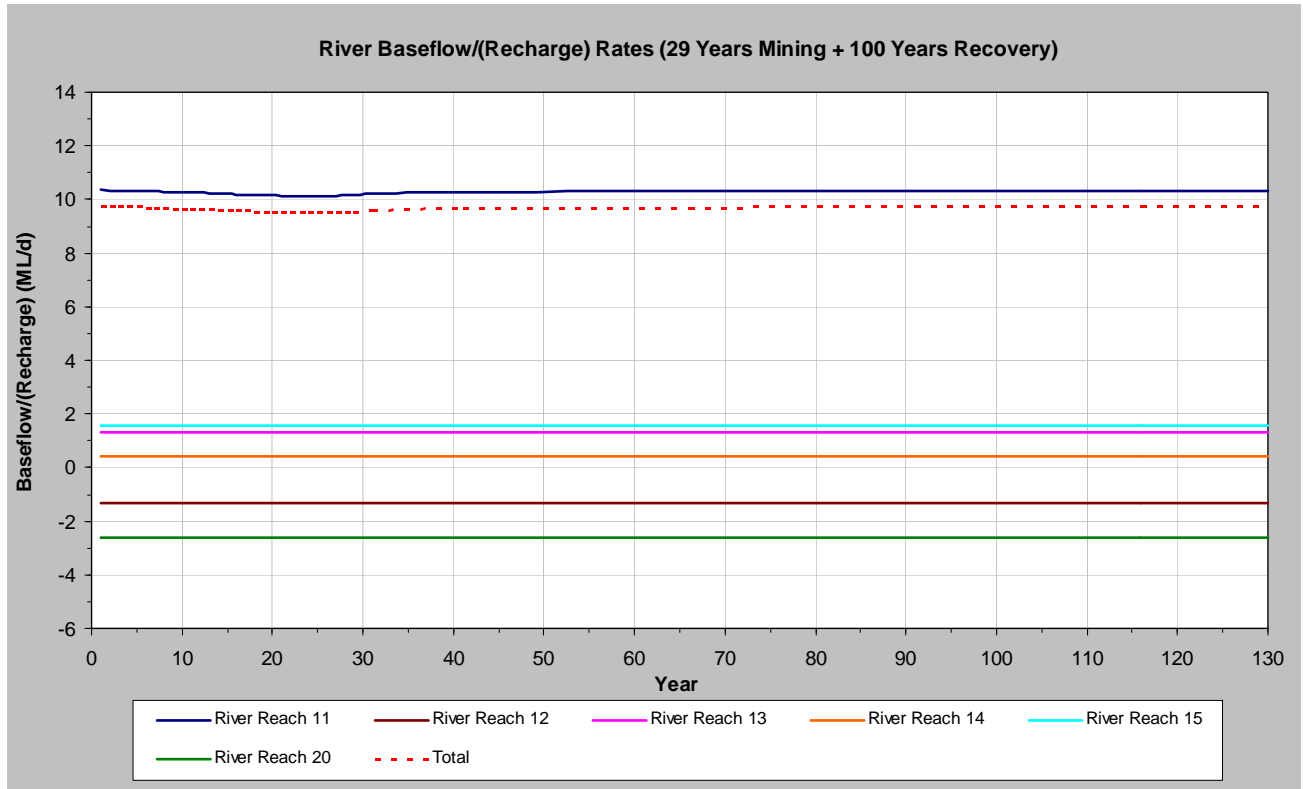


Legend 		Narrabri Coal Operations Pty Ltd	
		Particle Tracking In Layers 5, 6, 7, 8 and 9	
Date: 08 October 2009	Scale: As Shown		
Initials: TL	Job No: S28		
Drawing No: S28-087c	Rev: C		

Figure 6.26



Date:	8 October 2009	Scale:	as indicated	Narrabri Coal Operations Pty Ltd Predicted Baseflows Over Mining Period
Initials:	PZ	Job No:	S28	
Drawing No:	S28-016g	Rev:	G	
				Figure 6.27



Date: 8 October 2009	Scale: as indicated	Narrabri Coal Operations Pty Ltd
Initials: PZ	Job No: S28	
Drawing No: S28-017i	Rev: I	
aquaterra		Predicted Baseflows Over Mining and Recovery Period
		Figure 6.28



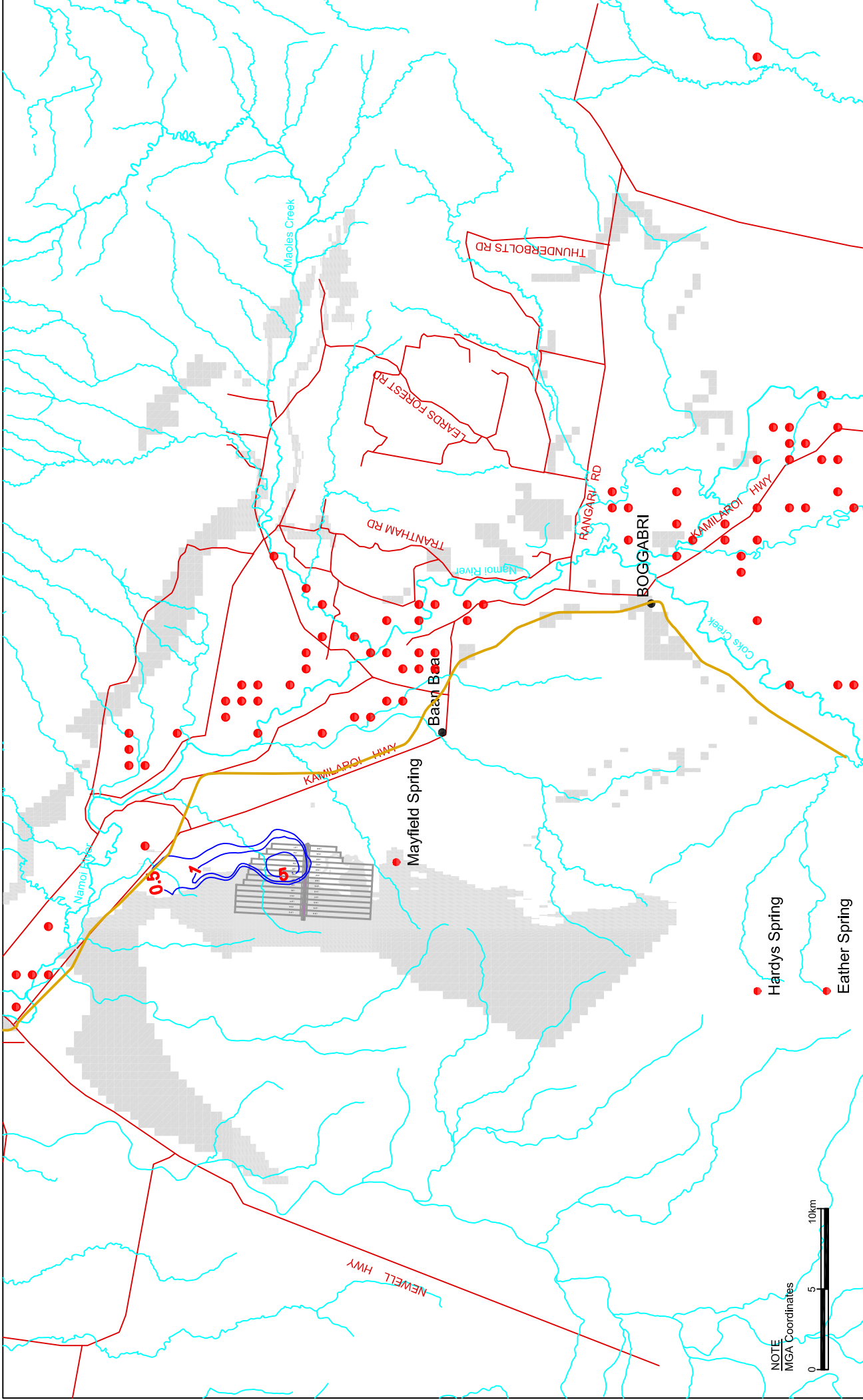
- Base Case (Fracture Zone Kh multipliers L8 = 2, L7 = 2, L6 = 2, L5 = 2; Kv multipliers L8 = 20, L7 = 10, L6 = 2.5, L5 = 2.5)
- Reduced Kv Multipliers in Fracture Zone: L8 = 10, L7 = 5, L6 = 1.5, L5 = 1.5
- Higher Kv Multipliers in Fracture Zone: L8 = 200, L7 = 100, L6 = 25, L5 = 25
- Subsidence Fracture Zone Extended to Layer 4 (Kh and Kv = 2 times host)

Date: 8 October 2009		Scale: As Shown		Narrabri Coal Operations Pty Ltd	
Initials: PZ		Job No: S28		Uncertainty Analysis Mine Inflow Dewatering Rates	
Drawing No: S28-021o		Rev: 0			
aquaterra					
Figure 6.29					

Inflow Salinity



Date: 19 August 2009		Scale: As Shown		Narrabri Coal Operations Pty Ltd	
Initials: PZ		Job No: S28		Predicted Mine Inflow Salinity Concentrations	
Drawing No: S28-076b		Rev: B			
				Figure 7.1	



NOTE
MGA Coordinates



Legend

- Narrabri Underground Outline
- Roads or tracks
- Surface Water Drainage (Stream/Creek)
- Predicted Groundwater Drawdowns (m AHD)
- Unsaturated area
- Alluvium Margin
- known Alluvium Ground Extraction Bores

- Hardys Spring
- Eather Spring
- Mayfield Spring
- Ban Baa
- BOGGABRI

Date:	20 August 2009	Scale:	As Shown
Initials:	PZ	Job No:	S28
Drawing No:	S28-078	Rev:	0



Narrabri Coal Pty Ltd	
Drawdown after 29 Year in Alluvium / Colluvium / Regolith (Layer 1)	

Figure 7.2