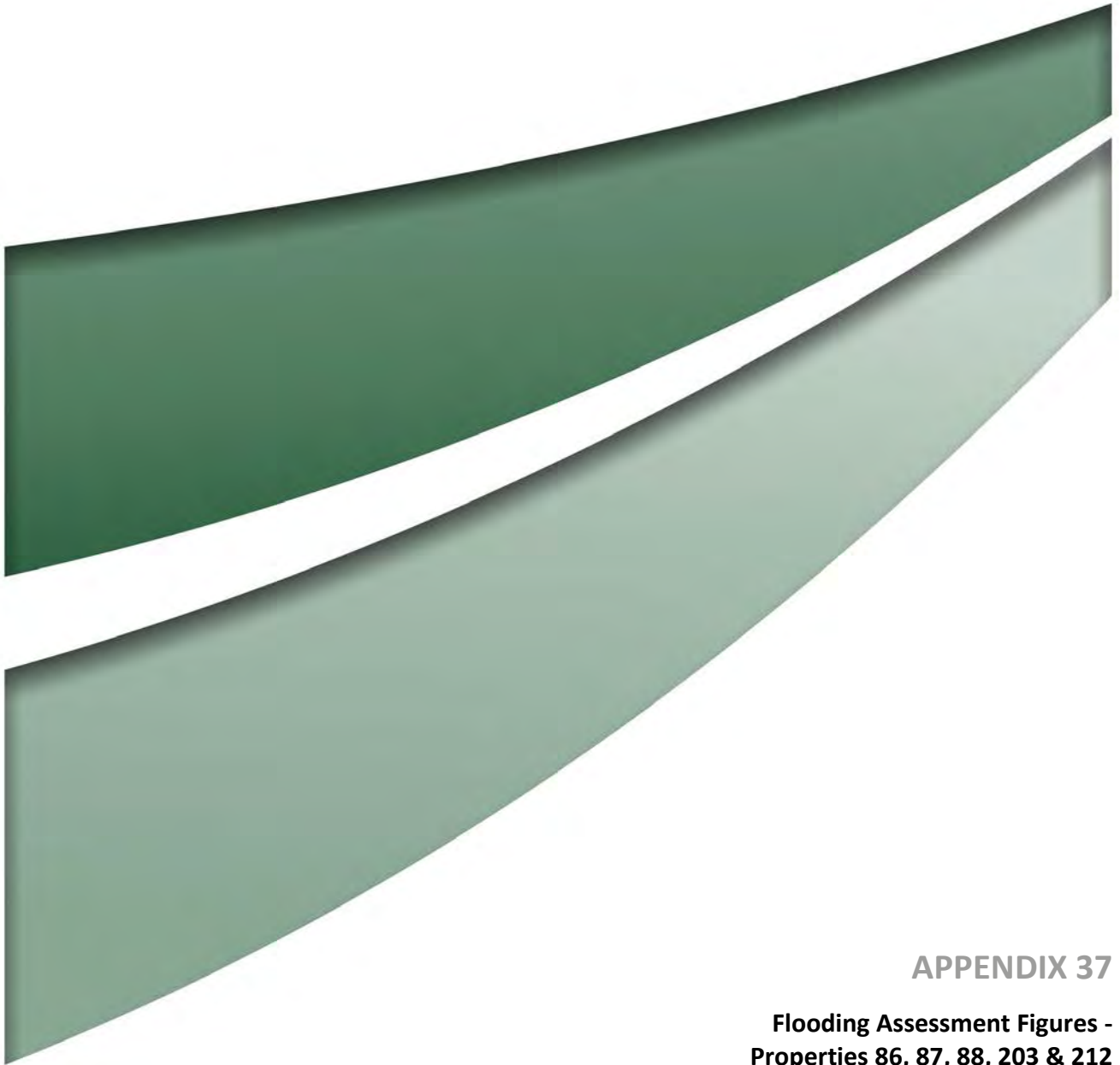




APPENDIX 37

**Flooding Assessment Figures -
Properties 86, 87, 88, 203 & 212**

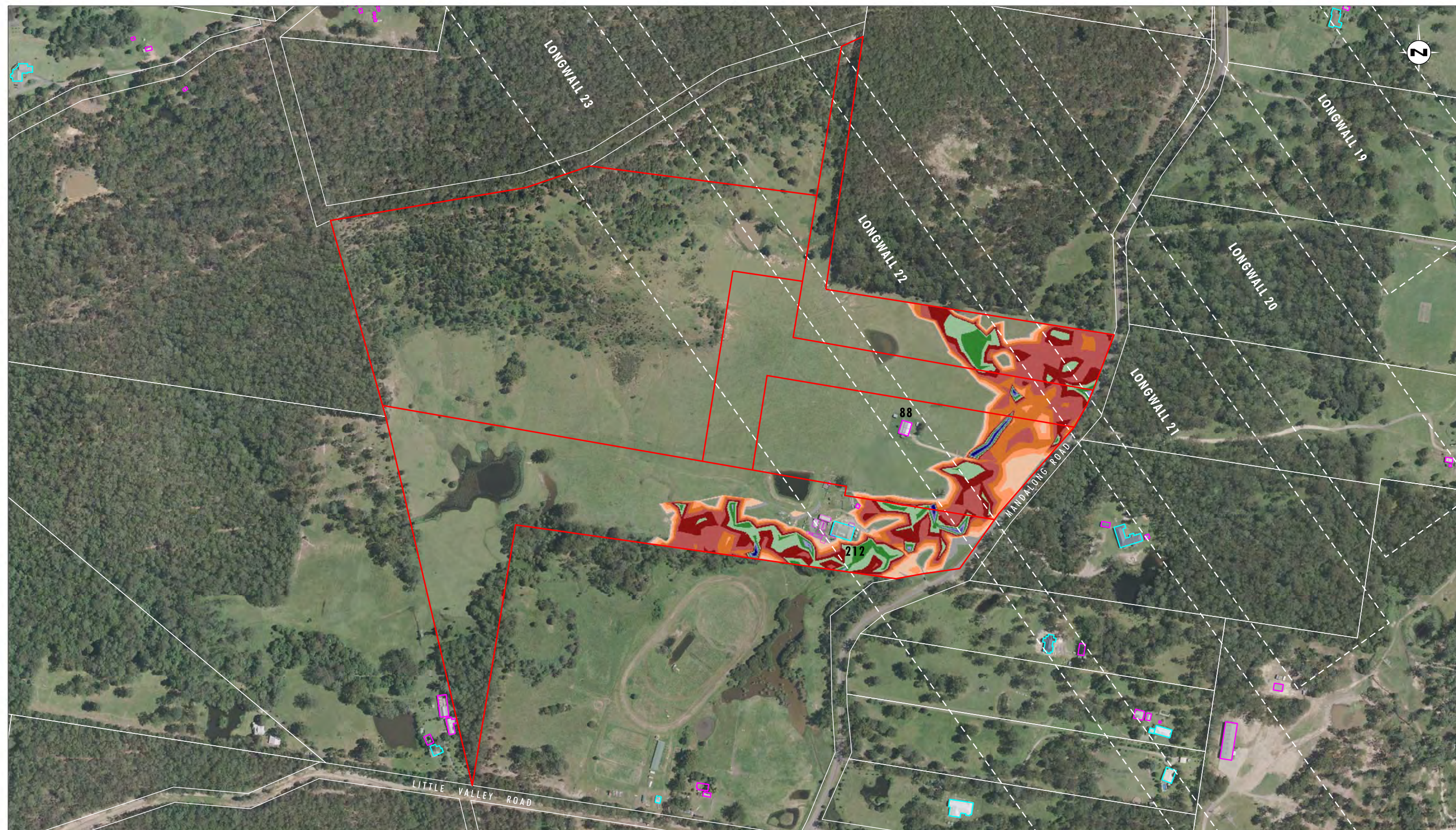


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend

- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Water Depth (m)

- | | |
|---|---|
| Range [0.001 : 0.100] | Range [1.100 : 1.300] |
| Range [0.100 : 0.300] | Range [1.300 : 1.500] |
| Range [0.300 : 0.500] | Range [1.500 : 1.700] |
| Range [0.500 : 0.700] | Range [1.700 : 1.900] |
| Range [0.700 : 0.900] | Range [>1.900] |

FIGURE 1

Property 86, 87, 88, 203 & 212 - 100 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

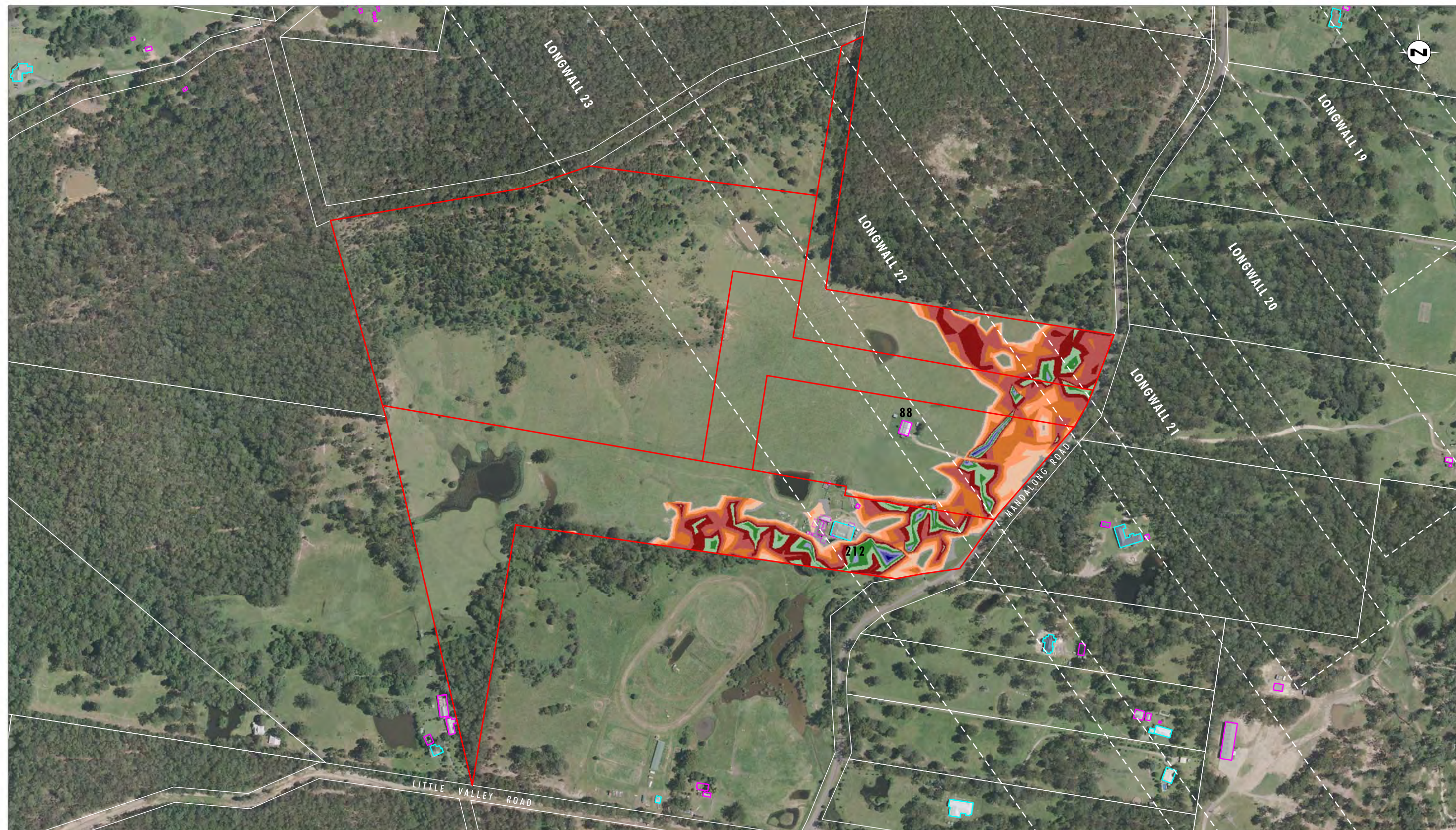


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend		
 Property 86, 87, 88, 203 & 212	Water Depth (m)	 Range [0.900 : 1.100]
 Longwall Locations	 Range [0.001 : 0.100]	 Range [1.100 : 1.300]
 Dwelling	 Range [0.100 : 0.300]	 Range [1.300 : 1.500]
 Other Structure	 Range [0.300 : 0.500]	 Range [1.500 : 1.700]
 Cadastral Boundary	 Range [0.500 : 0.700]	 Range [1.700 : 1.900]
	 Range [0.700 : 0.900]	 Range [>1.900]

File Name (A3): R02/Appendix37/3685_502.dgn
20160831 14.28

FIGURE 2

Property 86, 87, 88, 203 & 212 - 100 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

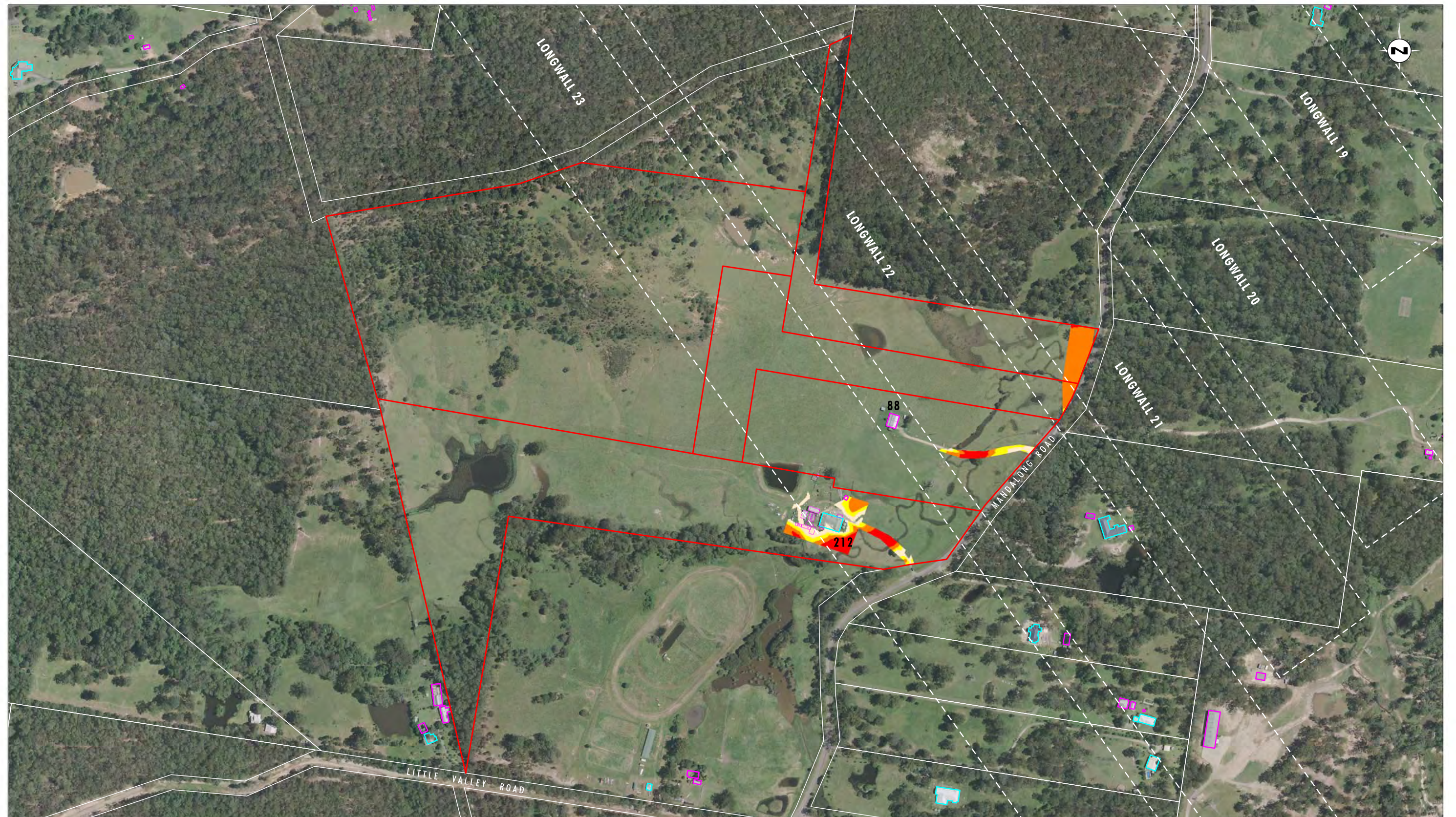


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 3

Property 86, 87, 88, 203 & 212 - 100 Year ARI Storm Event:
 Maximum Flood Hazard Categories Pre Mining Landform

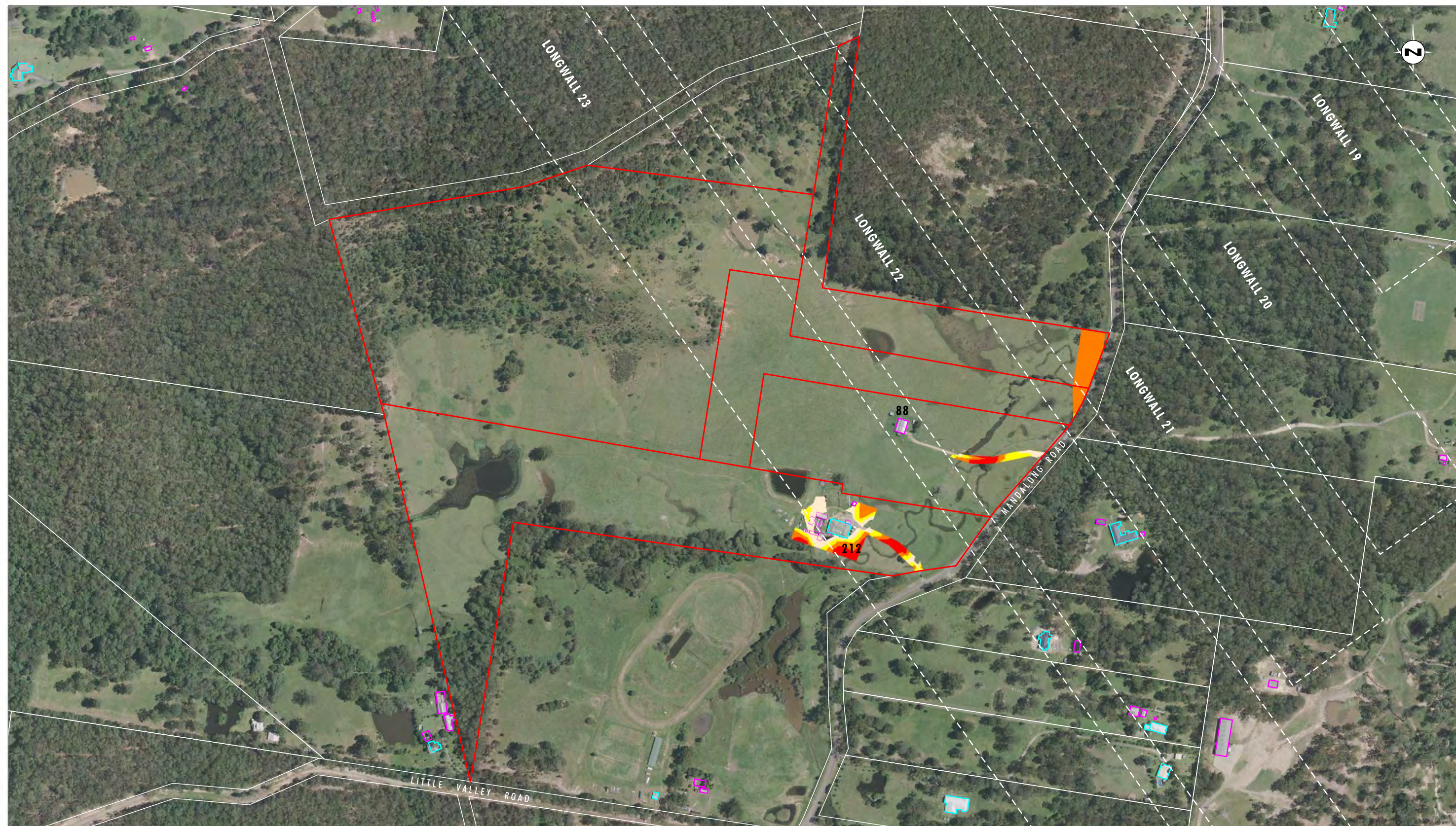


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 4

Property 86, 87, 88, 203 & 212 - 100 Year ARI Storm Event:
 Maximum Flood Hazard Categories Post Mining Landform
 (to Longwall 23)



Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend		
Property 86, 87, 88, 203 & 212	Water Depth (m)	Range [0.900 : 1.100]
Longwall Locations	Range [0.001 : 0.100]	Range [1.100 : 1.300]
Dwelling	Range [0.100 : 0.300]	Range [1.300 : 1.500]
Other Structure	Range [0.300 : 0.500]	Range [1.500 : 1.700]
Cadastral Boundary	Range [0.500 : 0.700]	Range [1.700 : 1.900]
	Range [0.700 : 0.900]	Range [>1.900]

FIGURE 5
Property 86, 87, 88, 203 & 212 - 1 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

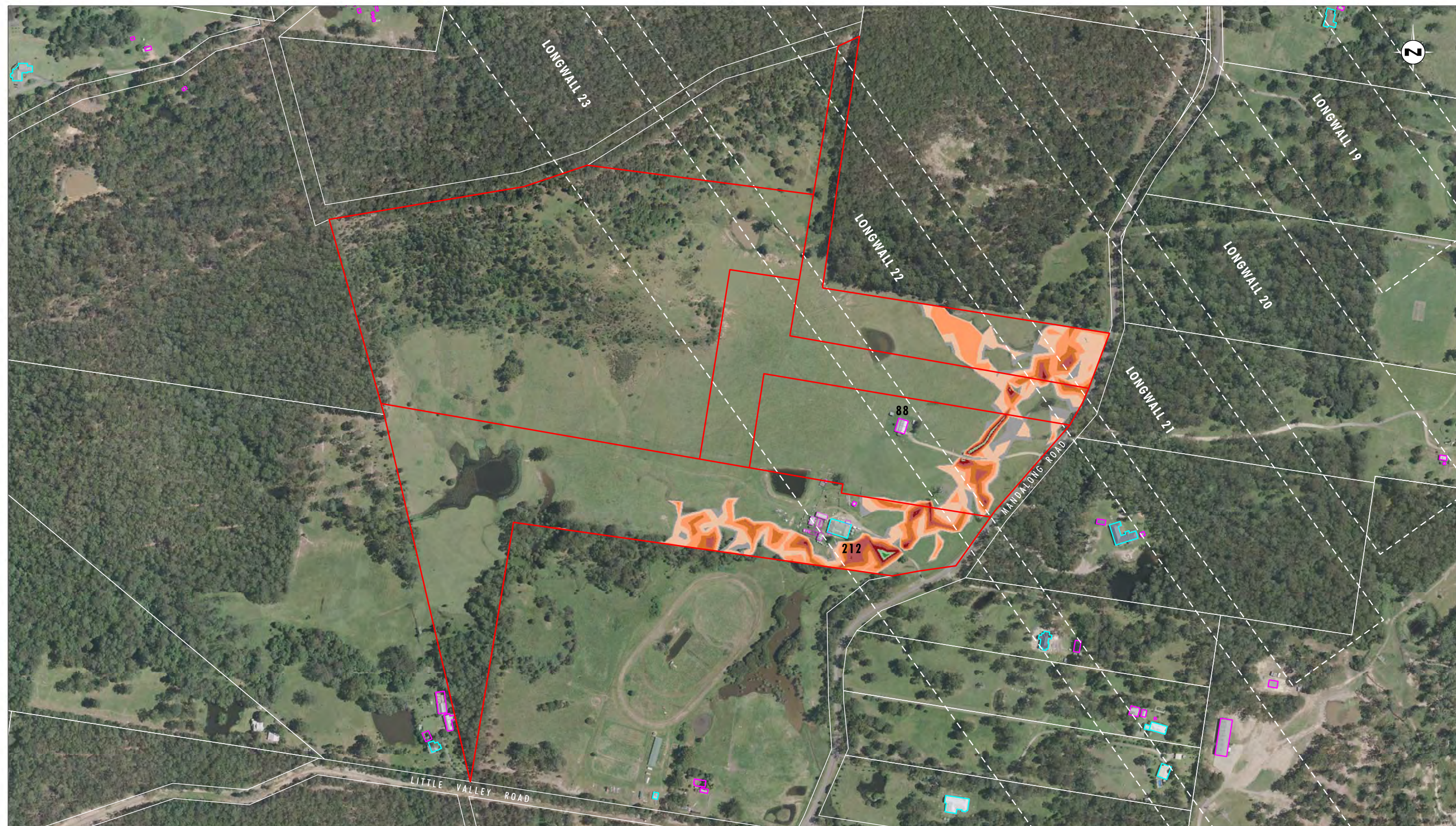


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend

- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Water Depth (m)

- | | |
|---|---|
| Range [0.001 : 0.100] | Range [1.100 : 1.300] |
| Range [0.100 : 0.300] | Range [1.300 : 1.500] |
| Range [0.300 : 0.500] | Range [1.500 : 1.700] |
| Range [0.500 : 0.700] | Range [1.700 : 1.900] |
| Range [0.700 : 0.900] | Range [>1.900] |

File Name (A3): R02/Appendix37/3685_506.dgn
20160831 14.49

FIGURE 6

Property 86, 87, 88, 203 & 212 - 1 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

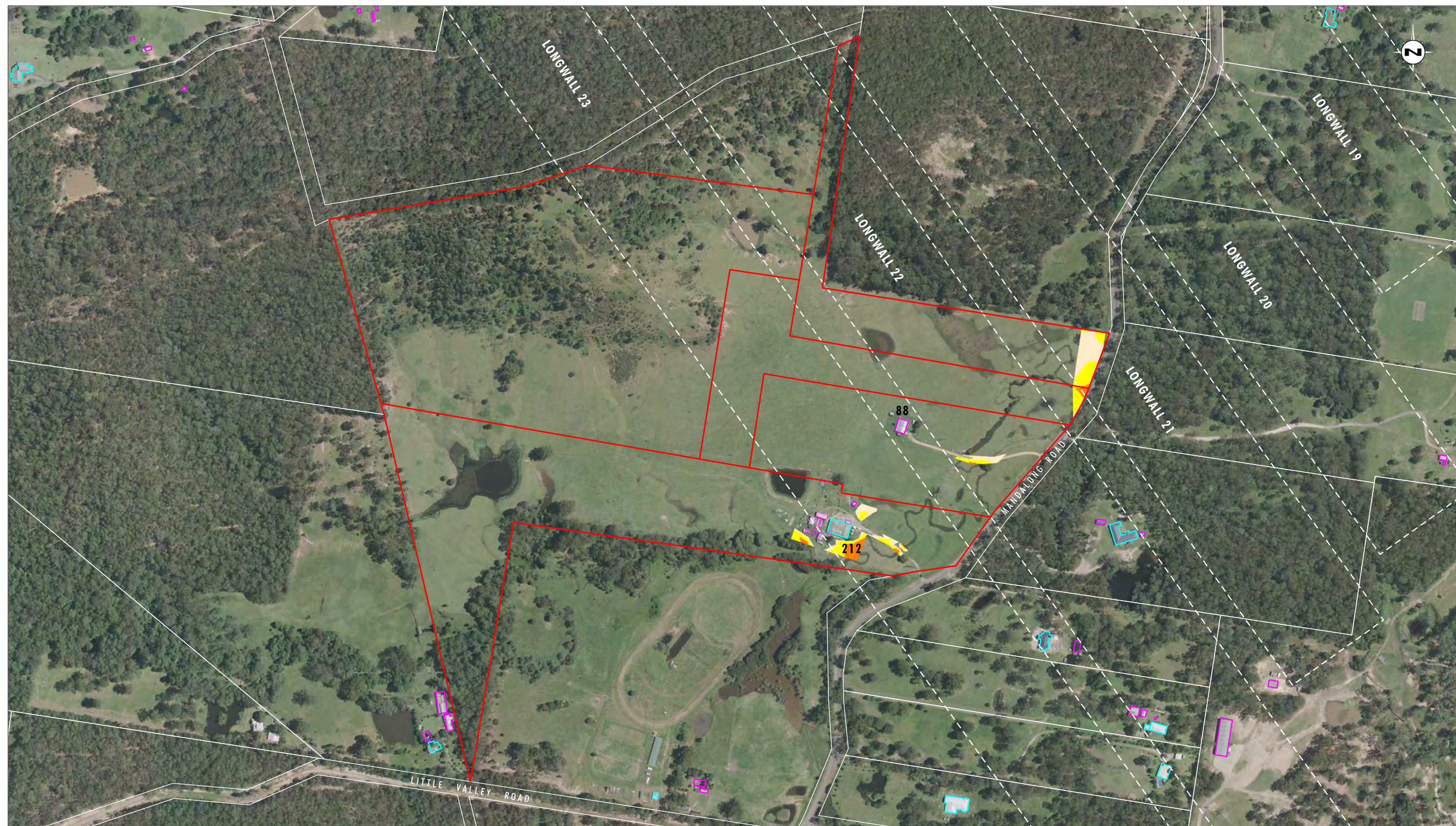


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 7

Property 86, 87, 88, 203 & 212 - 1 Year ARI Storm Event:
 Maximum Flood Hazard Categories Pre Mining Landform

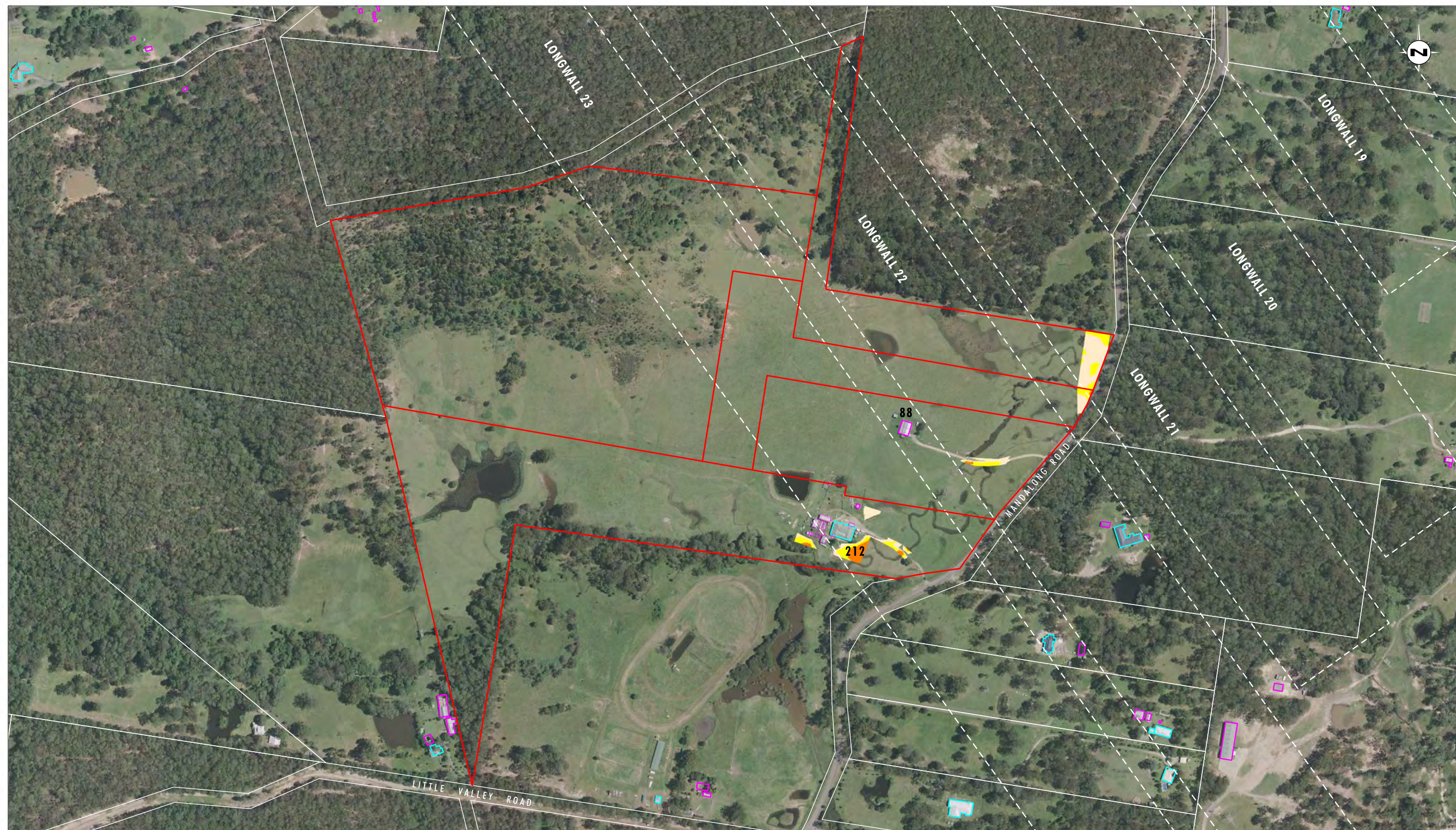


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

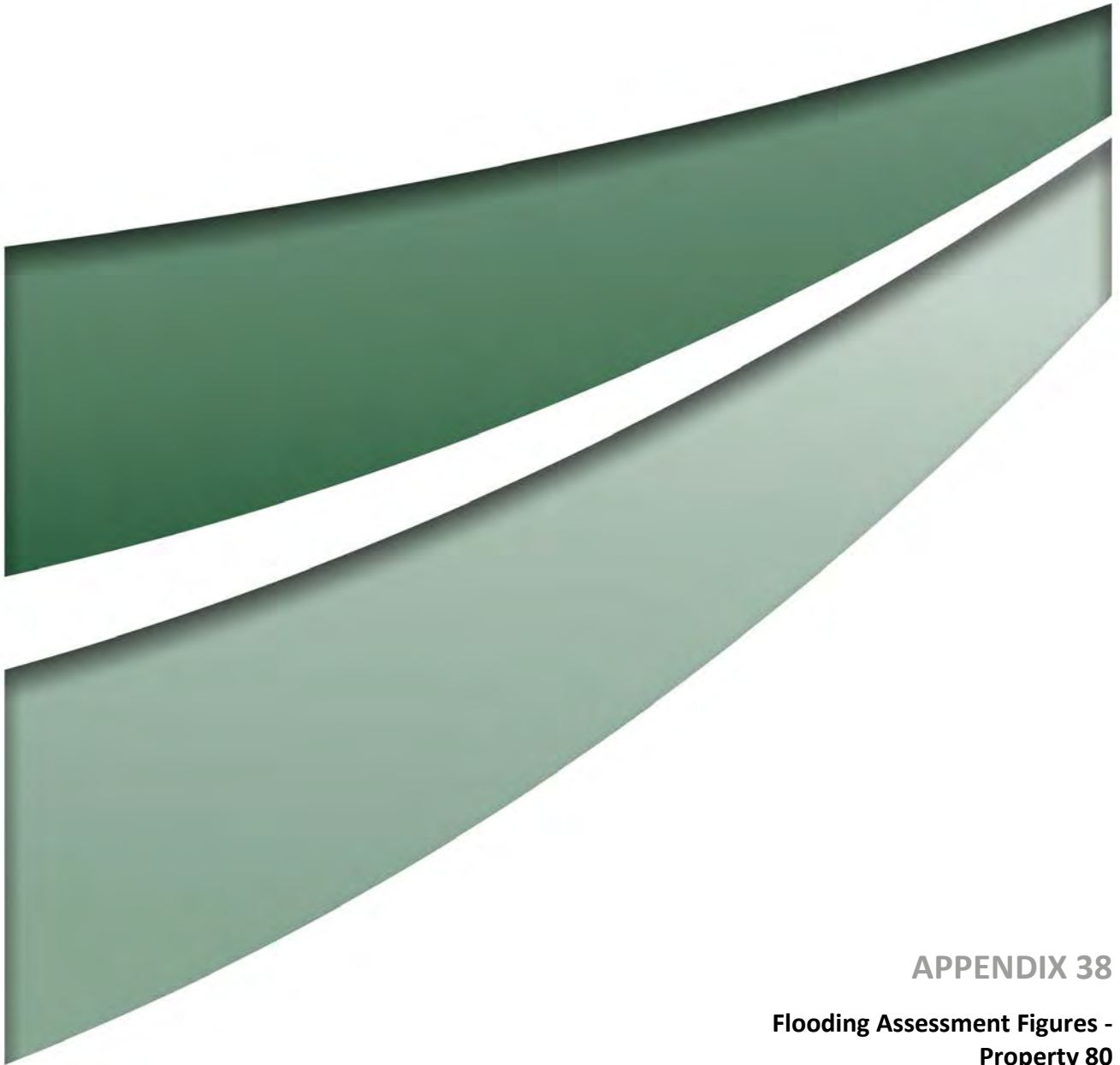
- Property 86, 87, 88, 203 & 212
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 8

Property 86, 87, 88, 203 & 212 - 1 Year ARI Storm Event:
 Maximum Flood Hazard Categories Post Mining Landform
 (to Longwall 23)



APPENDIX 38

**Flooding Assessment Figures -
Property 80**

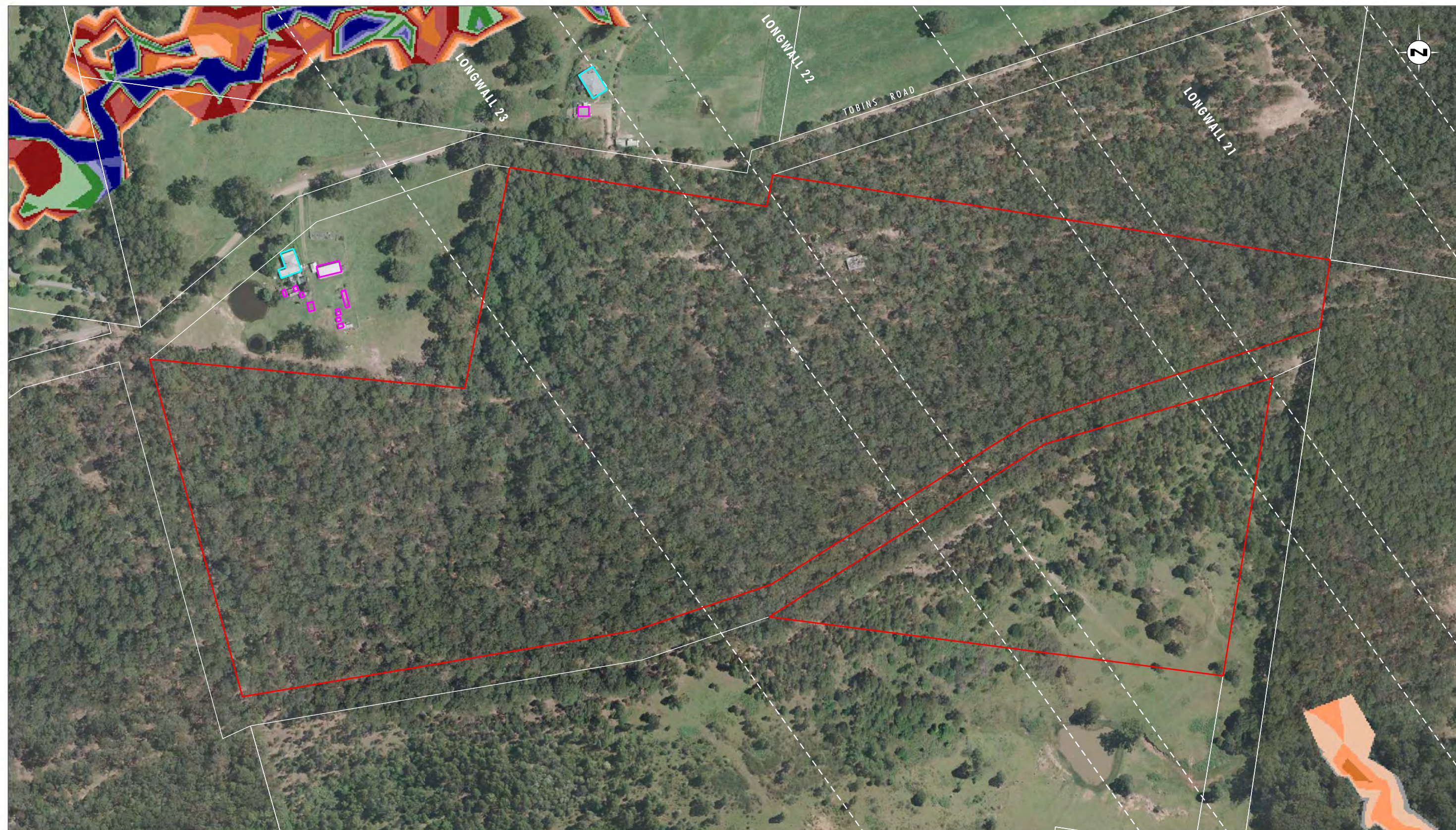


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

Legend		Water Depth (m)	
	Property 80		Range [0.001 : 0.100]
	Longwall Locations		Range [0.100 : 0.300]
	Dwelling		Range [0.300 : 0.500]
	Other Structure		Range [0.500 : 0.700]
	Cadastral Boundary		Range [0.700 : 0.900]
			Range [0.900 : 1.100]
			Range [1.100 : 1.300]
			Range [1.300 : 1.500]
			Range [1.500 : 1.700]
			Range [1.700 : 1.900]
			Range [>1.900]

FIGURE 1

Property 80 - 100 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

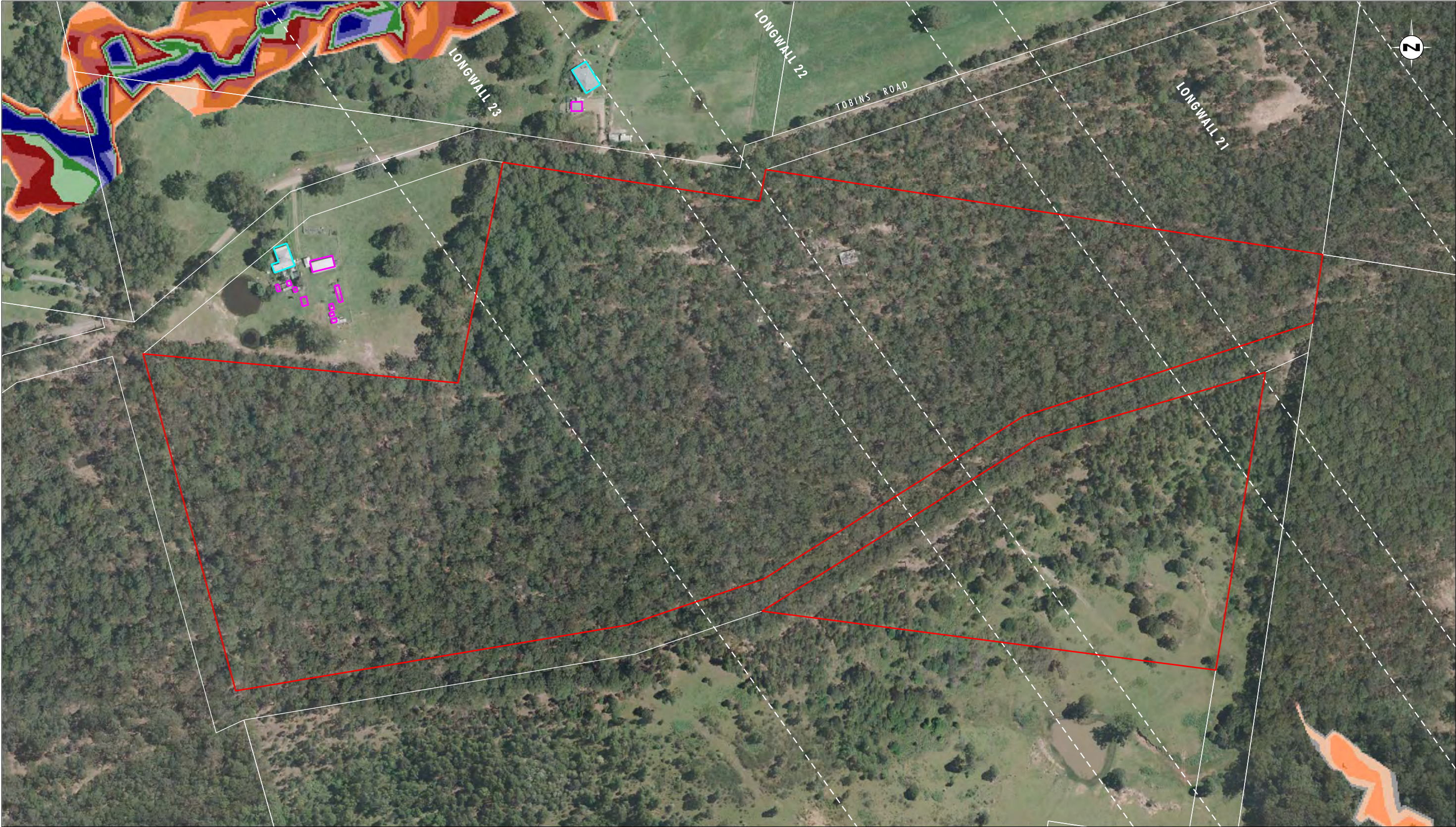


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 50 100 125 m
1:2500 (A3)

Legend		Water Depth (m)	
 	Property 80	 	Range [0.001 : 0.100]
 	Longwall Locations	 	Range [0.100 : 0.300]
◆	Dwelling	 	Range [0.300 : 0.500]
◆	Other Structure	 	Range [0.500 : 0.700]
 	Cadastral Boundary	 	Range [0.700 : 0.900]
		 	Range [0.900 : 1.100]
		 	Range [1.100 : 1.300]
		 	Range [1.300 : 1.500]
		 	Range [1.500 : 1.700]
		 	Range [1.700 : 1.900]
		 	Range [>1.900]

FIGURE 2

Property 80 - 100 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

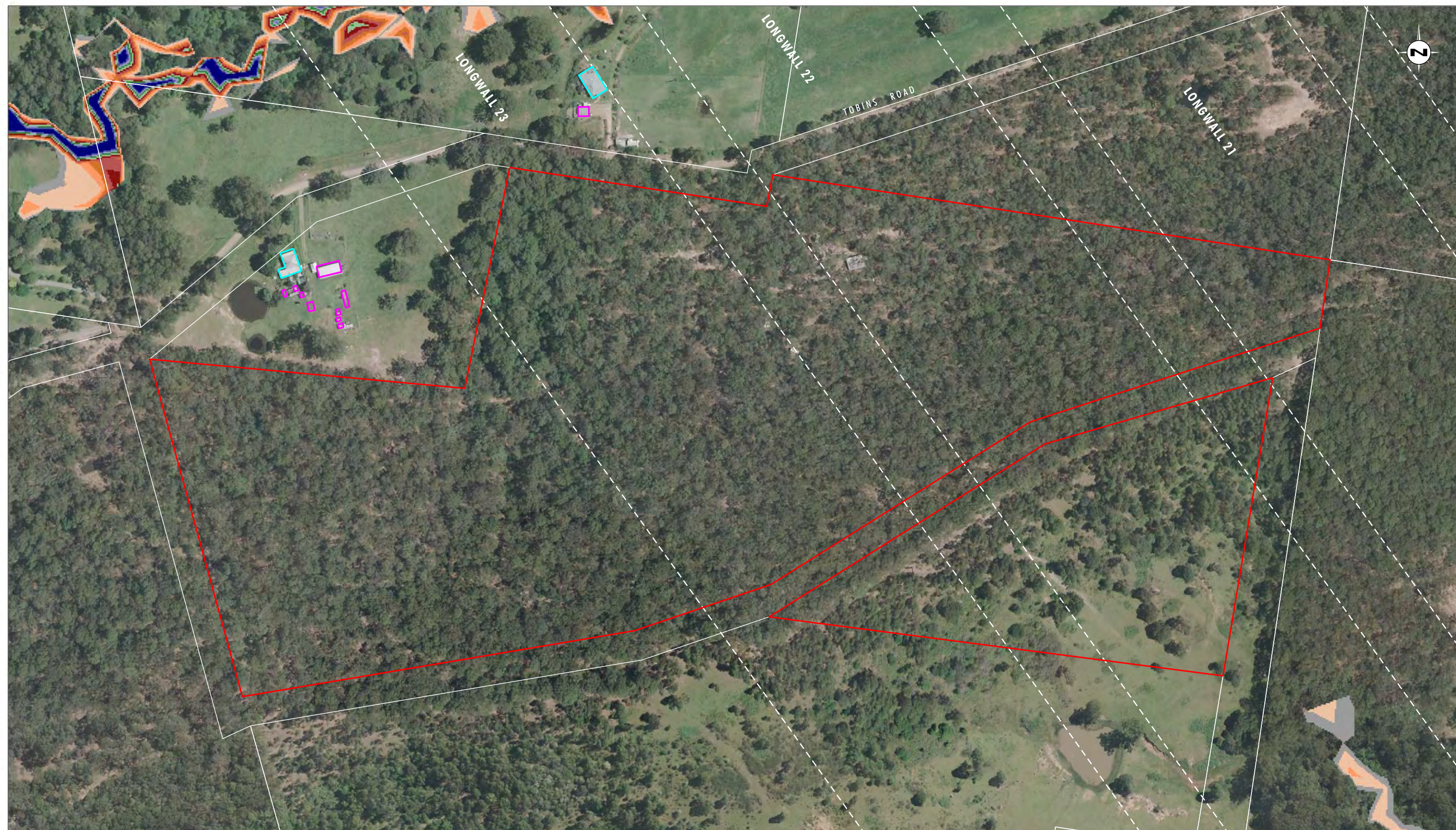


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

Legend		Water Depth (m)	
	Property 80		Range [0.001 : 0.100]
	Longwall Locations		Range [0.100 : 0.300]
	Dwelling		Range [0.300 : 0.500]
	Other Structure		Range [0.500 : 0.700]
	Cadastral Boundary		Range [0.700 : 0.900]
			Range [0.900 : 1.100]
			Range [1.100 : 1.300]
			Range [1.300 : 1.500]
			Range [1.500 : 1.700]
			Range [1.700 : 1.900]
			Range [>1.900]

FIGURE 3

Property 80 - 1 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

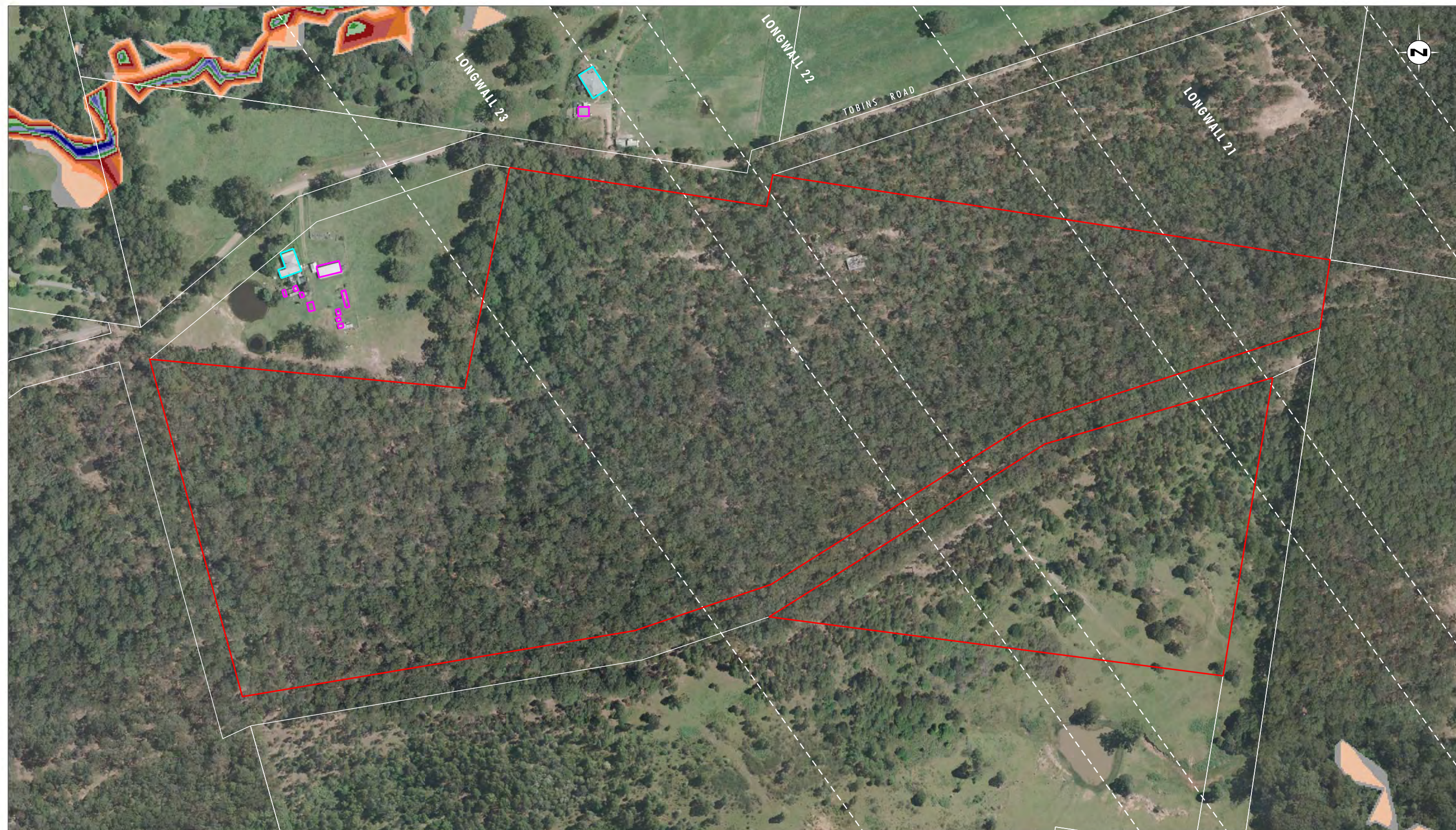


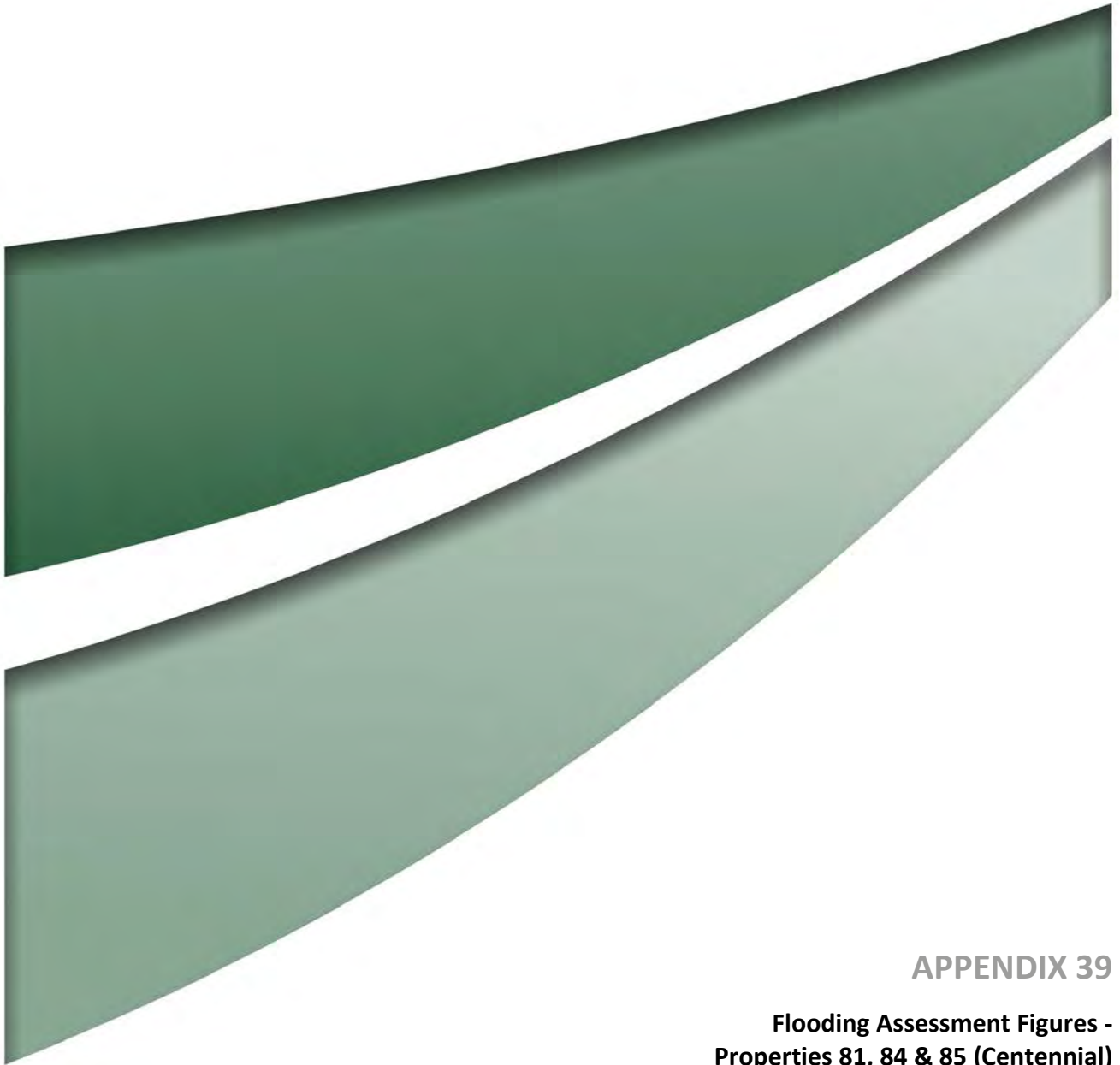
Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 50 100 125 m
1:2500 (A3)

Legend		Water Depth (m)	
	Property 80		Range [0.001 : 0.100]
	Longwall Locations		Range [0.100 : 0.300]
	Dwelling		Range [0.300 : 0.500]
	Other Structure		Range [0.500 : 0.700]
	Cadastral Boundary		Range [0.700 : 0.900]
			Range [0.900 : 1.100]
			Range [1.100 : 1.300]
			Range [1.300 : 1.500]
			Range [1.500 : 1.700]
			Range [1.700 : 1.900]
			Range [>1.900]

FIGURE 4

Property 80 - 1 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)



APPENDIX 39

**Flooding Assessment Figures -
Properties 81, 84 & 85 (Centennial)**

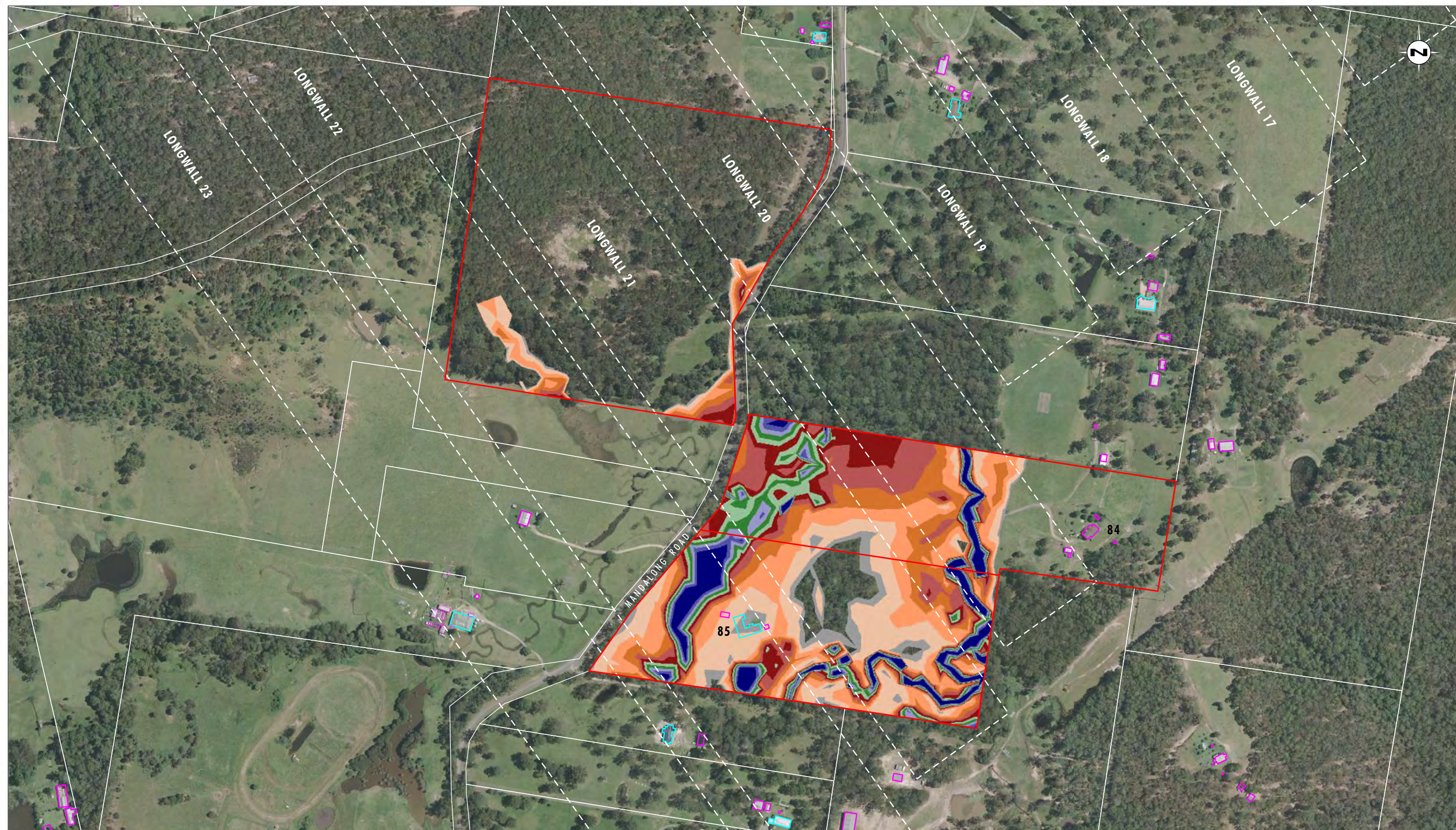


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend	
 	Property 81, 84, & 85
 	Longwall Locations
 	Dwelling
 	Other Structure
 	Cadastral Boundary
Water Depth (m)	
 	Range [0.001 : 0.100]
 	Range [0.100 : 0.300]
 	Range [0.300 : 0.500]
 	Range [0.500 : 0.700]
 	Range [0.700 : 0.900]
 	Range [0.900 : 1.100]
 	Range [1.100 : 1.300]
 	Range [1.300 : 1.500]
 	Range [1.500 : 1.700]
 	Range [1.700 : 1.900]
 	Range [>1.900]

File Name (A3): R02/Appendix39/3685_513.dgn
20160831 11.09

FIGURE 1

Property 81, 84, & 85 - 100 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

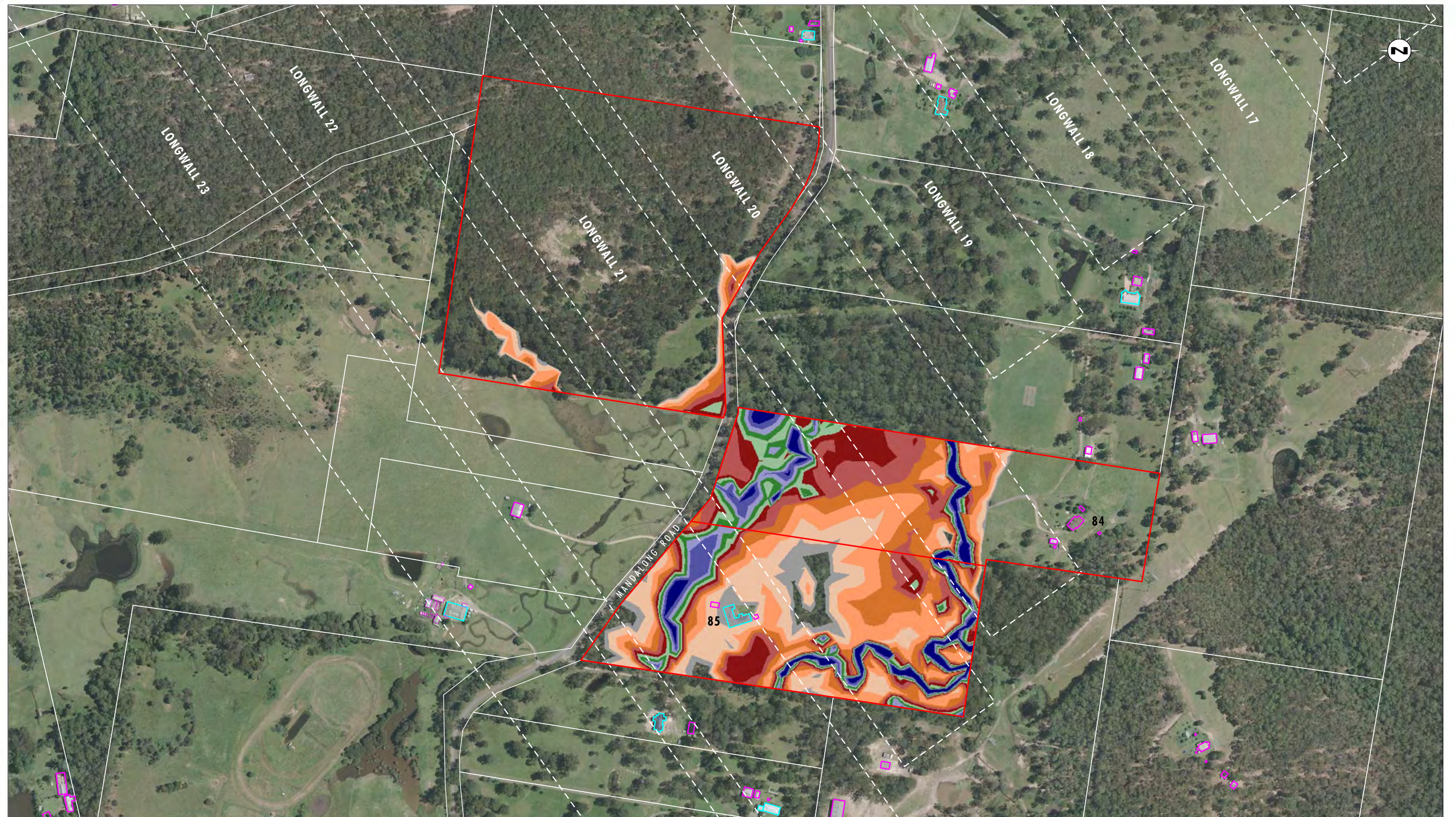
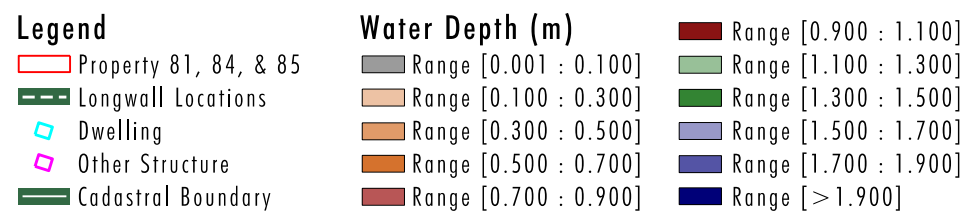


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)



File Name (A3): R02/Appendix39/3685_514.dgn
20160831 11.21

FIGURE 2

Property 81, 84, & 85 - 100 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

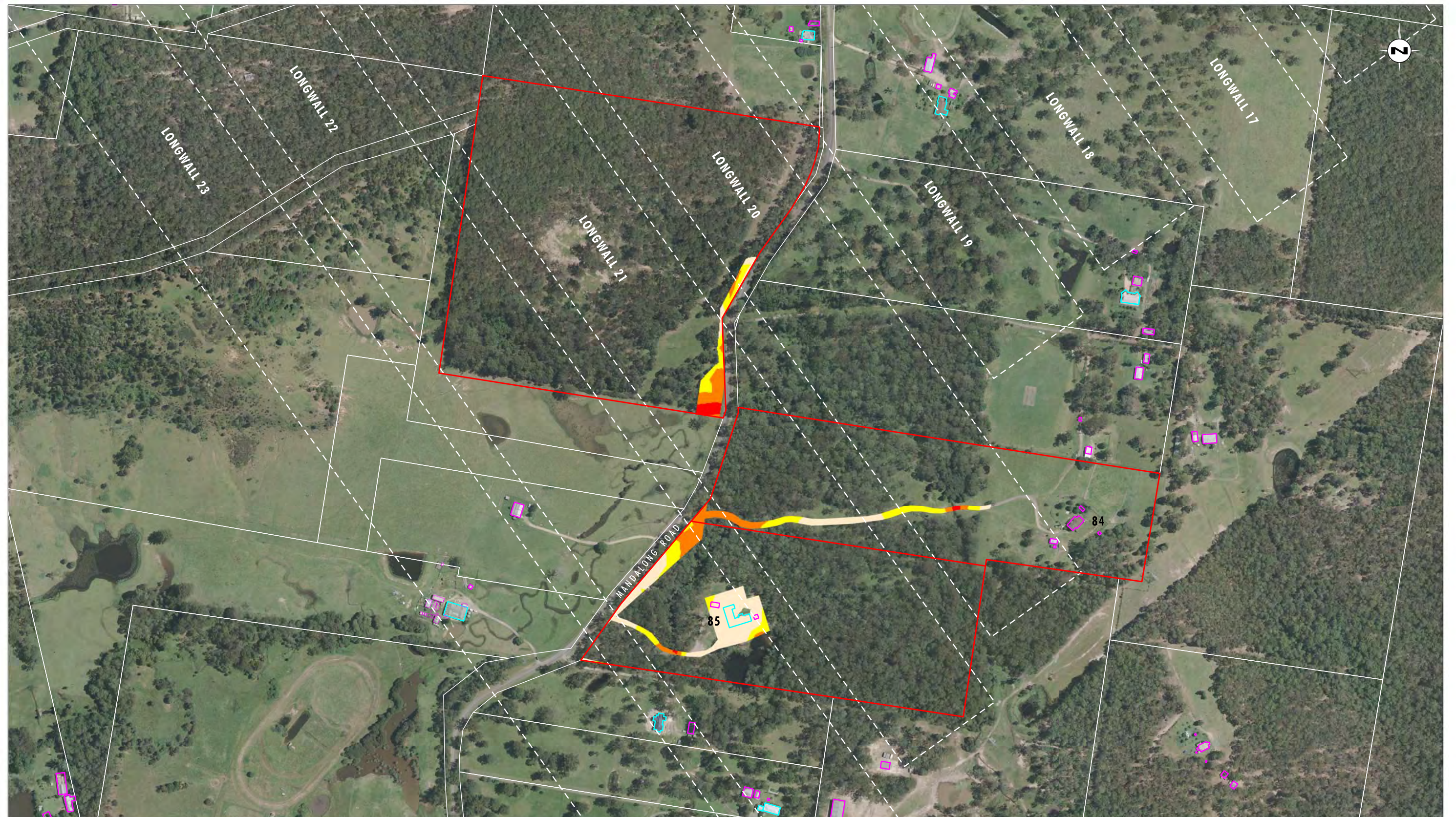


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
1:5000 (A3)

Legend

- Property 81, 84, & 85
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 3

Property 81, 84, & 85 - 100 Year ARI Storm Event:
Maximum Flood Hazard Categories Pre Mining Landform

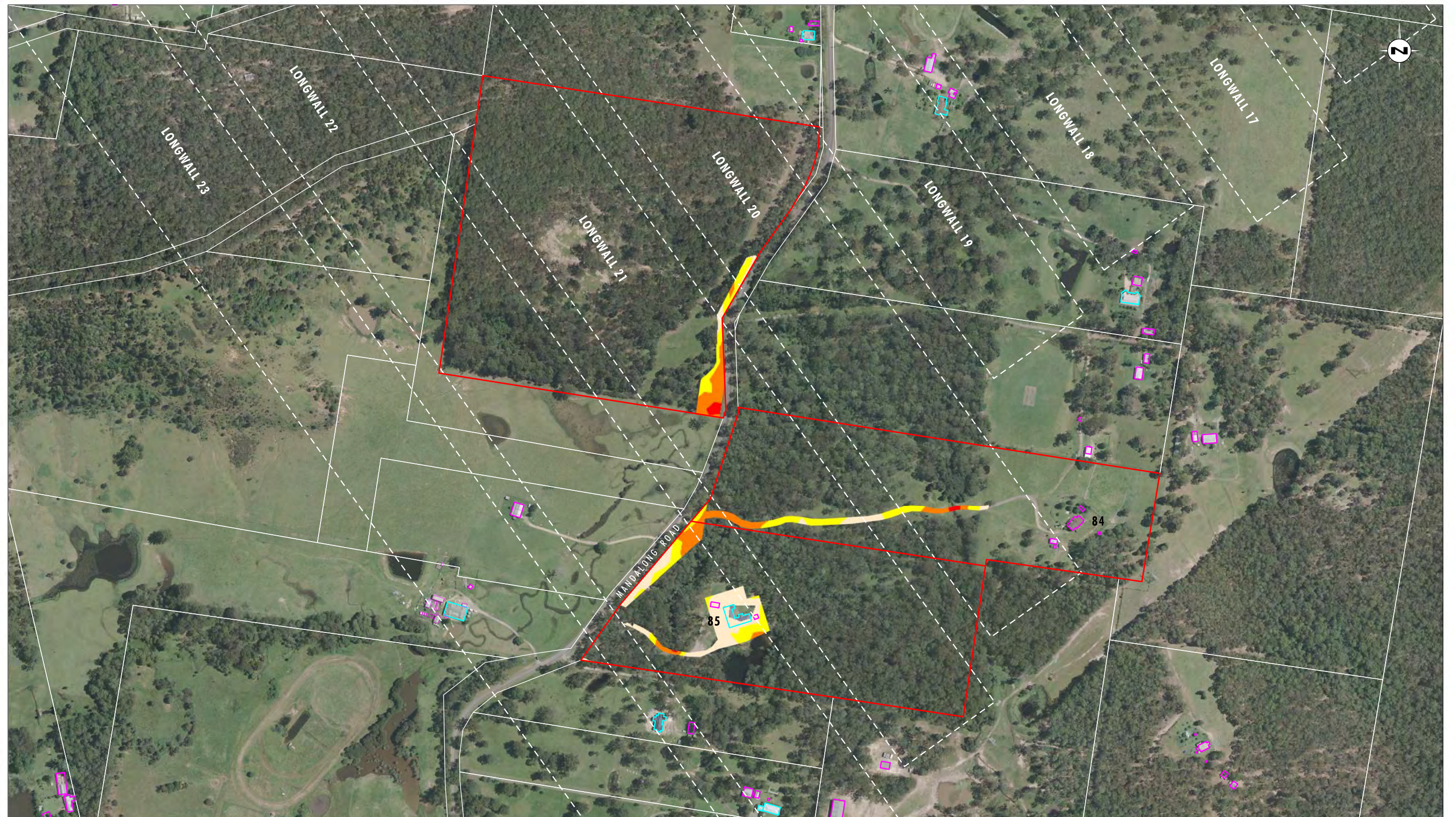


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

- Property 81, 84, & 85
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 4

Property 81, 84, & 85 - 100 Year ARI Storm Event:
 Maximum Flood Hazard Categories Post Mining Landform
 (to Longwall 23)

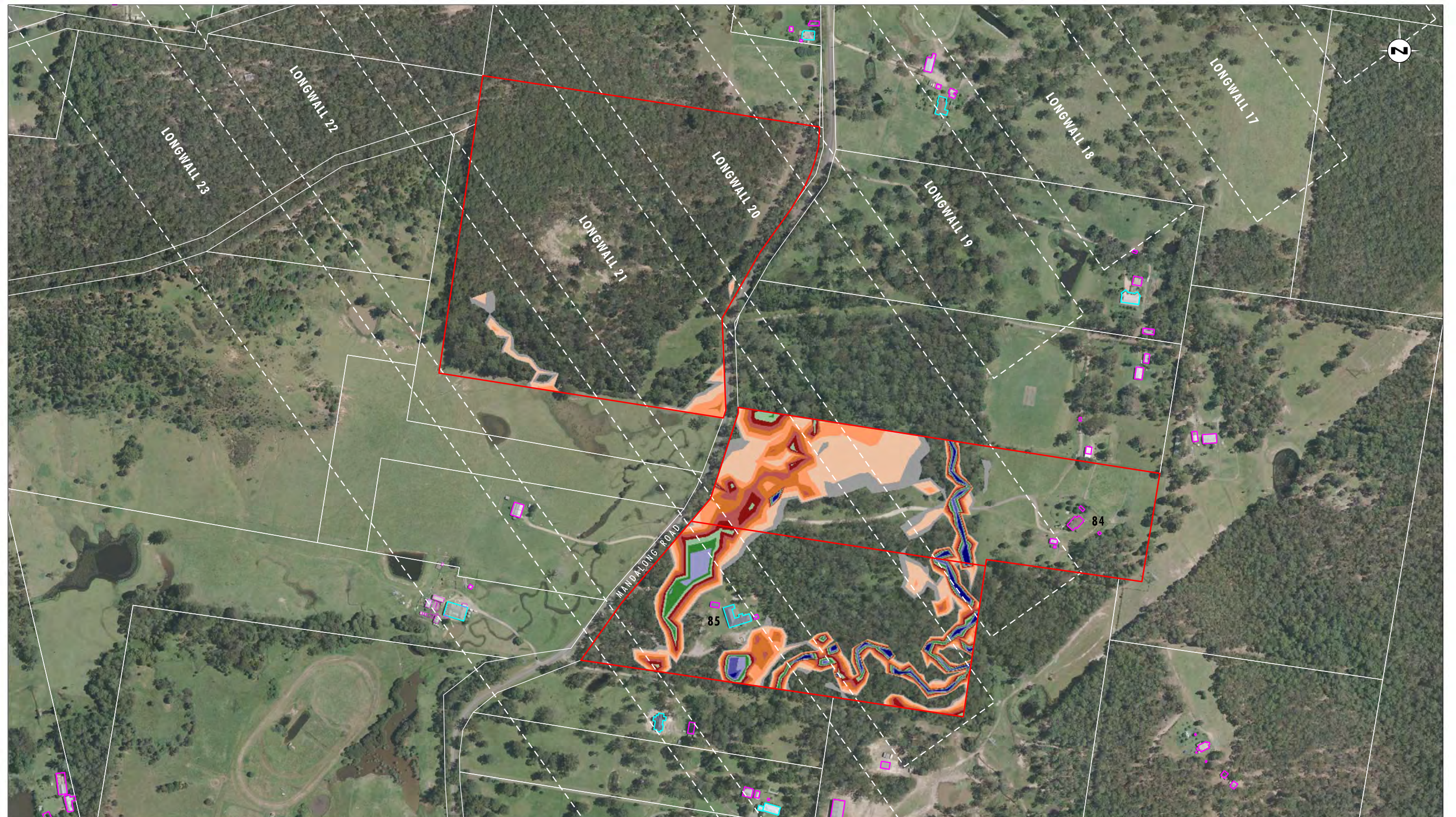
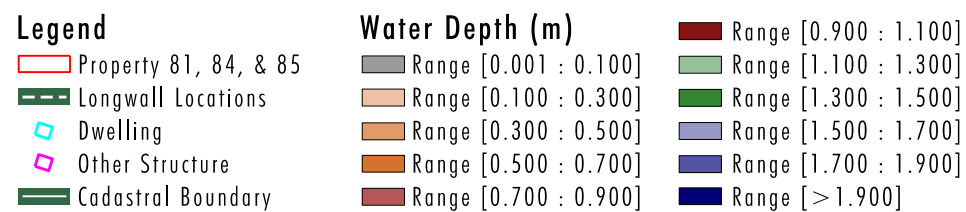


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)



File Name (A3): R02/Appendix39/3685_517.dgn
20160831 11.30

FIGURE 5

Property 81, 84, & 85 - 1 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

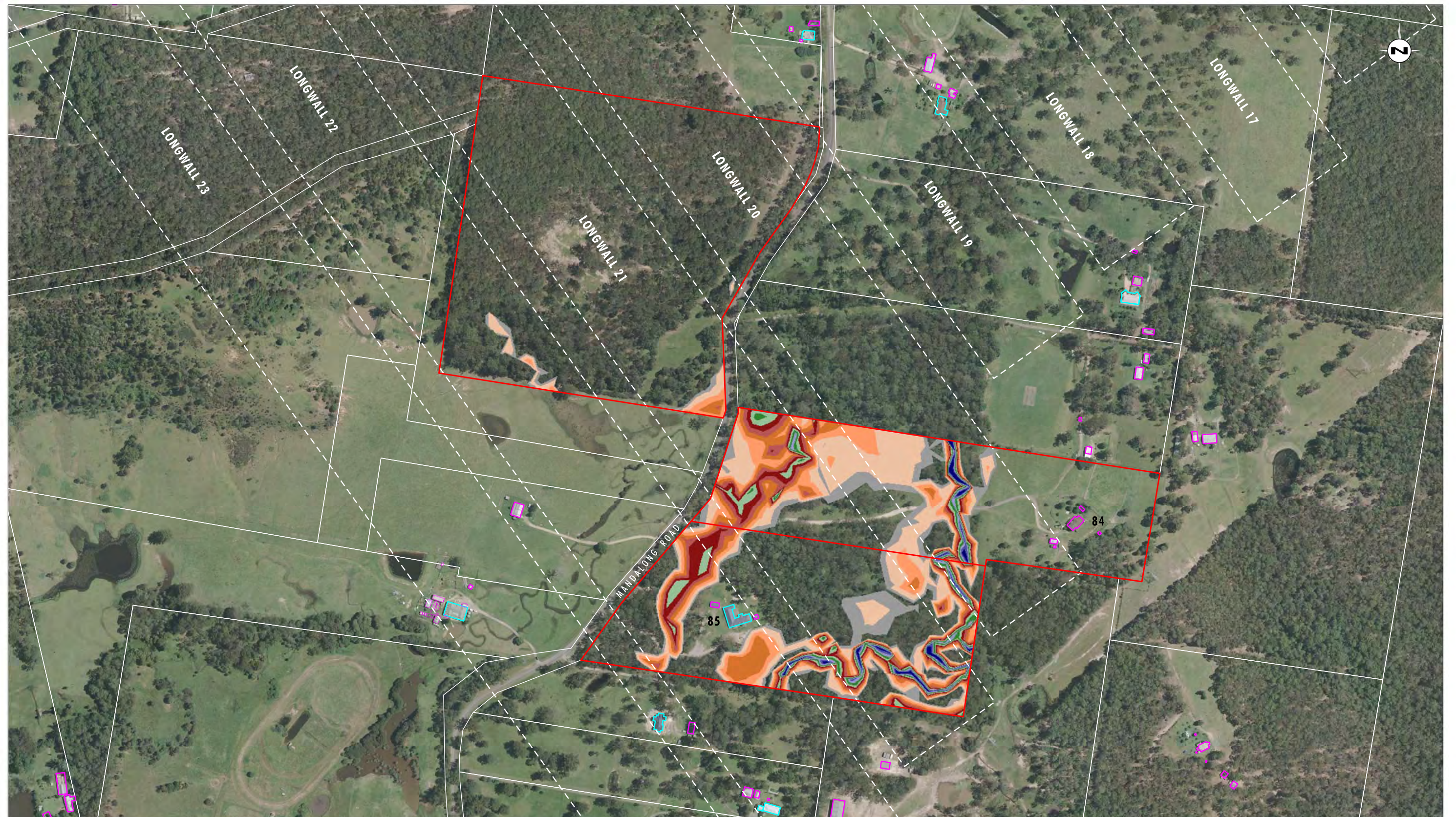


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 100 200 250m
1:5000 (A3)

Legend		Water Depth (m)	
 	Property 81, 84, & 85	 	Range [0.001 : 0.100]
 	Longwall Locations	 	Range [0.100 : 0.300]
 	Dwelling	 	Range [0.300 : 0.500]
 	Other Structure	 	Range [0.500 : 0.700]
 	Cadastral Boundary	 	Range [0.700 : 0.900]
		 	Range [0.900 : 1.100]
		 	Range [1.100 : 1.300]
		 	Range [1.300 : 1.500]
		 	Range [1.500 : 1.700]
		 	Range [1.700 : 1.900]
		 	Range [>1.900]

File Name (A3): R02/Appendix39/3685_518.dgn
20160831 11.32

FIGURE 6

Property 81, 84, & 85 - 1 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

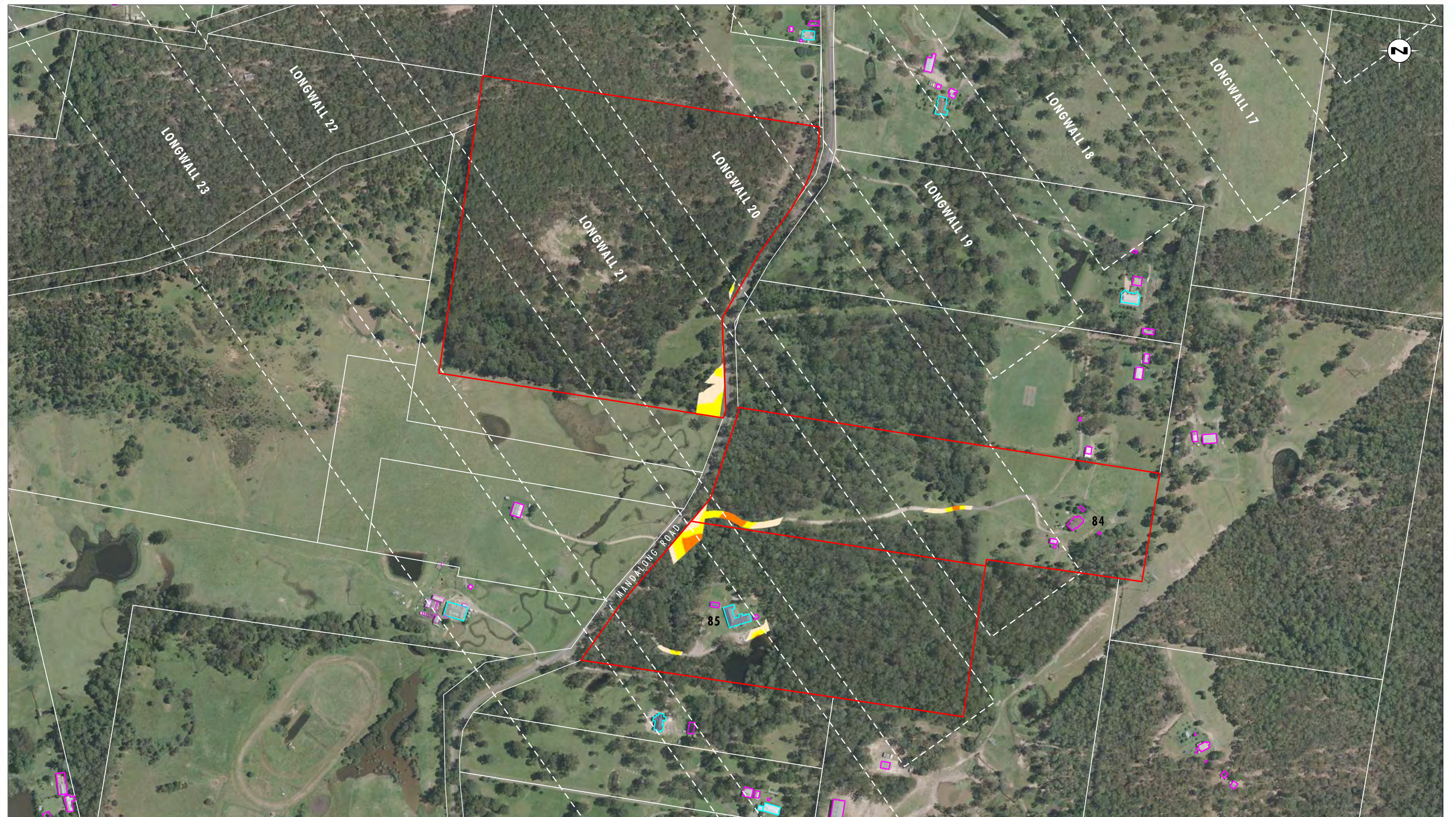


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

- Property 81, 84, & 85
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 7

Property 81, 84, & 85 - 1 Year ARI Storm Event:
 Maximum Flood Hazard Categories Pre Mining Landform

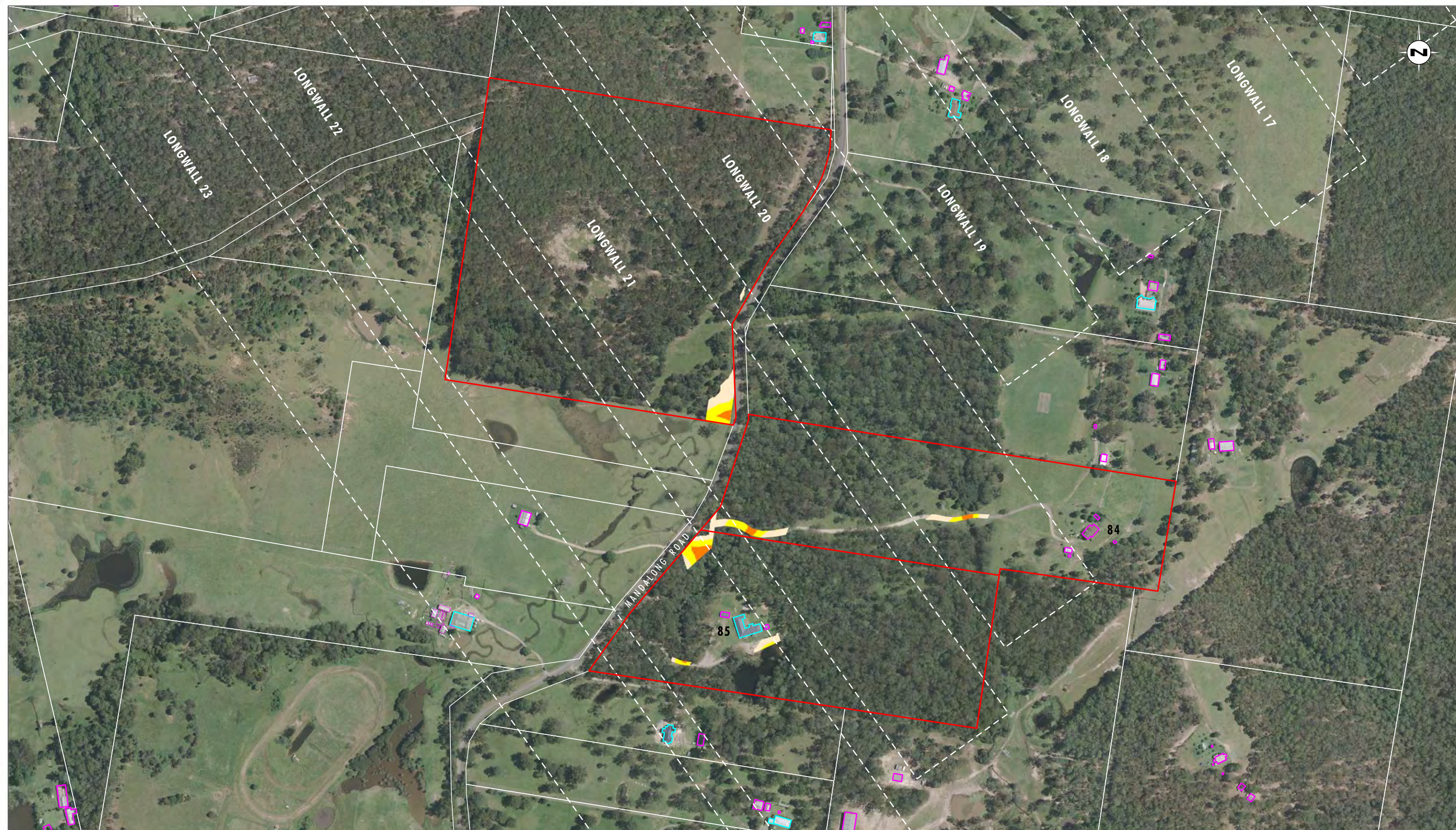


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
 Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries
 Note: Flood Hazard shown for access and dwellings only

0 100 200 250m
 1:5000 (A3)

Legend

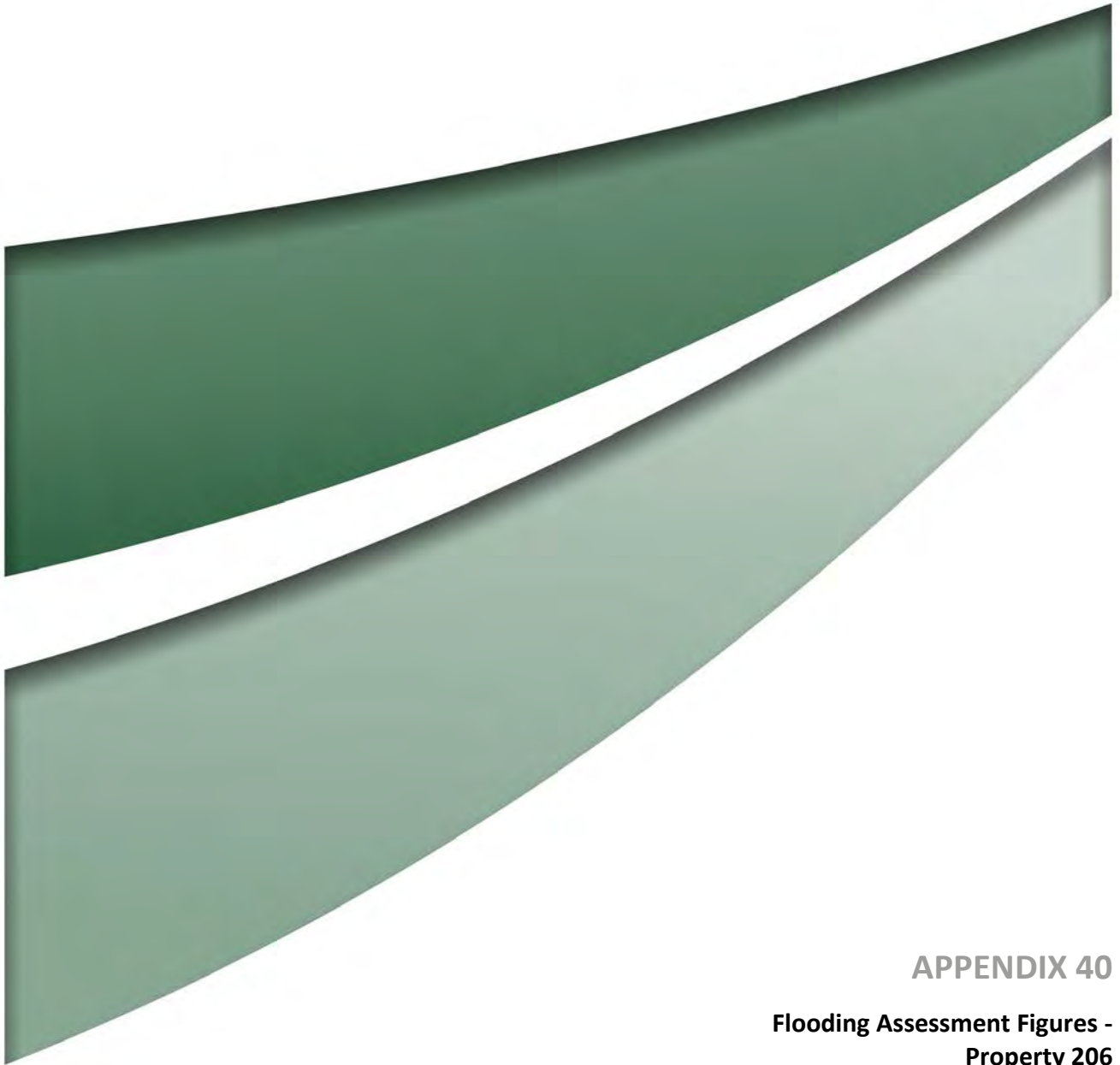
- Property 81, 84, & 85
- Longwall Locations
- Dwelling
- Other Structure
- Cadastral Boundary

Hazard Category

- Low Hazard - Unclassified hazard
- Low Hazard - Vehicles unstable
- High Hazard - Wading unsafe
- High Hazard - Damage to light structures

FIGURE 8

Property 81, 84, & 85 - 1 Year ARI Storm Event:
 Maximum Flood Hazard Categories Post Mining Landform
 (to Longwall 23)



APPENDIX 40

Flooding Assessment Figures -
Property 206

0 50 100 150 m
1:3000 (A3)

FIGURE 1
Property 206 - 100 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform

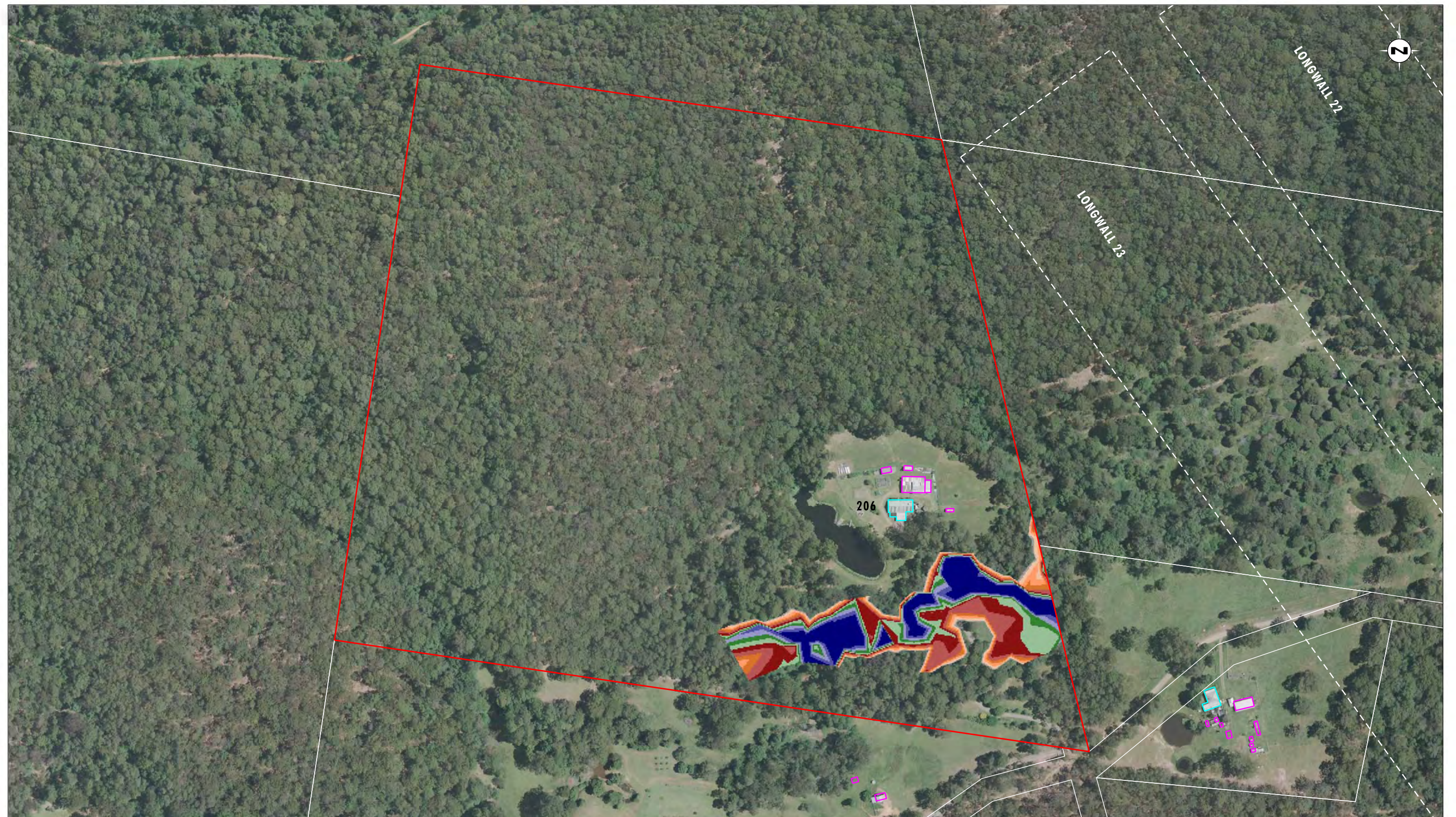


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 50 100 150m
1:3000 (A3)

Legend		Water Depth (m)	
	Property 206		Range [0.001 : 0.100]
	Longwall Locations		Range [1.100 : 1.300]
	Dwelling		Range [1.300 : 1.500]
	Other Structure		Range [1.500 : 1.700]
	Cadastral Boundary		Range [1.700 : 1.900]
			Range [>1.900]
			Range [0.300 : 0.500]
			Range [0.500 : 0.700]
			Range [0.700 : 0.900]
			Range [0.900 : 1.100]

File Name (A3): R02/Appendix40/3685_522.dgn
20160831 10.48

FIGURE 2

Property 206 - 100 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)

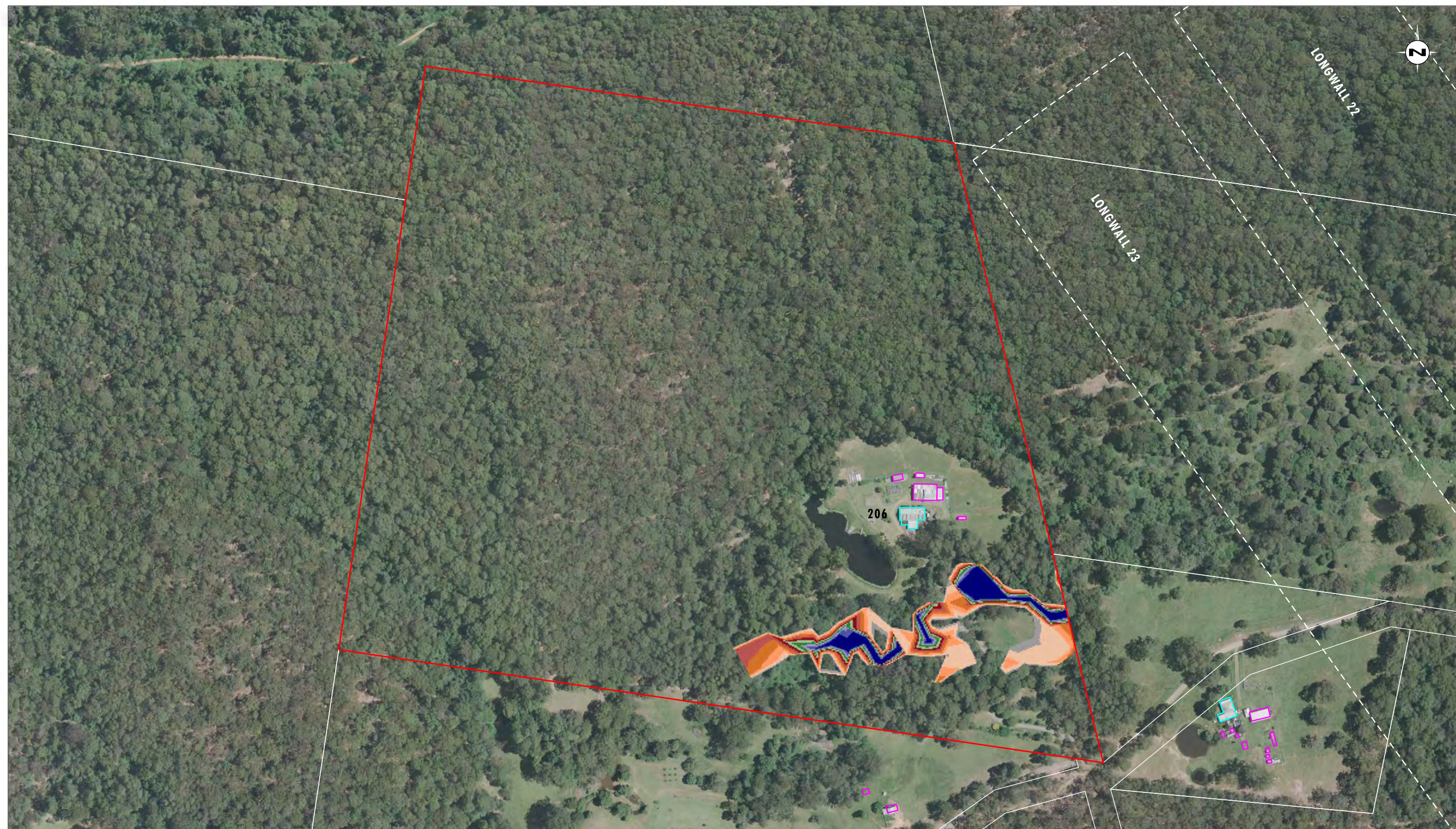


Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

0 50 100 150m
1:3000 (A3)

Legend		Water Depth (m)	
	Property 206		Range [0.001 : 0.100]
	Longwall Locations		Range [1.100 : 1.300]
	Dwelling		Range [1.300 : 1.500]
	Other Structure		Range [1.500 : 1.700]
	Cadastral Boundary		Range [1.700 : 1.900]
			Range [0.900 : 1.100]
			Range [0.100 : 0.300]
			Range [0.300 : 0.500]
			Range [0.500 : 0.700]
			Range [0.700 : 0.900]
			Range [>1.900]

File Name (A3): R02/Appendix40/3685_523.dgn
20160831 10.49

FIGURE 3

Property 206 - 1 Year ARI Storm Event:
Maximum Flood Depth Pre Mining Landform



Image Source: Centennial Mandalong Pty Ltd (2009) - Aerial Photograph
Data Source: Centennial Mandalong Pty Ltd, LPI - Cadastral Boundaries

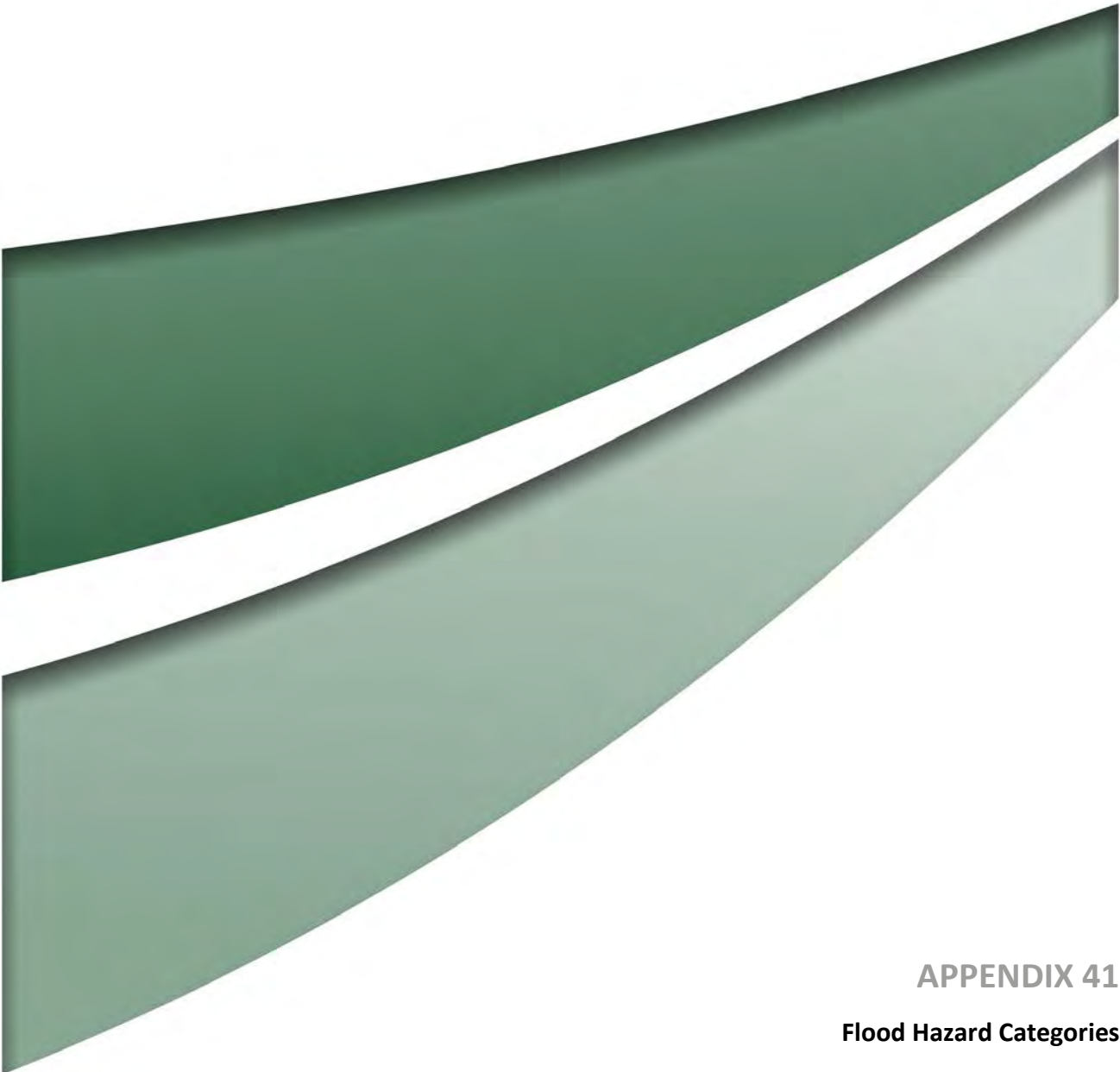
0 50 100 150m
1:3000 (A3)

Legend		Water Depth (m)	
	Property 206		Range [0.001 : 0.100]
	Longwall Locations		Range [1.100 : 1.300]
	Dwelling		Range [1.300 : 1.500]
	Other Structure		Range [1.500 : 1.700]
	Cadastral Boundary		Range [1.700 : 1.900]
			Range [>1.900]
			Range [0.900 : 1.100]
			Range [0.100 : 0.300]
			Range [0.300 : 0.500]
			Range [0.500 : 0.700]
			Range [0.700 : 0.900]

File Name (A3): R02/Appendix40/3685_524.dgn
20160831 11.04

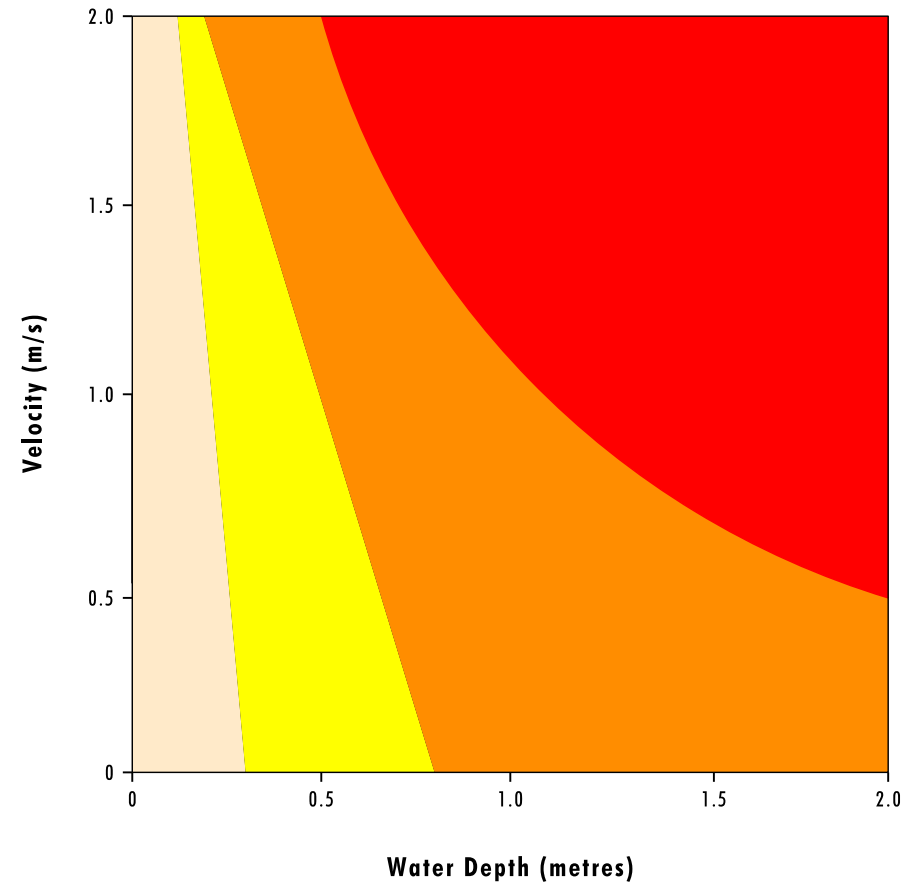
FIGURE 4

Property 206 - 1 Year ARI Storm Event:
Maximum Flood Depth Post Mining Landform
(to Longwall 23)



APPENDIX 41

Flood Hazard Categories



Data Source: Hydraulic and Hazard Categorisation, Floodplain Development Manual, DIPNR 2005

Legend

- Flood Hazard Level 1 - Wading and Vehicle Access
- Flood Hazard Level 2 - Vehicle Unstable from here
- Flood Hazard Level 3 - Wading Unsafe from here
- Flood Hazard Level 4 - Damage to light structures possible from here

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FIGURE 1
Flood Hazard Categories

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