

HUNTER VALLEY OPERATIONS

# West Pit Extension and Minor Modifications



e n v i r o n m e n t a l i m p a c t s t a t e m e n t f i g u r e s

4

## Hunter Valley Operations West Pit Extension and Minor Modifications

*Environmental Impact Statement Figures*

for

Coal & Allied Operations

October 2003

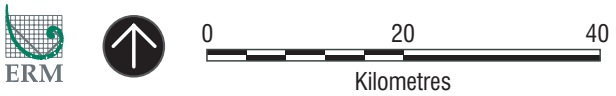
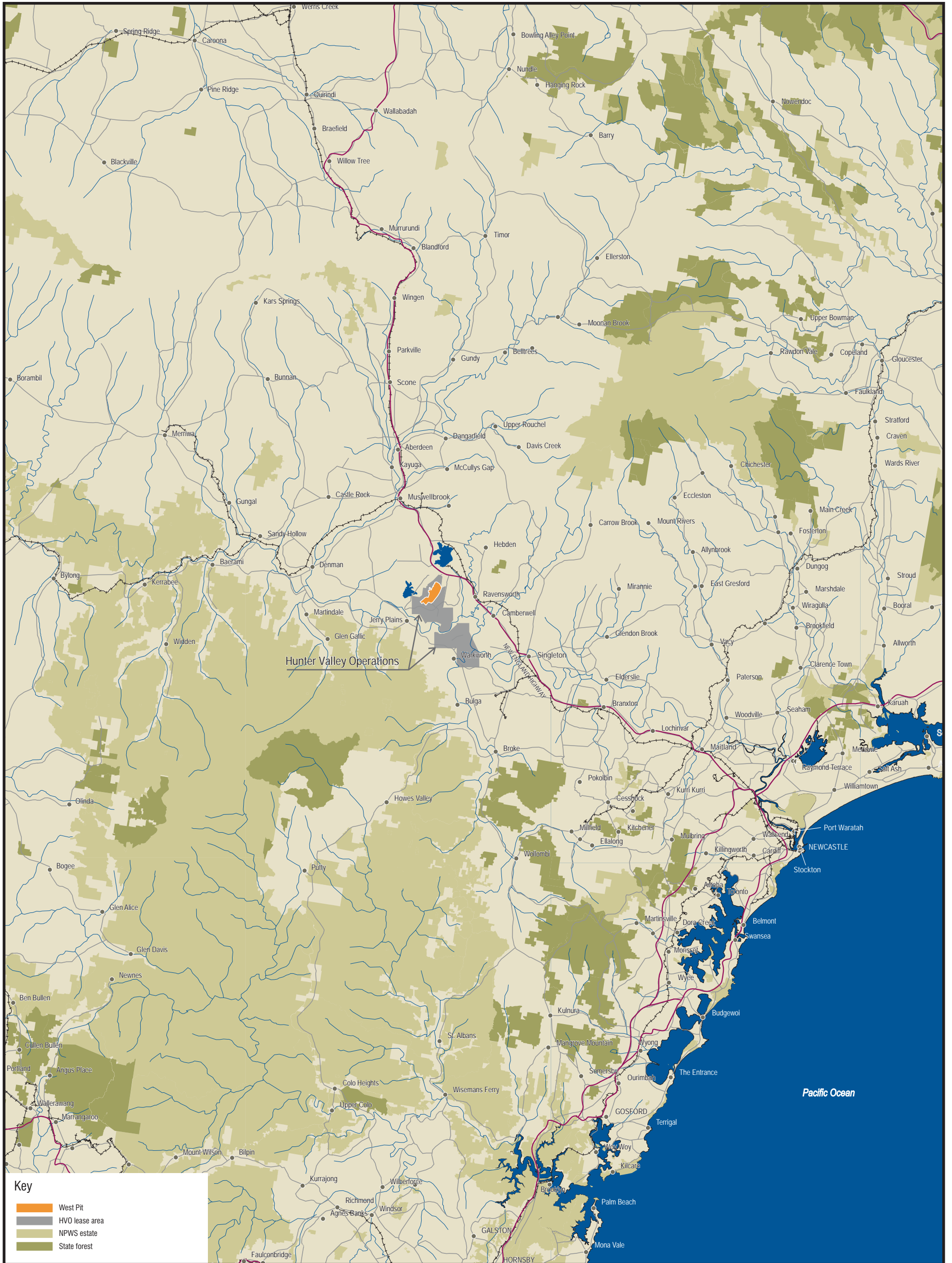
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HUNTER VALLEY OPERATIONS  
West Pit Extension and Minor Modifications



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**FIGURE 1**

Location of HVO and West Pit in their Regional Setting





**FIGURE 2**

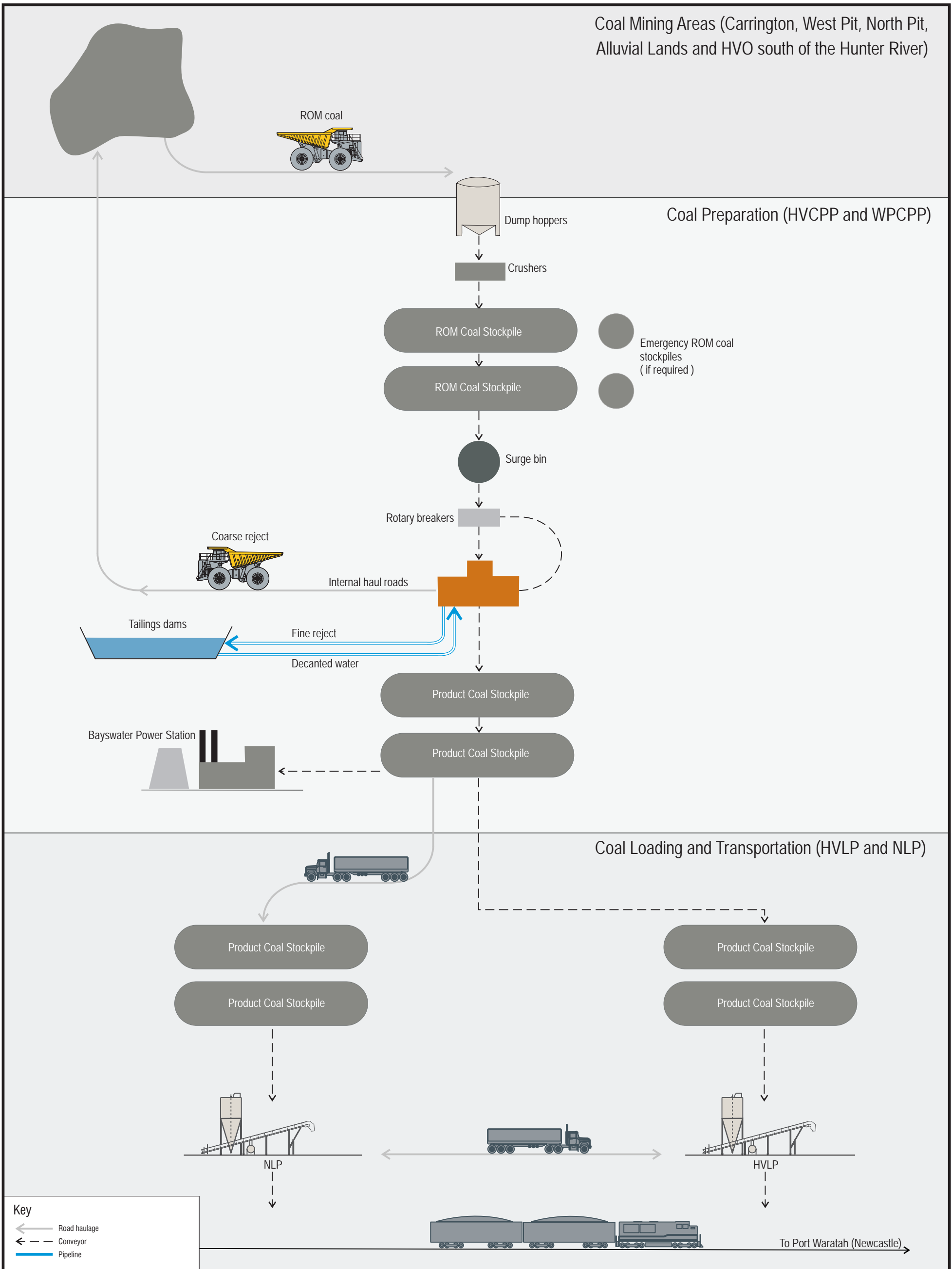
Location of HVO and West Pit in their Local Setting



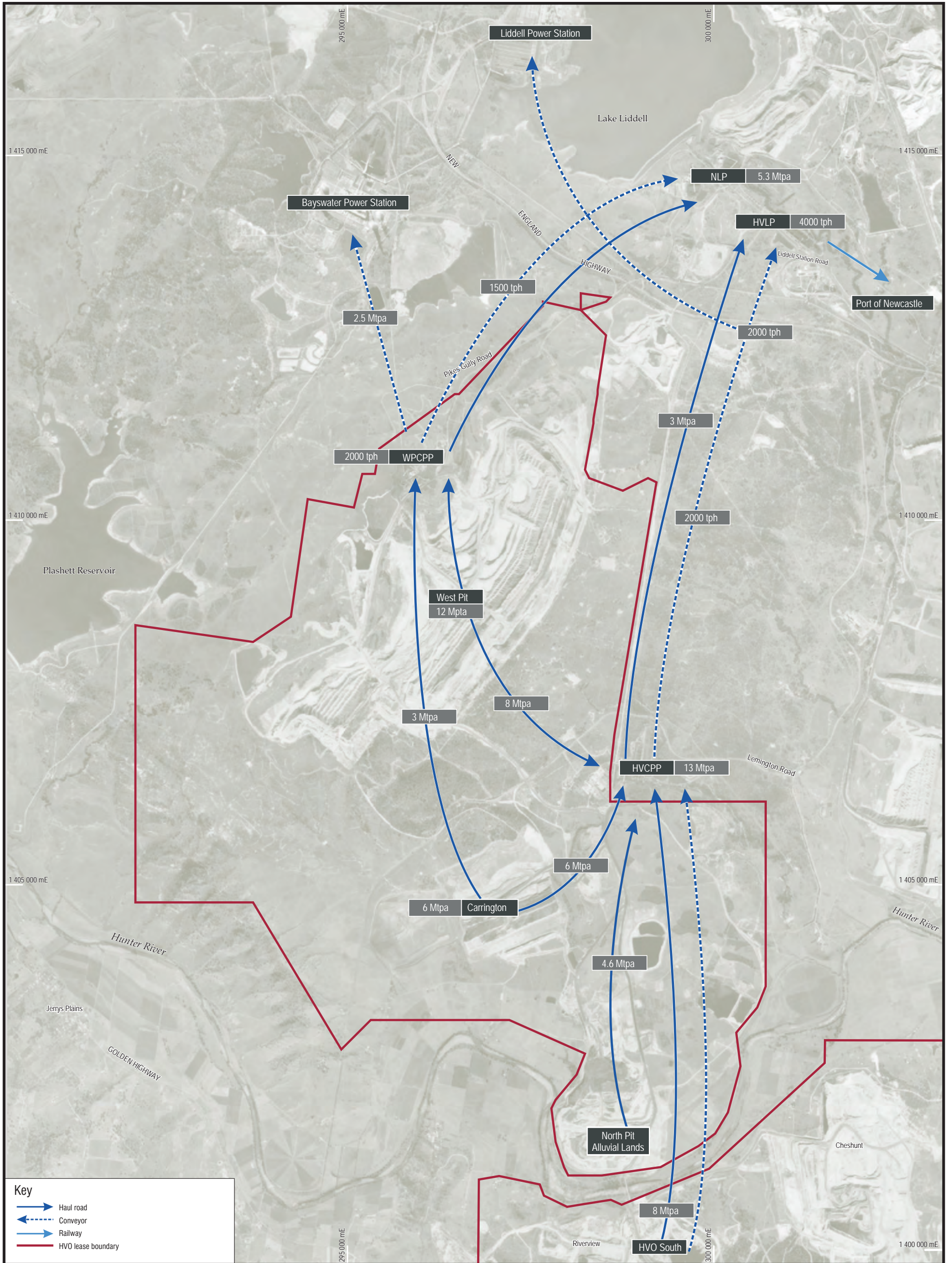
Coal Mining Areas (Carrington, West Pit, North Pit, Alluvial Lands and HVO south of the Hunter River)

Coal Preparation (HVCPP and WPCPP)

Coal Loading and Transportation (HVLP and NLP)







**Key**

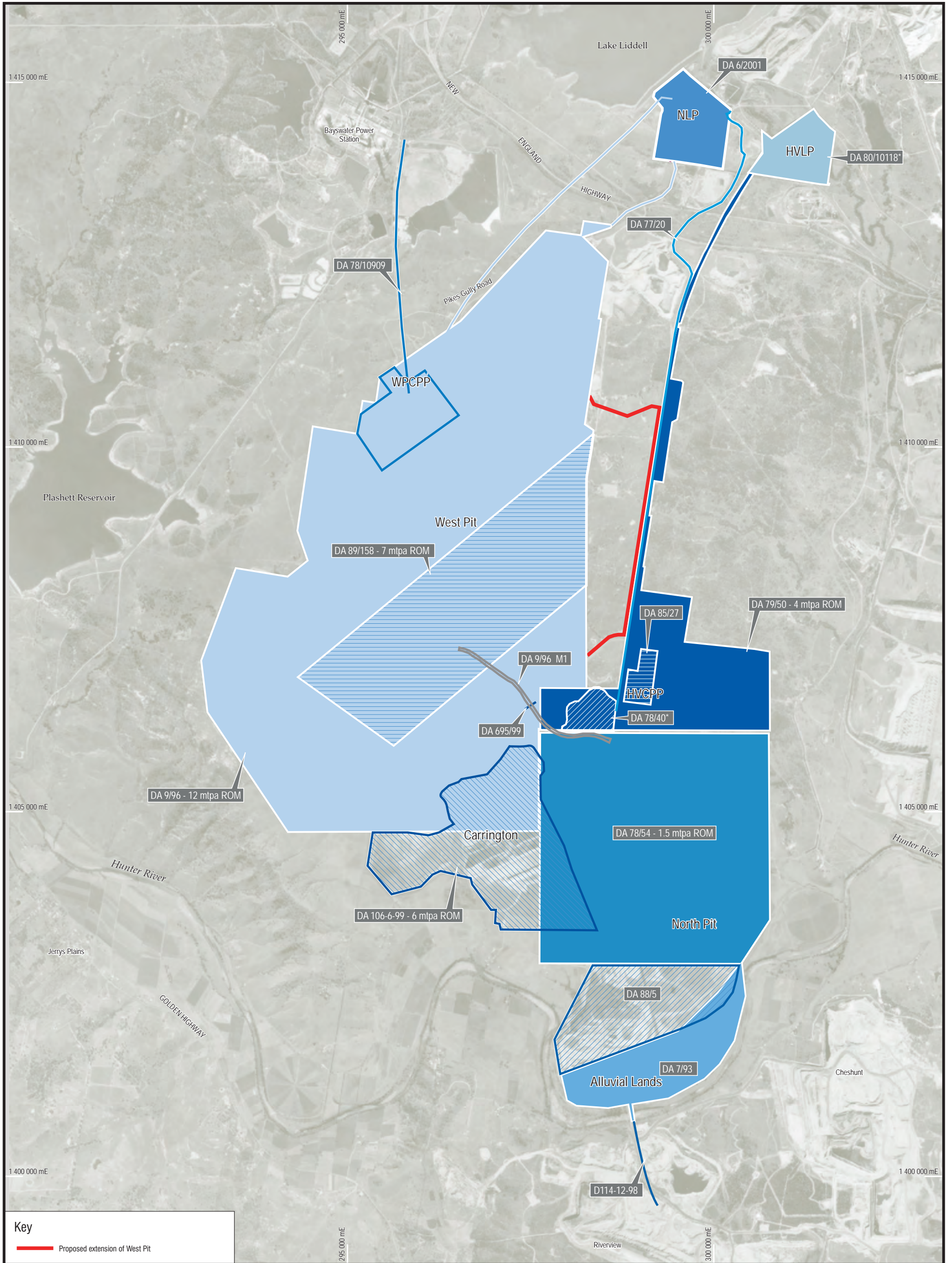
- Haul road
- Conveyor
- Railway
- HVO lease boundary

ERM 0 2.5  
Kilometres

**FIGURE 4**

Approved Coal Movements





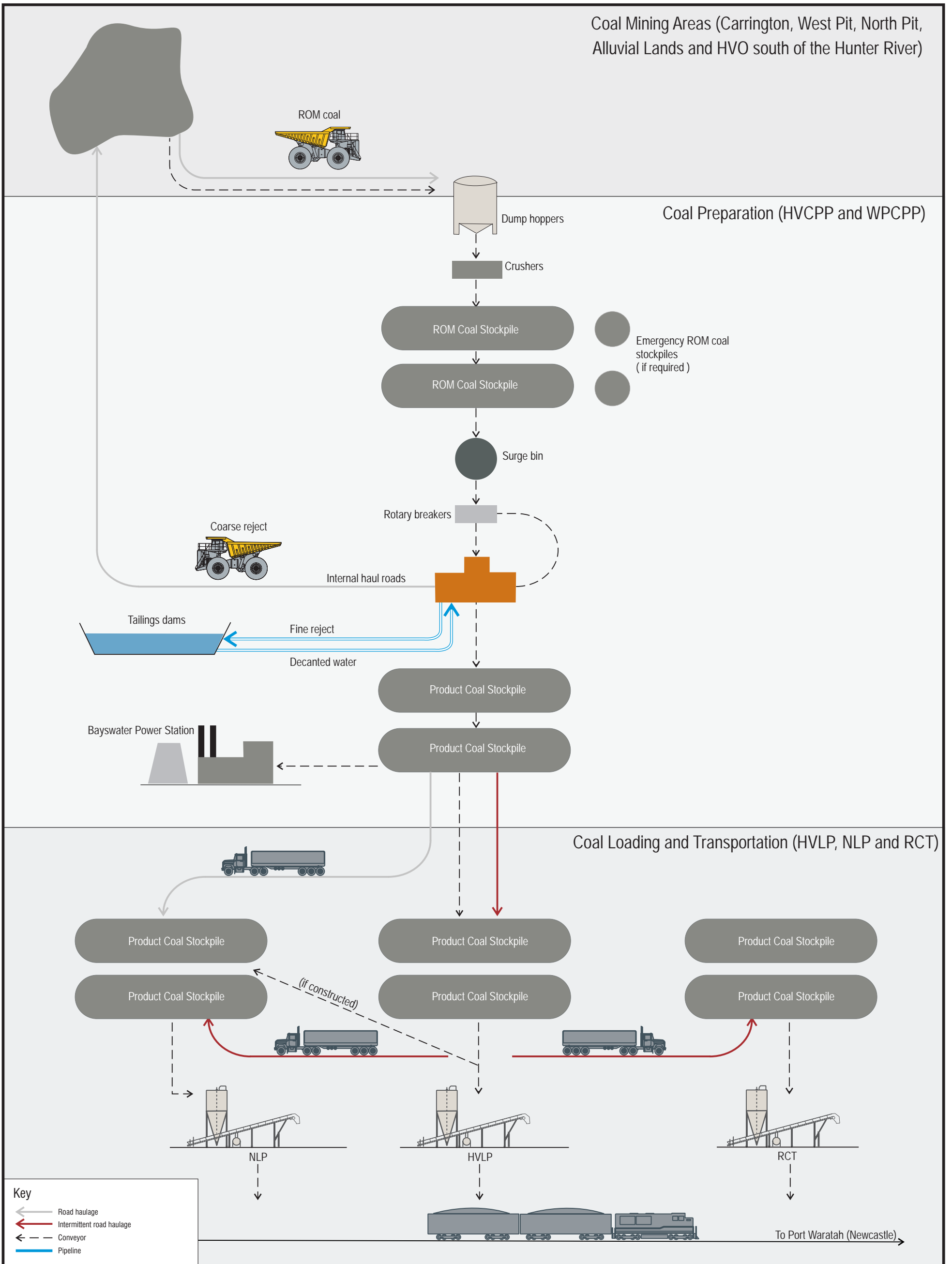
**FIGURE 5**

Overview of Existing Approvals with Proposed West Pit Extension

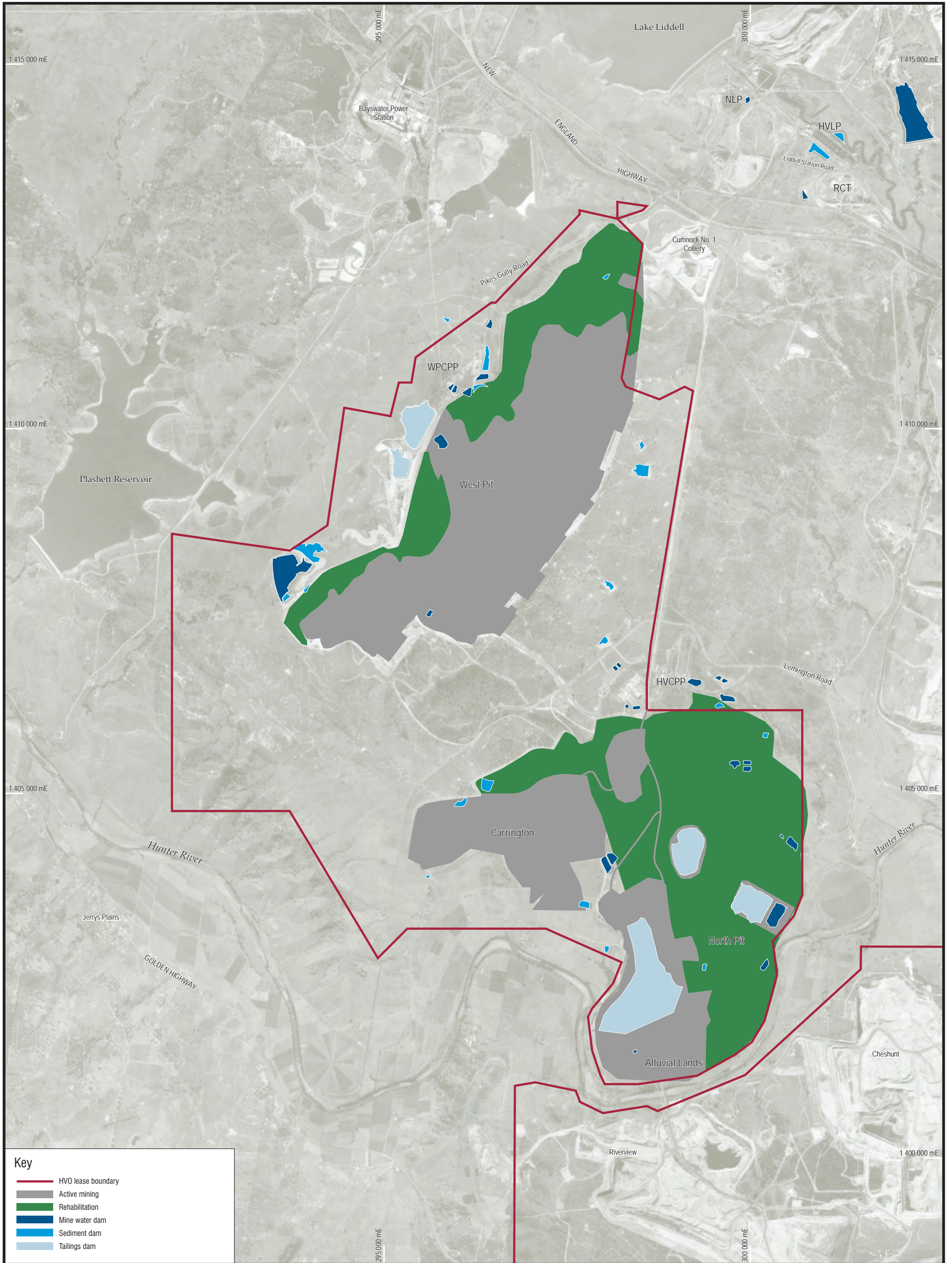
Coal Mining Areas (Carrington, West Pit, North Pit, Alluvial Lands and HVO south of the Hunter River)

Coal Preparation (HVCPP and WPCPP)

Coal Loading and Transportation (HVLN, NLP and RCT)







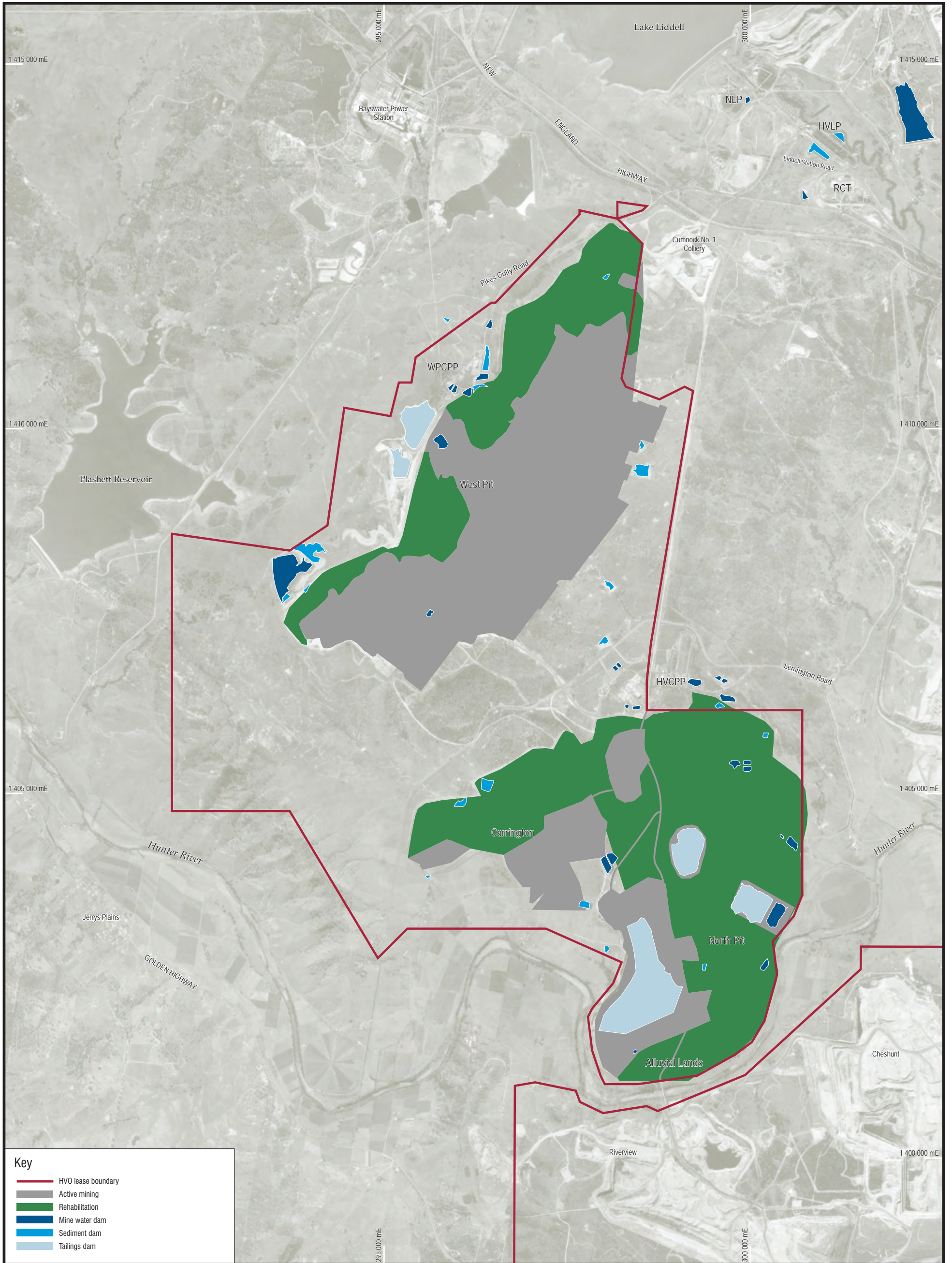
**Key**

- HVO lease boundary
- Active mining
- Rehabilitation
- Mine water dam
- Sediment dam
- Tailings dam

ERM 0 2.5  
Kilometres

**FIGURE 7**





**Key**

- HVO lease boundary
- Active mining
- Rehabilitation
- Mine water dam
- Sediment dam
- Tailings dam

ERM

**FIGURE 8**



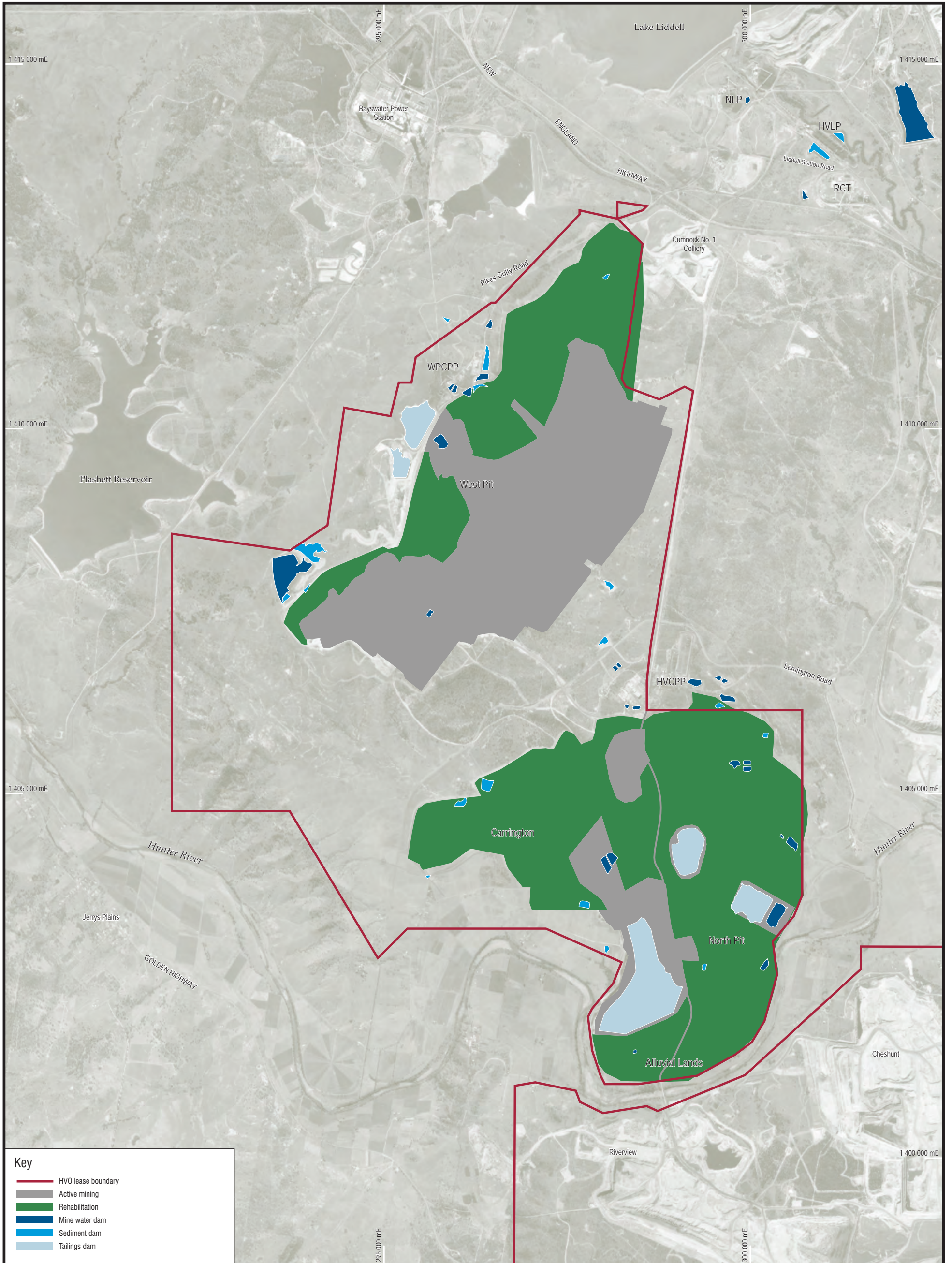
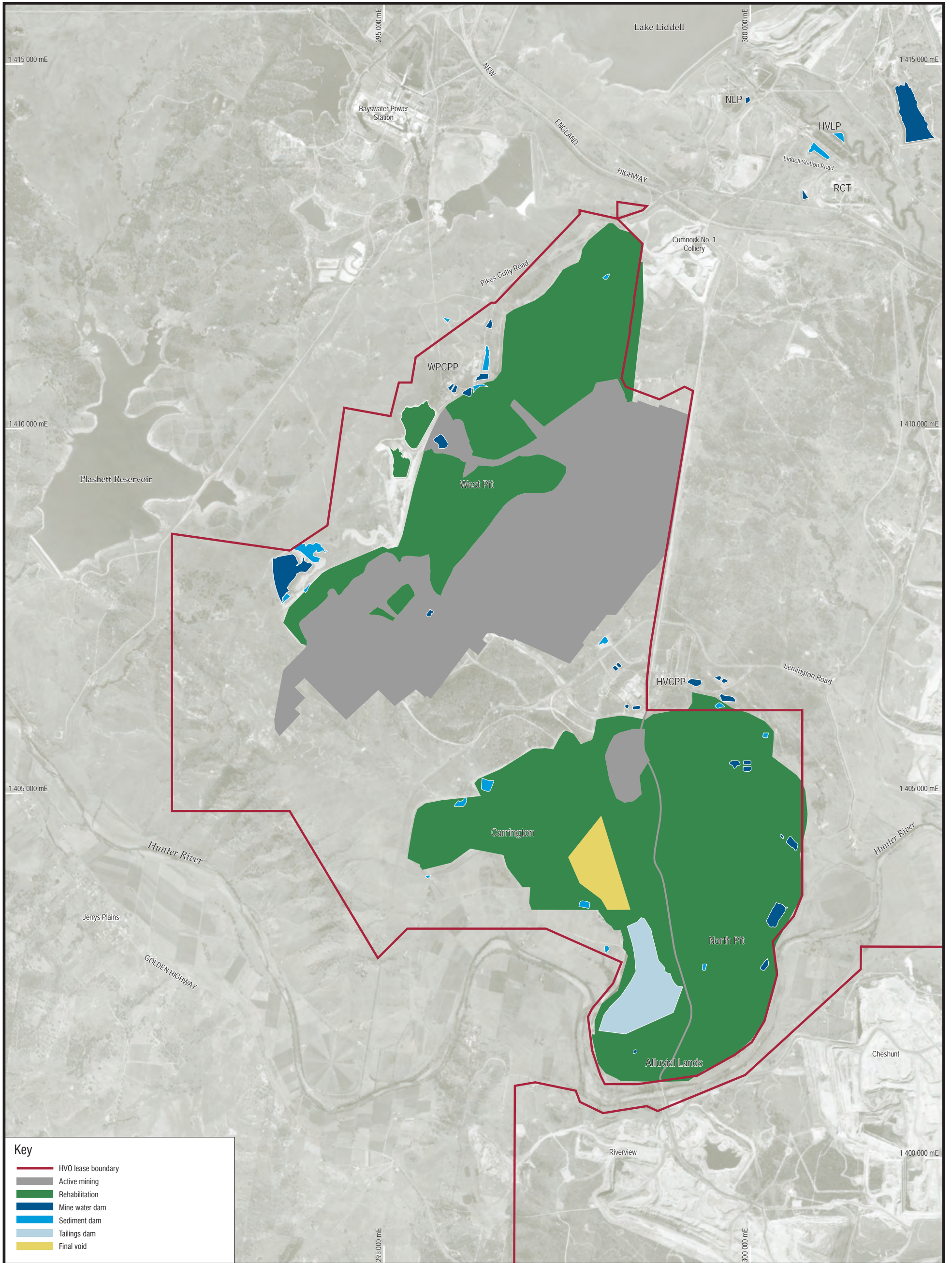


FIGURE 9

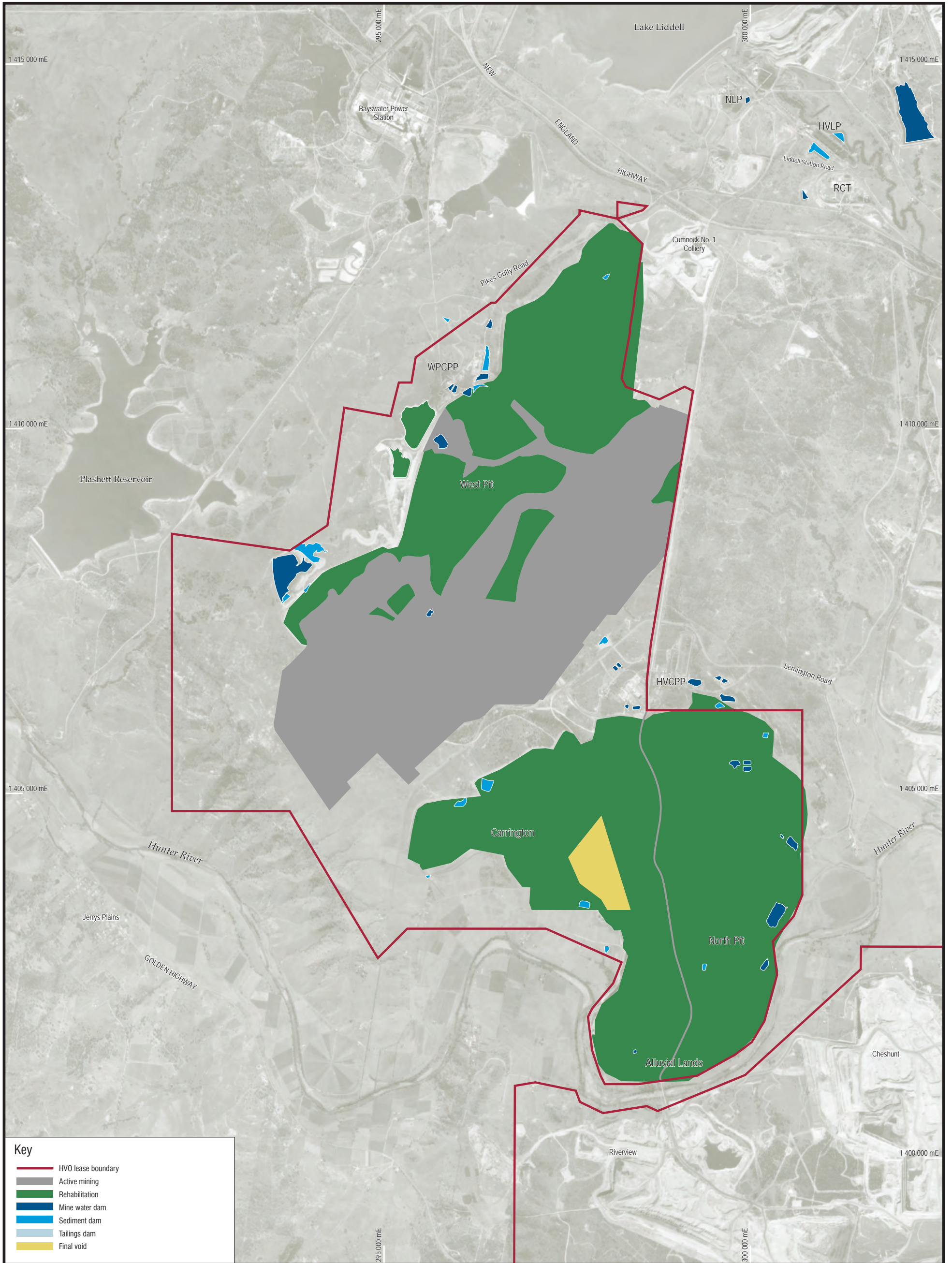




**FIGURE 10**

Mine Plan Year 14

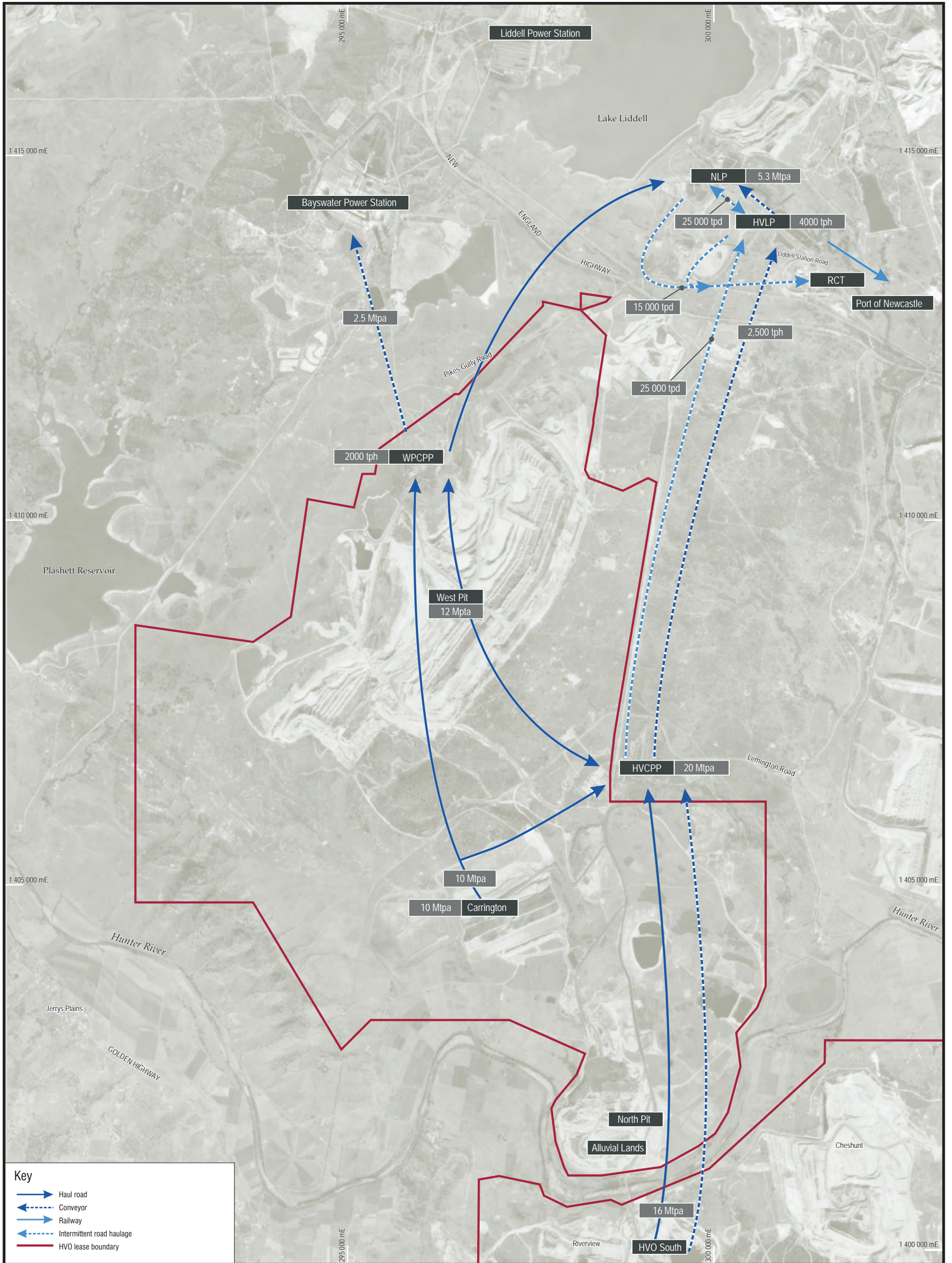




**FIGURE 11**

Mine Plan Year 20





**FIGURE 12**

Proposed Coal Movements

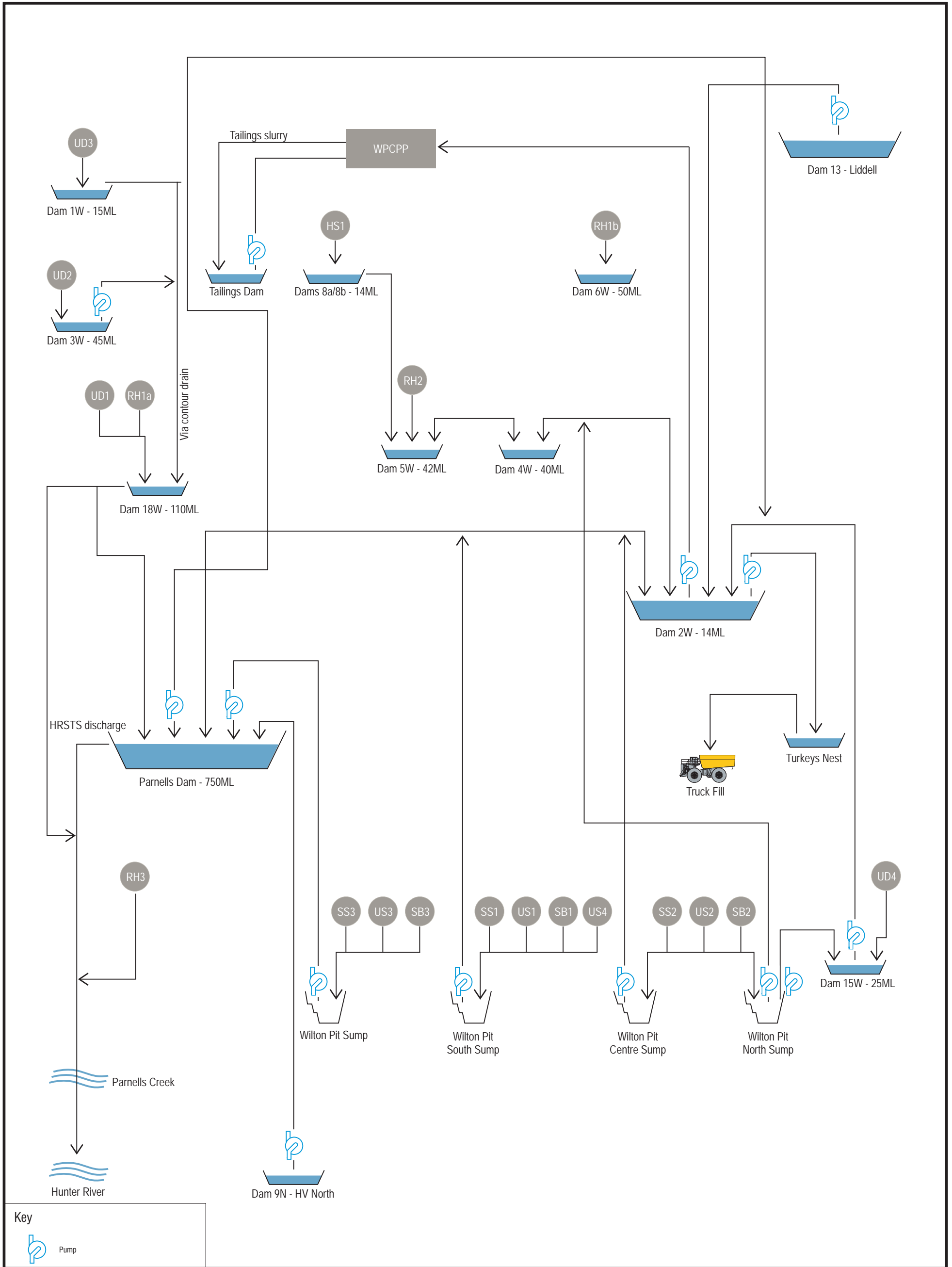




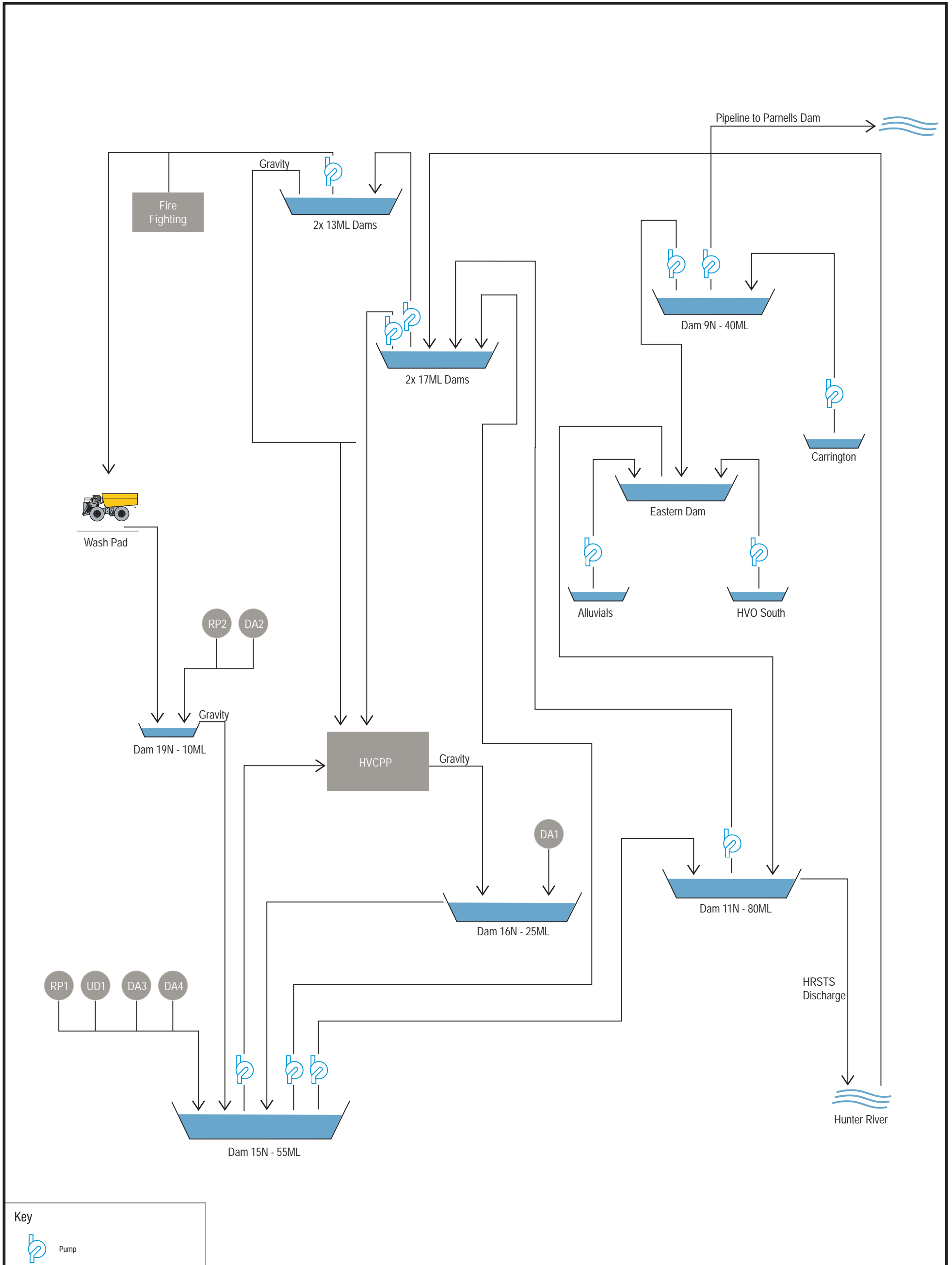
**FIGURE 13**

Proposed Haulage Routes

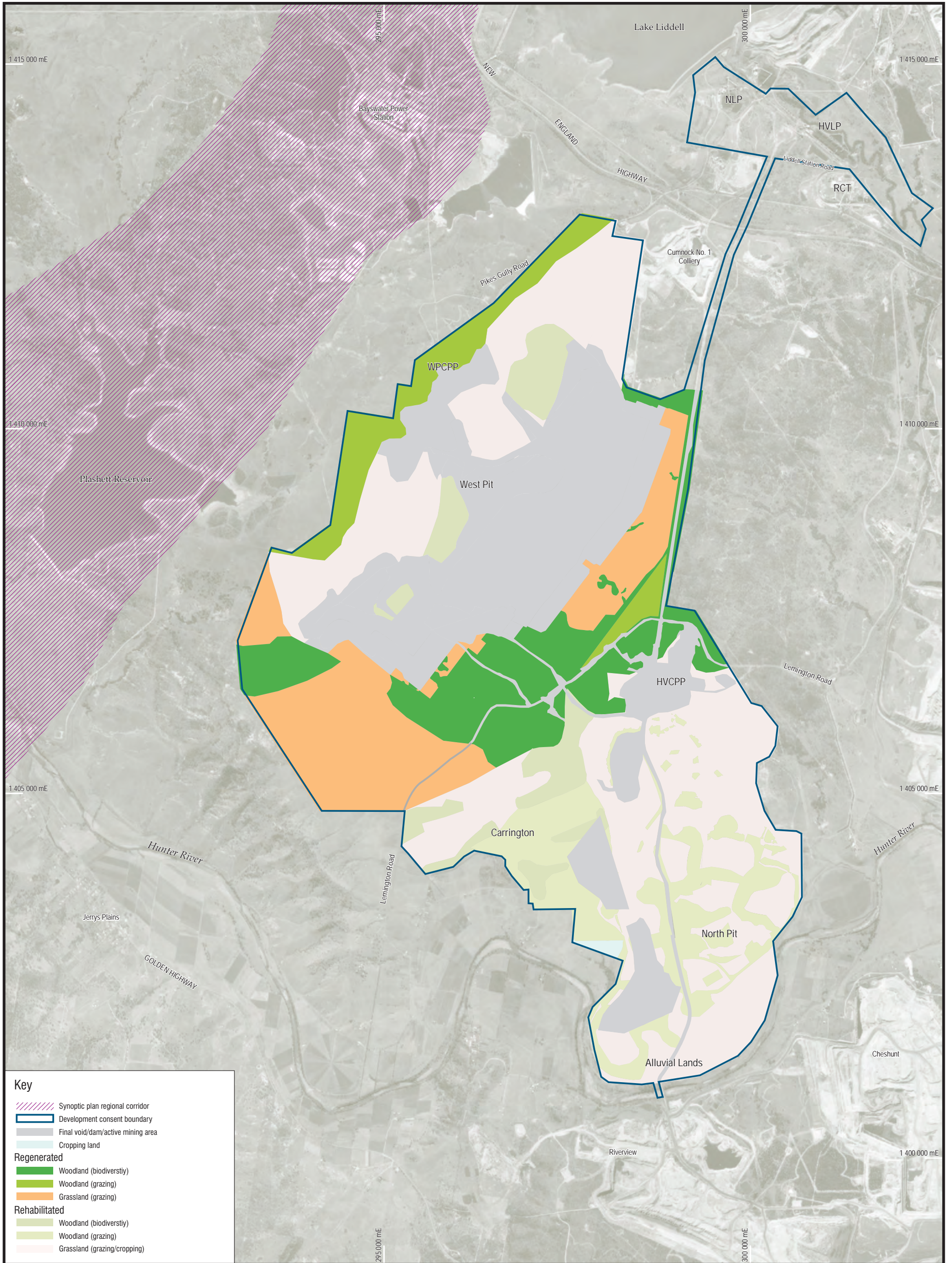








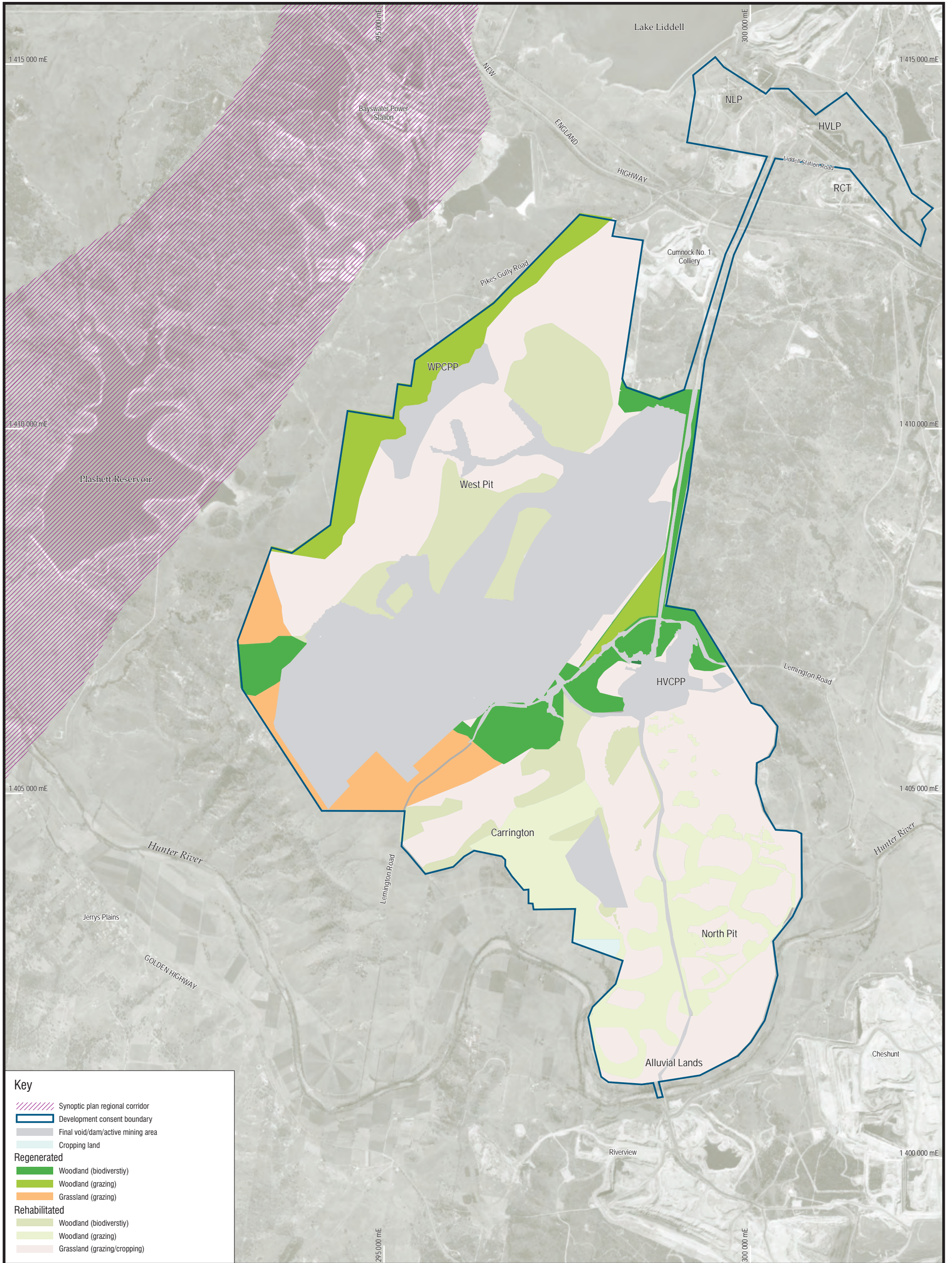




**FIGURE 16**

Short Term Vegetation Types - Year 10

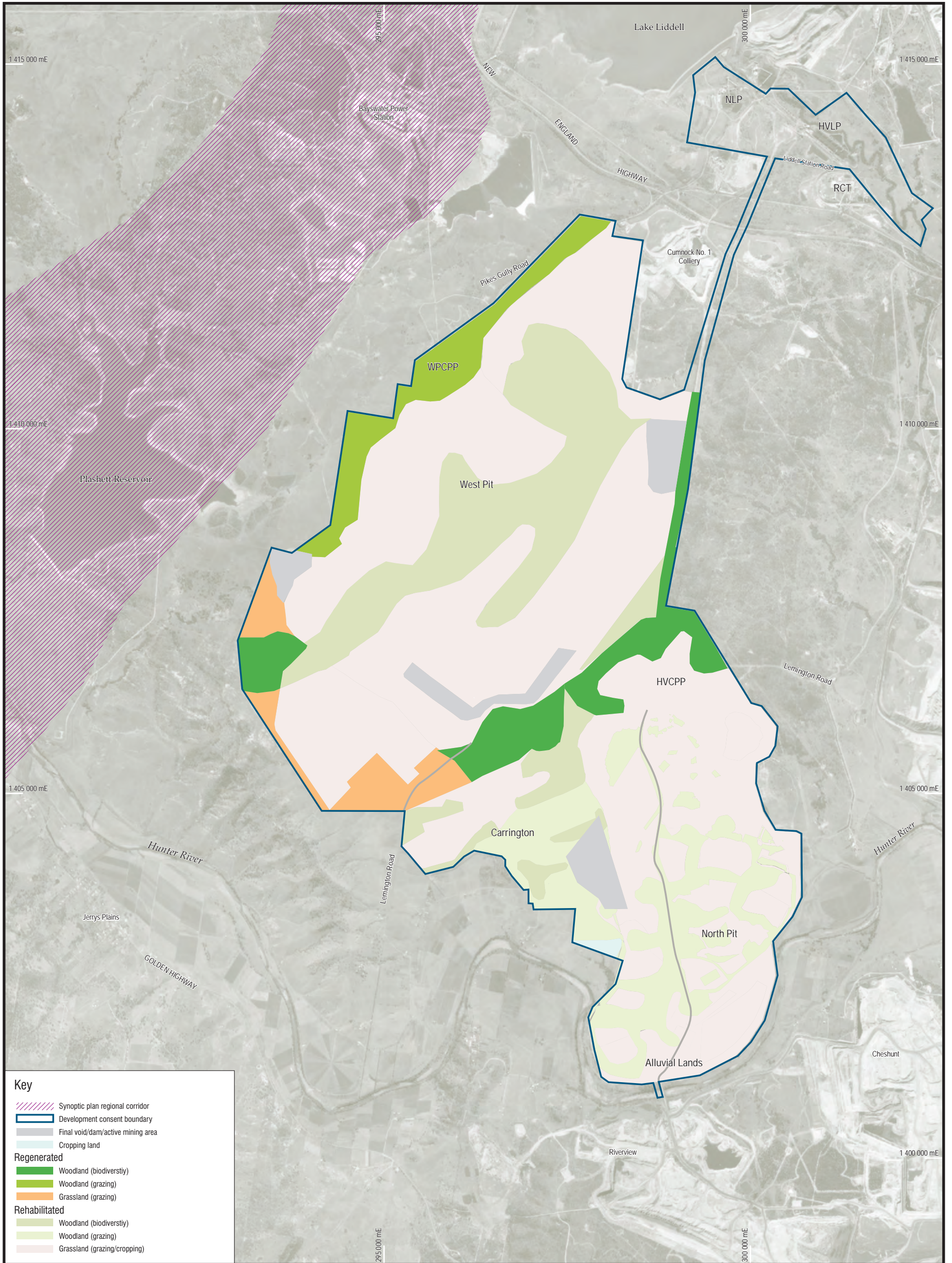




**FIGURE 17**

Medium Term Vegetation Types - Year 20

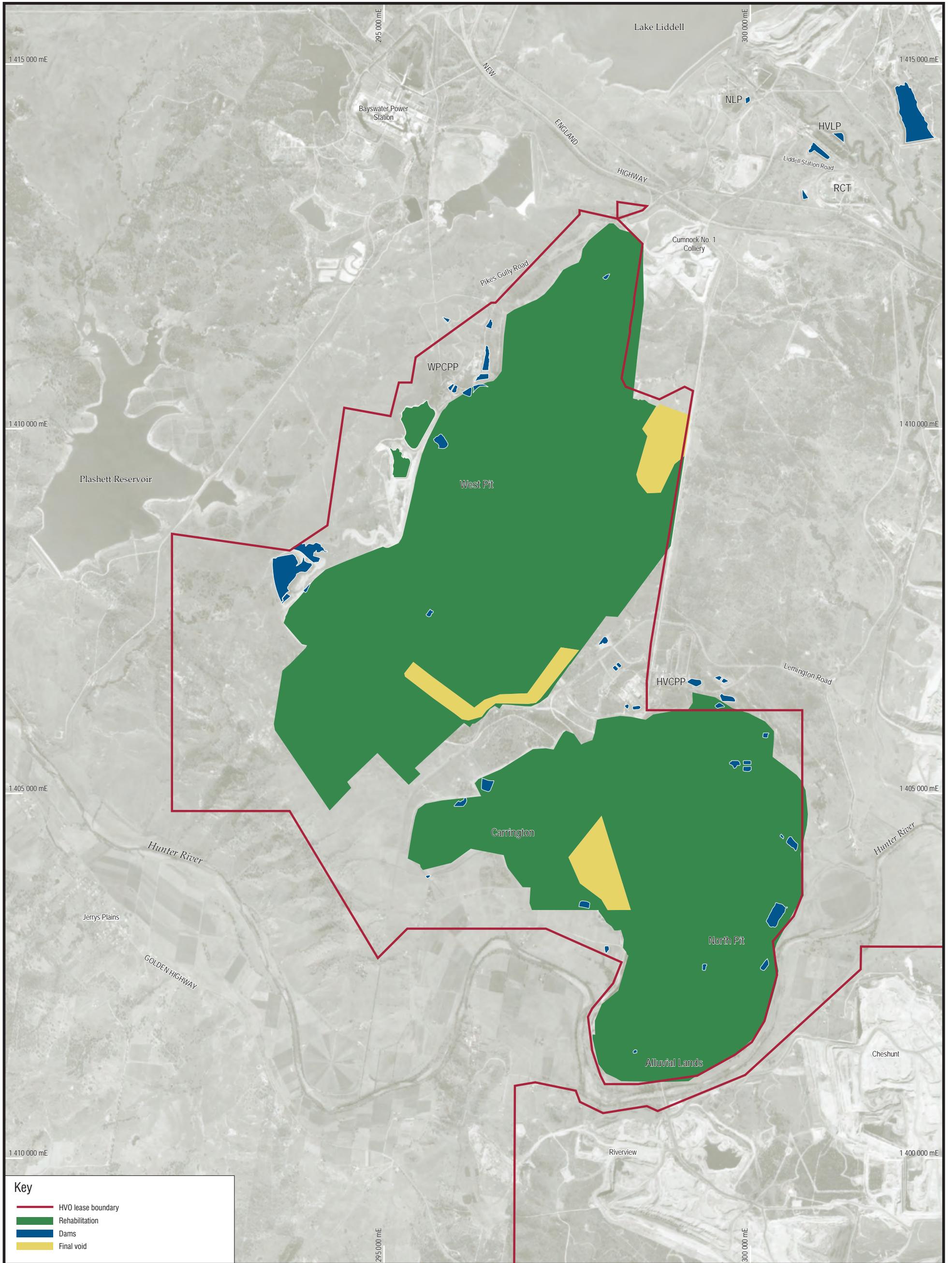




**FIGURE 18**

Long Term Vegetation Types - Year 30

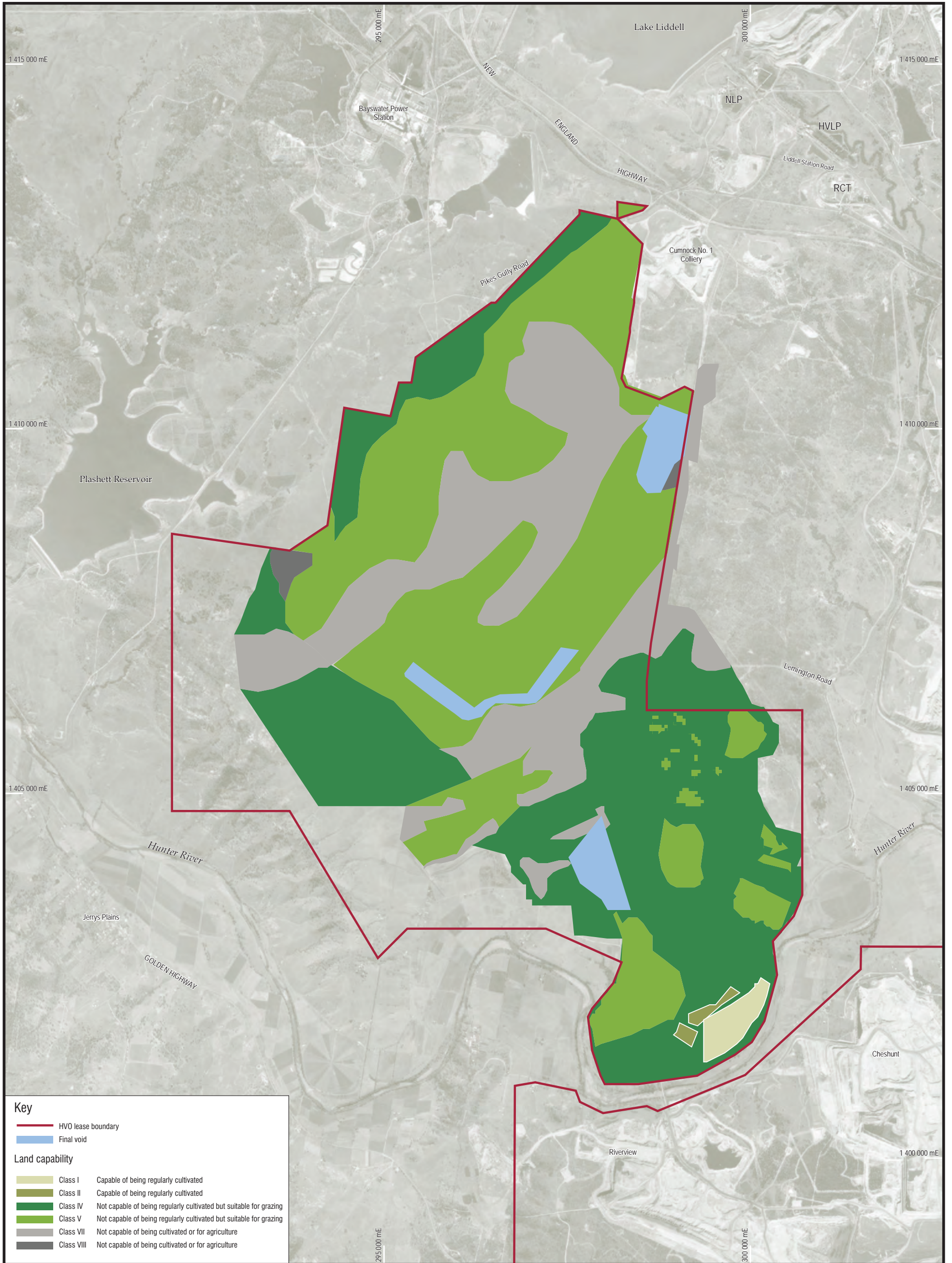




**FIGURE 19**

Final Land Form

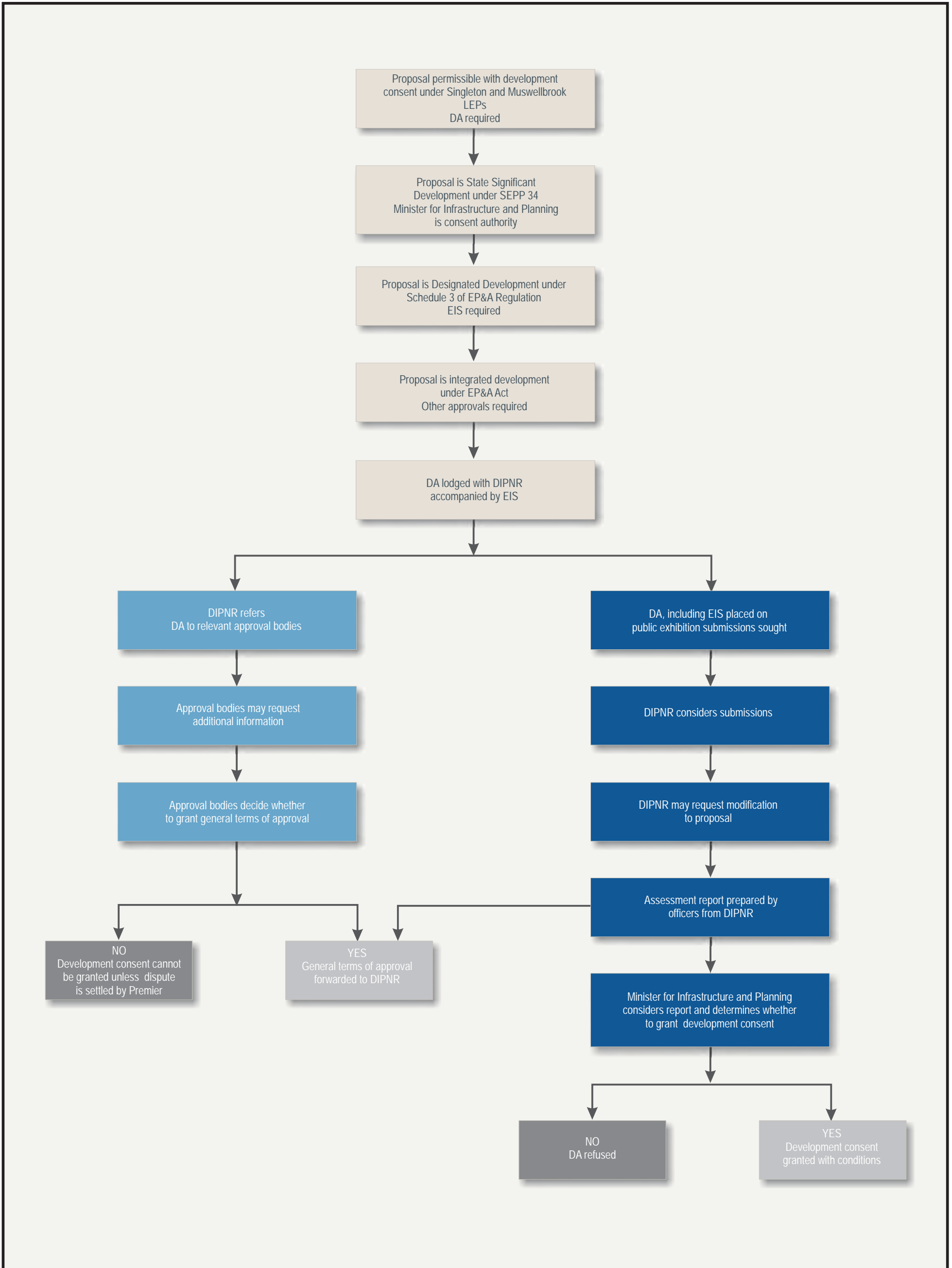




**FIGURE 20**

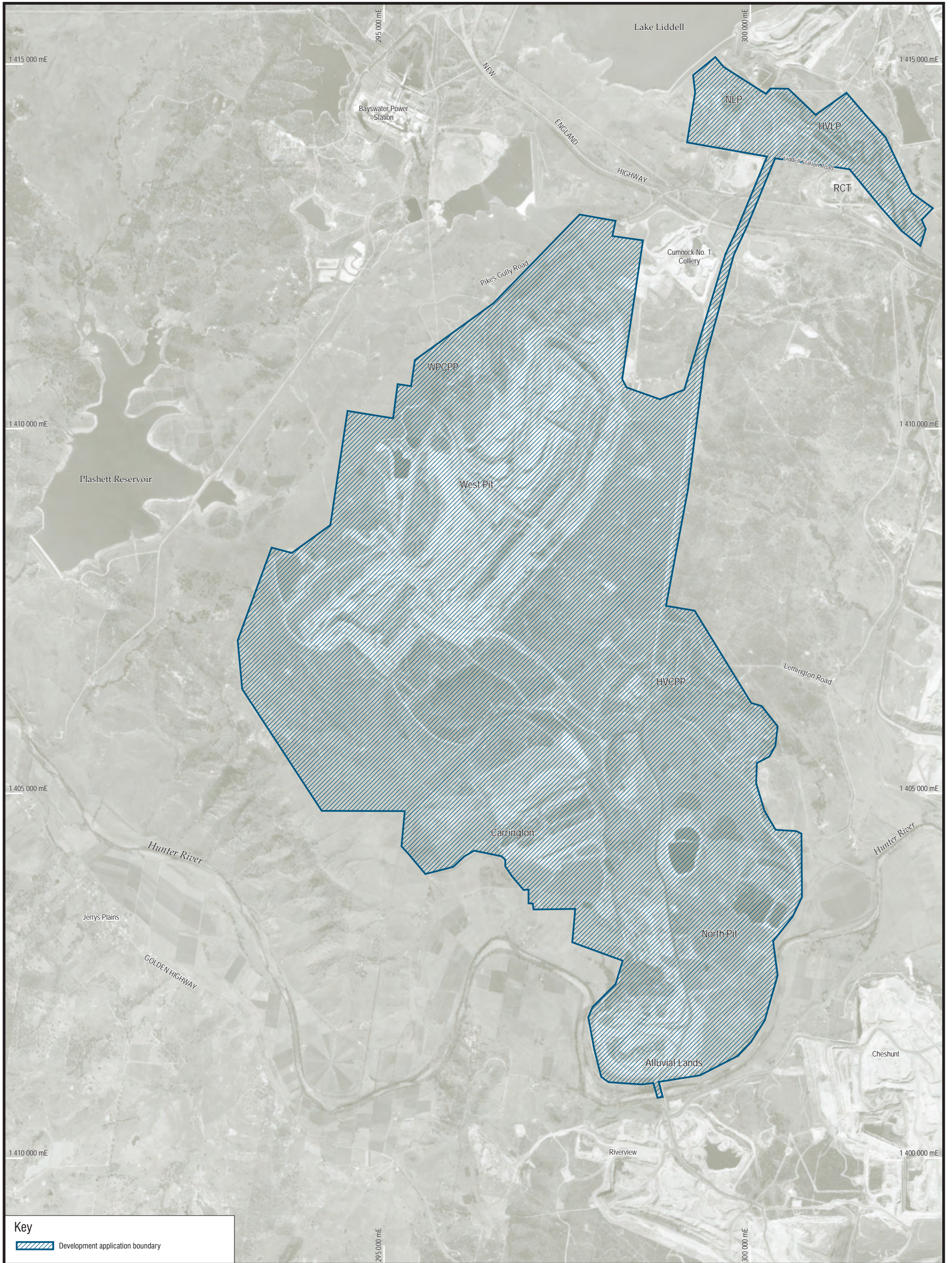
Final Land Capability





**FIGURE 21**





**FIGURE 22**

Development Application Area





Singleton Super Group	Wollombi Coal Measures	Glen Gallic Subgroup	<b>Greigs Creek Coal</b>		
			<b>Redmanvale Creek Formation</b>		
			Dights Creek Coal	Hillsdale Coal Member Nalleen Tuff Hobden Gully Coal Member	
		Doyles Creek Subgroup	<b>Waterfall Gully Formation</b>		
			Pinegrove Formation	Hambleton Hill Sandstone Wylies Flat Coal Member Glenrowan Shale	
		Horseshoe Creek Subgroup	Lucernia Coal	Eyriebower Coal Member Longford Creek Siltstone Rombo Coal Member Hillsdale Claystone Carramere Coal Member	
				<b>Strathmore Formation</b>	
			<b>Alcheringa Coal</b>		
			<b>Clifford Formation</b>		
		Apple Tree Flat Subgroup	Charlton Formation	Stafford Coal Member Monkey Place Creek Tuff	
	<b>Abbey Green Coal</b>				
			<b>Watts Sandstone</b>		
	Wittingham Coal Measures			<b>Denman Formation</b>	
		Jerrys Plains Subgroup	Mount Leonard Formation	Whybrow Seam	
				<b>Althorpe Formation</b>	
			Malabar Formation	Redbank Creek Seam Wambo Seam Whynot Seam Blakefield Seam	
				Mount Ogilvie Formation	Saxonvale Member Glen Munro Seam Woodlands Hill Seam
			<b>Milbrodale Formation</b>		
			Mount Thorley Formation	Arrowfield Seam Bowfield Seam Warkworth Seam	
				<b>Fairford Formation</b>	
Burnamwood Formation			Mount Arthur Seam Piercefield Seam Vaux Seam Broonie Seam Bayswater Seam		
		<b>Archerfield Sandstone</b>			
Vane Subgroup	<b>Bulga Formation</b>				
	Foybrook Formation	Lemington Seam Pikes Gully Seam Arties Seam Liddell Seam Barrett Seam Hebden Seam			
		<b>Saltwater Creek Formation</b>			

FIGURE 23



Property No.	Last name or Company name	First name	Property No.	Last name or Company name	First name	Property No.	Last name or Company name	First name	Property No.	Last name or Company name	First name
1	Hayes	RJ	18	Bennet	K	35	Exxon	C & M	52	Old	
2	Skinner	DR	19	Birlee Feeds		36	Garland		53	Shortland Electricity	MR
3	Elisnore		20	Bowman	E	37	Hall	J	54	Skinner	
4	Muller		21	Burley	PR & CM	38	Henderson	H	55	St Phillips Church	
5	Bowman	E	22	Burley/Bushfire Brigade	T	39	Kannar	H	56	Tansil Pty Ltd	
6	Moxey	EA & MM	23	Cec M Hawkes Pty Ltd		40	Kannar	H	57	Wambo Mining Corporation Pty Ltd	
7	Stapleton	N	24	Clifton & Edwards	JV & JS	41	Kannar	H	58	Wambo Mining Corporation Pty Ltd	
8	Holz	N & L	25	Coal & Allied		42	Kannar	H	59	Wambo Mining Corporation Pty Ltd	
9	Dallas	G	26	Coal & Allied		43	Kannar (Abandoned House)	HJ, WH & H	60	Witchard	BH & CJ
10	Moses	RJ	27	Coal & Allied		44	Kauter, Bowman & Wright	WM & L	61	Wyoming Holstiens	
11	Fisher	C	28	Coal & Allied		45	Kelly	CI	62	Wyoming Holstiens	
12	Barry	E	29	Coal & Allied		46	Maskey	EA & MM	63	Wyoming Holstiens	
13	Jerrys Plains Centre *		30	Coal & Allied		47	Moxey	EA & MM	64	Wyoming Holstiens	
14	Jerrys Plains North *		31	Cooper		48	Moxey	EA & MM	65	Wyoming Holstiens	
15	Adamson	KJ & CP	32	Curlewis Pastoral Company		49	Moxey	NR & GJ	66	Xstrata Coal Pty Ltd	
16	Algie	RJ & CY	33	Edward & Haynes	K & LF	50	Nelson				
17	Algie	RJ & CY	34	Ernst	GJ & JG	51	Nicholls	TP & CM			

\* General property location in village of Jerrys Plains used for noise modelling purposes only

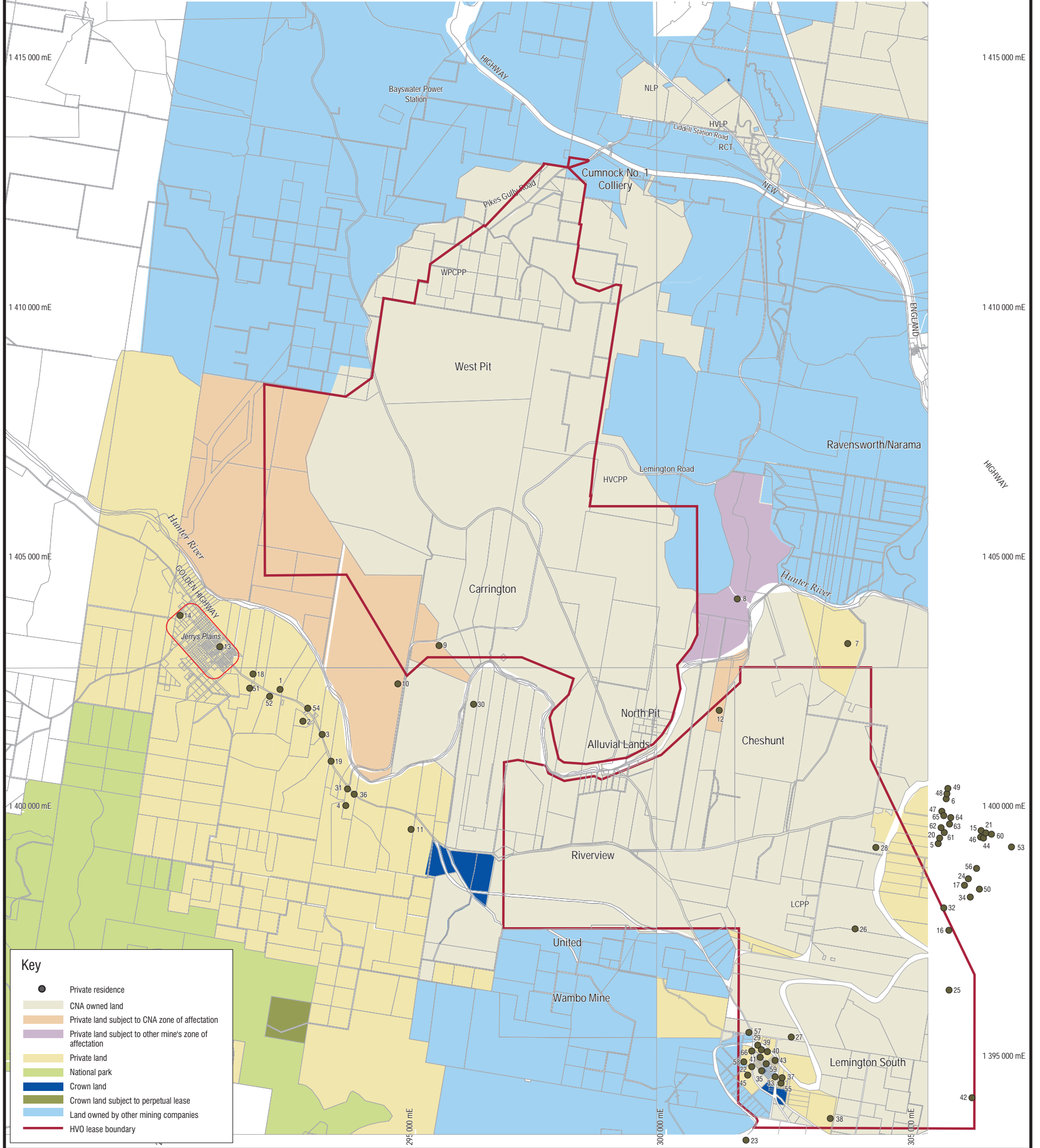


FIGURE 24

Land Ownership



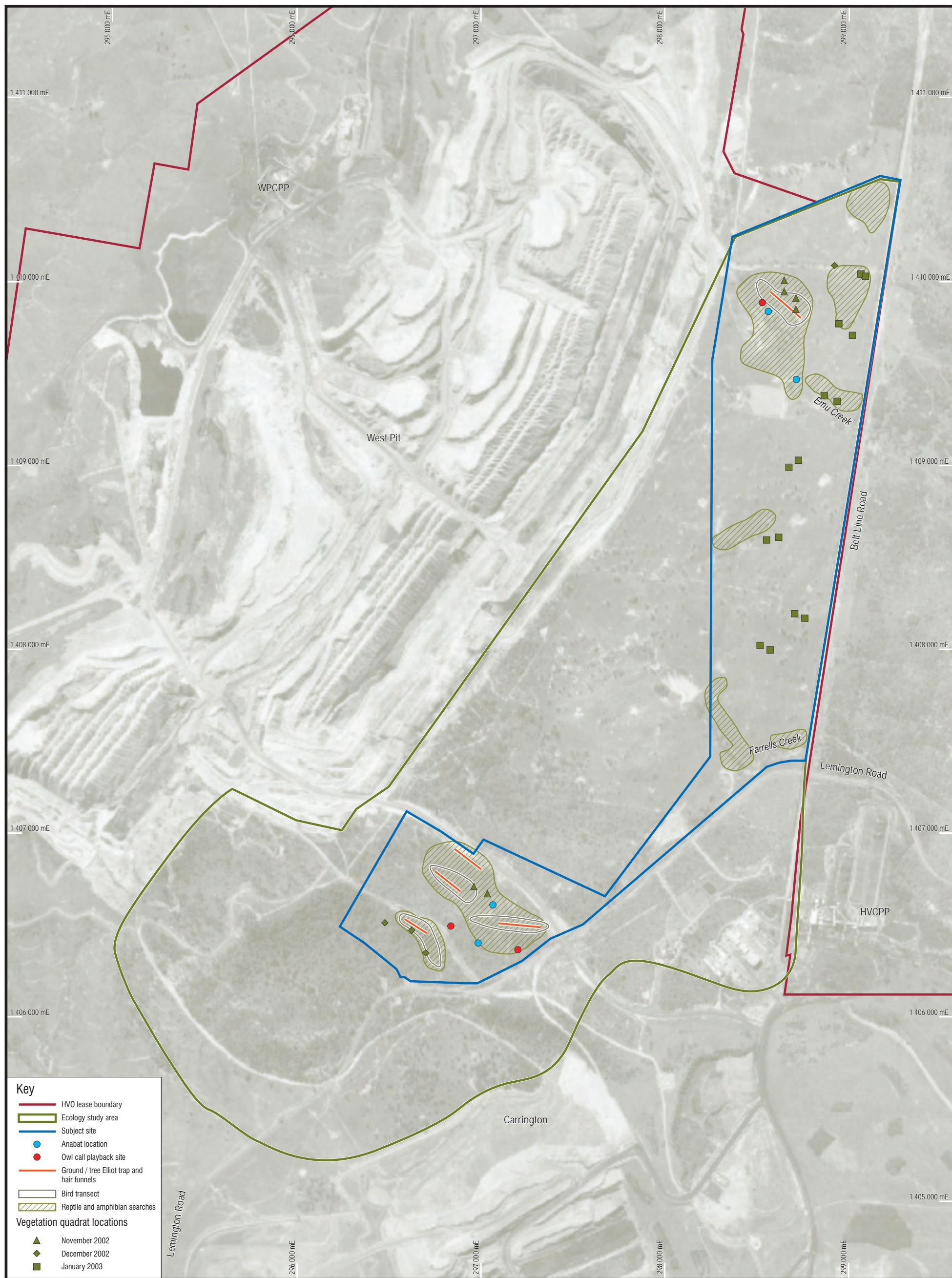




**FIGURE 25**

Study Area for Ecology and Archaeology

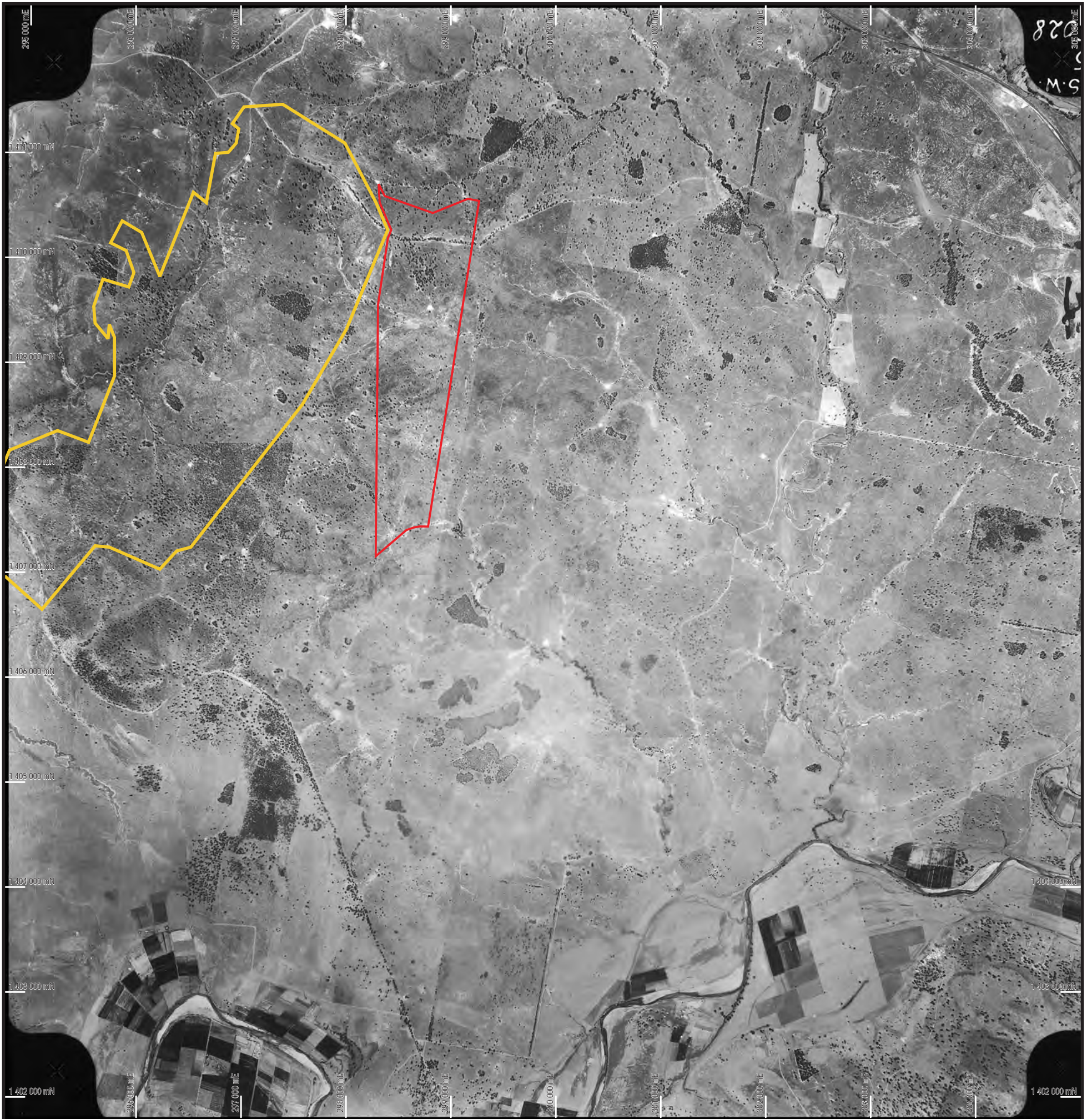




**FIGURE 26**

West Pit Extension Flora and Fauna Survey Locations





**Key**

- Current extent of West Pit
- Extension of West Pit

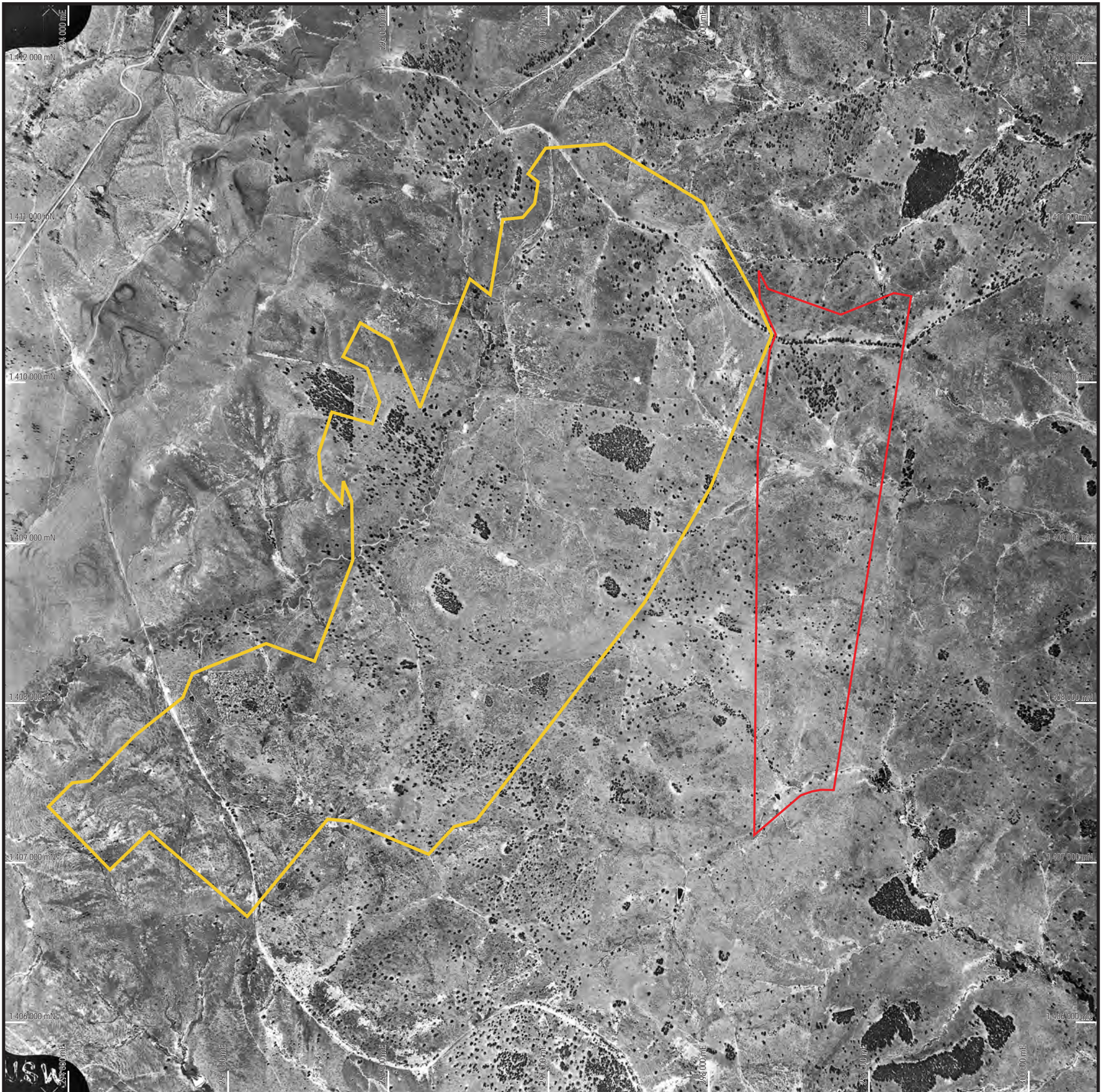
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S.M. 828

**FIGURE 27**

1958 Aerial Photograph of West Pit





**Key**

- Current extent of West Pit
- Extension of West Pit

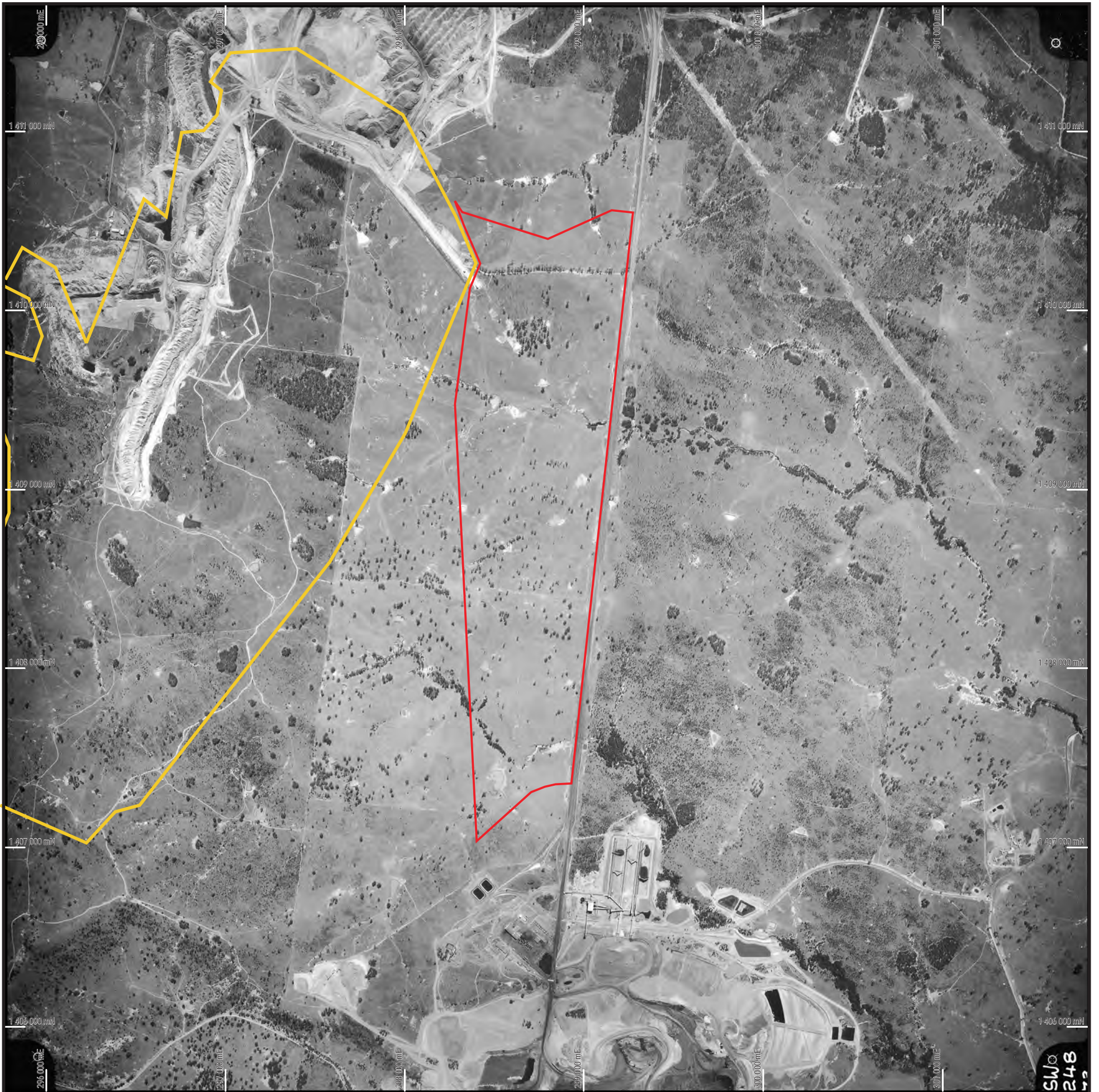




**FIGURE 28**

1967 Aerial Photograph of West Pit





**Key**

- Current extent of West Pit
- Extension of West Pit

ERM

↑

0 ————— 1  
Kilometres

**FIGURE 29**




1982 Aerial Photograph of West Pit





**Key**

- Current extent of West Pit
- Extension of West Pit

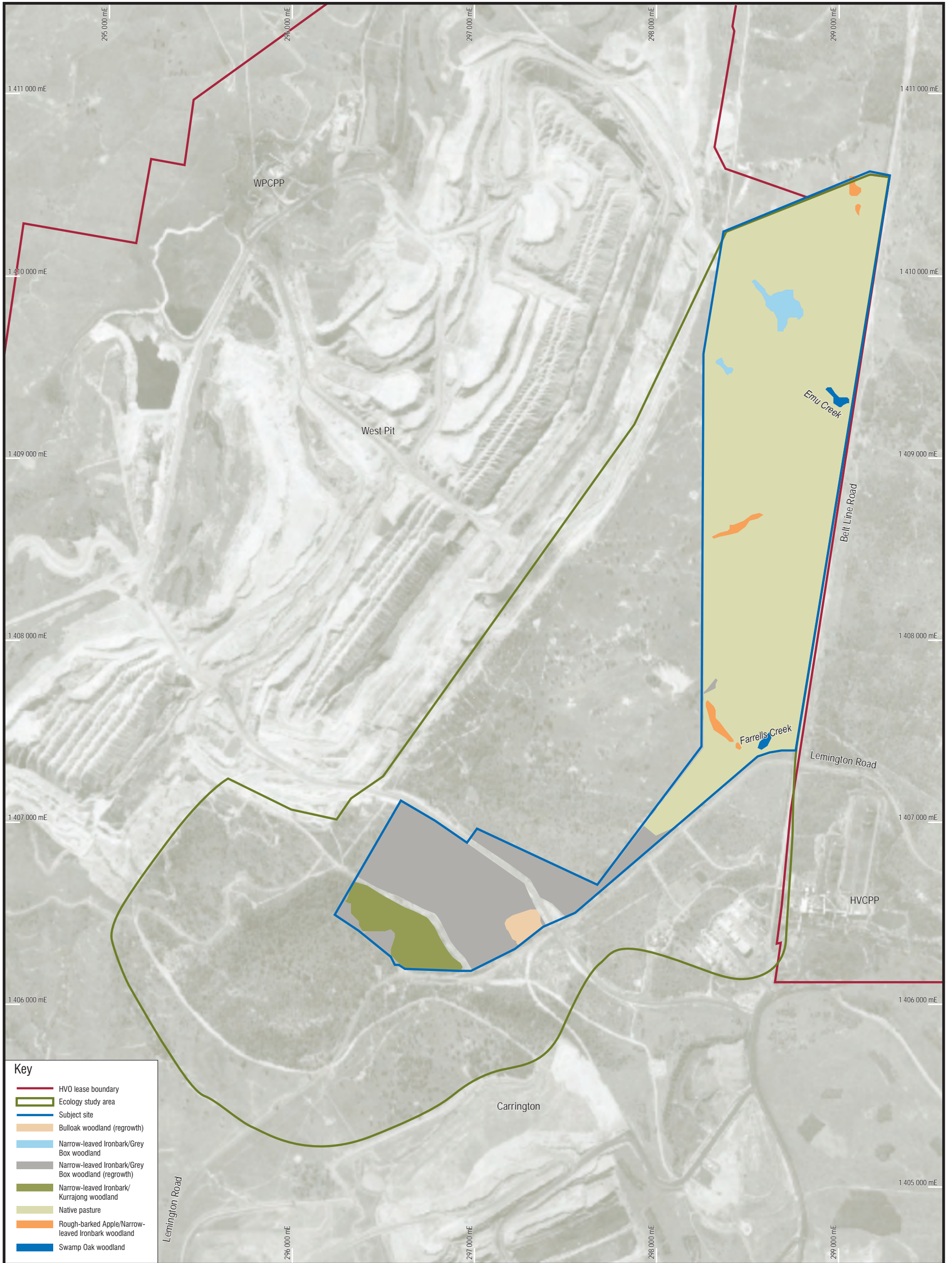




Kilometres

**FIGURE 30**

1993 Aerial Photograph of West Pit

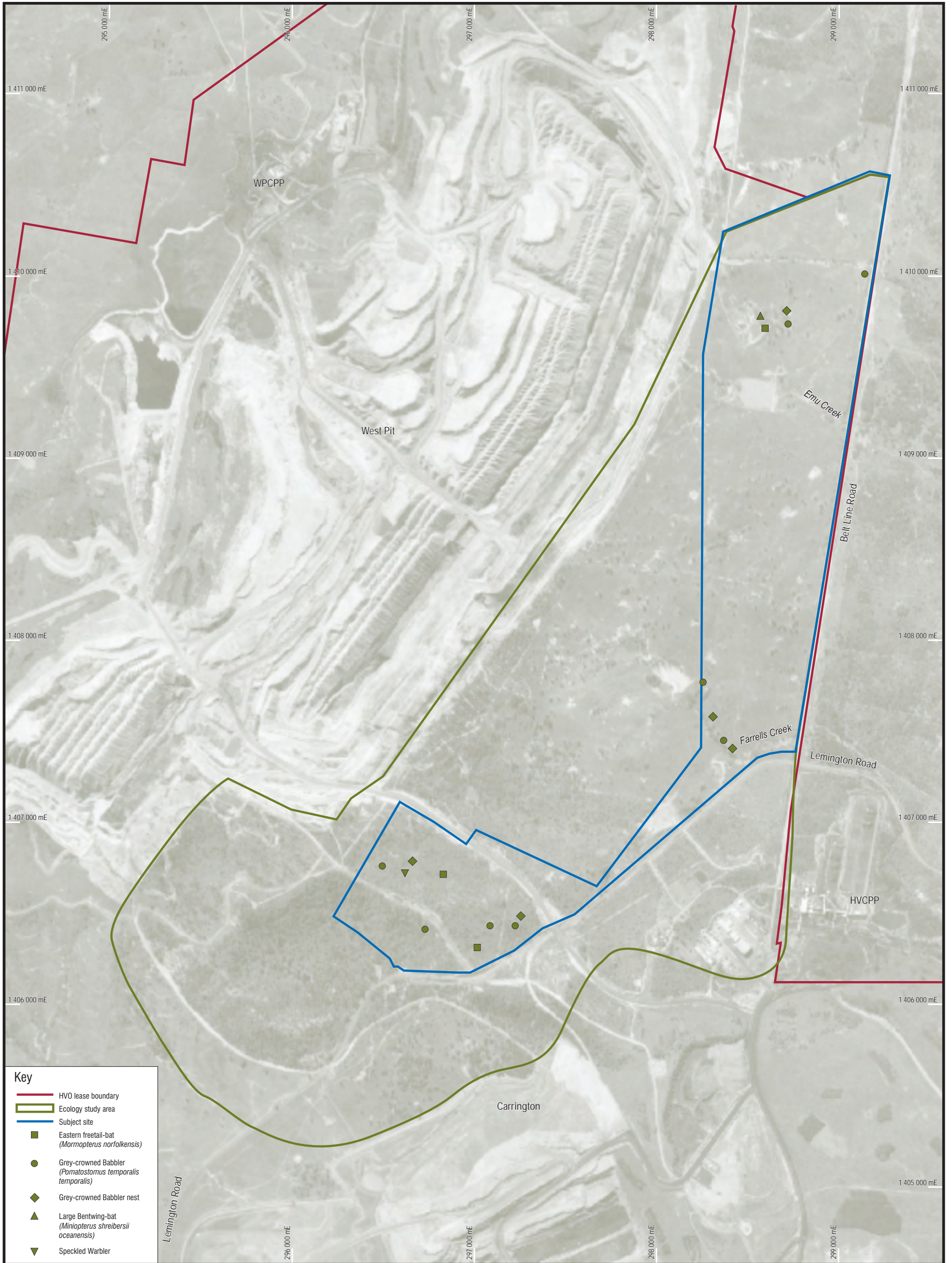




**FIGURE 31**

Vegetation of the Subject Site

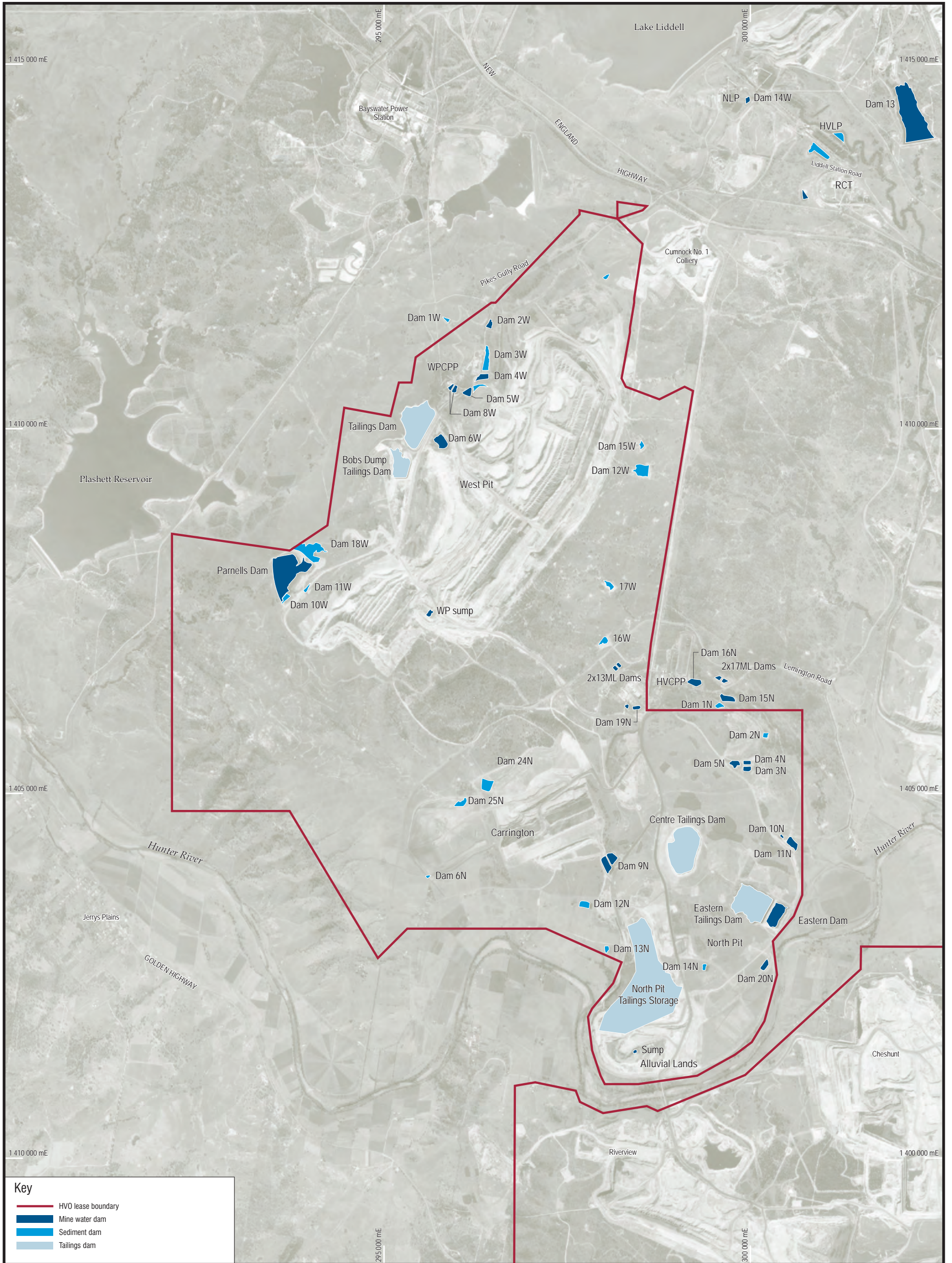




**FIGURE 32**

Threatened Fauna in the Study Area



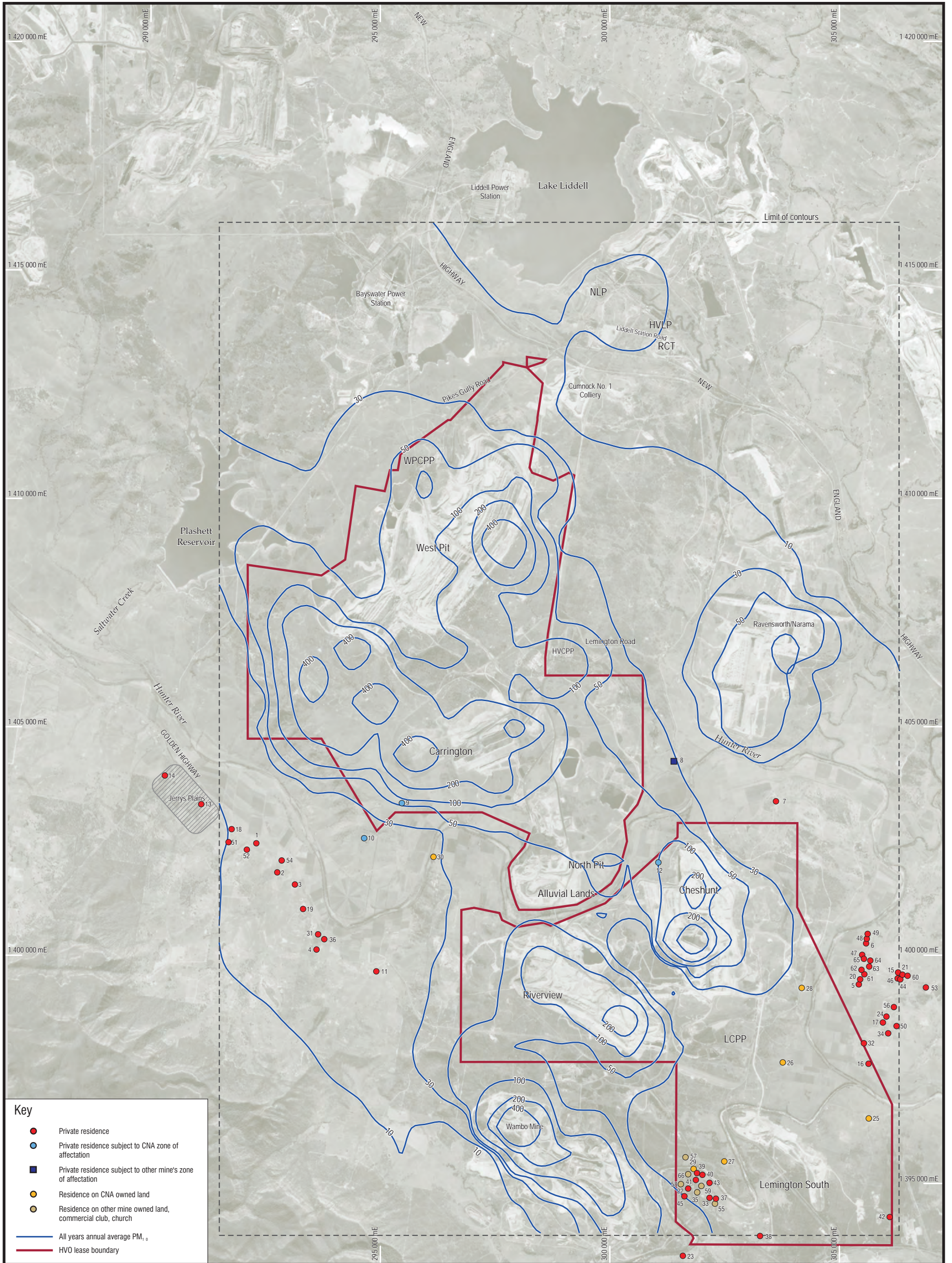


**FIGURE 33**

Existing Mine Water Elements



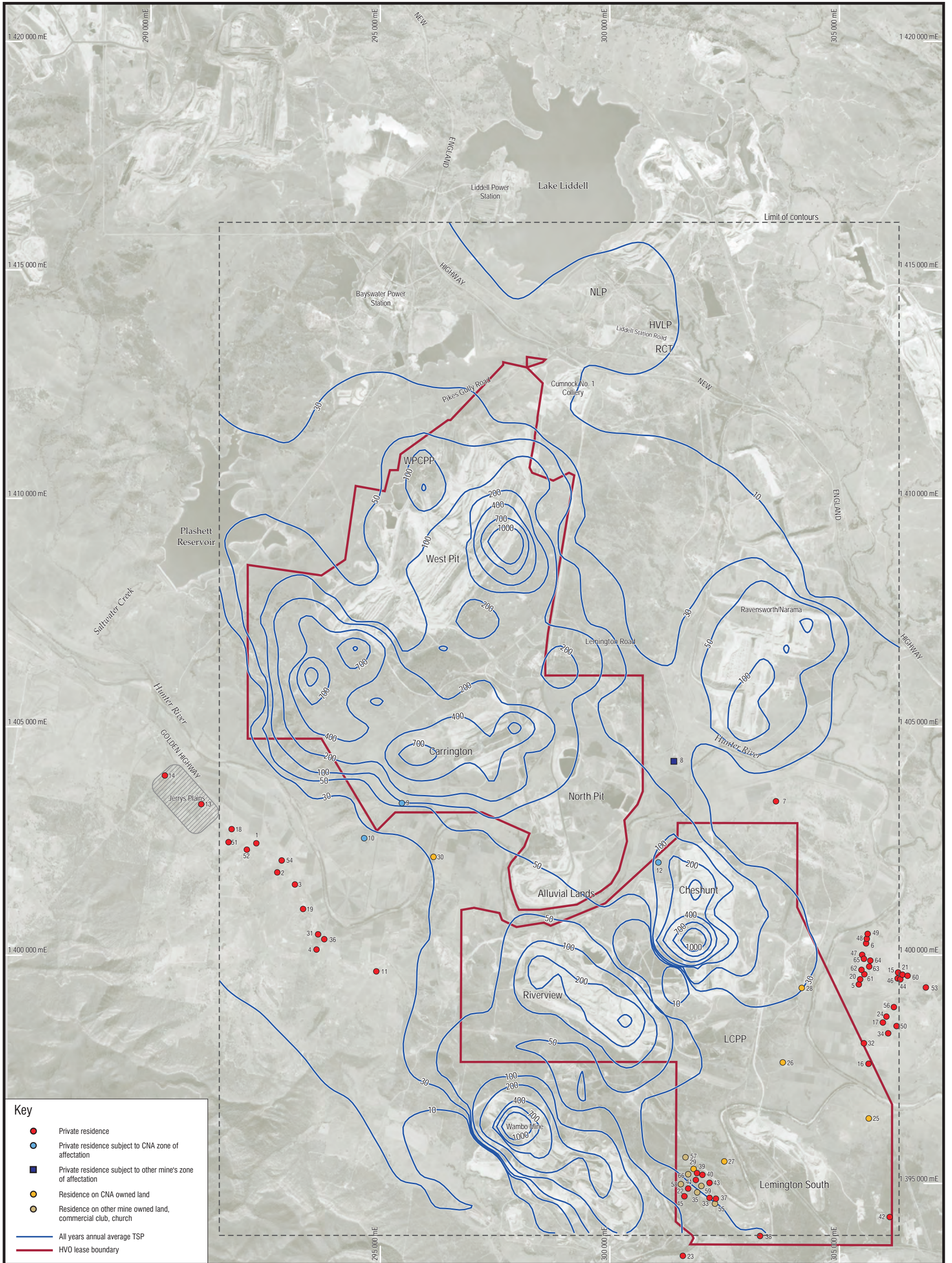




**FIGURE 34**

All Years Annual Average PM<sub>10</sub>





**FIGURE 35**

All Years Annual Average TSP



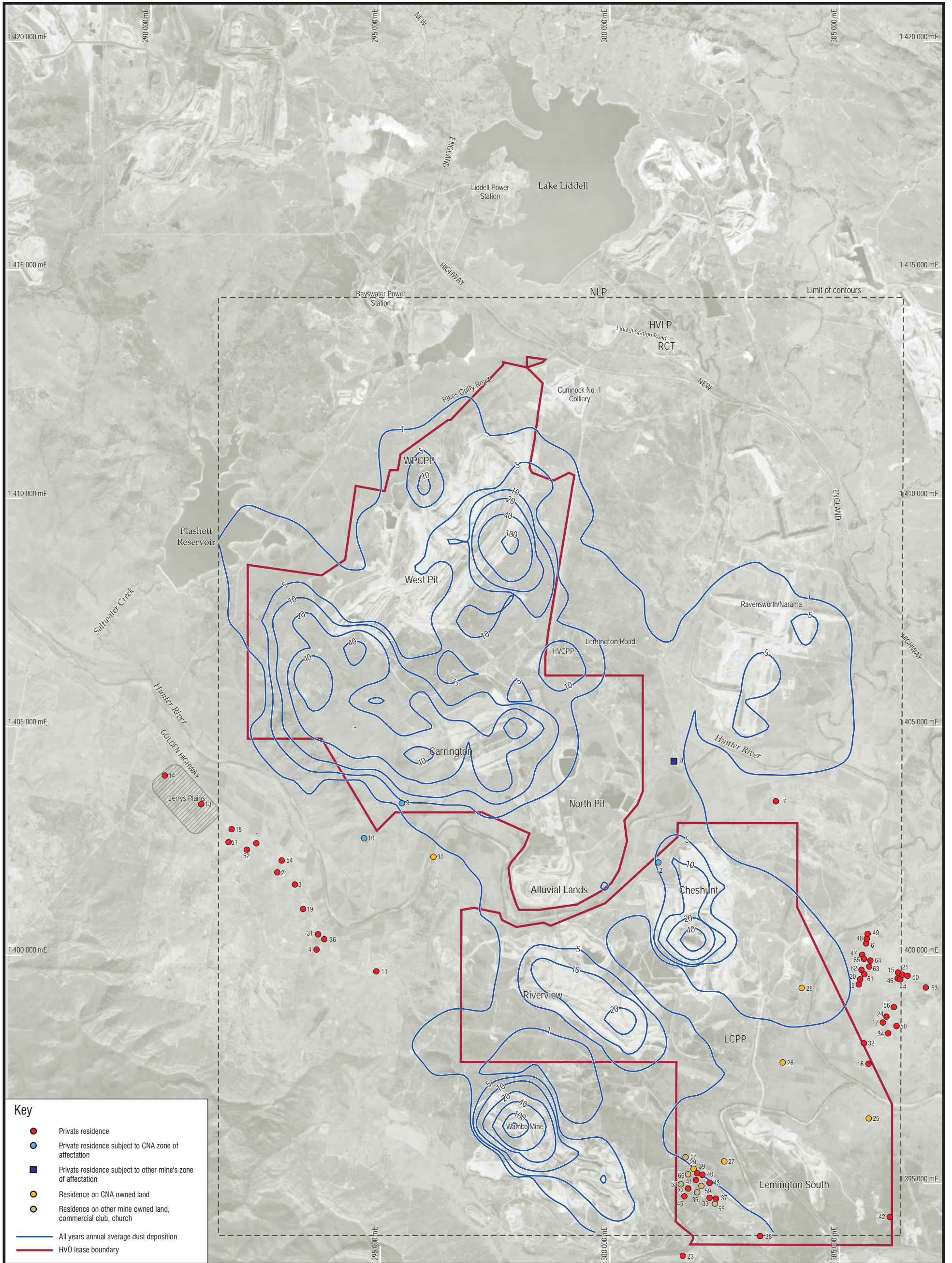
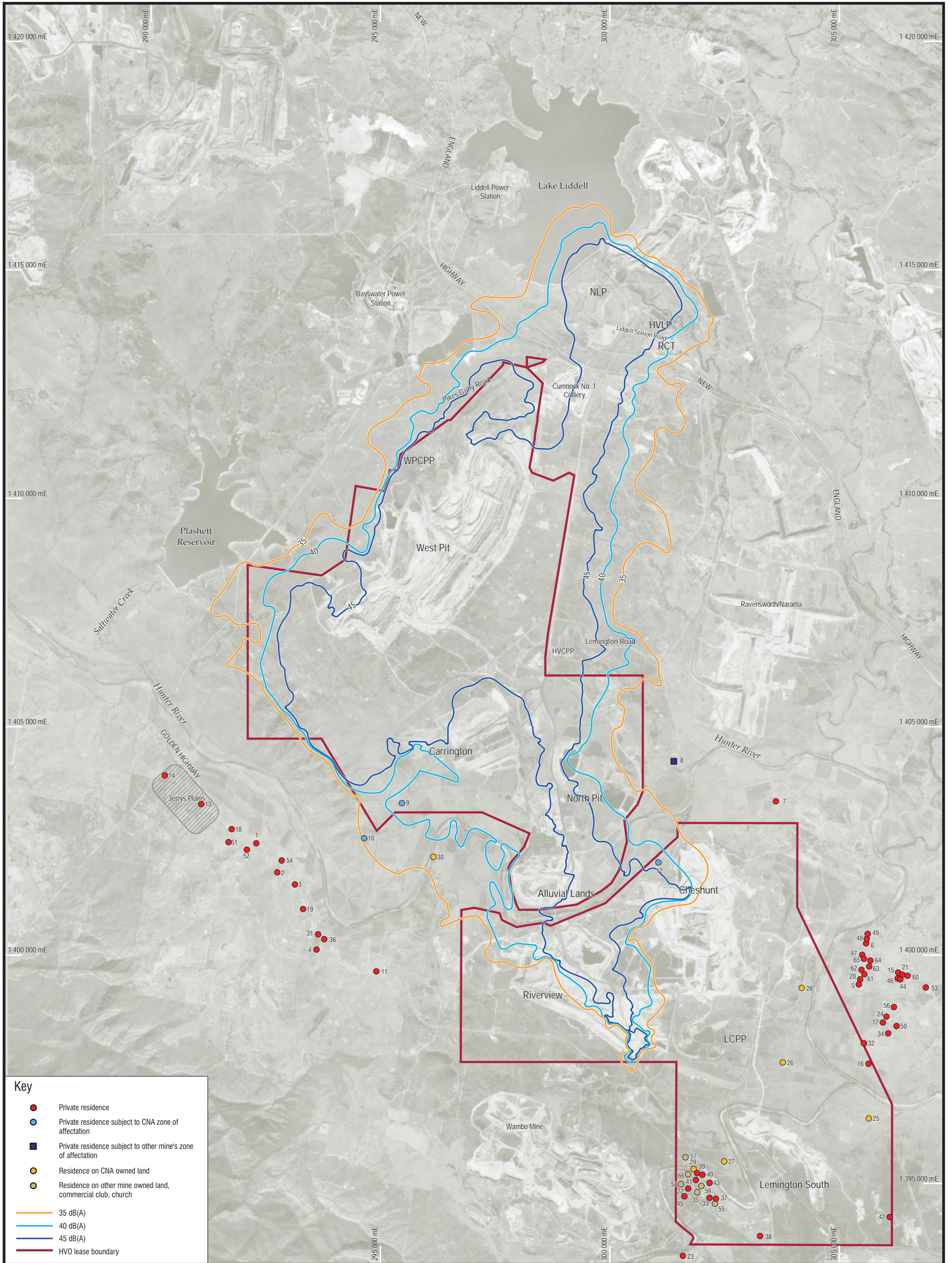


FIGURE 36

All Years Annual Average Dust Deposition

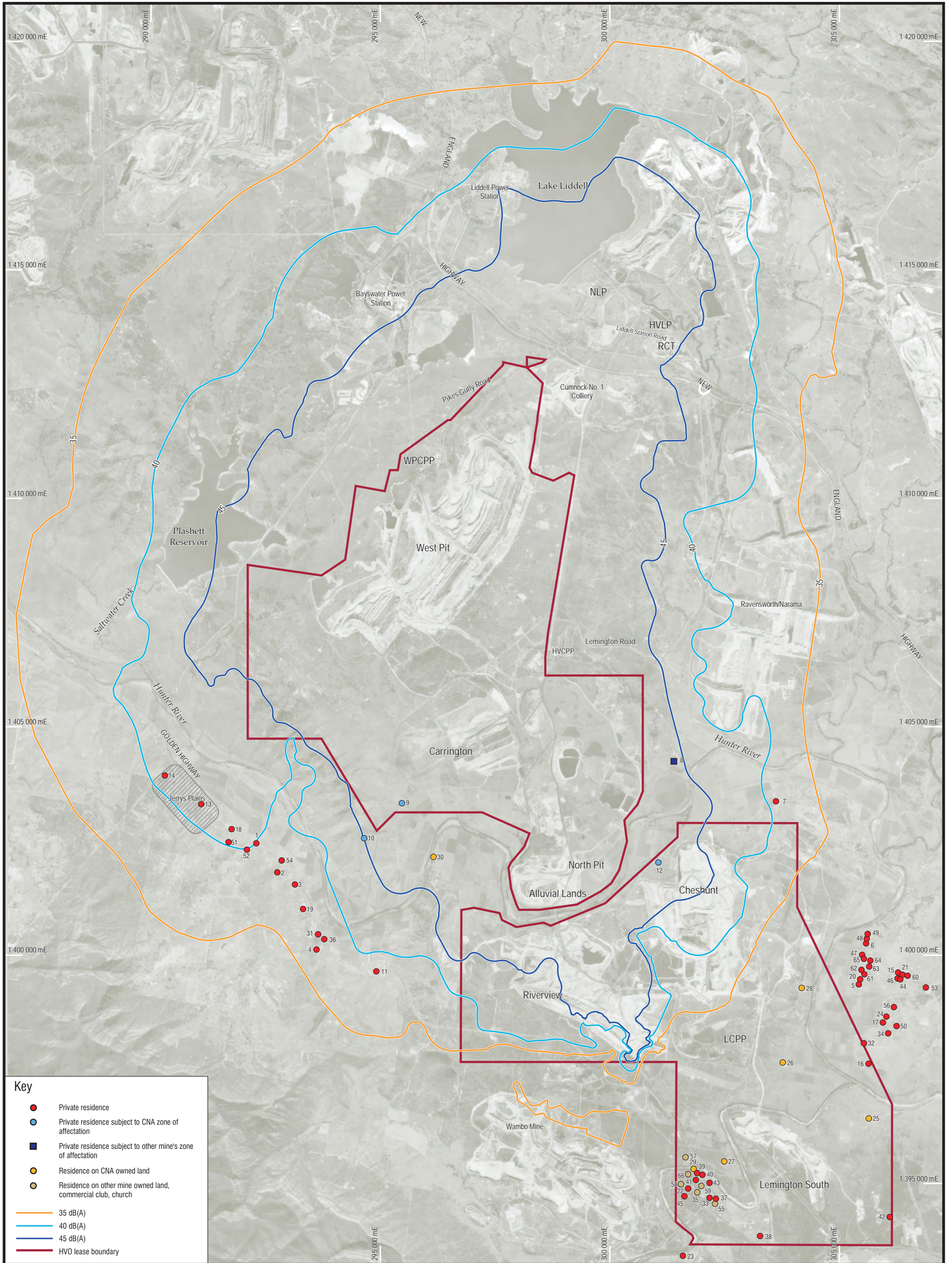




**FIGURE 37**

All Years Day Time  $L_{eq}$ , 15 Minute Operational SI Weather dB(A)





**Key**

- Private residence
- Private residence subject to CNA zone of affection
- Private residence subject to other mine's zone of affection
- Residence on CNA owned land
- Residence on other mine owned land, commercial club, church

— 35 dB(A)

— 40 dB(A)

— 45 dB(A)

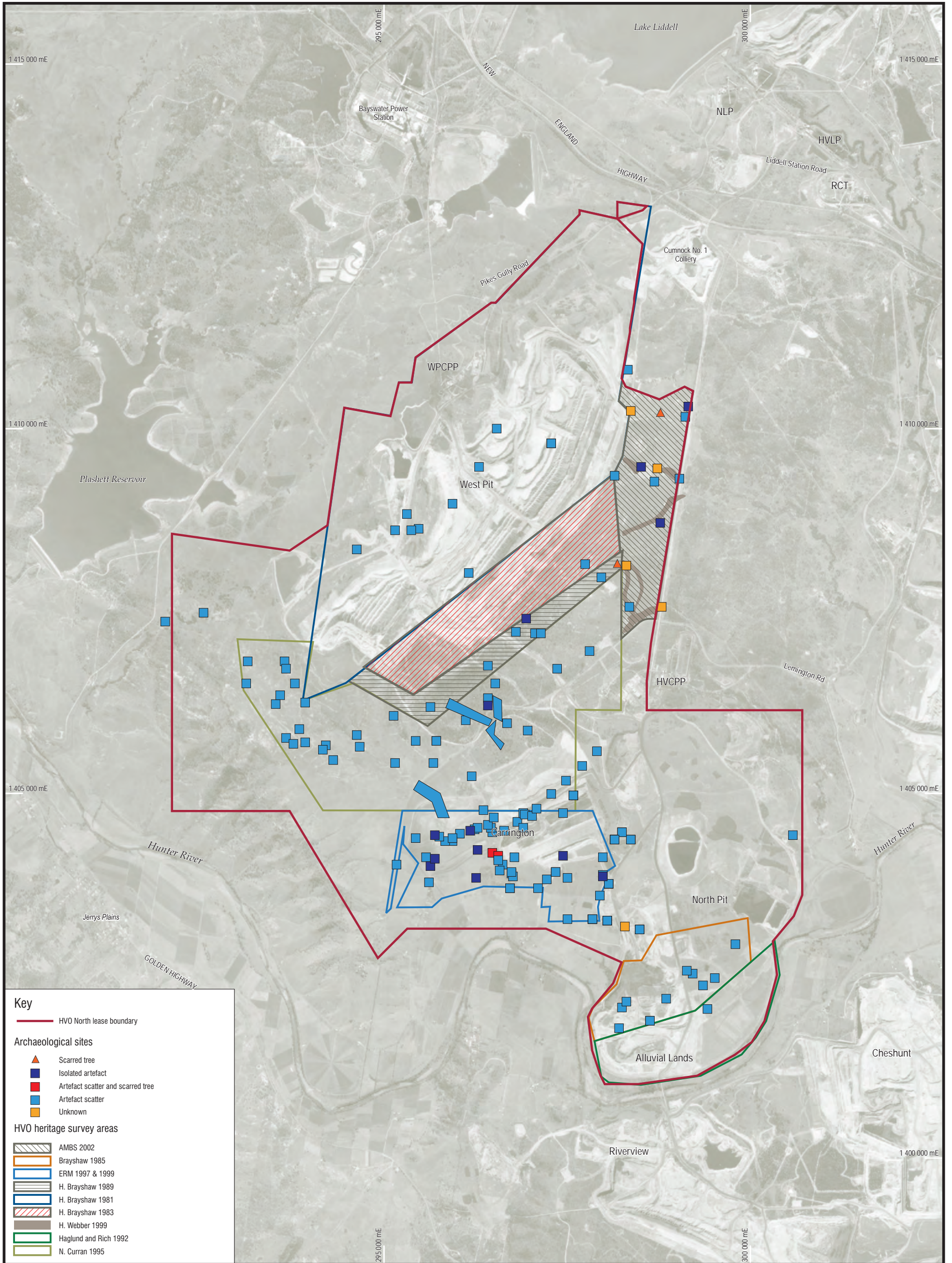
— HVO lease boundary



**FIGURE 38**

All Years Night Time  $L_{eq}$ , 15 Minute Operational INP Weather dB(A)

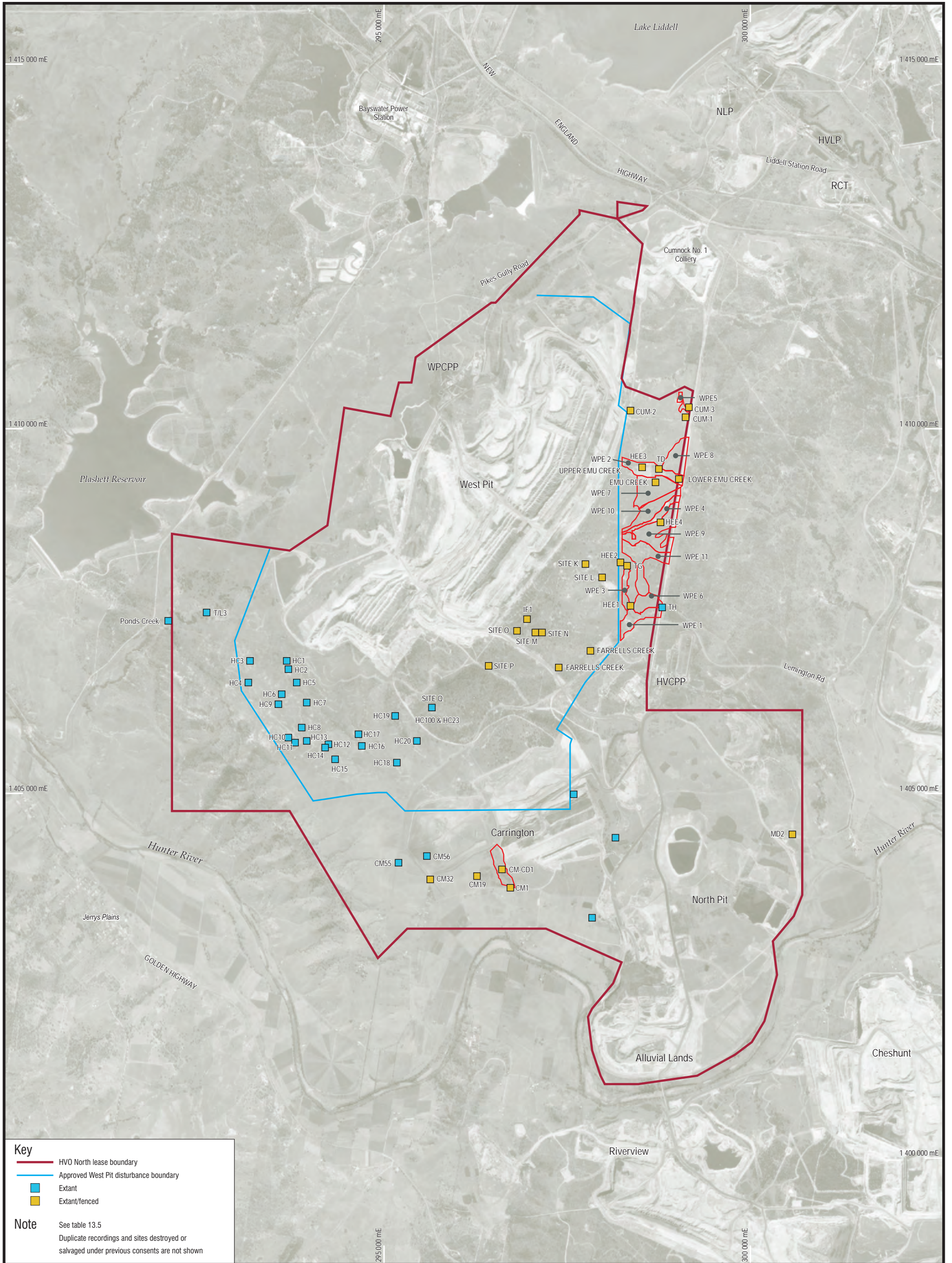




**FIGURE 39**

Location of all Previously Recorded Archaeological Sites





**FIGURE 40**

Status of Aboriginal Sites





View from property number 11 toward Carrington



New England Highway toward West Pit

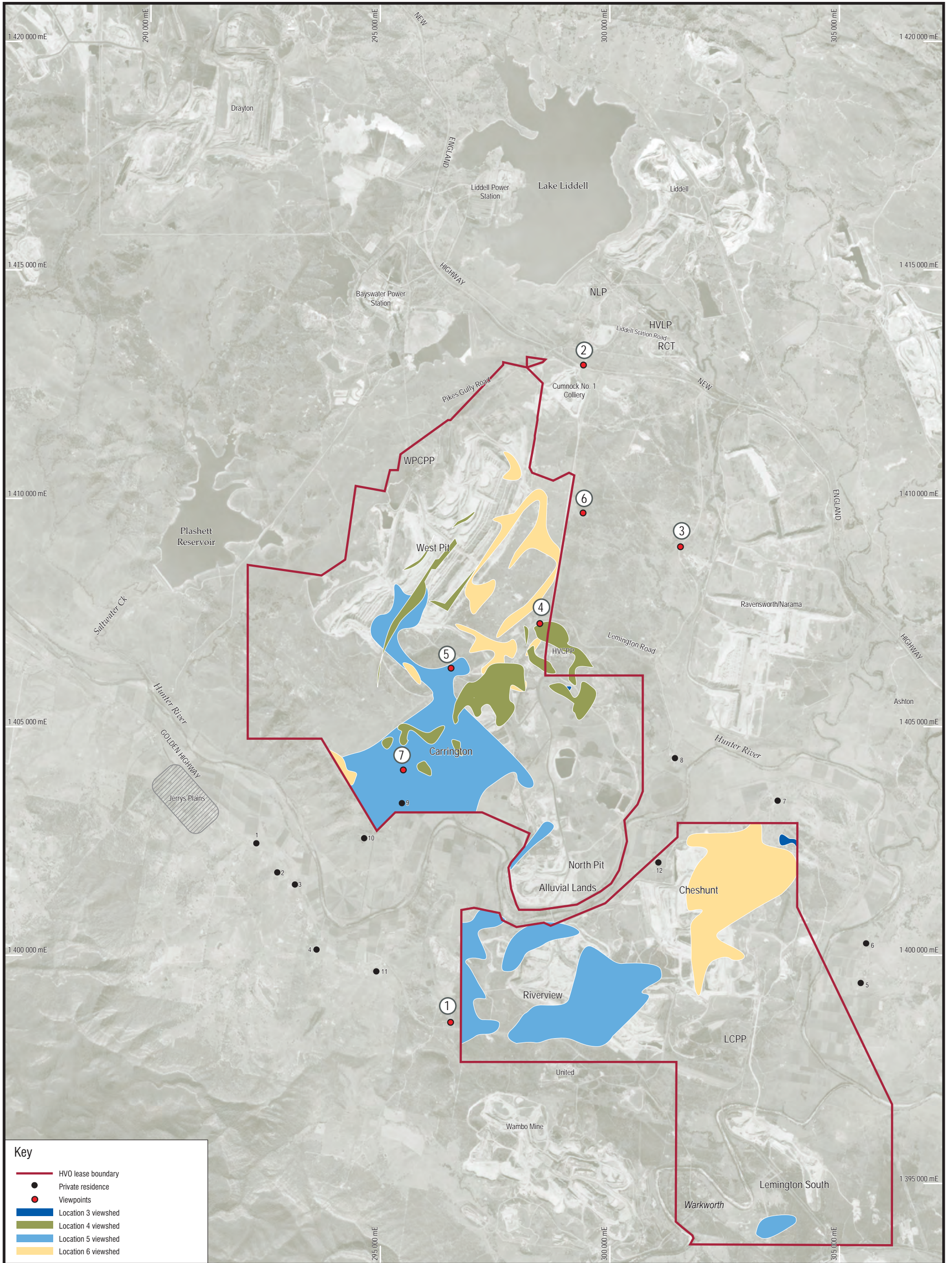


Lemington Road, viewer location 4 looking toward the proposed extension area



Lemington Road, viewer location 5 looking toward the proposed extension area

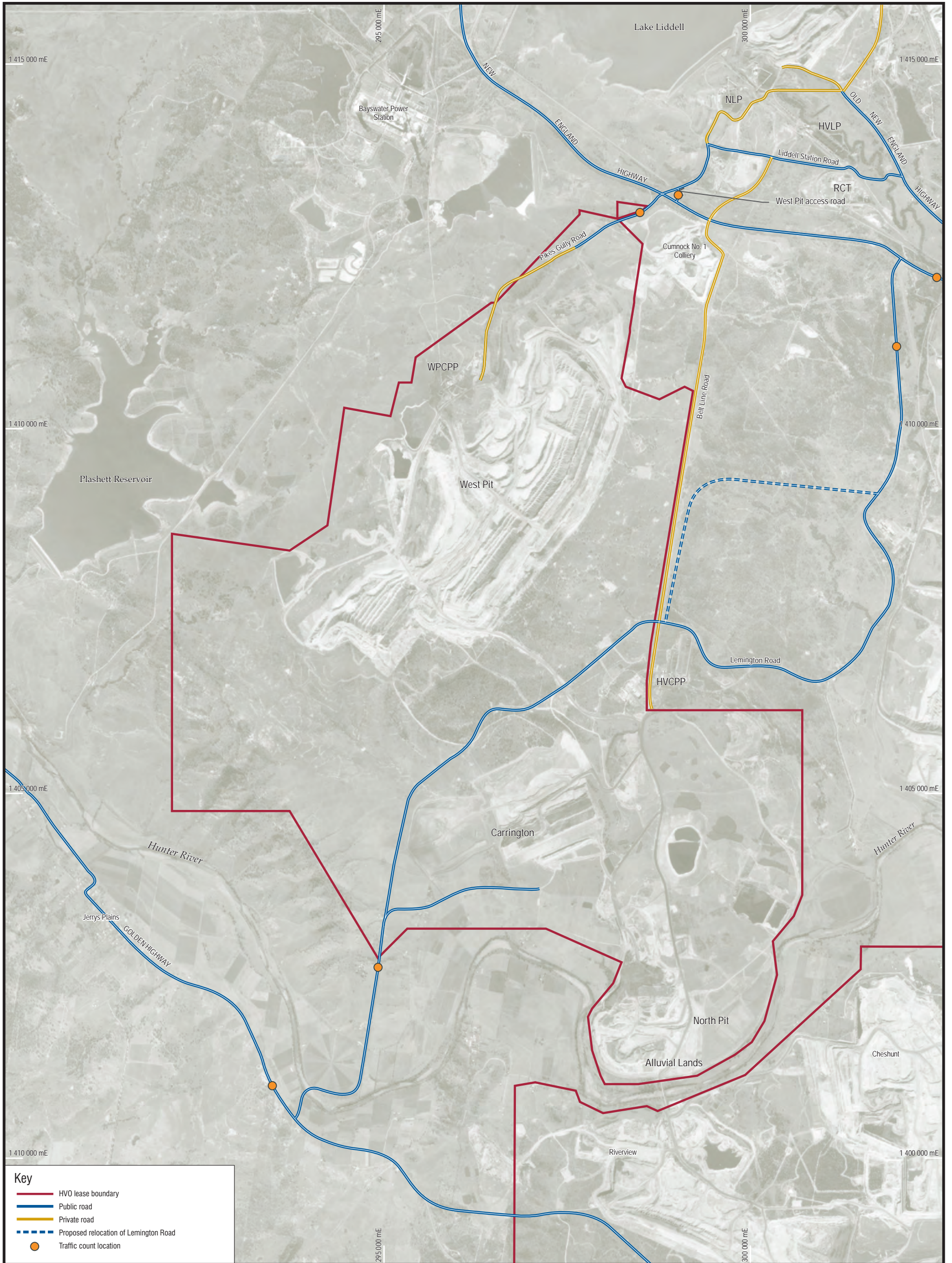




**FIGURE 42**

Viewshed and Viewer Locations





**Key**

- HVO lease boundary
- Public road
- Private road
- - - Proposed relocation of Lemington Road
- Traffic count location

**FIGURE 43**

Road Network



October 2003

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Hunter Valley Operations West Pit Extension and Minor Modifications

*Volume 1* Environmental Impact Statement (Part A-E)

*Volume 2* Technical Reports (Part F-H)

*Volume 3* Technical Reports (Part I-L)

*Volume 4* Environmental Impact Statement Figures

