

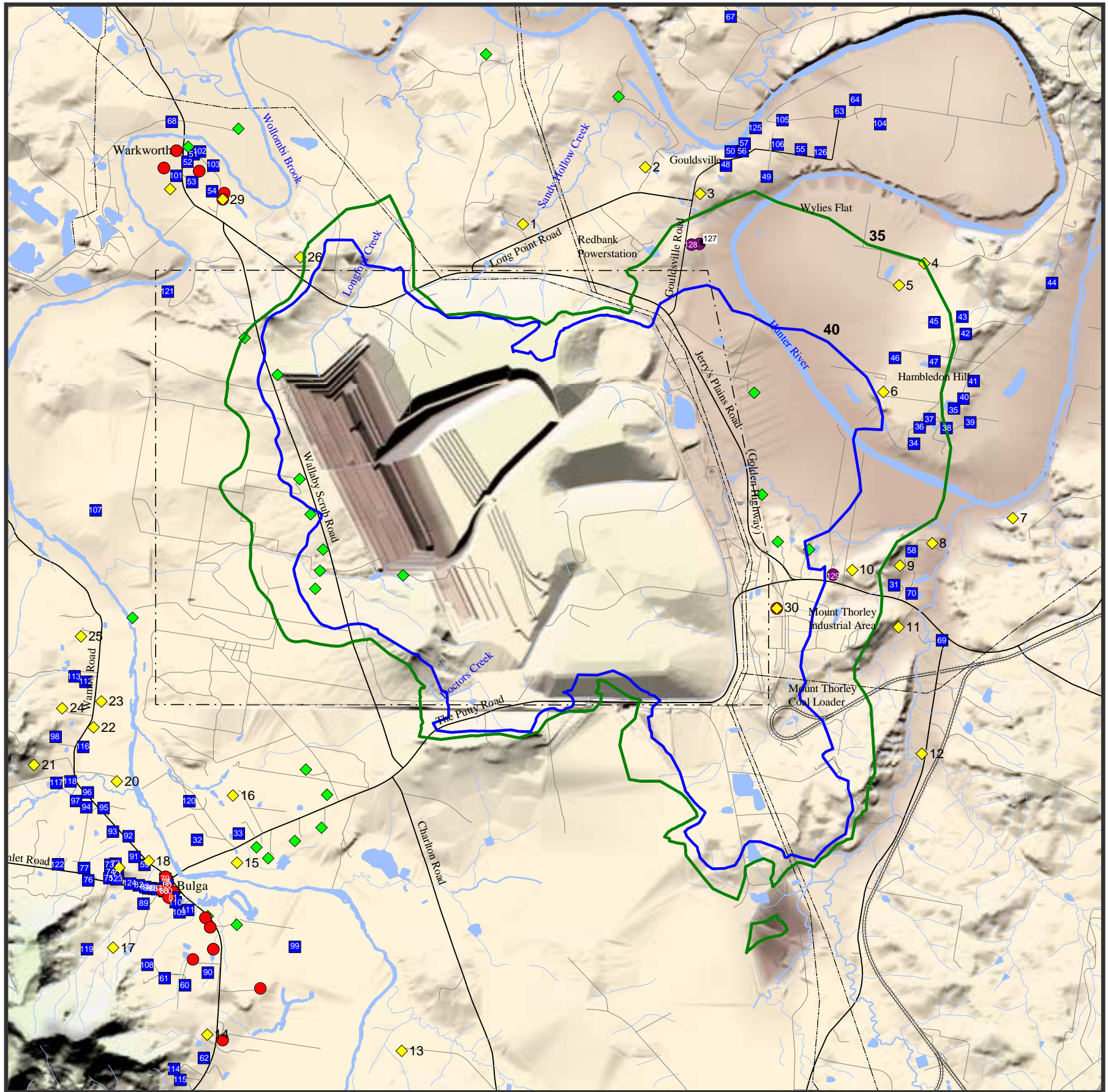
- ◆ Representative property
- Noise logger location
- Lease boundary
- Extension disturbance boundary

0 1 2  
Kilometres



# Surrounding Receptors and Noise Monitoring Locations





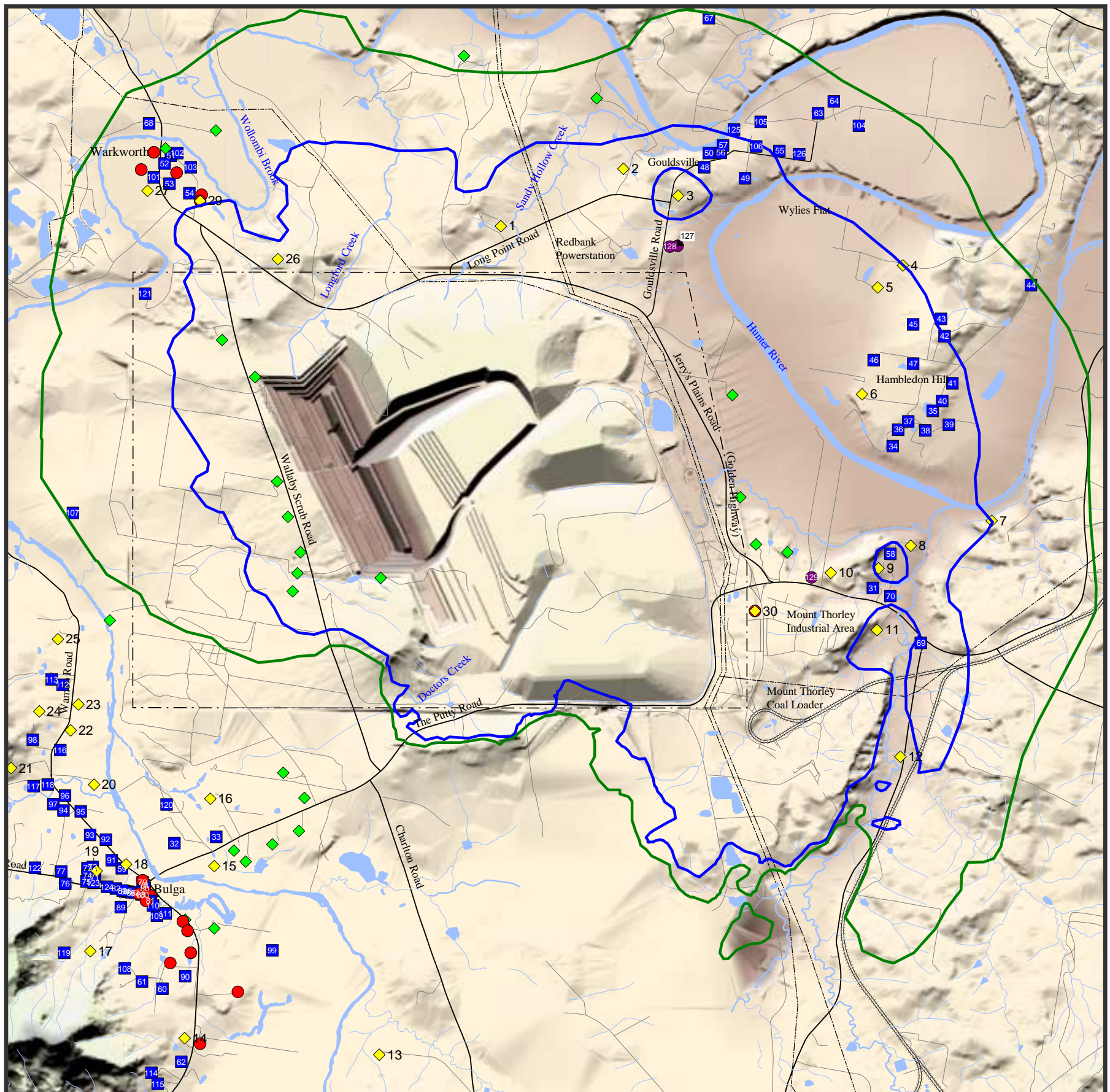
- ◆ Representative property
- 35 dB(A) contour
- 40 dB(A) contour
- - - Lease boundary
- Private residence
- ◆ Warkworth Mine, Mount Thorley Operations or Hunter Valley Operations owned residence
- Private residence within existing zone of affectation
- Commercial premises, club, church or other mine owned residence

0 1 2  
Kilometres



# All Years Daytime Leq, 15 minute Operational Noise Levels - SI Weather, dB(A)





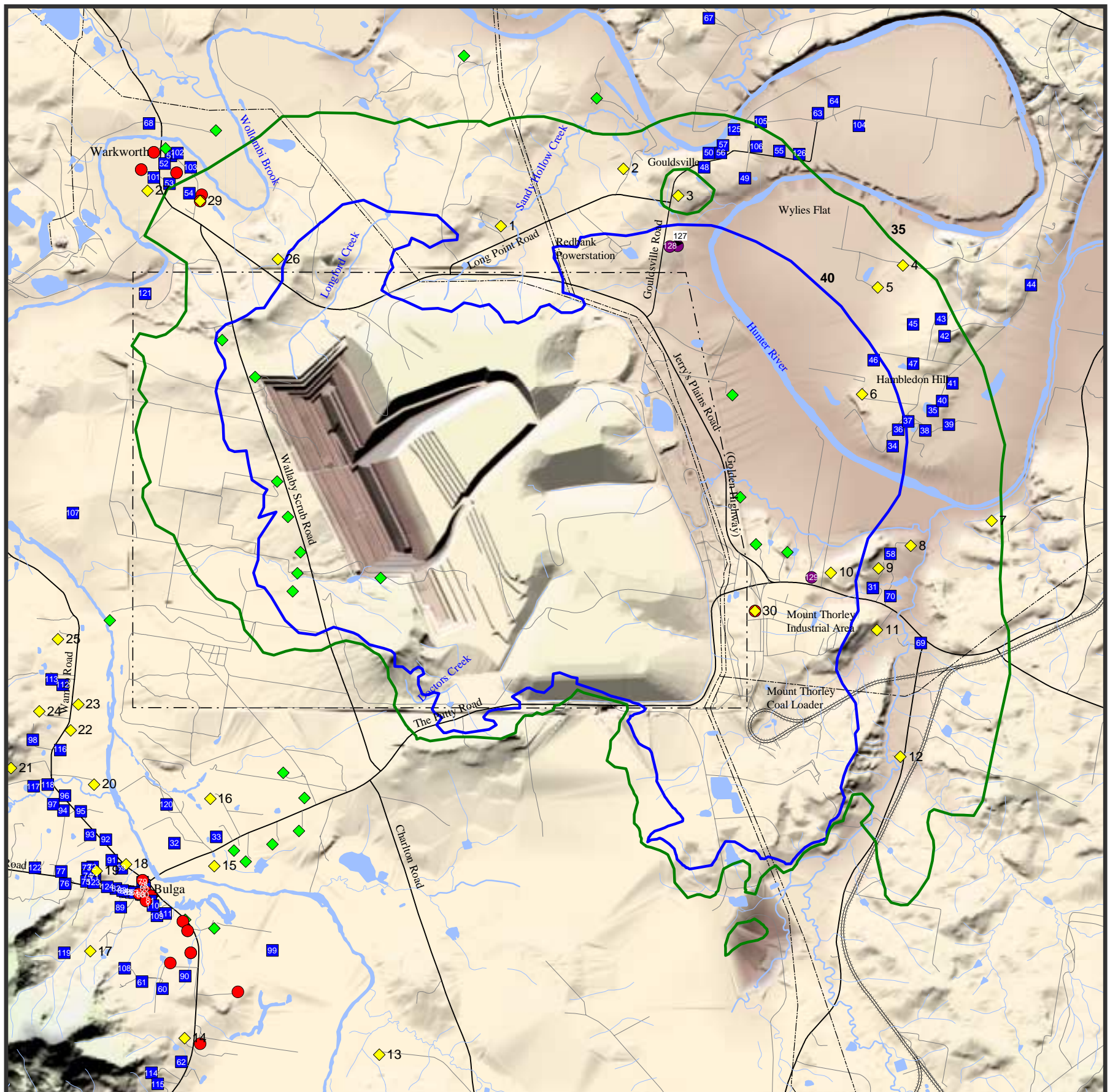
- ◆ Representative property
- 35 dB(A) contour
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- Private residence
- ◆ Warkworth Mine, Mount Thorley Operations or Hunter Valley Operations owned residence
- Private residence within existing zone of affectation
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All Years Night Time Leq, 15 minute Operational  
Noise Levels - INP Weather, dB(A)









- ◆ Representative Properties
- 35 dB(A)
- 40 dB(A)
- - - Lease boundary
- Private residence
- ◆ Warkworth Mine, Mount Thorley Operations or Hunter Valley Operations owned residence
- Private residence within existing zone of affection
- Commercial clubs, churches or other mine owned residence

0 1 2  
Kilometres



All Years Mitigated Night Time Leq, 15 minute  
Operational Noise Levels - INP Weather, dB(A)









- Future spoil emplacement
- Extension disturbance boundary
- Viewer location
- Lease boundary

0 1 2  
Kilometres



# Viewer Locations

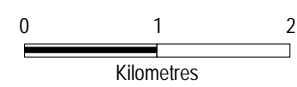
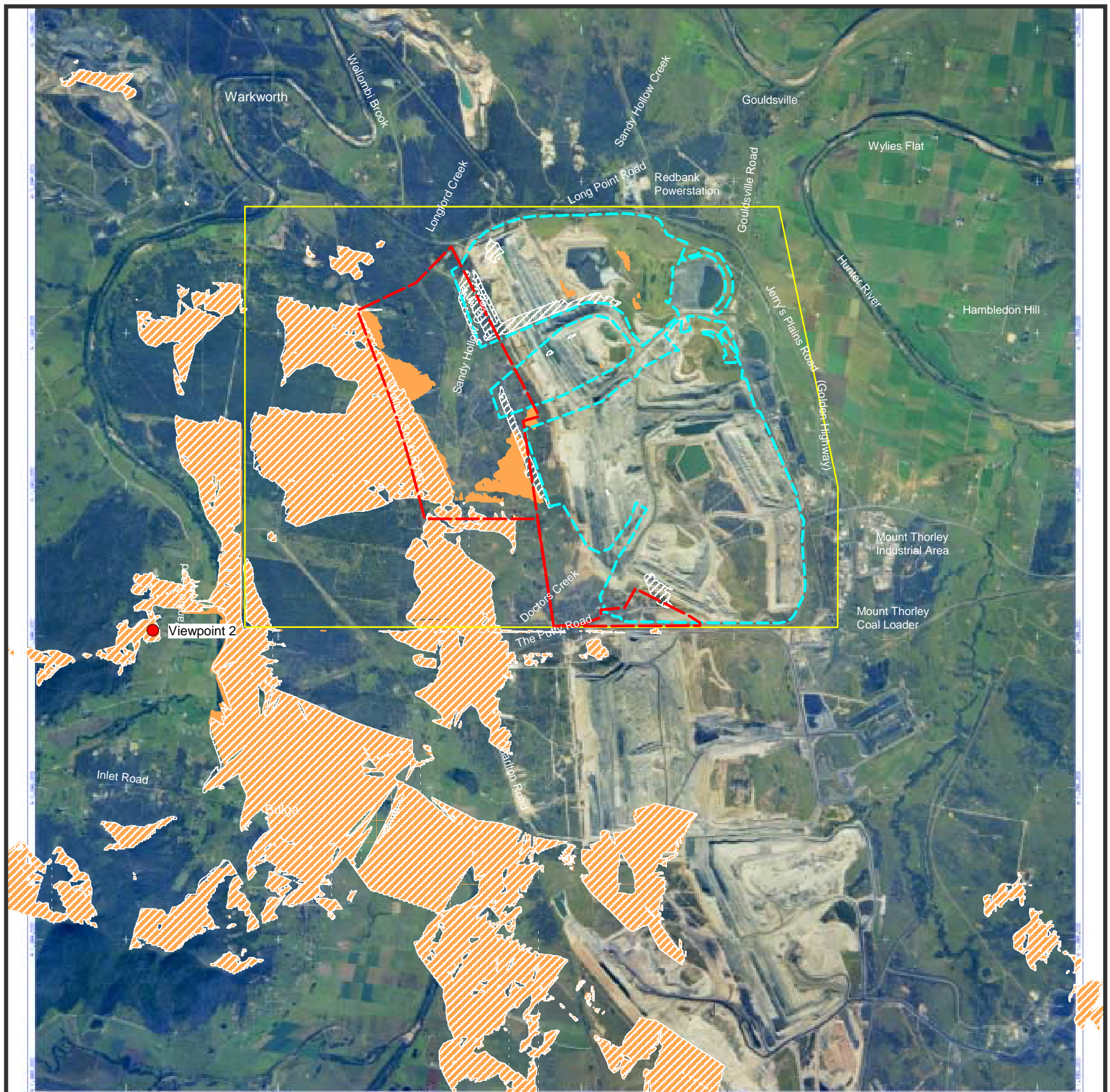




Photograph 1 - View from Bulga Village

## Viewshed of Location 1





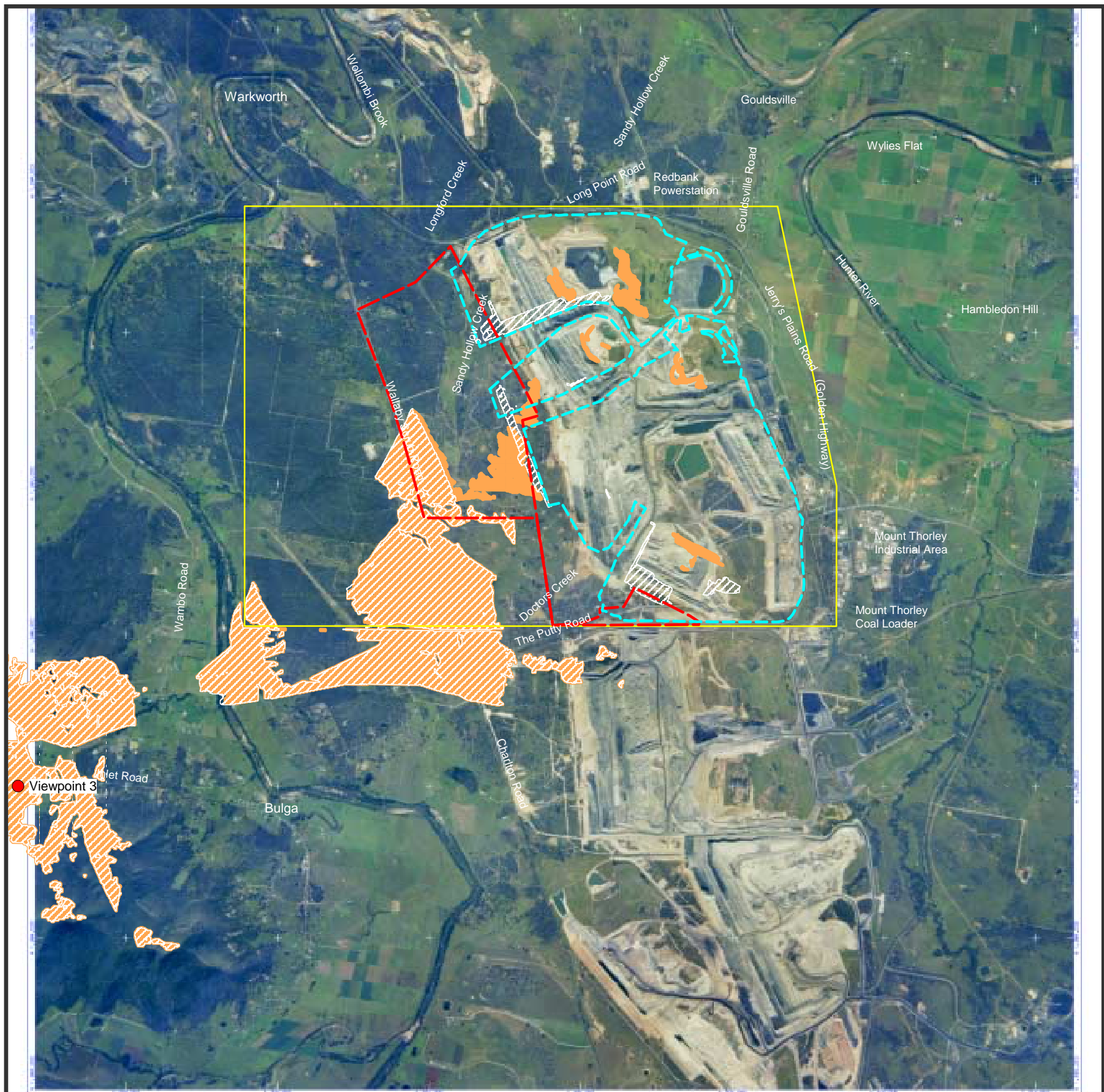
- Viewpoint
- Existing viewshed
- Year 18 viewshed
- Future spoil emplacement
- Extension disturbance boundary
- Lease boundary



Photograph 2 - View from elevated property on Wambo Road

## Viewshed of Location 2





Photograph 3 - View from elevated property on Inlet Road

## Viewshed of Location 3





Existing View



Year 2



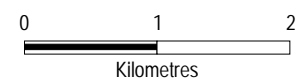
Year 5



Year 18

# Perspective Views from Viewer Location 2





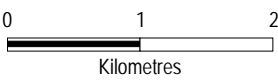
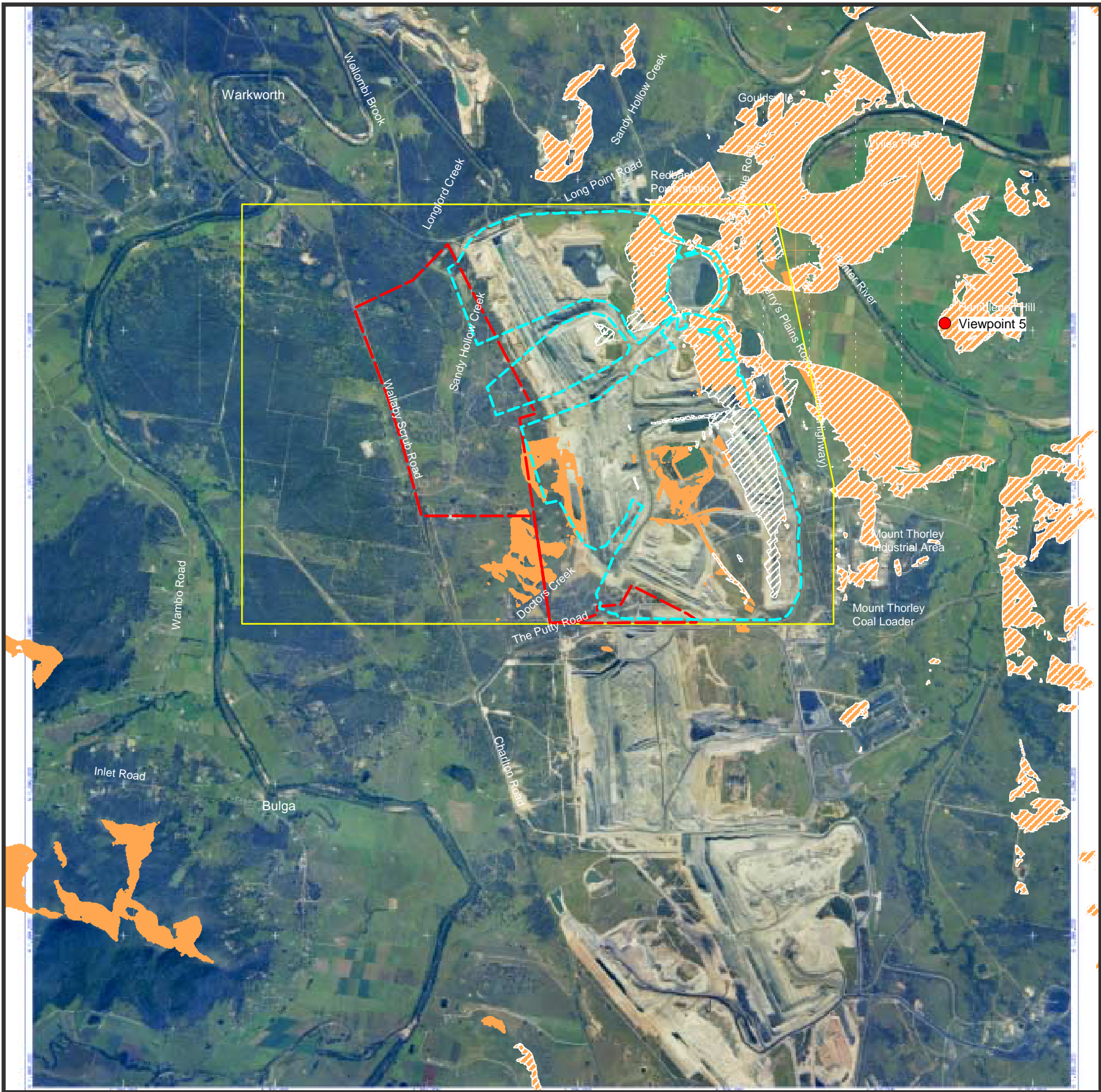
- Viewpoint
- Existing viewshed
- Year 18 viewshed
- Future spoil emplacement
- Extension disturbance boundary
- Lease boundary



Photograph 4 - View from Warkworth Hall

## Viewshed of Location 4





- Viewpoint
- Existing viewshed
- Year 18 viewshed
- Future spoil emplacement
- Extension disturbance boundary
- Lease boundary



Photograph 5 - View from Long Point Road

# Viewshed of Location 5

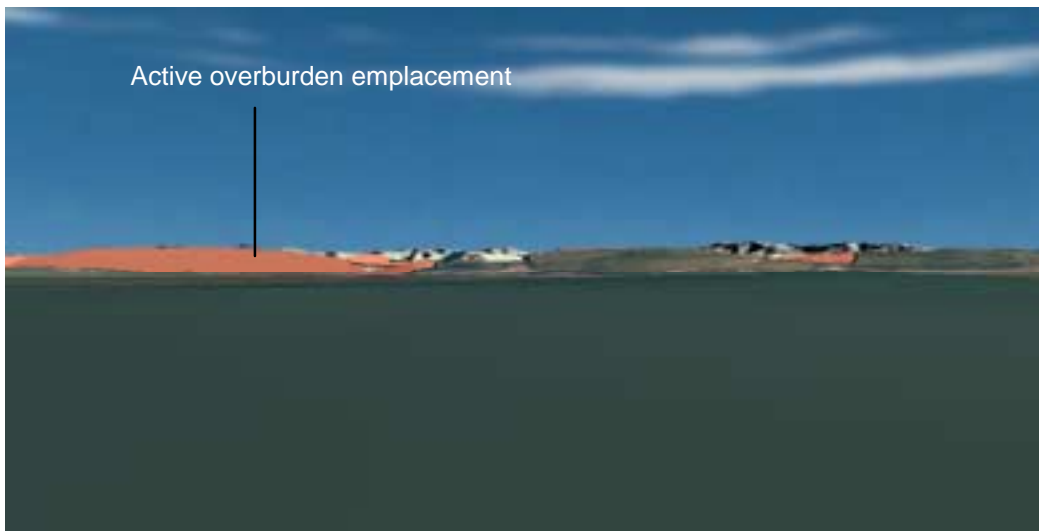




Existing View



Year 2



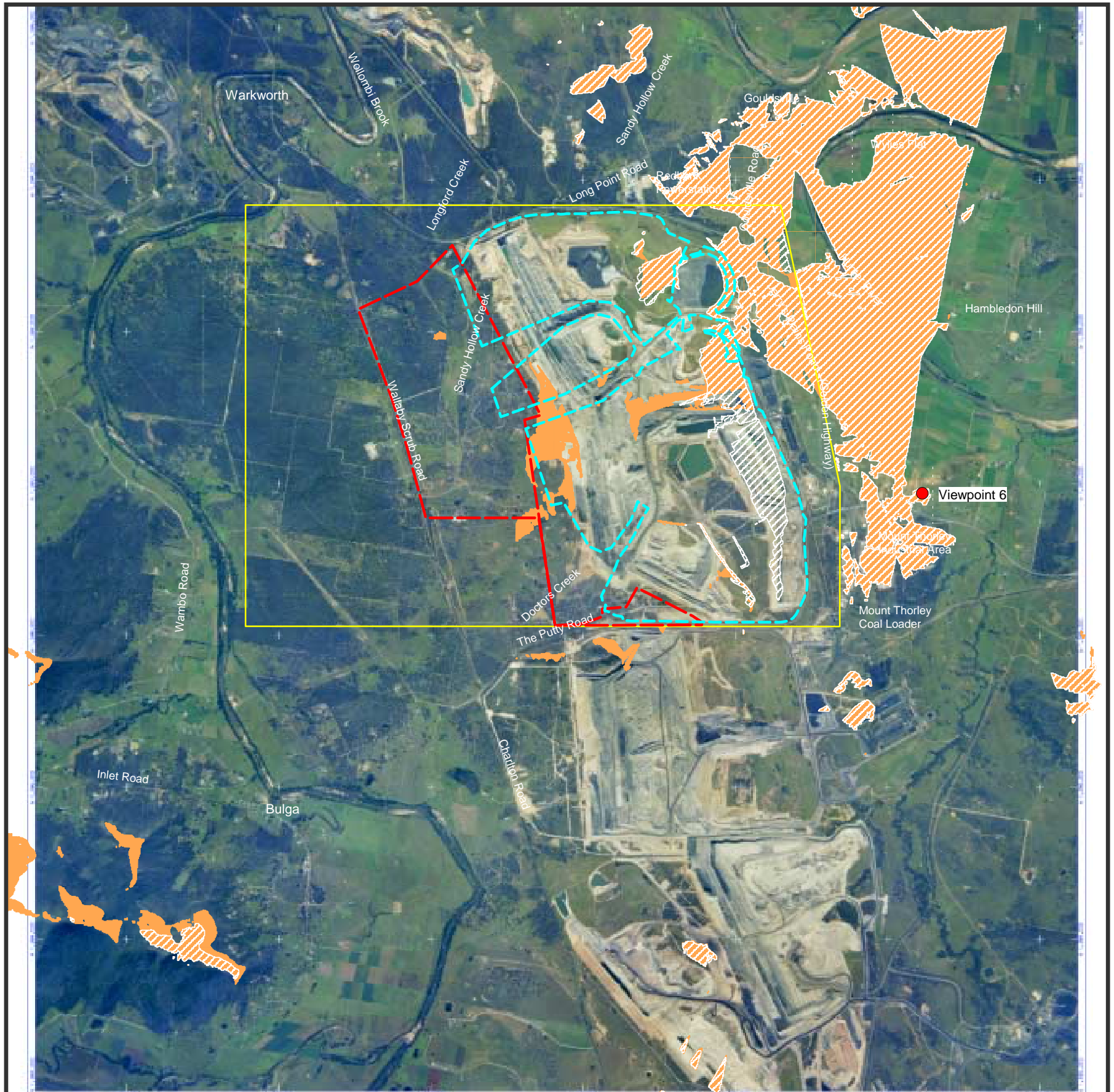
Year 5



Year 18

# Perspective Views from Viewer Location 5

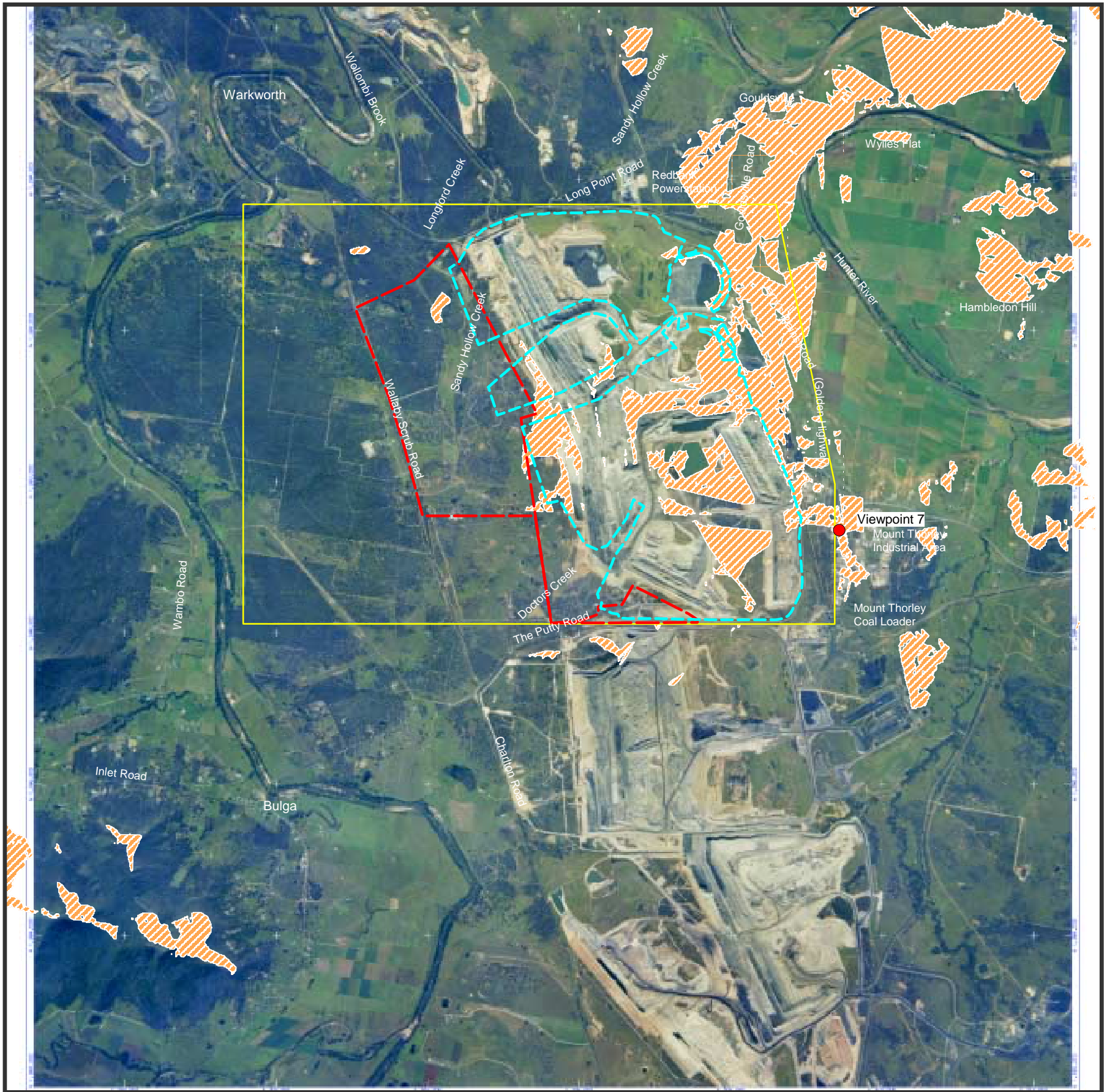




Photograph 6 - View from Mount Thorley residence

## Viewshed of Location 6





Photograph 7 - View from Mount Thorley Industrial Area

## Viewshed of Location 7

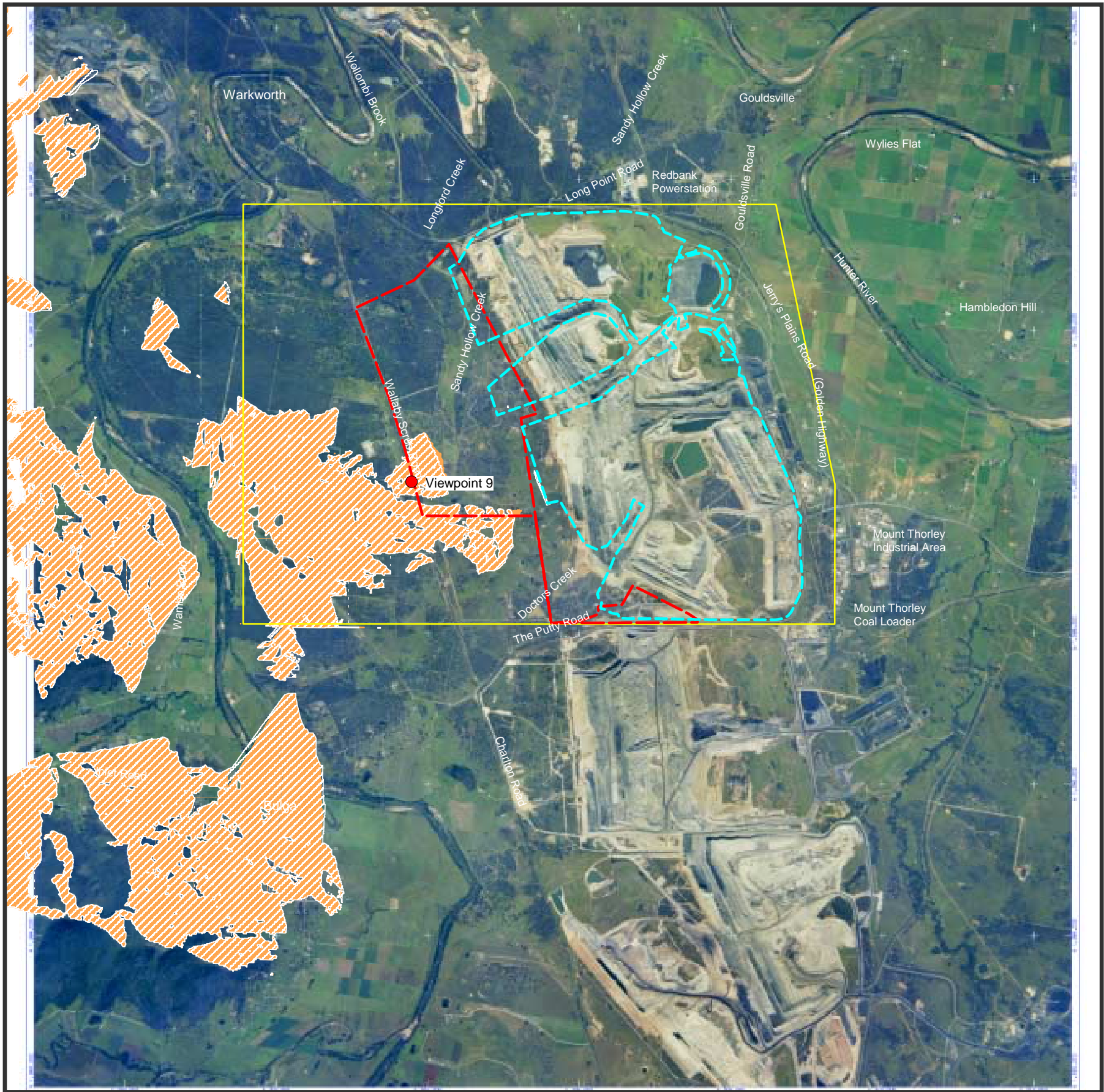




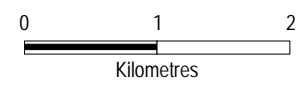
Photograph 8 - View from Jerry's Plains Road

## Viewshed of Location 8





Photograph 9 - View from Wallaby Scrub Road



- Viewpoint
- Existing viewshed
- Year 18 viewshed
- Future spoil emplacement
- Extension disturbance boundary
- Lease boundary

## Viewshed of Location 9

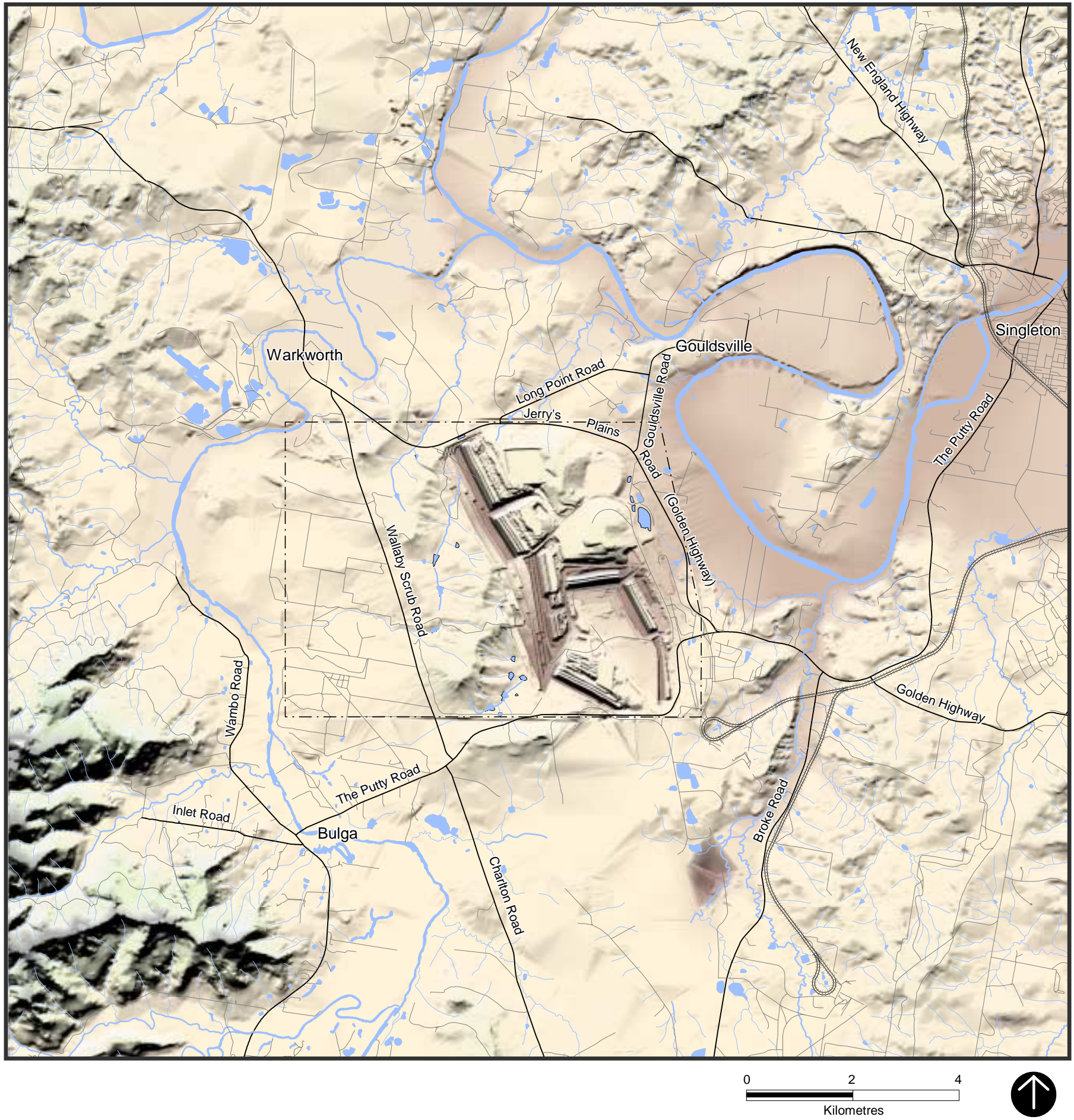




Photograph 10 - View from The Putty Road

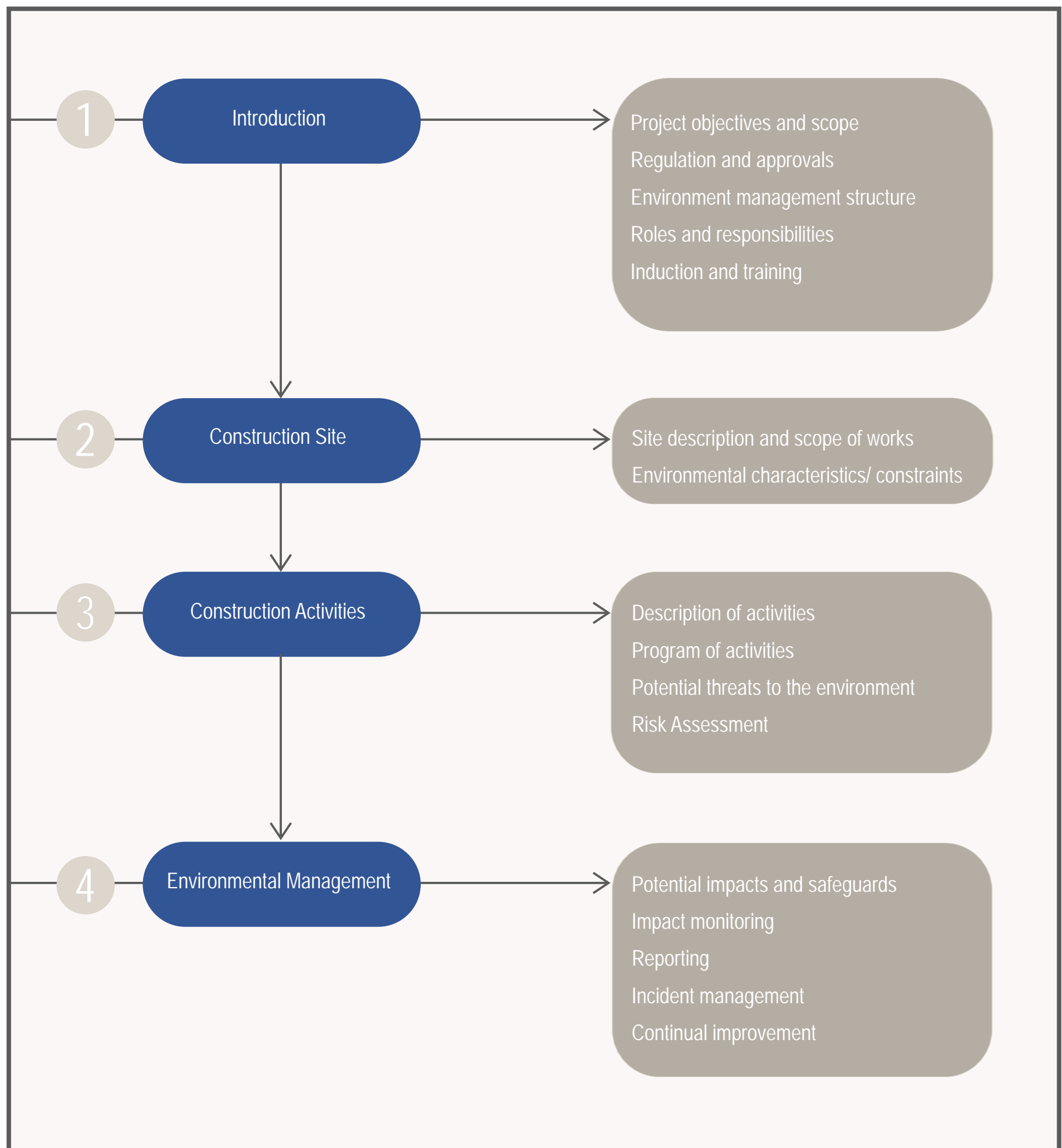
## Viewshed of Location 10





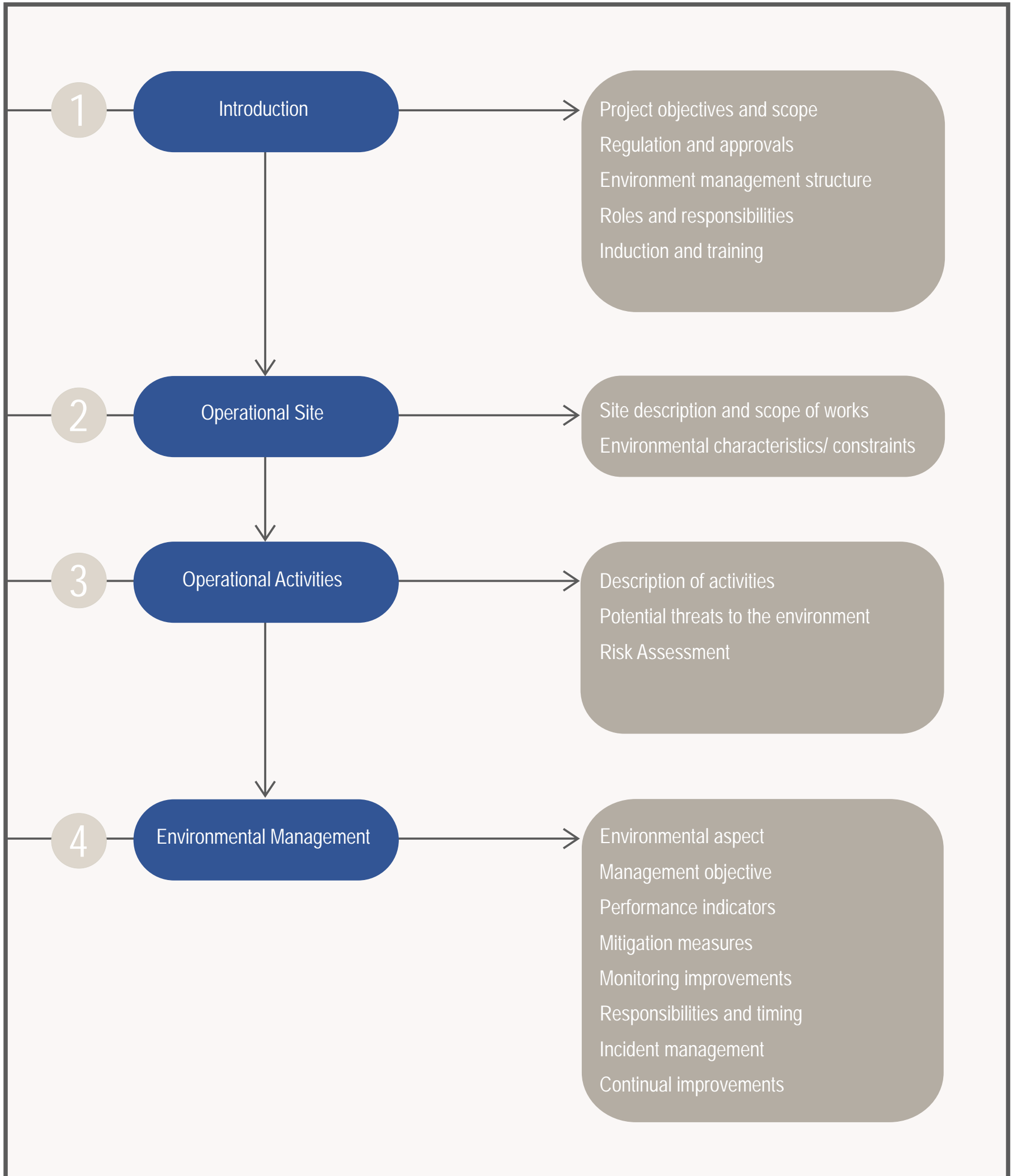
## Public Road Network





## Outline of Environmental Management Plan for the Construction Phase





## Outline of Environmental Management Plan for the Operational Phase



Proposed Mine Plan (Alternative 2)

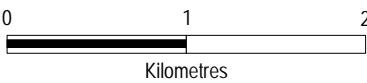
Project Alternative 1

Project Alternative 4

Project Alternative 5

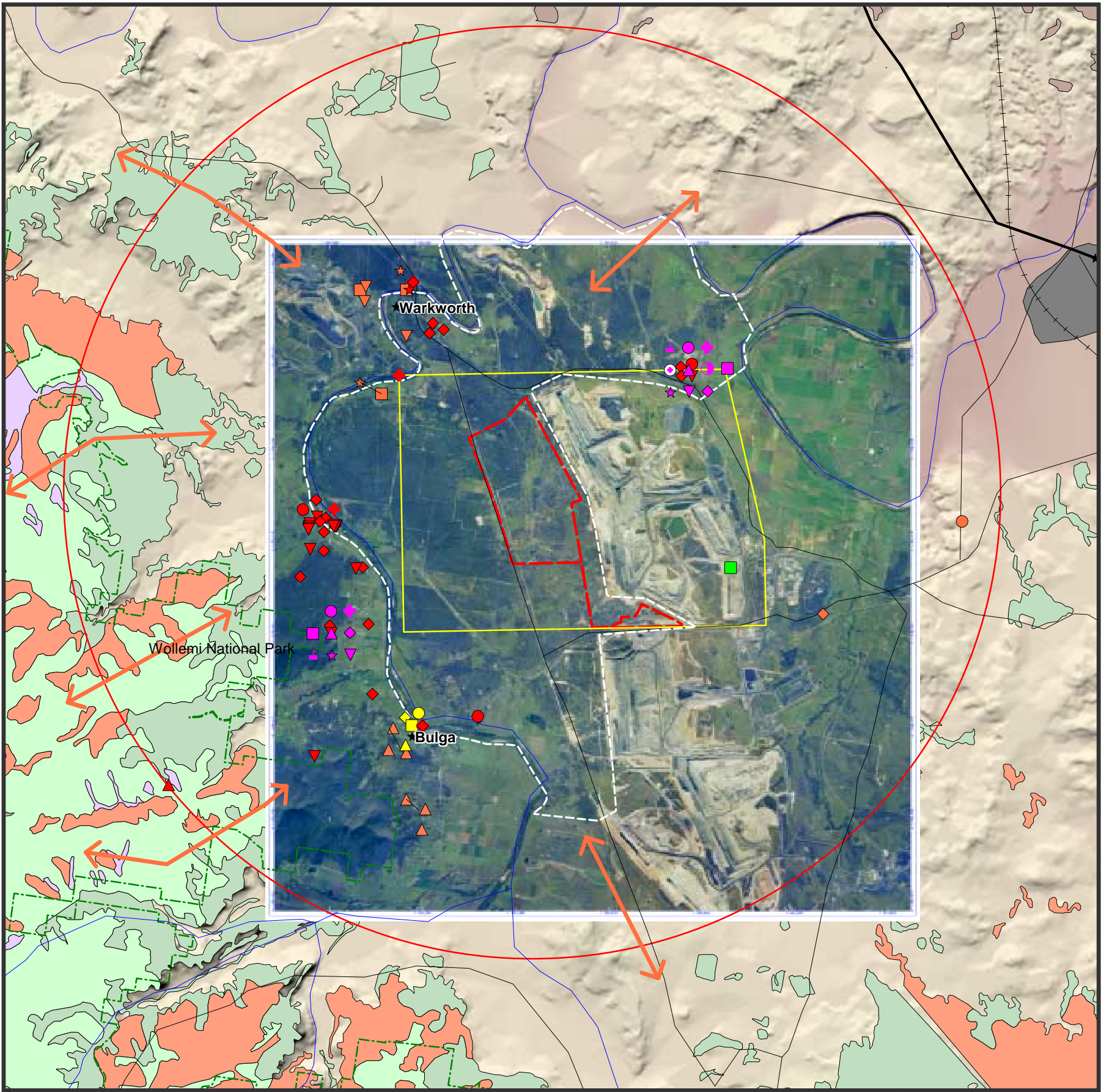
Lease boundary

Note: Project Alternative 3 is not shown (underground mining)



# Overview of Project Alternatives





NPWS Atlas Database Records

- Bothriochloa biloba
- Calyptorhynchus lathami Glossy Black-Cockatoo
- Dasyurus maculatus Spotted-tailed Quoll
- Ephippiorhynchus asiaticus Black-necked Stork
- Grantiella picta Painted Honeyeater
- Pyrrolaemus sagittatus Speckled Warbler
- Xanthomyza phrygia Regent Honeyeater

Australian Museum Records

- Falco hypoleucos Grey Falcon
- Hirundapus caudacuta White-throated Needletail
- Petaurus norfolcensis Squirrel Glider
- Pomatostomus temporalis Grey-crowned Babbler

NPWS Eastern Bushland Database 1999

- Disturbed dry open forest
- Disturbed forest woodland
- Dry forest system
- Moist forest / Dry open forest
- Moist forest system
- Permanent water bodies
- Severely disturbed forest
- Urban system
- Woodland system

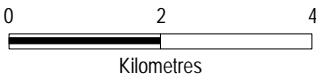
Birds Australia Database Records

- Monarcha melanopsis Black-faced Monarch
- Climacteris picumnus victoriae Brown Treecreeper
- Pomatostomus temporalis temporalis Grey-crowned Babbler
- Rhipidura rufifrons Rufous Fantail
- Pyrrolaemus sagittatus Speckled Warbler
- Haliaeetus leucogaster White-bellied Sea-Eagle
- Hirunapus caudacutus White-throated Needletail

- Locality
- Study area
- Subject site
- Potential regional corridor routes
- Lease boundary
- National Parks Estate

Hunter Bird Observers Club

- Calyptorhynchus lathami Glossy Black-cockatoo
- Climacteris picumnus victoriae Brown Treecreeper
- Grantiella picta Painted Honeyeater
- Hirundapus caudacutus White-throated Needletail
- Melanodryas cucullata cucullata Hooded Robin
- Pomatostomus temporalis temporalis Grey-crowned Babbler
- Pyrrolaemus sagittatus Speckled Warbler
- Rhipidura rufifrons Rufous Fantail
- Stagonopleura guttata Diamond Firetail
- Xanthomyza phrygia Regent Honeyeater



# The Locality



# The Proposal





- ◆ Owl call playback
- Vegetation quadrat
- Bat detection transect and stagwatching
- Ground Elliot traps and hair funnels
- Amphibian search
- Bird transect
- Subject site
- Lease boundary
- Study area



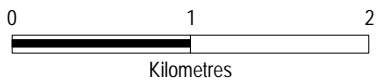
## January and February Survey Locations





- April survey sites:
- Vegetation quadrats
  - Bird surveys
  - Habitat assessment
  - Stagwatching
  - Spotlighting
  - Anabat survey
  - Reptile searches

- Lease boundary  
Subject site  
Study area



# April Survey Locations





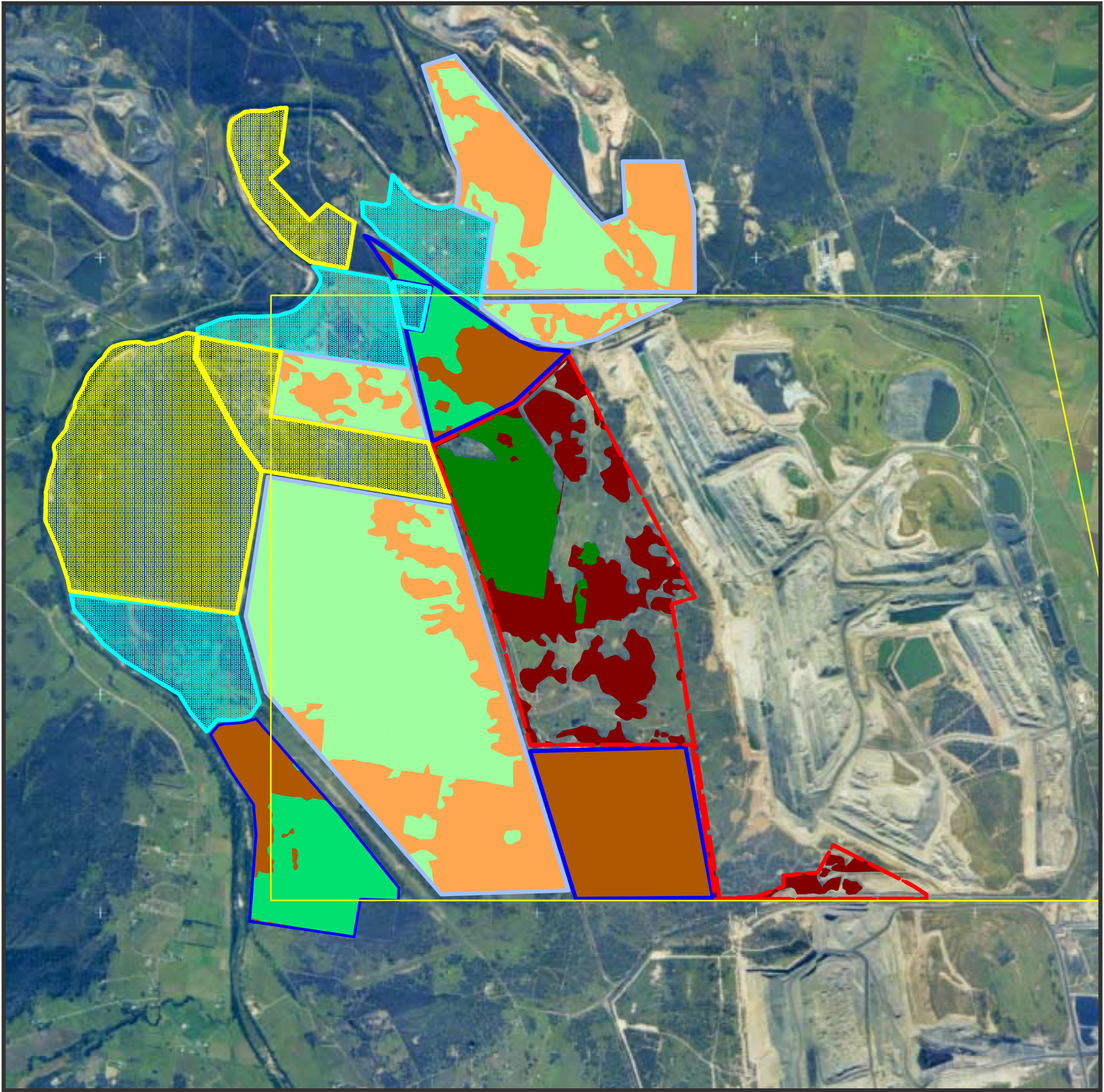




- Fauna
- Brown Treecreeper
  - Eastern Freetail-bat
  - Grey-crowned Babbler
  - Hooded Robin
  - Large Bentwing-bat
  - Large-footed Myotis
  - Little Bentwing-bat
  - Regent Honeyeater
  - Speckled Warbler
  - Squirrel Glider
  - Swift Parrot
- Subject Site
- Lease boundary
- Study area

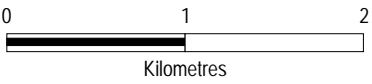
## Threatened Fauna Recorded in the Study Area





- Regrowth Open Areas
- Proposed Mining Area
- Non-disturbance Area
- Habitat Management Area
- Woodland
- Proposed Mining Area
- Non-disturbance Area
- Habitat Management Area

- Non-disturbance Area
- Subject site
- Habitat Management Area
- Privately owned land
- Wambo Mine owned land
- Lease boundary



# Green Offset Strategy





August 2002

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