

# BENDIGO OPHIR MINING PROJECT

VISUAL SIMULATIONS

08 JULY 2025





# BENDIGO OPHIR MINING PROJECT

ALL MINE ELEMENTS HAVE BEEN SHOWN AS OCCURRING AT THE SAME TIME.



## Contents

### MAPS

Map 1: Viewpoint Location Map - Visual Simulations

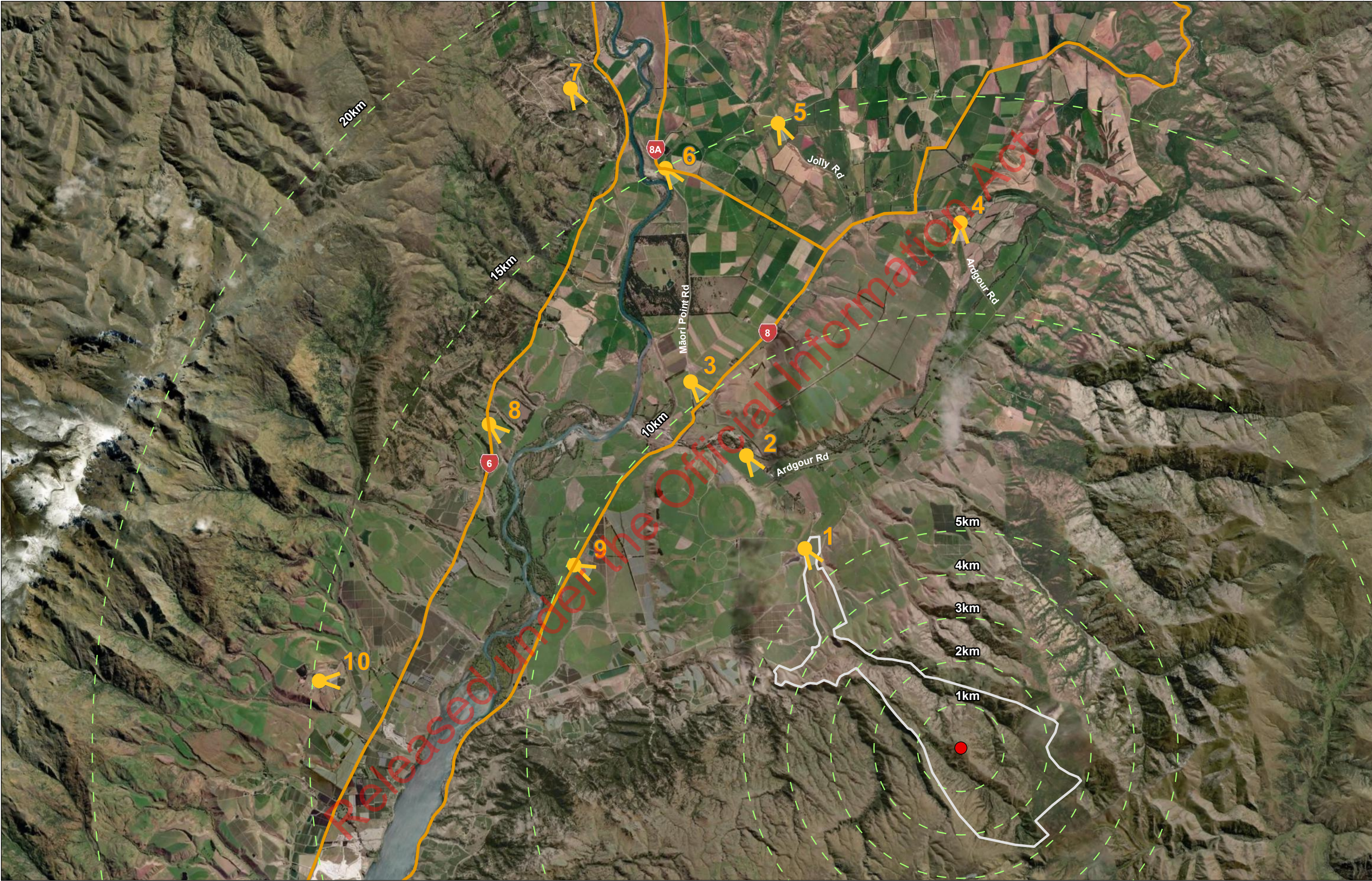
### VISUAL SIMULATIONS

- VP 1: View from Thomson Gorge Road - Single 50mm Frame (Existing View)  
VS 1: View from Thomson Gorge Road - Single 50mm Frame (View During Operation)  
View from Thomson Gorge Road - Single 50mm Frame (View at Closure)
- VP 2: View from VS2: Ardgour Road, Lindis Crossing - Single 50mm Frame (Existing View)  
VS 2: View from VS2: Ardgour Road, Lindis Crossing - Single 50mm Frame (View During Operation)  
View from VS2: Ardgour Road, Lindis Crossing - Single 50mm Frame (View at Closure)
- VP 3: View from Māori Point Road - Single 50mm Frame (Existing View)  
VS 3: View from Māori Point Road - Single 50mm Frame (View During Operation)  
View from Māori Point Road - Single 50mm Frame (View at Closure)
- VP 4: View from Ardgour Road, Tarras - Single 50mm Frame (Existing View)  
VS 4: View from Ardgour Road, Tarras - Single 50mm Frame (View During Operation)  
View from Ardgour Road, Tarras - Single 50mm Frame (View at Closure)
- VP 5: View from Jolly Road - Single 50mm Frame (Existing View)  
VS 5: View from Jolly Road - Single 50mm Frame (View During Operation)  
View from Jolly Road - Single 50mm Frame (View at Closure)
- VP 6: View from State Highway 8A - Single 50mm Frame (Existing View)  
VS 6: View from State Highway 8A - Single 50mm Frame (View During Operation)  
View from State Highway 8A - Single 50mm Frame (View at Closure)
- VP 7: View from Pukekowhai Drive, Queensbury - Single 50mm Frame (Existing View)  
VS 7: View from Pukekowhai Drive, Queensbury - Single 50mm Frame (View During Operation)  
View from Pukekowhai Drive, Queensbury - Single 50mm Frame (View at Closure)
- VP 8: View from State Highway 6 - Single 50mm Frame (Existing View)  
VS 8: View from State Highway 6 - Single 50mm Frame (View During Operation)  
View from State Highway 6 - Single 50mm Frame (View at Closure)
- VP 9: View from State Highway 8, Bendigo - Single 50mm Frame (Existing View)  
VS 9: View from State Highway 8, Bendigo - Single 50mm Frame (View During Operation)  
View from State Highway 8, Bendigo - Single 50mm Frame (View at Closure)
- VP 10: View from Mount Pisa Road - Single 50mm Frame (Existing View)  
VS 10: View from Mount Pisa Road - Single 50mm Frame (View During Operation)  
View from Mount Pisa Road - Single 50mm Frame (View at Closure)

### METHODOLOGY

Visualisations Methodology









Existing View









Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure













Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

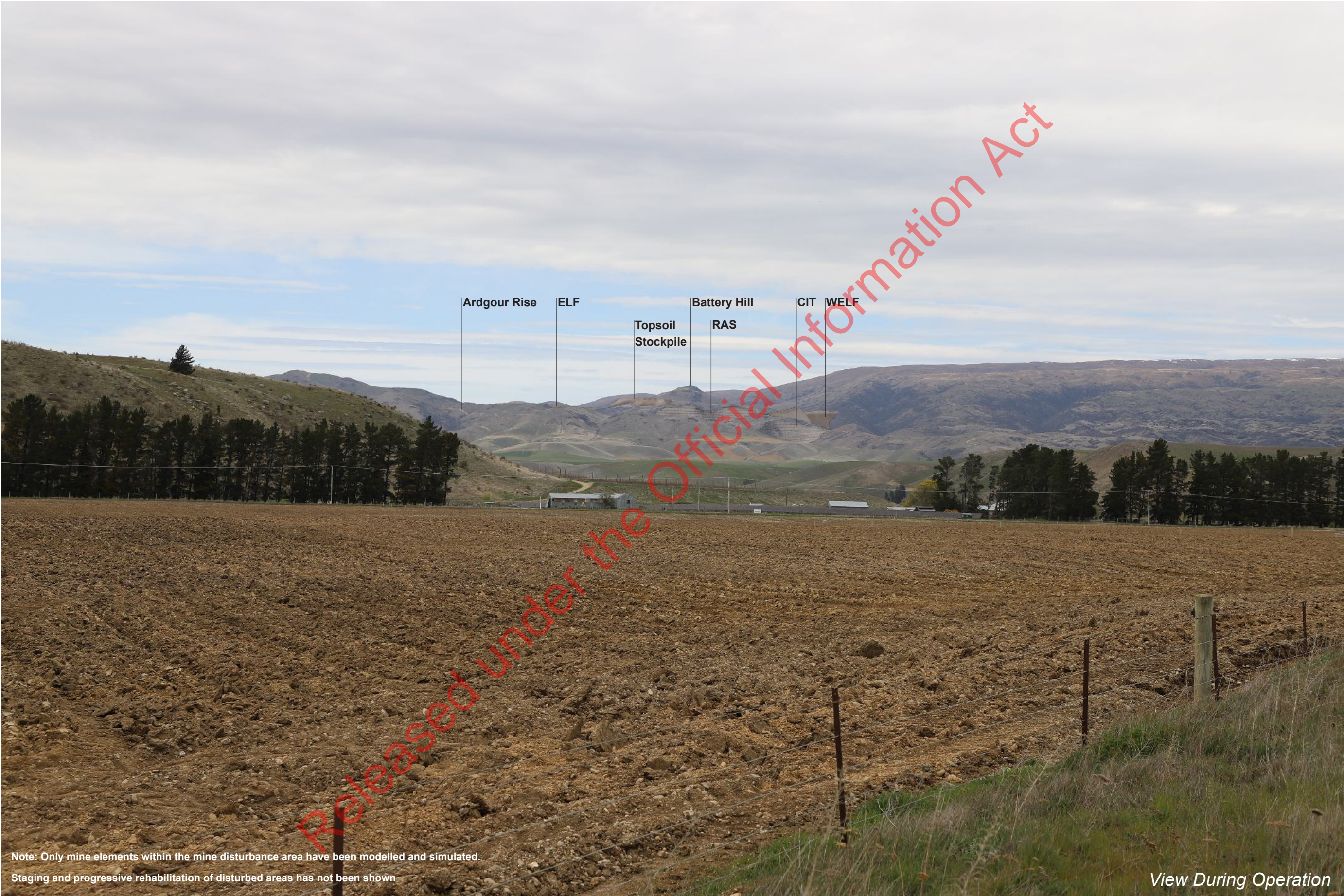
View at Closure





Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure

Viewpoint Details

NZTM Easting	: 1 312 389.9 mE	Horizontal Field of View	: 40°
NZTM Northing	: 5 025 197.4 mN	Vertical Field of View	: 25°
Elevation/Eye Height	: 249.3m / 1.6m	Projection	: NA
Date of Photography	: 10:52am 25 September 2024 NZST	Image Reading Distance @ A3 is	50 cm

Data Sources:

BENDIGO OPHIR MINING PROJECT  
Visual Simulation 3: Māori Point Road

Date: 9 May 2025 | Revision: 2

Plan prepared for Santana Minerals Limited by Boffa Miskell Limited

Project Manager: s9(2)(a)





Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure

Viewpoint Details

NZTM Easting : 1 318 602.1 mE  
NZTM Northing : 5 028 856.4 mN  
Elevation/Eye Height :282.8m / 1.6m  
Date of Photography : 11:42am 25 September 2024 NZST

Data Sources:

Horizontal Field of View : 40°  
Vertical Field of View : 25°  
Projection : NA  
Image Reading Distance @ A3 is 50 cm





Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure





Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation

Viewpoint Details

NZTM Easting	: 1 311 810.7 mE
NZTM Northing	: 5 030 109.6 mN
Elevation/Eye Height	:253.1m / 1.6m
Date of Photography	: 10:28am 25 September 2024 NZST

Data Sources:

Horizontal Field of View	: 40°
Vertical Field of View	: 25°
Projection	: NA
Image Reading Distance @ A3 is	50 cm

BENDIGO OPHIR MINING PROJECT

Visual Simulation 6: State Highway 8A





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure

Viewpoint Details

NZTM Easting : 1 311 810.7 mE  
NZTM Northing : 5 030 109.6 mN  
Elevation/Eye Height :253.1m / 1.6m  
Date of Photography : 10:28am 25 September 2024 NZST

Data Sources:

Horizontal Field of View : 40°  
Vertical Field of View : 25°  
Projection : NA  
Image Reading Distance @ A3 is 50 cm









Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation

Viewpoint Details

NZTM Easting : 1 309 621.5 mE  
NZTM Northing : 5 031 947.4 mN  
Elevation/Eye Height : 392.5m / 1.6m  
Date of Photography : 2:54pm 25 September 2024 NZST

Data Sources:

Horizontal Field of View : 40°  
Vertical Field of View : 25°  
Projection : NA  
Image Reading Distance @ A3 is 50 cm

BENDIGO OPHIR MINING PROJECT

Visual Simulation 7: Pukekowhai Drive, Queensbury

Date: 9 May 2025 | Revision: 2  
Plan prepared for Santana Minerals Limited by Boffa Miskell Limited  
Project Manager: s9(2)(a)









Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure

Viewpoint Details

NZTM Easting : 1 307 748.5 mE  
NZTM Northing : 5 024 220.0 mN  
Elevation/Eye Height :274.0m / 1.6m  
Date of Photography :3:15pm 25 September 2024 NZST

Data Sources:

Horizontal Field of View : 40°  
Vertical Field of View : 25°  
Projection : NA  
Image Reading Distance @ A3 is 50 cm

BENDIGO OPHIR MINING PROJECT  
Visual Simulation 8: State Highway 6

Date: 9 May 2025 | Revision: 2

Plan prepared for Santana Minerals Limited by Boffa Miskell Limited

Project Manager: s9(2)(a)





Existing View









Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure





Existing View





Note: Only mine elements within the mine disturbance area have been modelled and simulated.  
Staging and progressive rehabilitation of disturbed areas has not been shown

View During Operation





Note: Only mine elements and associated land cover within the mine disturbance area have been modelled and simulated. Changes in land cover anticipated within the mine regeneration zone have not been simulated.

View at Closure



VISUALISATIONS - METHODOLOGY

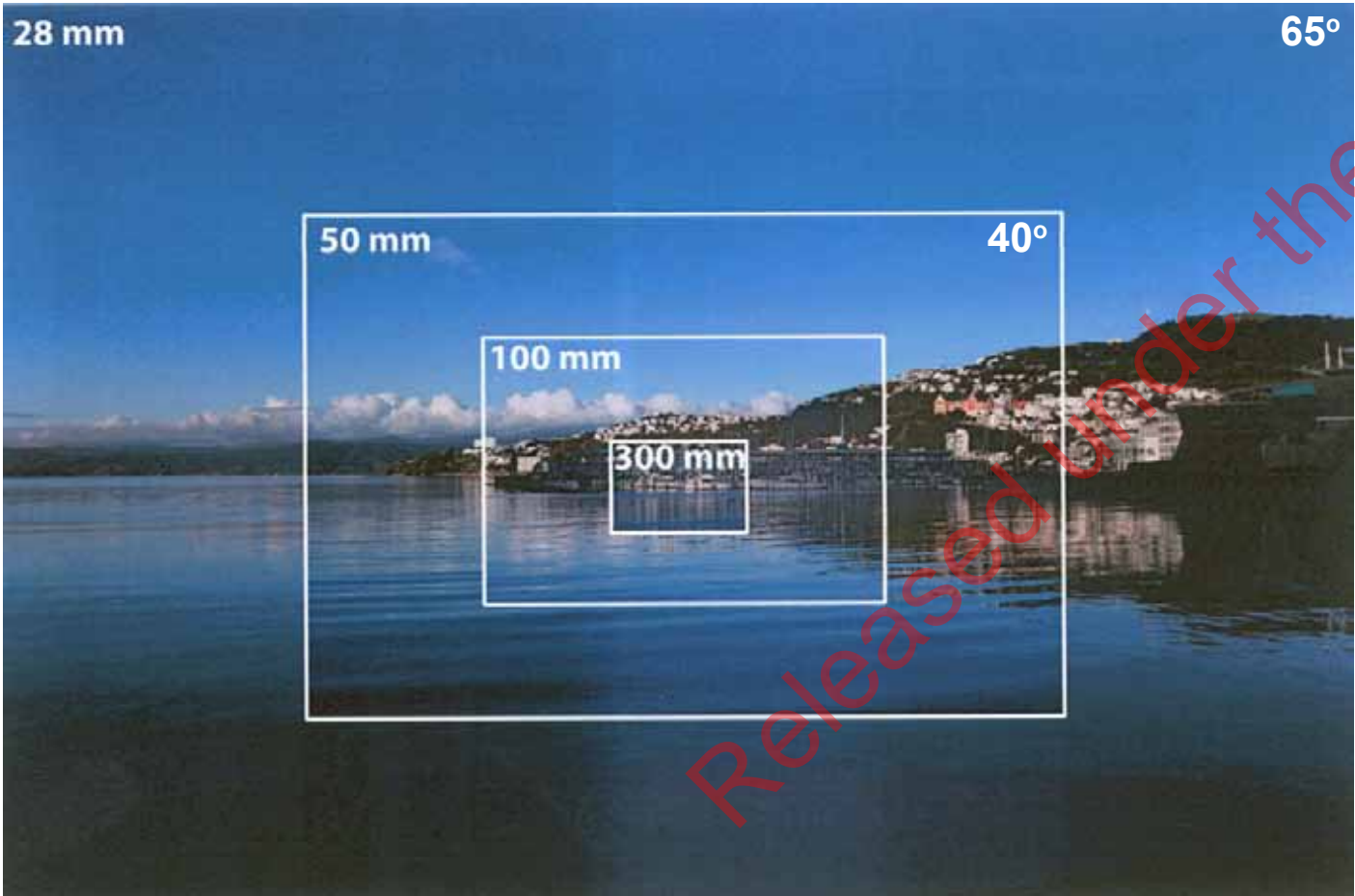
SITE VISIT & PHOTOGRAPHY

Site photographs were taken with a Canon digital SLR camera fitted with a 50mm focal length lens. A series of photos were taken at predetermined viewpoints, situated on public land. The locations of each viewpoint were recording using GPS.

NZILA GUIDELINES & PANORAMA PREPARATION

The visualisations have been produced in accordance with the Tuia Pito Ora New Zealand Institute of Landscape Architects (NZILA) Best Practice Guidelines for Visual Simulations (BPG 10.2) and also adhere to Boffa Miskell’s internal Visualisation Guidelines.

Camera lenses with different focal lengths capture images with differing fields of view. As can be seen below (derived from Fig 9 of the NZILA BPG), a photo taken with a 28mm lens provides a horizontal field of view of 65°. A 50mm lens will provide a cropped (40°) version of the same view. So panoramas can be created by taking multiple 28mm or 50mm photos (in “portrait” mode), and using digital stitching software to merge and crop to create a single panorama. The photos used in these visualisations have a field of view of 40°.

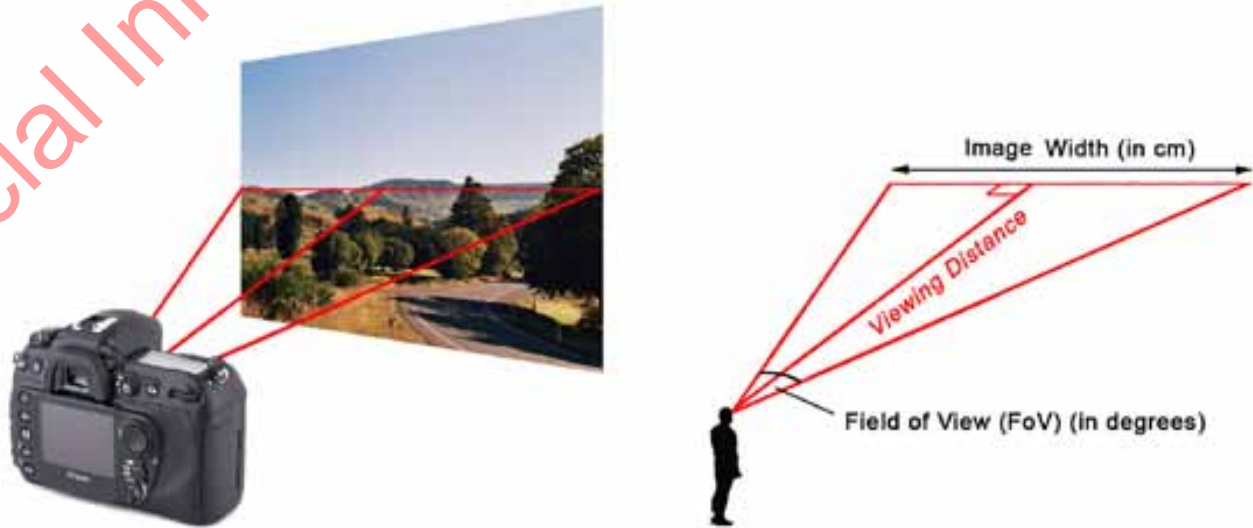


3D MODELLING

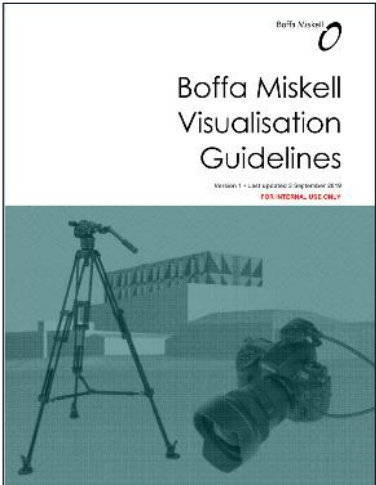
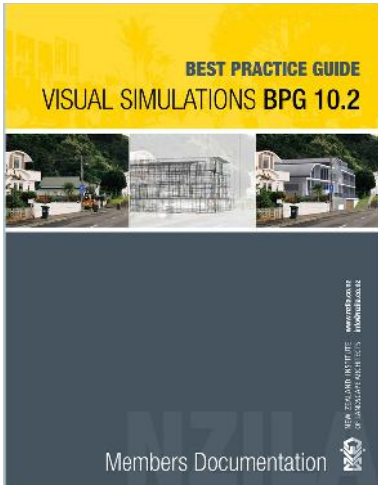
Virtual camera views were then created in 3D modelling software, and 3D terrain data and engineering modelling were imported. These views were then registered over the corresponding photographic panorama, using identifiable features in the landscape and the characteristics of the camera to match the two together. The visualisations were then assembled using graphic design software.

IMAGE READING DISTANCES

These visualisations have a field of view of 40° and so should be viewed from a distance of 50 cm when printed at A3. This will ensure that each simulation is viewed as if standing on-site at the actual camera location, and is in accordance with Section 7.11 of the NZILA BPG. Users are encouraged to print these pages on A3 transparency, go to the viewpoint and hold at the specified reading distance in order to verify the methodology.



Geometry of Image Reading Distance





## Bendigo-Ophir - GIS shape files provided by the applicant:

- Aggregated Footprint – blue area of land  
Includes land subject to the proposed application



- Ardgour Rise Concession Area – green line
  - Part of Thomson Gorge Rd will need to be closed to accommodate the proposed mining activities
  - Thomson Gorge Rd forms part of the existing public road network connecting Bendigo and the Manuherikia Valley over the Dunstan Mountains
  - Applicant is proposing to form an alternative local road route via Ardgour Station so that public access is maintained.
  - The alternative local road route is highlighted below, the green line circled is DOC land.

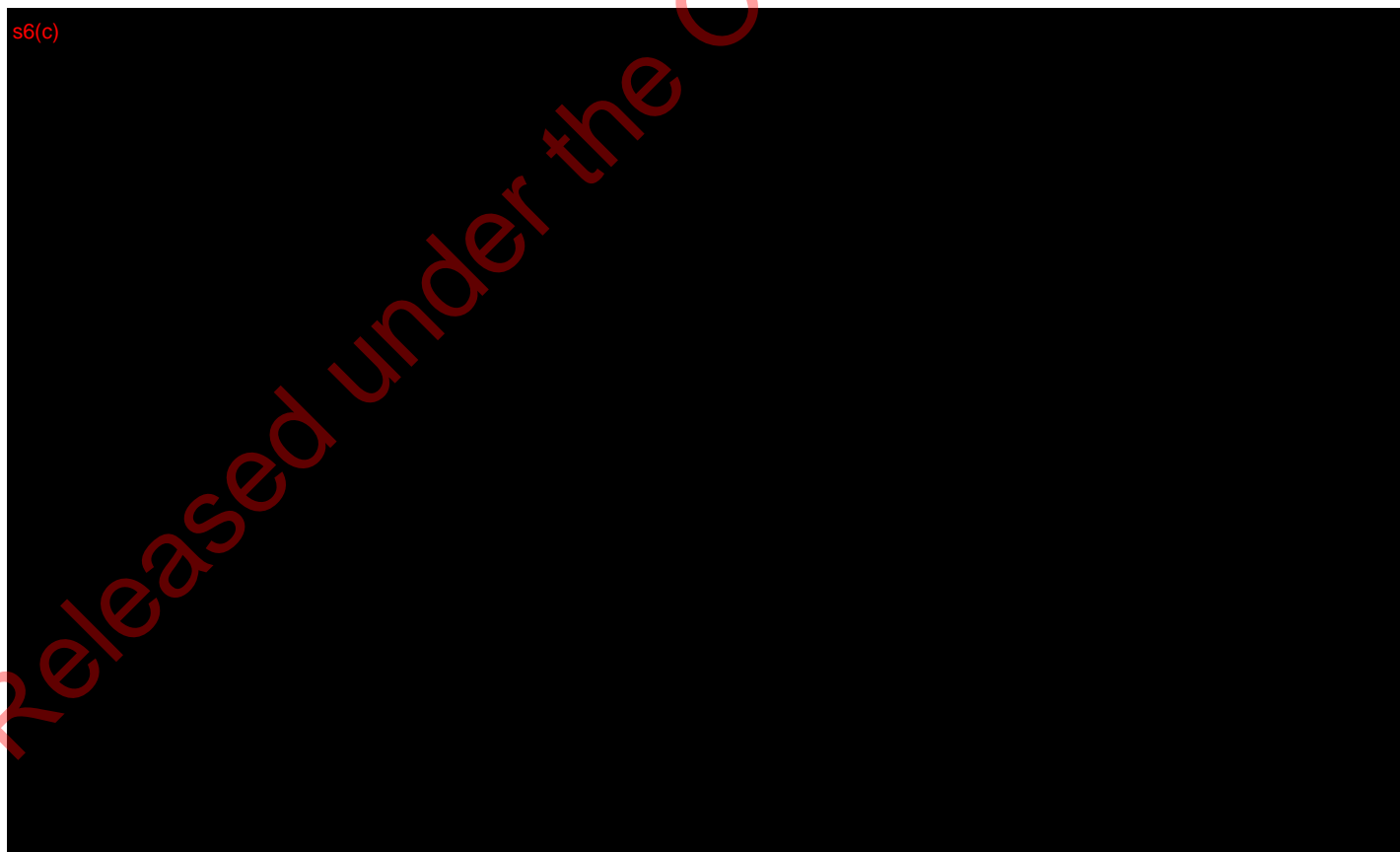




- Come in Time Concession Area (blue line)
  - As noted above, part of Thomson Gorge Rd will need to be closed. Come in Time Battery is a short walk off TG Rd.
  - Blue line represents alternative walking access to the Battery via the Bendigo Historic Reserve



s6(c)





- SH8 Concession Area (pink areas of land)
  - Proposed safety improvements at the SH8 and Ardgour Road intersection



- Willow trees Concession Area (dark red lines)
  - Removal and management of willows from creek (Clearwater and/or Bendigo Creeks)





Consultant	Category	Report	Main Report # pages	Total Report # pages	Date Transferred	By Whom	ORC	CODC
Alliance Ecology	Ecology	Assessment of effects	22	22				
Alliance Ecology	Ecology	Introduction and overarching plan framework						
Alliance Ecology	Ecology	Habitat Impact Management Plan						
Alliance Ecology	Ecology	Avifauna Management Plan						
Alliance Ecology	Ecology	Lizard Management Plan						
Habitat NZ	Ecology	Terrestrial Invertebrate Management Plan						
Habitat NZ	Ecology	Andigour Restoration Plan Version of 19 June 2025						
Habitat NZ	Ecology	Sanctuary Management Plan						
Habitat NZ	Ecology	Mammalian pest Management plan						
Habitat NZ	Ecology	Biosecurity & Plant Pest Mgmt Plan						
Alliance Ecology	Ecology	Biodiversity Outcome Management Plan						
Habitat NZ	Ecology	BATS HN2 Mtakanui Bat Report UPDATED	13	19				
Habitat NZ	Ecology	Mammalian Pest Report UPDATED	33	54				
Habitat NZ	Ecology	Invertebrate Report UPDATED	35	51				
RMA Ecology	Ecology	Baseline Lizards	18	23				
RMA Ecology	Ecology	Baseline Birds	55	61				
RMA Ecology	Ecology	Baseline rear plants and vegetation	51	52				
RMA Ecology	Ecology	Baseline wetlands	66	77				
Waterways Consulting	Ecology	BOGM Aquatic Assessment of Effects	77	88	17/06/2025	PC		
Komanawa	Water	Bendigo-Ophir Gold Project, Bendigo Groundwater Bore Take Effects Assessment (Gw Take_Effects_Rpt-Z24019SML_Rev3)	65	77				
Komanawa	Water	Groundwater Modelling Analysis for Mining BOGP (Draft, hardrock_bog_report_version_2.0.0)	62	85				
Komanawa	Water	Gw Effects Rpt Z24002Bog-1 (Final)	93	103				
Komanawa	Water	Surface water report	91	93	28.5.25	DC		
Komanawa	Water	Hydrology Management Plan Rev-1						
MWM	Geochemistry	Summary Report						
MWM	Contaminated Land	J-G-NZ005-R-Rev0 Bendigo-Ophir PSI	46	57				
Landcare Research	Closure	Applied Research Plan_Cushionfields and Annuals_8_Santana						
MCM	Closure	J-NZ0454-002-R-Rev1-MCP			27/06/2025	PC		
Boffa Miskell	Landscape	BM240011A_Bendigo_Ophir_Mine_	58	108				
Boffa Miskell	Landscape	BM240011_BendigoOphir_Mine_Mitigation_Closure_Plans_20241219	1	1				
Boffa Miskell	Landscape	BM240011_VisualSimulations_R1	30	30				
Boffa Miskell	Landscape	BM240011A_Rehabilitation Plan	23	23				
Marshall Day	Noise	Rp 001 20230685 Bendigo-Ophir Gold Project-Assessment Of Noise Effects	25	42				
Marshall Day	Noise	Rp 002 20230685 Operational Noise and Blasting Management Plan	10	12				
PDP	Air Quality	Air Quality Effects Report - Final Draft	25	30				
PDP	Air Quality	Air Quality Management Plan	10	12				
Lane and Associates	Bond	Matakanui Bond Introduction-c	7	12	4/06/2025	PAC		
Ryder Consulting	Water	WQCompliance Limits Report	34	40				
Recreation	Recreation	Santana Minerals Bendigo-Ophir recreation assessment	35	26	27/06/2025	PAC		
NZHP	Heritage/archeology	J011821_BOGP HA_May 2025	161	190				
NZHP	Heritage/archeology	J011821 AMP_Rev A.1	7	23				
NZHP	Heritage/archeology	J012084 Camp HA May 2025	64	74				
NZHP	Heritage/archeology	J012109 AGR April 2025	2	7				
NZHP	Heritage/archeology	J012137 CIT Track April 2025	5	15				
NZHP	Heritage/archeology	J012082 Emulsion Tanks 2025	6	6				
People and Places	Economics	Economic Impacts of the Bendigo-Ophir Gold Project	23	23				
Landcare Research	Closure	Matakanui Mine Rehab overview and ecological values post-rehab_v7_21Jan2025	21	21			This is part of the Landscape and Rehabilitation Management Plan	
Stantec	Traffic	Integrated Transport Assessment - final draft	47	75				
Stantec	Traffic	Transport Management Plan - construction	13	16	2/07/2025	PC		
Mitchell Daysh	Planning	BOGP Draft Fast-Track AEE Table of Contents (21 January 2025)	18	18				
Mitchell Daysh	Planning	BOGP Project Description - Tech Assessments - 19 March 25	6	6				
Mitchell Daysh	Planning	Project Description - AEE - 22 Jan 25	41	41				
Mitchell Daysh	Planning	Fast Track Application and AEE DRAFT						
Aukaha	Cultural Impact Statement	BOGP Cultural Impact Statement						
Cosgroves	Lighting	CQ24020 BOGP Exterior Lighting Report RevA	8	10				
GHD	Social Impact	Social Impact Assessment						