

5. APPLICATION APPROACH AND STRUCTURE

5.1 APPROVALS SOUGHT UNDER THE FTAA AND HOW THEY ARE SET OUT IN THIS DOCUMENT

This application has been prepared as an integrated Fast-track application for the BPCP. The Project comprises interrelated mining areas, infrastructure, environmental management activities, rehabilitation and closure activities, residual effects measures, and approvals under several statutory regimes.

For that reason, the application should be read as one integrated package. Although the documents are divided into parts, chapters, technical reports, peer reviews, maps, proposed conditions, management plans and supporting records, they are intended to operate together. Collectively, they describe the overall Project and the coordinated approach to assessing, managing and securing the approvals required for it.

The structure of the application reflects two important considerations.

First, the FTAA enables Bathurst to seek multiple approvals through a single Fast-track process. That integrated process is particularly important for the BPCP because the different components of the Project are functionally connected. The mining Sub-Areas, haul road, processing and logistics infrastructure, water management systems, rehabilitation obligations and residual effects package are not standalone matters. They form part of a wider operating and environmental management system across the Buller Plateaux.

Secondly, while the Project is integrated, the FTAA and its schedules require particular information to be provided for particular approval types. The application has therefore been structured so that the common, Project-wide material is presented once, upfront, and then the later chapters and supporting parts address the more specific requirements for each approval stream.

To make the package navigable, the application has been organised into the following parts.

5.1.1 Main Application Chapters

Part A contains the main application document. It is the starting point for understanding the Project and the approvals sought.

Part A is divided into 15 chapters:

1. Project Overview
2. Mining Overview
3. Existing Environment

	4. Project Description
	5. Application Approach and Structure
35	6. Assessment of Environmental Effects
	7. Management and Monitoring of Effects
	8. RMA Approvals
	9. RMA Statutory Assessment
	10. Conservation Act 1987 Approvals
40	11. Wildlife Act 1953 Authorisations
	12. HNZPTA Authorities (Heritage Approvals)
	13. Fisheries Act 1996 Authorisations
	14. Crown Minerals Act 1991 Approvals – Mining Permits
	15. Crown Minerals Act 1991 Approvals – Access Arrangements
45	Chapters A.1 to A.7 form the foundation of the application. These chapters apply to all approvals sought under the FTAA and should be read together as the core Project-wide assessment. This reflects the integrated nature of the FTAA process and avoids unnecessary duplication across the approval-specific chapters.
	These chapters explain:
50	> Who the Applicant is;
	> What the BPCP is and why it is required;
	> How the different Project Sub-Areas are connected;
	> The mining context and coal blending requirements;
	> The existing and proposed activities;
55	> The environmental setting;
	> The approach taken to developing and structuring the application;
	> The actual and potential environmental effects of the Project;
	> The way those effects are proposed to be avoided, remedied, mitigated, managed, monitored, or otherwise addressed; and
60	> The management plan and conditions framework that will apply across the Project.

The later chapters in **Part A** then address the particular statutory approvals sought under the FTAA. These approval-specific chapters are organised by approval type so that the relevant FTAA schedule requirements and underlying legislative requirements can be clearly identified and addressed.

65 Accordingly, **Chapters A.8 to A.15** should not be read in isolation. Each of those chapters relies on, and should be read together with, the Project-wide material in **Chapters A.1 to A.7**, the technical reports in **Part B**, the peer reviews in **Part C**, key maps and figures in **Part D**, the proposed conditions in **Part E**, the Consultation material (e.g. sections 29, 30 and letters from key stakeholders such as Transpower and Ngāi Tahu) in **Part F**, the final draft Management Plans in **Part G** and Landowners, Adjacent Landowners and Records of Title in **Part H**.

5.2 TECHNICAL REPORTS AND PEER REVIEW REPORTS

75 Bathurst has engaged a broad team of independent and highly qualified technical experts to support this application. Given the Project's scale, complexity and duration, the technical reporting programme includes a multidisciplinary suite of assessments relevant to a large-scale opencast coal mining operation, associated infrastructure, operational activities, rehabilitation and closure.

The specialist disciplines covered include:

- > Landscape and visual assessment;
- 80 > Amenity effects (including noise, vibration, dust, and lighting);
- > Transport and traffic;
- > Public access and recreation;
- > Terrestrial, aquatic, and freshwater ecology (including wetlands, vegetation, flora, and fauna);
- 85 > Residual effects management;
- > Surface water hydrology and flood assessment;
- > Groundwater and hydrogeology;
- > Water quality;
- > Geochemistry, including AMD characterisation and source control;
- 90 > Geotechnical engineering and engineering geology;
- > Mine design and scheduling;

- > Civil and structural engineering;
- > Haul road and bridge design;
- > Waste rock management and ELF design;
- 95 > Sludge and residue management;
- > Archaeology and historic heritage;
- > Cultural impact assessment;
- > Blasting and explosives;
- > Hazardous substances and fuel storage;
- 100 > Closure planning; and
- > Rehabilitation and revegetation.

Collectively, this technical work has been prepared to identify, assess, and address the effects of the Project's development, operation, rehabilitation, and closure through appropriate avoidance, remediation, mitigation, and management measures.

105 Bathurst and its technical advisors have also drawn on direct operational experience from the Stockton Mine, one of New Zealand's largest opencast mining operations. Decades of environmental management, monitoring and regulatory oversight have provided a strong understanding of the effects of such activities and the methods available to manage them. In particular, Stockton has informed the development of AMD management approaches,

110 including active treatment systems such as alkaline dosing and passive treatment methods, as well as an understanding of water quality responses and treatment performance over time.

Stockton has also demonstrated progressive rehabilitation and ecological restoration, including the re-establishment of indigenous vegetation across previously disturbed areas.

115 That experience has helped refine techniques for stabilising landforms, managing erosion and sediment, and establishing vegetative cover in the climatic and geochemical conditions of the Buller Plateaux, providing a relevant reference point for the management approaches proposed for this Project.

To support the quality of the application, Bathurst has implemented an independent peer-review programme across key technical workstreams, primarily in the water, ecology and heritage disciplines, and in other areas where additional review was considered appropriate.

120

As set out in **Parts B and C**, the application is supported by more than 60 primary technical reports and a number of peer-review reports. In most cases, reviews were undertaken on an

individual-report basis to provide focused, discipline-specific scrutiny. The full suite of technical advisors, disciplines and roles is set out in **Table 5-1**:

Table 5-1: Technical advisors, disciplines and roles in the BPCP

Author / Company	Report Title	Reference	Role
EcoLogical Solutions	Terrestrial Ecological Impact Assessment Report	EcoLogical Solutions, 2026a	Primary
Lloyd's Ecological Consulting	An Assessment of the Impacts of the Buller Plateaux Continuation Project on Powelliphanta patrickensis Snails and Proposed Effects Management	Lloyd's Ecological Consulting, 2026a	Primary
Lloyd's Ecological Consulting	Modelling Trends in Powelliphanta patrickensis Snail Populations on Buller Plateaux	Lloyd's Ecological Consulting, 2026b	Primary
Alliance Ecology	Residual Effects Management Report	Alliance Ecology, 2026a	Primary
Alliance Ecology	Pest Mammal Survey	Alliance Ecology, 2026b	Primary
Pestproof Fences	Possible responses of great spotted kiwi to pest exclusion fences on the Denniston and Stockton Plateaux	Pestproof Fences, 2025a	Primary
Pestproof Fences	Pest exclusion fencing feasibility report Denniston and Stockton Plateaux	Pestproof Fences, 2025b	Primary
Earth Sciences New Zealand	Assessment of Environmental Effects: Aquatic Ecology	ESNZ, 2026a	Primary

Author / Company	Report Title	Reference	Role
RMA Science	Water Quality Protection Guidelines	RMA Science, 2026	Primary
Earth Sciences New Zealand	Kōura movement ecology and passage requirements	ESNZ, 2026b	Primary
Bathurst Resources Limited	Characterisation of Culverts for Kōura Passage	Bathurst, 2026a	Primary
Mine Waste Management	AMD Overview Report	MWM, 2026a	Primary
Mine Waste Management	Sediment Overview Report	MWM, 2026b	Primary
Mine Waste Management	Hydrological Assessment	MWM, 2026c	Primary
Process Flow	Active Water Treatment Testing Report Summary of Water Quality Testing	Process Flow, 2026a	Primary
Process Flow	Active Water Treatment Plant Basis of Design	Process Flow, 2026b	Primary
Courtenay Environmental	Wastewater Treatment for Escarpment Mine Extension, Denniston Plateau	Courtenay, 2026a	Primary
Courtenay Environmental	On-site wastewater management at Stockton Mine	Courtenay, 2026b	Primary
Bathurst Resources Limited	New Zealand West Coast Coal and Mining Operations A Technical Reference	Bathurst, 2026b	Primary
Rough Milne Mitchell Landscape Architects	Landscape Assessment Report	RMMLA, 2026	Primary

Author / Company	Report Title	Reference	Role
Rob Greenaway & Associates	Recreation and Tourism Assessment	Rob Greenaway & Associates, 2026	Primary
Clough & Associates	Archaeological and Historic Heritage Assessment	Clough & Associates, 2026	Primary
Stantec	Denniston Plateau Access Integrated Transport Assessment	Stantec, 2026a	Primary
Stantec	Stockton Mine Integrated Transport Assessment	Stantec, 2026b	Primary
Stantec	SH 67 Kerrs Road Granity LCSIA	Stantec, 2026c	Primary
Stantec	SH 67 Granity Ngakawau LCSIA	Stantec, 2026d	Primary
Stantec	Millerton Road Ngakawau LCSIA	Stantec, 2026e	Primary
Tonkin and Taylor	Air Quality Technical Assessment	T+T, 2026a	Primary
Tonkin and Taylor	Hazardous Substances Assessment	T+T, 2026b	Primary
Tonkin and Taylor	Outdoor Tyre Storage Technical Assessment	T+T, 2026c	Primary
Leading Design Professionals	Existing Infrastructure Assessment of Environmental Effects – Lighting	LDP, 2026a	Primary
Leading Design Professionals	Proposed Infrastructure Assessment of Environmental Effects – Lighting	LDP, 2026b	Primary
Marshall Day Acoustics	Assessment of Noise Effects	Marshall Day, 2026	Primary

Author / Company	Report Title	Reference	Role
AIGIS Group	Economic Impact Assessment	AIGIS Group, 2026a	Primary
AIGIS Group	Social Impact Assessment	AIGIS Group, 2026b	Primary
Ngāti Waewae	Cultural Impact Assessment	Ngāti Waewae, 2026	Primary
Pattle Delamore Partners	Mount Frederick South Geotechnical Assessment Report Pre-Feasibility Study	PDP, 2026a	Primary
Bathurst Resources	Pre-Feasibility Study: Escarpment Extension Geotechnical Assessment	Bathurst, 2025a	Primary
Bathurst Resources	Stockton Mine Executive Summary – Geotechnical	Bathurst, 2025b	Primary
Bathurst Resources	Upper Waimangaroa Haul Road (UWHR) Summary Coal Transport Logistics Road Design	Bathurst, 2026c	Primary
Pattle Delamore Partners	Geotechnical Assessment A-Drive Borrow Pit, Stockton Mine	PDP, 2026b	Primary
Bathurst Resources	Upper Waimangaroa Haul Road and Mount Frederick South Access Road Void Assessment	Bathurst, 2026d	Primary
Bathurst Resources	Sustainability, Energy Use and Greenhouse Gas Emissions	Bathurst, 2026e	Primary
Pattle Delamore Partners	Buller Plateaux Continuation Project	PDP, 2026c	Primary

Author / Company	Report Title	Reference	Role
	Greenhouse Gas Assessment Report		
Bathurst Resources	Stockton Supporting Information to Accompany a Subsequent Mining Permit Application for CML 37150 and ACML 3715002	Bathurst, 2026f	Primary
Bathurst Resources	Sullivan Supporting Information to Accompany a Subsequent Mining Permit Application for CML 37161, ACML 3716102 and ACML 3716103	Bathurst, 2026g	Primary
Bathurst Resources	Mount Frederick South Supporting Information to Accompany a Subsequent Mining Permit Application	Bathurst, 2026h	Primary
GHD	Water management and assessment of effects on waterways and water users from the BPCP Stockton mining activities	GHD, 2026a	Primary
GHD	Hydrogeology of the Stockton area and the assessment of impacts on groundwater from BPCP Stockton mining activities	GHD, 2026b	Primary
InStream Consulting	Stockton Plateau Aquatic Ecology: history,	InStream, 2026	Primary

Author / Company	Report Title	Reference	Role
	thresholds and long-term management		
Bathurst Resources	Acid Mine Drainage History of AMD Management and Proposed Future Management	Bathurst, 2026i	Primary
Bathurst Resources	Stockton Mine 80-year water quality forecast	Bathurst, 2026j	Primary
Bathurst Resources	Millerton Water and AMD Management	Bathurst, 2026k	Primary
Bathurst Resources	Stockton Operational AMD Sludge Management	Bathurst, 2026l	Primary
Lane Associates	Bond Process Description	Lane Associates, 2025	Primary
Tonkin and Taylor Roger MacGibbon	Terrestrial Ecology Peer Review		Peer Review
University of Auckland Dr Bruce Burns	Vegetation Mapping and Zonation Peer Review		Peer Review
Bioeconomy Science Institute – Manaaki Whenua – Landcare Research Group Dr Robyn Simcock	Rehabilitation, Weeds and Biosecurity Peer Review		Peer Review
Proteus Dr Darryl MacKenzie	Snail Population Peer Review		Peer Review
University of Canterbury Emeritus Professor Jon Harding	Aquatic Ecology Peer Review		Peer Review

Author / Company	Report Title	Reference	Role
EHS Support Andrew Rumsby	Water Quality Guidelines Peer Review		Peer Review
Strata Geoscience Ltd Dr James Pope	AMD and Sediment Peer Review		Peer Review
GHD Dr Dora Avaniadou	Hydrogeology Peer Review		Peer Review
EMM Consulting Pty Ltd Craig Vincent	Stockton Hydrogeology Peer Review		Peer Review
GHD Tim Mulliner	Hydrology Peer Review		Peer Review
Wayfinder Ltd Shannon Bray	Landscape and Visual Effects Peer Review		Peer Review
Dr Neville Ritchie	Heritage and Archaeology Peer Review		Peer Review
Market Economics Greg Akehurst	Economics Peer Review		Peer Review
Just Add Lime Ltd Julie Boucher	Social Impact Peer Review		Peer Review
PDP Andrew Smith	Geotechnical Peer Review		Peer Review
Southern Skies Campbell Stewart	Erosion and Sediment Control Peer Review		Peer Review

This approach reflects the scale and significance of the Project and aligns with feedback from BDC, WCRC, and Te Rūnanga o Ngāti Waewae that independent peer review would help build confidence in the technical material, particularly within the statutory timeframes associated with the FTAA process.

135 Both primary authors and peer reviewers are experienced practitioners with involvement in large-scale, complex projects. Many have participated in comparable approval processes as experts or reviewers, and some have also more recently served as decision-makers on Fast-track panels.

Overall, the breadth of disciplines and level of independent review provide confidence in the technical material supporting this application.

5.2.1 Role of Peer Reviewers

140 The peer reviewers engaged for the BPCP have provided independent, discipline-specific review of key technical reports and supporting material. Their role has been to test the robustness of the assessments, comment on the adequacy of methodologies and assumptions, identify matters requiring clarification or further explanation, and help improve the transparency and reliability of the technical material supporting the application.

145 In most cases, the peer-review process has helped refine the relevant technical reports, management responses, and proposed conditions; as a result, the review indicates general support for the overall approach to the assessment, including the methodologies used and the resulting outcomes and conclusions. However, for a limited number of matters, there remain areas where the peer reviewer does not fully agree with the position advanced by Bathurst or the relevant primary technical author, or where Bathurst does not fully agree
150 with the peer reviewer's position. This is not unexpected in a complex, multidisciplinary application of this nature. The reasons for any remaining areas of disagreement, and the way those matters have been considered or addressed in the application, are summarised in **Table 5-2** below.

Table 5-2: Summary of peer-review matters where disagreement remains

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
Compliance assessment for chronic water quality guideline values	Andrew Rumsby - Peer Review of Water Quality Protection Guidelines (August 2026)	Dr Hickey proposes comparing dissolved-metal concentrations with bioavailability-adjusted site-specific guideline values to calculate a Metal Ecotoxicity Quotient (MEQ) for both chronic and acute exposure applicable to each monitoring site and assessing compliance of such using the annual median of the MEQ for chronic exposure and the annual 95 th percentile of the MEQ for acute exposure. Mr Rumsby considers that this would effectively permit chronic guideline values to be exceeded in approximately 50% of monitoring results and is inconsistent with the intent of the ANZG, Canadian FEQG and US EPA chronic aquatic-life protection frameworks. He recommends consideration of rolling 30-day median values, including high-bypass events, with no exceedance of acute criteria, together with a rolling	Bathurst adopts the compliance approach recommended in the Water Quality Protection Guidelines report. This approach reflects the highly variable hydrology, toxicity-modifying factors and short-duration flood events that characterise Buller Plateaux streams, together with the use of chronic and acute guideline values and a high-frequency monitoring programme.	Bathurst considers the compliance framework appropriately reflects the hydrology and water quality characteristics of Buller Plateau streams. The conditions now directly embed the chronic and acute Metal Ecotoxicity Quotient (MEQ) framework, including annual median chronic MEQ compliance, annual 95th percentile acute MEQ compliance, ongoing weekly monitoring, continuous monitoring, annual Ecohydrology Reporting, aquatic ecology monitoring and adaptive management. While Mr Rumsby prefers alternative compliance metrics, the conditions establish a comprehensive monitoring and reporting regime that allows long-term validation of the adopted methodology against ecological outcomes and receiving water performance.

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
		annual 95th-percentile measure excluding high-bypass events.		
Iron guideline value and assessment approach	Andrew Rumsby - Peer Review of Water Quality Protection Guidelines (August 2026)	Mr Rumsby does not consider the 1976 US EPA iron criterion, whether applied directly at 1.0 mg/L or modified by a factor of two to produce 0.5 mg/L, to provide an adequately supported basis for a site-specific iron guideline for the Buller Plateaux streams. He considers the criterion to be based on limited and dated field observations involving fish communities and does not adequately account for pH, dissolved organic matter, iron speciation or other site-specific characteristics. Of the available guideline approaches, he considers the Canadian FEQG framework superior to the ANZG 2025 and US EPA 1976 approaches and considers that it should have been selected in preference to the US EPA criterion, while acknowledging that the Canadian model also has limitations when extrapolated below its validated pH range.	Bathurst adopts the iron assessment methodology recommended by Dr Hickey. Bathurst's position is that neither the generic ANZG guideline nor an unmodified application of the Canadian FEQG is fully suited to the unusual chemistry of Buller Plateaux streams. The application therefore adopts a precautionary site-specific dissolved-iron guideline of 0.5 mg/L, supported by a weight-of-evidence assessment.	The conditions expressly adopt a site-specific dissolved iron criterion requiring the annual median dissolved iron concentration at all compliance sites to remain below 0.5 mg/L. This is supported by extensive receiving-water monitoring, aquatic ecology monitoring, annual reporting and adaptive management requirements. While the reviewer sought further justification for the selected guideline value, the conditions establish an enforceable framework for assessment of the adopted threshold and ongoing review of its performance against ecological outcomes.

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
Methodological integration of landscape values	Shannon Bray, Landscape Effects Assessment Peer Review (August 2026)	Mr Bray considers the LAR does not consistently carry through the Te Tangi a te Manu framework, particularly the integration of physical, perceptual and associative landscape dimensions. He considers physical attributes dominate the assessment and that links between landscape character, values, effects and policy conclusions could be more explicit.	Bathurst considers the methodology appropriate and consistently applied. The application position is that the physical, perceptual and associative values are identified throughout the report and supported by specialist assessments, visual simulations and the Buller Plateaux Landscape Study.	Bathurst acknowledges the reviewer sought greater transparency but considers this is primarily an issue of report structure and presentation rather than omissions in assessment. The peer reviewer concludes that any shortcomings do not materially alter the assessment outcomes and that the report remains fit for purpose. The proposed conditions also require rehabilitation planning to consider ecological context, final landform outcomes, stream and wetland rehabilitation, habitat connectivity, landscape integration, edge treatment and long-term ecosystem development.
Rehabilitation assumptions and long-term landscape outcomes	Shannon Bray, Landscape Effects Assessment Peer Review (August 2026)	Mr Bray accepts that rehabilitation is fundamental to landscape recovery but considers the assumptions underpinning the conclusion that effects reduce to low or negligible levels over time could have been more explicitly explained. He notes that some permanent landform changes	Bathurst adopts the position that progressive rehabilitation, ecological restoration, engineered landforms and biodiversity initiatives will substantially restore landscape character and values over time, resulting in significant reductions in adverse effects post-closure.	Bathurst considers the rehabilitation pathway and anticipated outcomes are adequately supported by the ecological, rehabilitation and landscape evidence. While the peer reviewer sought greater explanation of the assumptions underpinning long-term recovery, he did not conclude that the anticipated

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
		may remain notwithstanding successful rehabilitation.		outcomes were unreasonable or that the overall conclusions should change.
Integration of cultural values within landscape assessment	Shannon Bray, Landscape Effects Assessment Peer Review (August 2026)	Mr Bray accepts reliance on the CIA but considers tangata whenua values are largely referenced rather than integrated into the landscape assessment. He considers that cultural values are not always clearly translated into landscape values or systematically reflected in the assessment of landscape sensitivity and effects.	Bathurst considers cultural values have been appropriately incorporated through the CIA, supporting technical assessments and the landscape assessment itself. The application adopts the CIA as the primary source of cultural values and considers it more appropriate for tangata whenua values to be identified by Ngāti Waewae rather than independently interpreted by the landscape architect.	Bathurst responded by further explaining how cultural values associated with maunga, whenua, wai, mahinga kai, taonga species, rehabilitation and water quality management have informed the assessment. Bathurst considers the assessment appropriately reflects the CIA and notes Ngāti Waewae's support for the Project subject to implementation of the proposed mitigation, rehabilitation and compensation measures. The peer reviewer did not dispute the cultural evidence itself, but sought stronger integration of those values into the landscape assessment framework. The conditions also explicitly integrate cultural considerations into stream reinstatement objectives, closure planning, annual reporting, aquatic ecology monitoring, mahinga kai monitoring, fish passage programmes and consultation requirements with Te Rūnanga o Ngāti Waewae. These

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
				provisions provide an operational mechanism for cultural values to influence environmental management, rehabilitation and closure outcomes throughout the life of the Project.
Rehabilitation certainty and performance standards	Dr Robyn Simcock – Rehabilitation Peer Review (August 2026)	While supportive of the rehabilitation framework overall, Dr Simcock sought greater certainty that rehabilitation outcomes will be delivered. This included stronger minimum requirements for vegetation types, VDT deployment, highwall rehabilitation, rockfield establishment and ecosystem diversity outcomes. Dr Simcock also sought greater certainty regarding implementation mechanisms, including rehabilitation resourcing, soil management practices, VDT deployment and rehabilitation resource tracking.	The application adopts clear rehabilitation objectives, closure criteria, rehabilitation cover targets, minimum vegetation extents and a project-wide 15% VDT target, together with monitoring and adaptive management	Bathurst considers the rehabilitation outcomes appropriately specified while retaining the flexibility needed for mine planning and operational constraints. The reviewer generally supported the approach but preferred additional quantified requirements and conditions to improve delivery certainty. The proposed conditions respond directly to Dr Simcock's concern about outcome certainty by establishing quantified, auditable rehabilitation requirements. These include a minimum project-wide 15% VDT target, active disturbance limits, minimum highwall rehabilitation requirements, minimum boulderfield requirements, stream reinstatement standards, detailed rehabilitation outcome schedules, species-specific targets, measurable ecosystem

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
				completion criteria and formal closure certification processes. Collectively, these requirements provide substantially greater certainty regarding rehabilitation delivery and performance.
Long-term rehabilitation outcomes, maintenance and management	Dr Robyn Simcock – Rehabilitation Peer Review (August 2026)	Dr Simcock expressed some uncertainty regarding longer-term achievement of certain outcomes, particularly highwalls, sandstone pavement, rockfield habitats, wire-rush establishment and aspects of wetland hydrology. Dr Simcock also sought a more detailed and earlier rehabilitation research programme. Dr Simcock also recommended provision for ongoing post-closure maintenance and management to address residual weed and pest risks and increase confidence that rehabilitation outcomes will be sustained in the long term.	The application relies on progressive rehabilitation, monitoring, adaptive management, closure criteria and a rehabilitation research programme to refine methods over time	Bathurst considers adaptive management and ongoing monitoring provide an appropriate framework for managing uncertainty. The reviewer generally agreed with this approach but favoured earlier research, additional monitoring and stronger commitments for some ecosystem types. The proposed conditions expressly recognise uncertainty and address it through rehabilitation research programmes, ongoing monitoring, trigger-based responses, corrective actions, annual reporting, long-term monitoring frequencies, adaptive management requirements and periodic review of rehabilitation techniques. Specific provision is made for research into VDT performance, wetland rehabilitation, boulderfields, stream reinstatement,

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
				highwalls and target species management. These mechanisms directly address the reviewer's request for stronger research, monitoring and adaptive management pathways.
Landscape integration, connectivity and legacy outcomes	Dr Robyn Simcock – Rehabilitation Peer Review (August 2026)	Dr Simcock considered that greater emphasis could be placed on achieving landscape integration, ecological connectivity, haul road rehabilitation, highwall connectivity and management of historic rehabilitation areas that may affect future outcomes.	The application incorporates objectives for connectivity, rehabilitation of the UWHR in agreement with landowner requirements, integration of rehabilitation with surrounding ecosystems, and weed management through separate management plans.	The overall review did not disagree with the direction of the application or the conditions regarding landscape outcomes and rehabilitation. As noted above, the proposed conditions provide a strong focus on ecological and landscape connectivity through VDT prioritisation, habitat linkages, riparian rehabilitation, stream reinstatement, rehabilitated fauna habitat corridors, edge treatment requirements, UWHR rehabilitation and closure planning. Rehabilitation must provide connectivity between indigenous vegetation, wetlands, riparian habitats and surrounding ecosystems where practicable. Closure planning must also restore indigenous vegetation and habitat connectivity along retained corridors. These provisions directly address the

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
				reviewer's concerns regarding landscape integration and long-term connectivity outcomes.
Cultural values and long-term stewardship	Dr Robyn Simcock – Rehabilitation Peer Review (August 2026)	Dr Simcock considered cultural values and post-closure stewardship could be more explicitly integrated into rehabilitation planning, monitoring and governance.	The application and conditions provide for engagement with Ngāti Waewae, cultural health indicators and involvement in monitoring processes and management plans.	The review generally supported the provisions but suggested greater visibility of cultural values within the rehabilitation framework and potential involvement in future review processes. In response, the proposed conditions provide for ongoing engagement with Ngāti Waewae through annual Ecohydrology Reporting, mahinga kai monitoring, fish surveys, closure planning, stream reinstatement objectives and review of final closure plans. Closure certification also requires documentation of consultation undertaken with Ngāti Waewae and consideration of matters raised. These requirements help embed cultural values and tangata whenua involvement within long-term management, monitoring and stewardship arrangements extending beyond active mining.

Topic / area	Peer reviewer / relevant report	Nature of disagreement	Application position	Reason/response and how addressed
Wetland rehabilitation	Dr Robyn Simcock – Rehabilitation Peer Review (August 2026)	Dr Simcock generally supports the proposed wetland rehabilitation approach and expresses a high level of confidence that wetland and tarn outcomes are achievable. She recommends early hydrological monitoring and research to validate assumptions regarding wetland establishment using different rehabilitation methods and across a range of slopes.	The application proposes extensive wetland rehabilitation supported by wetland-specific design criteria, variable root-zone depths, hydrological design measures, VDT and closure criteria.	Dr Simcock concludes that wetland rehabilitation is both feasible and achievable, expressing a high level of confidence in Bathurst’s proposed approach and the expected outcomes. Her recommendations are focused on further strengthening the programme through early monitoring, targeted research, and adaptive management to confirm performance and support ongoing optimisation. Bathurst is also undertaking further wetland and hydrological monitoring, with the results to be provided through the Panel process, further enhancing the evidence base supporting the proposed rehabilitation approach

155 **5.2.2 Management Plans and Conditions**

Many technical assessments for the Project identify recommended measures to avoid, remedy or mitigate potential adverse effects. These recommendations have been progressively integrated into the Project design and have informed the proposed conditions set out in **Part E** of this application. In many cases, the measures draw on management approaches used at other West Coast mining operations, including Stockton, but have been refined for the specific environmental, hydrological and ecological characteristics of the Buller Plateaux.

Bathurst acknowledges that the Project will result in residual adverse effects, particularly from vegetation clearance, habitat modification and fragmentation, disturbance of wetlands and waterways, changes to surface and groundwater regimes, generation and treatment of mine-affected water including AMD, and changes to landforms and geomorphology associated with mining and rehabilitation. While these effects will be subject to comprehensive management, treatment, monitoring, mine design and progressive rehabilitation, some adverse effects will endure through both the operational and closure phases and require ongoing management.

Bathurst proposes to undertake the Project in accordance with a suite of management plans, provided in draft in **Part G** of these application documents. Those plans will give effect to the final conditions and set out clear objectives, performance outcomes, and implementation requirements so potential adverse effects are managed in a clear and enforceable way.

Bathurst (and/or its technical advisors) has prepared a comprehensive final draft of these management plans. The management plans attached to this application are set out in **Table 5-3:**

Table 5-3: Final Draft Management Plans

Document Reference	Management Plan Title	Contributing Author/s
BPCP-ENV-PLN-050	Conceptual Mine Closure Strategy	IEMA
BPCP-ENV-PLN-008	Weed Management Plan	EcoLogical Solutions
BPCP-ENV-PLN-002	Rehabilitation Management Plan	EcoLogical Solutions
BPCP-ENV-PLN-003	AvMP	EcoLogical Solutions

Document Reference	Management Plan Title	Contributing Author/s
BPCP-ENV-PLN-004	<i>Powelliphanta</i> Snail Management Plan	Lloyds Ecological Consulting
BPCP-ENV-PLN-009	BOMP	Alliance Ecology
BPCP-ENV-PLN-022	PCEP	Alliance Ecology
BPCP-ENV-PLN-005	LMP	Alliance Ecology
BPCP-ENV-PLN-007	BMP	EcoLogical Solutions
BPCP-ENV-PLN-006	AEMP	Earth Sciences New Zealand
BPCP-ENV-PLN-010	AMD-WMP	MWM
BPCP-ENV-PLN-011	AMD-ELFMP	MWM
BPCP-ENV-PLN-013	ESCPLDA	Bathurst
BPCP-ENV-PLN-012	WIDP	Bathurst
STO-ENV-PLN-016	Stockton Mine AMD Environment Management Plan	Bathurst
STO-ENV-PLN-013 v2.0	Stockton Mine Environmental Water Management Plan	Bathurst
STO-ENV-PLN-027	Millerton Block Water and AMD Management Plan	Bathurst
BPCP-ENV-PLN-020	HHMP (including appended AMP)	Clough & Associates
BPCP-ENV-PLN-019	TMP	IEMA
BPCP-ENV-PLN-018	LVAMP	IEMA
BPCP-ENV-PLN-017	DMP	Tonkin + Taylor
BPCP-ENV-PLN-016	NBVMP	IEMA
BPCP-ENV-PLN-015	WasteMP	IEMA
BPCP-ENV-PLN-014	HSMP	IEMA
STO-ENV-PLN-029	NOEMP	IEMA

Document Reference	Management Plan Title	Contributing Author/s
--------------------	-----------------------	-----------------------

STO-TEC-PHMP-002	Bathurst Resources - Stockton Mine GSI PHMP	Bathurst
------------------	--	----------

180

Having regard to residual effects, Bathurst proposes a range of management, rehabilitation and broader compensatory measures across the ecological, freshwater, recreation and heritage domains. Although these measures are not advanced as ecological offsetting or compensation in the strict RMA policy sense, they are intended to deliver tangible benefits beyond the immediate mine footprint, including funding and initiatives aimed at wider ecological, recreational and heritage outcomes. They will be secured and managed through proposed conditions and associated management plans.

185

This reflects a balanced response to the Project's environmental impacts, while also recognising the delivery of regional and national benefits associated with its development.

190

CONSULTATION UNDERTAKEN

5.3.1 Consultation Undertaken for the BPCP

As set out in the Community and Stakeholder Engagement Report (Bathurst, 2026am) in **Part F**, consultation for the BPCP has been extensive, multi-layered and iterative. It has been undertaken to ensure that the application is informed by the perspectives of those who may be affected by, have an interest in, or hold statutory, cultural, environmental, community, recreation, commercial or infrastructure-related responsibilities relevant to the Project.

195

The consultation process has been guided by Bathurst's Stakeholder Engagement Plan, which applies the principles of the International Association for Public Participation framework and is intended to support transparent, ongoing, and responsive engagement throughout the assessment, operational, and closure phases of the Project.

200

The engagement programme has been deliberately broad. Stakeholders were identified by considering statutory consultation requirements, proximity to the Project area, land ownership or occupation, cultural values, environmental and technical matters, recreational use, infrastructure interests, commercial interfaces, and the likely level of interest, support or concern. Consultation has included regular meetings, workshops, site visits, briefings, community drop-in sessions, letterbox drops, direct correspondence, technical information sharing, and targeted discussions with specific stakeholder groups.

205

5.3.2 The Consultation Programme

The consultation programme has reached a wide range of stakeholder groups, including:

- 210 > Iwi, particularly Te Rūnanga o Ngāti Waewae, who have prepared the CIA for the application. Engagement has included meetings, correspondence and the provision of effects assessment summaries across matters such as water, ecology, noise, traffic, landscape, social and economic effects, closure and pest management. Other iwi groups have also deferred to Te Rūnanga o Ngāti Waewae in correspondence regarding the Project (refer **Part F**).
- 215
- 220 > Employees, contractors and unions, including Stockton and West Coast employees, Bathurst's Human Resources group, the ETU union and principal contractors such as Doug Hood Mining. Engagement with the workforce focused on the Project scope, timing, approval pathway, employment continuity and the broader social and economic importance of the mine to Buller and the West Coast.
- 225 > Local communities and adjacent landowners, including Ngakawau, Waimangaroa, Denniston, Westport and Millerton, as well as specific engagement with the Ngakawau Hector Reserve Board Trust and a private landowner near the Stockton Mine gate. These discussions addressed local amenity, property and access issues, community facilities, potential post-mining opportunities and the practical effects of ongoing operations.
- 230 > Community and heritage groups, including MaPPS, Friends of the Hill, Northern Buller Museum, Museum of Kawatiri and the Denniston Heritage Trust. Engagement focused on heritage effects, artefact management, post-mining land use, oral history, museum custodianship and the relationship between mining, heritage protection and community identity.
- 235 > Recreation users, including 4WD groups, cyclists, trail runners, walkers and other users of the Denniston and Stockton Plateaux. Engagement focused particularly on access to Mt Rochfort, Mackley Track, Mt William and other valued recreation routes, as well as the amenity impacts of mining on the recreation experience.
- 240 > Industry and adjacent operators, including Kawatiri Energy Ltd, Buller Electricity Ltd and Rockies Mining. These discussions addressed potential overlapping Project footprints, water effects, access arrangements, blasting protocols, operational interfaces and the need to avoid adverse effects on existing commercial activities.
- > Utilities and infrastructure providers, including Kordia, Zelan, Buller Electricity and Transpower. Engagement focused on maintaining access to critical telecommunications and electricity infrastructure, powerline realignments, safety

protocols, emergency response and compliance with relevant electrical clearance standards.

- > Emergency services, who were briefed on the Project, workforce implications, health and safety considerations and access protocols, with further engagement proposed before construction or new operational phases commence.
- > NGOs, statutory bodies and regulators, including Forest and Bird, Environmental Defence Society, DOC, LINZ, HNZPT, NZP&M, BDC, WCRC, the New Zealand Conservation Authority, West Coast Tai Poutini Conservation Board, Outdoor Access Commission, Game Animal Council and Fish & Game. These engagements addressed environmental effects, land status, biodiversity, rehabilitation, offsetting, recreation access, heritage, statutory authorisations and the Fast-track process.
- > DOC concession holders, who were contacted to identify whether their concessions or activities could be affected by the Project. Responses ranged from no concerns or no activity in the area, through to requests for further information and concerns about the use of the Fast-track process, environmental assessment, threatened species, hydrology, climate commitments and mitigation measures.

5.3.3 Consultation with Statutory Authorities

Engagement has been undertaken with key statutory authorities, including the New Zealand Conservation Authority, West Coast Tai Poutini Conservation Board, Outdoor Access Commission, Game Animal Council, and Fish & Game New Zealand. Discussions have focused on providing an overview of the Project, statutory interests, assessment methodologies, conservation and heritage values, recreational access considerations, and FTAA compliance processes. Engagement has ranged from information sharing through to detailed technical discussions, with several agencies requesting ongoing involvement and updates as the assessment process progresses.

5.3.4 Consultation with Regulators

In accordance with section 29 of the FTAA, Bathurst has consulted with all relevant local and administering authorities, including BDC, WCRC, DOC, LINZ, NZP&M and HNZPT.

Bathurst's long-standing operational presence on the West Coast has enabled it to build established relationships with these agencies. Initial engagement on the Buller Plateau Continuation Project (BPCP) commenced following the Project's inclusion on the EPA Fast-track list in May 2024 and focused on identifying the consents, permits, concessions, authorities and access arrangements required for the Project. Formal engagement began in

275 November 2024 and has continued through regular meetings, workshops, site visits,
technical reviews and information sharing.

Key topics discussed with regulators have included the Project scope and life of mine,
environmental effects assessments, required authorisations, stakeholder engagement
processes, socio-economic benefits, workforce requirements, and consultation
280 expectations. A guiding principle of the engagement process has been to provide regulators
with early access to information and to front-load discussions before formal approval
documentation is submitted.

Project information, including technical reports, management plans, peer reviews and
application components, has been made available through a secure online data room.

285 Regulators and technical specialists have also been offered opportunities to undertake site
visits. Feedback received has been recorded, considered and, where appropriate,
incorporated into revised documents. All comments and responses have been collated to
support ongoing engagement and refinement of the application.

5.3.4.1 BDC and WCRC

290 Engagement with BDC and WCRC has focused on providing an overview of the Project,
environmental assessment outcomes, statutory requirements, proposed conditions,
management plans and coordination with other regulatory agencies. Discussions have
sought to identify and address key issues and develop a shared understanding of consent
requirements and implementation arrangements.

295 Separate to the FTAA process, BDC administers several small land parcels within the Project
area as unformed legal roads. Bathurst has entered into a Heads of Agreement with BDC to
facilitate subsequent approvals, including potential road stopping, licences to occupy and
other access arrangements, should the BPCP receive approval.

5.3.4.2 DOC

300 As more than half of the Project footprint is located on Crown land administered by DOC,
engagement has focused on proposed mining activities, the relationship between existing
and future authorisations, and the renewal or replacement of relevant approvals.
Discussions have also included the Project's residual effects package and other matters
relevant to DOC's statutory responsibilities.

305 Key authorisations administered by DOC include access arrangements, concessions,
Wildlife Act permits and Freshwater Fisheries approvals. Engagement has involved ongoing
meetings, site visits and review of technical information to support assessment of these
requirements.

5.3.4.3 LINZ

310 A portion of the Project footprint is located on Crown land administered by LINZ. While access arrangements are already in place for much of this area, engagement has focused on areas where additional approvals may be required. Consultation has included face-to-face meetings, site visits and provision of Project information through the secure data room.

315 Discussions have addressed environmental assessment outcomes, proposed conditions, management plans and coordination with other regulatory agencies. LINZ has also maintained an ongoing interest in management options for the UWHR including closure and long-term stewardship arrangements, which will continue to be considered in collaboration with stakeholders throughout the life of the Project.

5.3.4.4 HNZPT

320 Three known areas of pre-1900 activity within the Project Area trigger the need for an ArchA. As a precautionary measure, Bathurst has applied for ArchA coverage across the entire Project Area. Recognising the significant archaeological values of the Denniston Plateau, engagement with HNZPT has included Project briefings, site visits, heritage workshops involving other heritage stakeholders, and provision of technical reports and management plans.

325 Feedback received on draft heritage documentation has been incorporated into updated plans and reports. Discussions have focused on ensuring heritage values are appropriately assessed, avoided, mitigated or compensated for where necessary, and that suitable heritage and archaeological management measures are implemented.

330 5.3.4.5 New Zealand Petroleum and Minerals

NZP&M manages the Crown's mineral resources and oversees the administration and compliance of mineral permits. Engagement with NZP&M has focused on permitting requirements and regulatory processes relevant to the Project.

335 Bathurst maintains regular monthly meetings with NZP&M to discuss permitting matters. Bathurst also held a pre-lodgement meeting with NZP&M and WorkSafe New Zealand on 26 November 2025 to discuss the Project and associated approval pathway.

5.3.5 Key Matters Raised Through Consultation

340 A number of clear themes have emerged across the consultation programme. While stakeholders' interests differ, the issues raised consistently point to what is most important to affected communities and stakeholders.

5.3.6 Employment, Economic Continuity and Regional Certainty

A recurring theme among employees, unions, contractors, and community representatives has been the Project's importance to employment and economic stability in Buller and the wider West Coast. The Project is presented as supporting the continuation of approximately 390 direct jobs, as well as wider regional benefits through wages, procurement, local spending, rates, royalties, taxes and support for community organisations.

Workforce engagement highlighted concern that delays in approval could affect coal production and lead to uncertainty or potential redundancies. This has reinforced the importance of employment continuity and regional economic resilience as core drivers of the Project. It has also shaped how Bathurst has presented the Project's objectives, with a strong emphasis on sustaining existing employment, retaining workforce capability, supporting the local economy, and maintaining associated infrastructure such as the Midland Rail line.

5.3.7 Environmental Management, Water Quality and AMD

Environmental effects have been a central focus of consultation, particularly AMD, water quality, hydrology, biodiversity, rehabilitation, compensation and long-term closure outcomes. Community sessions, NGO engagement, iwi engagement, council and regulator discussions, and industry consultation all identified water and ecological effects as critical matters requiring robust assessment and long-term management.

Stakeholders sought clarity on how historic AMD liabilities are managed, the Crown's role in legacy issues, the treatment of mine-affected water, effects on the Ngakawau and Waimangaroa catchments, water monitoring, ecological restoration and the effectiveness of rehabilitation techniques. In response, Bathurst has emphasised its existing AMD management role, ongoing water treatment, progressive rehabilitation, technical assessments, peer review of key reports and long-term aspirations to improve waterway health.

Consultation with MaPPS is one example of environmental feedback materially influencing the Project. MaPPS raised concerns about the proposed water management strategy and its consistency with the purpose of the MaPPS Reserve and the associated memorandum of understanding. Bathurst subsequently revised the water management strategy. The revised approach was generally accepted because it would result in little or no change to current water flows through the reserve and would avoid the need for water management infrastructure within the reserve.

5.3.8 Recreation Access and Amenity

375 Recreation access has emerged as one of the most important and sensitive issues for local
and regional stakeholders. Access to Mt Rochfort, Mackley Track, Mt William and the wider
Denniston and Stockton Plateaux is valued by 4WD users, cyclists, walkers, trail runners
and the general public. Stakeholders acknowledged that mining would affect amenity and
access, but sought practical solutions that would maintain meaningful access where
380 possible.

As a result of this engagement, Bathurst has committed to maintaining a base level of
access to Mt Rochfort and Mackley Track throughout the life of the mine. This includes
proposed annual access days, the ability to apply for additional access for specific events,
access protocols, possible escorted access, online information, wayfinding signage and
385 further work with recreation groups to identify alternative routes and improve understanding
of remaining recreation opportunities. Walking and cycling access through to Mackley Track
is proposed to be maintained through a single-track arrangement along the Upper
Waimangaroa Haul Road alignment.

This consultation has directly shaped the Project's approach to recreation effects by moving
390 beyond identifying access disruption as an unavoidable consequence of mining to include
practical access commitments, communication tools and ongoing advisory mechanisms as
part of the proposed mitigation package.

5.3.9 Heritage Protection and Community Identity

Heritage has also emerged as a significant issue, particularly for Denniston, Millerton,
395 Stockton and the wider Northern Buller community. Heritage groups emphasised the
importance of recording, protecting and appropriately managing European mining artefacts,
preserving oral histories, considering long-term custodianship and identifying post-mining
opportunities that retain or enhance the area's heritage values.

Engagement with Friends of the Hill, Northern Buller Museum, and Museum of Kawatiri has
400 led to the development of a non-Māori artefact management protocol. This provides for
artefacts to be recorded in situ where possible, retrieved if safe and appropriate, labelled,
analysed if required, temporarily stored securely, and considered for conservation and
custodianship in consultation with Bathurst, the landowner and relevant local museums.
The protocol also provides for annual reporting of artefacts recorded, retrieved, analysed,
405 conserved and transferred into custodianship.

This is a tangible example of consultation directly informing the application's content and
proposed conditions by moving heritage management beyond assessment to an agreed
practical process involving local custodians and museums.

5.3.10 Amenity, Transport and Localised Effects

410 Localised amenity matters have also been raised, particularly by residents near the Ngakawau rail loading facility. Feedback about the continuation of existing operations was generally accepting, but specific matters such as generator noise, rail shunting, dozer operations and dust monitoring were identified for investigation and practical response.

415 Bathurst has responded by progressing a series of targeted actions, including noise attenuation for the generator, review of dozer operating procedures and potential attenuation measures, working with SGS to manage generator noise, and consulting KiwiRail regarding rail shunting protocols and compliance with rail operating procedures. These responses demonstrate how localised consultation has informed practical management measures for amenity effects.

420 5.3.11 Utility, Infrastructure and Emergency Access

Utility providers and emergency services emphasised the need for reliable, safe and timely access to critical infrastructure, particularly telecommunications and electricity infrastructure at Mt Rochfort. In response, Bathurst has developed access protocols providing for 24/7 emergency and planned maintenance access, site inductions, vehicle requirements, mine radios, escorted access, gatehouse coordination, forward planning for maintenance, and monthly stakeholder meetings during initial implementation.

430 Engagement with Transpower has also informed the Upper Waimangaroa Haul Road alignment and civil construction design, ensuring compliance with relevant electrical clearances and setback distances. These outcomes demonstrate how infrastructure-related consultation has influenced design, construction planning and operational protocols. Transpower has provided a letter acknowledging this consultation and the agreed management protocols for the Project (refer **Part F**).

435 Consultation with Kawatiri Energy Ltd and Buller Electricity Ltd has been undertaken as a targeted component of the BPCP engagement programme, recognising the potential interface between the Project and existing or proposed hydro-schemes. Engagement with Kawatiri Energy Ltd has focused on water effects, flow protection, water quality, discharge protocols, and ensuring that the BPCP does not adversely affect hydro-generation capacity or existing consents and authorisations. This has resulted in the provision of water-effects information, ongoing technical meetings, updated water modelling, and work towards
440 formal agreements that address flow and water-quality obligations across the construction, operation, closure, and post-mining phases. Overall, it is not considered that the BPCP will result in any adverse effects on the operation of the existing Kawatiri Energy hydroscheme.

Engagement with Buller Electricity Ltd has focused on the physical and operational interface between the BPCP and any future proposed hydroscheme. While Buller Electricity Ltd holds consents previously obtained by Hydro Developments Ltd, it is expected to seek variations or new consents for its current plans, which differ from the existing consents. Bathurst has agreed in principle to work with Buller Electricity Ltd and the Crown, through LINZ, to determine whether a hydroscheme incorporating elements of the Stockton Mine can be achieved without compromising the Project.

5.3.12 Outcomes of consultation

The consultation process has produced a series of concrete outcomes that have informed both the Project design and the proposed management framework. Key outcomes include:

- > Refinement of water management approaches, including changes to the strategy affecting the MaPPS Reserve and ongoing engagement with stakeholders concerned about AMD, water quality, hydrology and ecological restoration.
- > Development of recreation access commitments, including guaranteed base-level access to Mt Rochfort and Mackley Track, proposed annual access days, event-based access flexibility, walking and cycling arrangements, wayfinding, online access information and ongoing engagement with recreation users.
- > Creation of a heritage artefact management protocol, developed with local heritage and museum groups to guide the recording, retrieval, storage, conservation, custodianship and annual reporting of non-Māori artefacts.
- > Development of utility and emergency access protocols, including 24/7 access arrangements, escorted access, induction requirements, emergency response processes and forward planning procedures for planned maintenance.
- > Local amenity management responses, particularly at Ngakawau, where noise and rail-related concerns have informed further investigation of dozer noise, generator noise, operating procedures and rail shunting protocols.
- > Ongoing engagement commitments, including twice-yearly operational meetings with MaPPS, post-submission stakeholder updates, advisory or consultation mechanisms, fact sheets, a Project website and continued engagement through the Fast-track assessment process and life of mine.
- > Integration of cultural assessment, through ongoing engagement with Ngāti Waewae and the preparation of a CIA to accompany the application.

- 475 > Peer review and technical transparency, including independent peer review of key environmental effects assessments and sharing of technical material with relevant stakeholders and statutory agencies.

5.3.13 How Consultation Has Informed Bathurst's Fast-track Application

480 Consultation has materially informed Bathurst's approach to its Fast-track application. It has shaped the way the Project is framed, the matters prioritised in the application, the proposed mitigation and management measures, and the commitments that Bathurst is advancing as part of the approvals package.

485 Most importantly, the consultation has reinforced that the Project is not being advanced solely as a mine-continuation proposal. It is also framed around a broader set of objectives that have been part of Bathurst's Project development from the outset: maintaining employment and economic resilience for the Buller district and the West Coast, supporting national and regional infrastructure including rail, continuing management of historic environmental liabilities on behalf of the Crown, protecting and managing cultural and heritage values, maintaining recreation and infrastructure access where practicable, and
490 ensuring that environmental effects are assessed and managed through robust technical work, adaptive management, conditions and ongoing engagement.

The engagement process has helped Bathurst understand which issues are most important to stakeholders. These include:

- > Certainty of employment and continuity of operations;
- 495 > Water quality, AMD and long-term environmental management;
- > Biodiversity, rehabilitation, offsetting and closure outcomes;
- > Access to valued recreation areas;
- > Protection and custodianship of heritage artefacts;
- > Local amenity effects such as noise, light, traffic and rail operations;
- 500 > Safe, reliable access to critical utilities and emergency services; and
- > Transparent communication and confidence in the Fast-track assessment process.

These priorities are reflected in the application through proposed consent conditions, management plans, technical assessments, access protocols, heritage management processes, recreation commitments and ongoing engagement mechanisms. They have also
505 informed the scope and emphasis of supporting material, including social and economic

assessments, technical fact sheets, community FAQs, environmental assessments, peer review processes and the planned Project website.

In practical terms, the application has been shaped by consultation in the following ways:

- 510 > Project objectives have been reinforced and explained through consultation, including employment retention, regional economic contribution, continued AMD management, rehabilitation and closure planning.
- > Mitigation has become more targeted and place-specific, responding to issues raised by particular communities or stakeholders, such as Ngakawau amenity, MaPPS water management concerns, Denniston heritage and recreation access.
- 515 > Access has become a central design and management issue, with specific protocols proposed for recreation users, utility providers and emergency services.
- > Heritage management has moved from assessment to implementation, through a practical artefact management protocol developed with local museums and heritage groups.
- 520 > Environmental assessment has been strengthened through stakeholder input, technical report sharing and independent peer review of key effects assessments.
- > Ongoing consultation has been embedded into the Project, with commitments to continued stakeholder updates, regular meetings, advisory mechanisms, a Project website and post-submission engagement.

525 Overall, the consultation undertaken has informed Bathurst's Fast-track application by identifying the issues that matter most to stakeholders and translating them into Project commitments, design responses, management plans and proposed conditions. The application reflects a responsive and adaptive approach, linking continued mining to commitments around employment, environmental stewardship, access, heritage

530 protection, transparency and long-term closure outcomes.

Given the scale, complexity and multidisciplinary nature of the BPCP, Bathurst was not able to provide all stakeholders with the complete final application package during consultation. The application required the preparation, integration and review of a substantial suite of technical assessments, management plans and supporting material, much of which

535 continued to be refined close to lodgement. Bathurst nevertheless sought to consult in a meaningful and iterative way by engaging with stakeholders on matters relevant to their interests, sharing available technical information and effects-assessment summaries where practicable, and using stakeholder feedback to inform the Project design, proposed mitigation, management plans and consent conditions. Regulators, including DOC, were

540 also provided with access to draft technical reports for comment when available.
Comments received through that process have, where possible, been considered and
incorporated into the updated technical reports submitted with the application.

5.4 ASSESSMENT OF ALTERNATIVES

5.4.1 Introduction

545 Under the FTAA, consideration of alternative locations and methods is relevant in certain
respects, including:

- > Schedule 5, clause (6)(1)(c) – if the activity includes the discharge of any contaminant, a
description of –
 - (i) The nature of the discharge and the sensitivity of the receiving environment to
550 adverse effects; and
 - (ii) Any possible alternative methods of discharge, including discharge into any
other receiving environment.
- > Schedule 5, clause (7)(e) – any discharge of contaminants into the environment and
options for the treatment and disposal of contaminants.
- 555 > Schedule 6, clause (3)(1)(c) - information about whether the project could reasonably be
undertaken in another location, or in another conservation area or another part of the
conservation area, where the potential adverse effects would be significantly less.

560 Against that background, this chapter provides a broad and integrated assessment of the
alternatives considered in the development of the Project. This chapter does not seek to
exhaustively assess every conceivable alternative. Rather, it provides a proportionate and
practical assessment of the alternatives considered relevant to the Project and
demonstrates that the proposed configuration appropriately responds to the Project's
functional, operational, environmental, and technical constraints.

5.4.2 Project Objectives and Alternatives Assessment

565 Mining activities are inherently constrained by the location of the mineral resource. Bathurst
nevertheless recognises that this resource is co-located with important natural values, and
that extraction must, where practicable, avoid significant and enduring adverse effects on
those values. Bathurst has therefore assessed alternatives relating to mining
methodologies, mine plans and the siting of associated infrastructure.

570 The alternatives assessment has been embedded in the Project's development since 2019.
Multiple iterations of mine planning, infrastructure design, and water management have

been considered through structured analysis and informed by progressively refined datasets, including exploration, hydrological modelling, geochemical testing, and coal blend optimisation. This iterative process has enabled continued refinement of the Project configuration and helped ensure the final design reflects a balanced response to environmental, cultural, technical and economic constraints.

The alternatives work has addressed mine design and sequencing, transport corridors and vehicle selection, processing strategy, water management, sanitary systems and enabling infrastructure, informed by ecological, heritage, geotechnical, safety, practical and cost considerations.

The Project has been developed to:

1. Maintain coal tonnage and product quality to sustain existing logistics and Project economic viability (i.e., blending quality);
2. Minimise new disturbance by reusing infrastructure and maximising in-pit backfill;
3. Avoid high-value ecological and heritage features wherever practicable;
4. Deliver robust water quality outcomes via clean/dirty water separation, on-site treatment and closure-ready passive systems (at least for the new Project Sub-Areas); and
5. Ensure operational flexibility, safety and geotechnical feasibility over the Project life.

These objectives have framed the lens of practicability through which alternatives were examined and preferred options selected. Functional and operational needs have also been prioritised in this assessment.

A key outcome of the alternatives assessment is that, in several instances, economically recoverable coal has been deliberately set aside to avoid or reduce adverse environmental and cultural effects. Examples include stand-offs to the Whareatea River headwaters and gorge, exclusion of the Billo Stream headwater tarn from disturbance, and adjustments to pit geometry to avoid heritage features. These decisions show that environmental and cultural constraints have directly shaped the extent and configuration of mining, even where this reduces resource recovery.

Closure outcomes have also been central to the evaluation of alternatives. Options requiring long-term reliance on active management, or creating ongoing geotechnical or water-quality risks, were generally discounted in favour of approaches that support stable landforms, controlled water pathways and a gradual transition to passive treatment where practicable. Examples include removing or sealing underground workings, maximising in-pit backfilling,

605 and adopting landform and water-management strategies that reduce the need for intervention after mining ceases.

5.4.2.1 Functional and Operational Need

Consideration of the ‘functional’ and ‘operational’ needs of the Project has also been a fundamental component of this assessment.

610 Functional need is defined in the NPS-IB and NPS-FM as:

The need for a proposed activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment.

Operational need is defined as:

615 *The need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints.*

In assessing functional and operational needs, the following matters are relevant to this proposal:

- > Location of the mineral resource;
- 620 > Quality and blending requirements;
- > Proximity of existing mining-related infrastructure;
- > Land ownership and control;
- > Efficiency benefits in relation to material movement costs;
- > Geotechnical and hydrological constraints (or opportunities);
- 625 > Construction efficiency;
- > Known technology;
- > Scale.

Functional need was also considered in the Mt Messenger Bypass case, where the Court held that:

- 630 > The presence of alternative routes for a proposal is not in itself a sufficient argument to indicate a lack of “functional need” because, with linear infrastructure, alternatives will always exist, and their existence could not have been intended to make the specified infrastructure exception serve no practical purpose.

- 635 > The “location” in which the activity occurs does not mean the specific wetland in question, but the broader environment (as defined in section 2 of the RMA) that is subject to the activity.

While the BPCP is not a linear infrastructure like a roading project, its components are highly interconnected in physical, operational, and functional terms. Pit locations are driven primarily by the location, depth, geometry and quality of the coal resource, together with the need to access a blend of coal types capable of maintaining the required product specification. In that respect, the mining activity has a clear functional need to occur within the Buller Plateaux environment because the coal resource can only be extracted where it occurs.

645 The proposed pit locations and pit extents have also been shaped by operational constraints and opportunities, including coal seam sub-crop, seam dip and structure, stripping ratio, overburden depth, existing underground workings, minimum mining widths, geotechnical conditions, safety, surface and groundwater drainage, AMD management, access, proximity to ELFs and water treatment infrastructure, heritage constraints, ecological values and the need to minimise the overall disturbance footprint. These matters have materially influenced the final pit layouts for both MFS and ESE. For example, the MFS pit sequence is linked to the preferred southern access route and enables mining to commence in the lower strip-ratio West Pit, with improved water management and reduced ex-pit landform requirements. Similarly, the ESE pit has been refined through multiple design iterations to stand off the Whareatea River headwaters and heritage areas, while retaining a practical and economically viable mining sequence.

660 The infrastructure proposed as part of the BPCP also has functional and operational locational requirements. Much of the infrastructure is not standalone; rather, it is required to enable the pits to operate safely and efficiently, with appropriate environmental management. This includes haul roads, coal stockpiles, WTPs, sumps, CWDs, ELFs, borrow pits, power supply, wastewater treatment, laydown areas and access controls. These components must be located in close proximity to the mining areas, transport corridors, water management catchments and suitable ground conditions, while also avoiding or minimising effects on wetlands, waterways, heritage sites, public access, existing utilities and areas of higher ecological value.

665 A central operational requirement of the Project is connecting the new mining Sub-Areas to the existing Stockton infrastructure. The UWHR is required to connect MFS and ESE with the existing Stockton CHPP, rail loadout and supporting infrastructure. This connection avoids the need to construct a new coal processing plant and associated infrastructure on the Denniston Plateau or coastal plain, thereby reducing capital costs, avoiding duplication of

670 infrastructure, minimising operational disruption, and reducing the overall infrastructure footprint in the new mining areas. The alternatives assessment found that using the existing Stockton CHPP provides the lowest capital-cost option, avoids production lag associated with relocation or new construction, uses established services and infrastructure, and avoids a new off-site processing footprint.

675 The location and design of the UWHR is also driven by operational and technical constraints. Alternative coal transport options, including public road haulage, aerial ropeway, rope conveyor, and slurry pipeline, were considered but not preferred due to cost, capacity, technical risk, fixed alignment constraints, reduced flexibility, additional water management requirements, or the need for supporting access corridors. The preferred private haul road

680 option provides flexibility to service different production areas and production rates, while the selected road-train configuration reduces road width, axle loading, construction requirements, maintenance requirements and disturbance footprint compared with conventional mine trucks. The alignment was selected because it avoids the need for further significant river crossings, reduces geotechnical and cost risk, and avoids areas of greater

685 ecological sensitivity.

The proposed water management infrastructure also has a clear operational need for specific locations. Water treatment plants (or “WTP”), sumps, clean water diversions (or “CWD”), bypasses, and discharge points must be located with regard to catchment boundaries, pit sequencing, grades, pumping distances, water quality, treatment

690 requirements, receiving environment sensitivity, and the need to manage AMD. For MFS, an on-site water treatment plan was preferred over pumping mine-affected water to the McCabes treatment system at Stockton because it provides enhanced treatment for metals, suspended solids and pH, retains treated water within the Waimangaroa catchment, and provides greater operational flexibility. The selected MFS water treatment plant location was

695 chosen after considering access, geotechnical conditions, the ability to treat runoff from the coal stockpile area, discharge location, and environmental outcomes. For ESE, clean water diversion and treatment infrastructure has likewise been designed to reduce demands on treatment systems and manage water quality through the operational and closure phases.

700 Other infrastructure has similarly been located based on operational need and effects minimisation. The ESE infrastructure layout was refined several times to consolidate operational and support functions into a central infrastructure area, using existing disturbed areas where practicable and accounting for terrain, proximity to mining operations, transport corridors, blast clearances, heritage sites, the ex-pit seal, and existing ecological enhancement areas.

705 Accordingly, the Project components are not freely relocatable. The pits must be located
where the coal resource and required blending outcomes can be achieved, and the
supporting infrastructure must be located to safely and efficiently service those pits,
connect them to existing Stockton infrastructure, manage water and waste streams, provide
access, and avoid unnecessary duplication or remote infrastructure. The alternatives
710 assessment shows that the selected locations and designs have been progressively refined
to balance these functional and operational requirements with environmental, cultural,
heritage, technical and economic considerations.

In addition, the alternatives assessment has been undertaken in the context of the Project as
listed under the FTAA. That listing identifies the Project and its relevant components and
715 therefore provides an important frame for the alternatives assessment. While Bathurst has
considered alternative locations, methods, designs, sequencing and management
approaches within that framework, the assessment is not an unconstrained reconsideration
of wholly different projects or development areas outside the listed Project.

5.4.2.2 Mining Methodology, Open Pit vs Underground

720 Underground mining has several advantages over opencast mining, including reduced
surface effects and fewer amenity issues such as noise, dust, and visual impacts. However,
underground mining is considerably more technically challenging, poses higher risks to
worker safety, and is more expensive, less productive, and less flexible or scalable than
opencast mining.

725 Underground mining has a long operating history across the Buller Plateaux, particularly in
the Stockton, Escarpment, Sullivan, Whareatea and Mount Frederick areas, where historic
bord-and-pillar and hydro-mining methods were previously used. As part of the
development of the BPCP, underground mining was explicitly recognised and considered
during mine planning, resource evaluation, and options assessment. This consideration
730 occurred both directly (through assessment of potential future mining approaches) and
indirectly (through assessment of interactions with legacy underground workings and their
implications for safety, water management, and environmental risk).

Following a detailed technical evaluation, underground mining was not considered
consistent with BPCP objectives. Instead, the Project favours opencast mining integrated
735 with progressive rehabilitation and water management, principally because underground
methods would create greater safety, environmental, water-management, economic and
closure risks.

A fundamental constraint on underground mining across the BPCP areas is the condition of
the coal measures and overburden. Much of the resource beneath both the Stockton

740 Plateau and Denniston Plateau is shallow to moderate depth, structurally disrupted, and intersected by historic workings with incomplete or unreliable records. Large parts of ESE and MFS also contain secondary and hydro-mined workings, where collapse, void migration and subsidence are already present or anticipated.

745 These conditions would require extensive ground stabilisation, conservative extraction ratios and large exclusion zones, materially sterilising coal and reducing recovery compared with opencast mining, which allows controlled removal and backfilling of disturbed material while achieving higher recovery rates.

750 Safety was also a decisive factor. Existing underground workings pose ongoing risks of void collapse, uncertain pillar conditions, and water ingress, particularly where historic hydro-mining has compromised the strength of subsurface material beyond clearly defined mine geometries.

755 Rather than introducing new underground operations through these conditions, the Project proposes in some areas to mine through and remove legacy workings by opencast methods, improving long-term safety by reducing future subsidence and uncontrolled water migration risks. Underground redevelopment was therefore assessed as introducing unacceptable operational risk.

760 Water management, particularly AMD control, was another central reason underground mining was deemed inappropriate. Historic underground workings across the Buller Plateaux act as uncontrolled hydraulic conduits, allowing mine-impacted water to move laterally and vertically over long distances and discharge to sensitive receiving environments.

765 The alternatives assessment, therefore, prioritised eliminating or isolating underground water pathways rather than reactivating them. This is reflected in decisions such as mining through legacy workings in Millerton and the MFS West Pit to reduce AMD generation and groundwater flow paths and constructing engineered ex-pit seals at ESE where workings cannot be removed. By contrast, ongoing or expanded underground mining would increase reliance on long-term pumping, sealing and treatment, with greater post-closure liabilities and uncertainty.

770 From an economic perspective, underground mining was also found to be less efficient and higher risk than opencast alternatives. Underground development would involve high upfront capital costs, lower production rates, reduced recovery due to safety exclusions, and increased operating complexity, particularly in water and gas management. These factors were inconsistent with the strategic objective of sustaining economically viable

production using existing infrastructure and blending strategies across Stockton, MFS and ESE.

In summary, underground mining was evaluated and rejected because of unfavourable geological conditions, unacceptable safety risks from legacy workings, complex and enduring water-management liabilities, poorer closure outcomes, and weaker economic performance than opencast options. In this context, it was not considered an appropriate or defensible option for continuing mining across the Buller Plateaux.

5.4.2.3 Stockton, Treasury Business Case

As discussed earlier in this application, the Crown's long-term liability for historic AMD at Stockton is managed under the Deed of Commitment, with BT Mining currently managing historic AMD on the Crown's behalf while mining continues. The Crown's liability principally relates to AMD generated by pre-2017 Crown and Crown-owned mining activity, while Bathurst/BT Mining remains responsible for AMD generated by its own post-2017 mining activity and for managing the site during the operational period.

In March 2024, the Treasury completed the Stockton Mine AMD Management Project Single Stage Business Case to identify the preferred long-term approach for the Crown to manage AMD after the point at which the miner exits the site. The business case was not a mine continuation assessment, nor did it assess the BPCP. However, it is directly relevant to this application because it evaluates the same long-term AMD management setting at Stockton, recognises the importance of using existing on-site capability while mining continues, and identifies a preferred pathway that builds on the current Stockton AMD management system rather than replacing it with a fundamentally different approach.

The business case assessed four plateaux-wide masterplan options for long-term AMD management: the Base Case, the Enhanced Base Case, Individual Advanced Active Treatment, and Combined Waterways with No Treatment Discharging to Ocean Outfall. The Enhanced Base Case was identified as the preferred option because it met the Crown's Project objectives and critical success factors, while managing risk and cost. The Treasury business case sets out that the preferred direction is not to stop activity at Stockton and wait for Crown management at the end of mining. Rather, it emphasises the need to act early, retain and use the existing site knowledge, capability and infrastructure while the miner remains present, progressively improve treatment outcomes, and maintain flexibility through monitoring, feasibility studies and adaptive management.

The BPCP is consistent with that direction. At Stockton, the Project continues to use and optimise established AMD treatment infrastructure, including the existing network of sumps, pumps, drains, treatment systems and monitoring arrangements. It also supports

810 continued management of legacy AMD while Bathurst’s personnel, contractors, equipment,
data systems and operational expertise remain available on site. That is materially aligned
with the business case’s emphasis on transition planning, continuity of treatment, and
making practical improvements before capability is lost through mine closure.

815 In particular, the Stockton component of the BPCP supports the Enhanced Base Case
pathway by maintaining the existing active treatment platform, enabling progressive
optimisation of treatment systems, retaining long-term treatment infrastructure beyond
closure, improving source control through mine planning and rehabilitation, and providing
for monitoring and adaptive management. The proposed management of Millerton, Hope
Lyons and Rockies North through a network of in-pit sumps integrated with the life-of-mine
disturbance footprint also reflects the business case’s preference for practical, staged, site-
820 specific management rather than large new off-footprint or diversion-based infrastructure
where that would introduce additional environmental, consenting and delivery risk.

The business case also expressly recognises that AMD management at Stockton must
remain adaptive. Its preferred option is a point-in-time framework based on the best
available information, with future treatment decisions refined through monitoring, feasibility
825 studies, and changing site conditions. The BPCP adopts the same philosophy. It does not
lock the Crown, the future landowner, or the long-term management entity into a rigid
treatment pathway. Instead, it maintains continuity of proven treatment systems while
allowing future optimisation as monitoring results, mine closure planning, technology and
regulatory expectations evolve.

830 This is a positive and important alignment. The fast-track approvals sought by Bathurst
would enable continued mining and associated AMD management to occur in a way that
supports, rather than frustrates, the Crown’s long-term planning direction. Continued
operations provide the practical platform for maintaining existing treatment, implementing
progressive improvements, gathering further monitoring data, refining closure designs, and
835 preparing for transition to Crown-led management at the point of exit. In that respect, the
BPCP is consistent with the options assessment and overall trajectory of the Treasury
business case, which favours a pragmatic, evidence-based and progressively improving
approach to long-term AMD management at Stockton.

5.4.2.4 Ecological Compensation Measures

840 A range of compensation alternatives has been considered to address the residual
terrestrial ecological effects of the Buller Plateaux Continuation Project. This assessment
has been undertaken in accordance with the effects management hierarchy, which requires
adverse effects to be avoided, minimised, and remedied to the extent practicable before

offsetting is considered, and compensation applied only where residual adverse effects remain and offsetting cannot be fully achieved.

The assessment confirms that, given the nature, scale, and significance of the ecological values affected, strict like-for-like biodiversity offsetting is unlikely to be achievable in all respects. In particular, the Project affects threatened ecosystems and species associated with the Buller Plateaux, including habitats that cannot realistically be recreated or restored elsewhere at equivalent scale, condition, and certainty. The loss of these values, including wetland and sandstone pavement habitats, cannot feasibly be addressed solely through conventional biodiversity offsetting methods. Accordingly, the alternatives assessment has focused on identifying the package of measures most capable of counterbalancing residual adverse effects through measurable ecological gains, while remaining practicable, robust, and defensible in the context of the Fast-track approvals framework.

The alternatives were assessed against a consistent set of criteria, including:

- > Ecological relevance to the Project's residual effects;
- > Likely scale and certainty of ecological gain;
- > Technical and operational feasibility;
- > Implementation risk and long-term durability;
- > Land access and third-party dependency constraints;
- > Alignment with statutory policy expectations and biodiversity management principles; and
- > Relative cost-effectiveness over the life of the Project.

The assessment was also informed by a preliminary Biodiversity Assessment, which was used to provide an indicative estimate of the extent of habitat likely to be impacted and the type of measures available to broadly counterbalance the Project's residual terrestrial ecological effects. Based on the assumptions applied, the assessment supported a combined package comprising ecological rehabilitation within the Project footprint, on-site pest eradication within the proposed pest exclusion fenced areas, and targeted off-site pest management.

The principal alternatives considered were as follows.

Large pest exclusion fencing on the Buller Plateaux

Large pest exclusion fences on the Stockton and Denniston Plateaux were identified as key options because they offer the highest level of confidence in securing long-term biodiversity

gains in locations closely related to the environments affected by the Project. These measures would enable the eradication of mammalian browsers and predators within fenced areas, supported by weed management and, where appropriate, fauna relocation or translocation. Their main advantage is that they provide a durable and controlled mechanism for restoring ecological conditions in high-value habitats and directly benefiting species affected by the Project. They are also less vulnerable to setbacks from mast seeding events and reinvasion than broad-scale suppression programmes.

A further important consideration in identifying these fencing options was ensuring that the compensation measures did not themselves generate unnecessary ecological effects. Proposed fence locations and alignments have therefore been selected to maximise the use of existing disturbance footprints, including roads, tracks, and modified corridors, thereby minimising additional vegetation clearance, habitat disturbance, and associated construction effects. This was a deliberate and important factor in the assessment of alternatives, as it reduces the extent to which the compensation package itself causes further ecological or landscape effects. In that respect, the preferred fencing options are not only effective but also represent the least intrusive and most defensible means of delivering those benefits.

While these options involve significant establishment costs and, in some cases, reliance on third-party land access, they were nevertheless assessed as highly favourable because they provide the strongest combination of ecological relevance, certainty of benefit, long-term effectiveness, and minimisation of secondary effects.

Smaller pest exclusion fences

Smaller pest exclusion fences on the Stockton Plateau and elsewhere on the plateaux were also considered. These options retain many of the same ecological advantages as larger fences, but at a smaller scale. While they may be more affordable and easier to implement, their ecological value is correspondingly reduced, particularly in carrying capacity, habitat diversity, and the ability to support a wider range of threatened species. They were therefore considered potentially useful as supplementary or fallback measures, but less effective than larger fenced areas as a primary response to the Project's residual effects.

Mt Augustus pest exclusion fence

A smaller exclusion fence at Mt Augustus was considered particularly relevant for the protection and recovery of *Powelliphanta augusta* and associated species. This option would provide a relatively high level of certainty of gain for that species and directly support an important outcome for a threatened species. However, the ecological benefits are narrow in scope, and the site presents technical challenges for construction and

maintenance due to steep, exposed terrain. As a result, this option was considered beneficial but discounted as a larger exclusion fence as it is limited in its ability to respond to the broader suite of residual terrestrial ecological effects associated with the Project.

Offsite predator-proof fencing

915 Offsite predator-proof fencing, potentially across one or more locations, was also identified
as a possible means of generating biodiversity gains for threatened lizards and invertebrates
that may not be fully addressed by onsite measures. While such options may provide strong
benefits for selected species and could support broader conservation priorities, they are
constrained by the difficulty of identifying suitable sites, the practicality of constructing
920 fences without causing further ecological effects, and potential dependence on third-party
approvals. These factors reduce their suitability as the primary response, although they may
have value as part of a broader package.

Large-scale offsite pest management

925 A number of landscape-scale pest management alternatives were considered, including
support for Paparoa Predator Free, the Old Ghost Road Sanctuary concept, and large-scale
pest suppression on Department of Conservation-administered land in the wider
surrounding landscape. These options have the potential to generate biodiversity gains
across large, diverse areas and could contribute to broader regional conservation
outcomes. However, the assessment identified substantial constraints, including very high
930 cost, governance complexity, reinvasion risk, lower certainty of success, social licence
concerns in some locations, and reliance on third-party agencies and long-term operational
commitments.

Although these options may offer theoretical ecological benefits at the landscape scale,
they were not considered the most appropriate primary response to the Project's residual
935 effects. In particular, they were assessed as less defensible because of the lower certainty
of sustained ecological outcomes relative to the level of investment required, and because
they are less directly connected to the specific biodiversity values affected by the Project.

Support for existing Predator Free 2050 initiatives

940 The option of contributing to an existing Predator Free 2050 programme was also
considered. This option has advantages in terms of existing governance arrangements,
established delivery structures, and confidence that funding would be directed toward
effective conservation outcomes. However, while such support may represent a useful
supplementary measure, it does not provide a sufficiently direct or Project-specific
response to the residual ecological effects of the BPCP to be relied upon as a standalone
945 solution.

Preferred package and reasons for selection

Having considered the available alternatives, the preferred residual effects package comprises:

- > Large pest exclusion fencing on the Stockton and Denniston Plateaux, coupled with smaller fences in targeted locations;
- > Targeted off-site pest management where appropriate;
- > Ecological rehabilitation and weed control within the Project footprint; and
- > Complementary freshwater, recreational and heritage measures forming part of the broader residual effects package.

This package is considered the most appropriate alternative because it best balances ecological relevance, practicality, certainty, and long-term effectiveness. In particular, Plateaux pest exclusion fencing offers the greatest prospect of achieving durable and measurable biodiversity gains in habitats most closely associated with the Project's impacts. It also enables compensation measures to be implemented in a way that minimises additional ecological disturbance by making maximum practicable use of existing disturbed corridors and modified areas. Ecological rehabilitation and weed control within the Project footprint contribute further gains over time, while targeted offsite measures and complementary freshwater, recreational and heritage initiatives provide flexibility to supplement onsite actions and broaden the overall residual effects response where like-for-like measures alone are insufficient.

Other alternatives were not preferred because they were either too limited in scale, too uncertain in their ecological outcomes, too dependent on third-party arrangements, or disproportionately costly relative to the level of confidence in delivery. By contrast, the preferred package provides the most robust and defensible response currently available. It can be staged and refined over time, providing an adaptive framework that responds to further ecological information, implementation experience, and stakeholder engagement as the Project proceeds.

Overall, it was considered that no single offset or compensation measure is sufficient in isolation to address the Project's residual terrestrial ecological effects. However, the preferred combined package provides the strongest and most credible response in the circumstances. It aligns most closely with the effects management hierarchy, offers the highest level of confidence in achieving enduring biodiversity gains, and has been designed to minimise the extent to which the compensation package itself generates new ecological disturbance.

980 **5.4.2.5 BPCP Mine Planning**

Stockton

985 Mining at Stockton is nearing completion. The remaining area of high-quality coal is in the Millerton section of the Stockton Mine. Initial mine plans for Millerton included a larger extraction footprint, but that footprint was reduced by approximately 48 hectares to better balance coal recovery with cost, disturbance and water-management considerations.

990 Long-term management of mine-affected water from Millerton, Hope Lyons, and Rockies North will utilise a network of in-pit sumps integrated within the life-of-mine disturbance, including the MW16 sump within the mined-out Millerton pit, building on existing on-site systems. This approach avoids increased disturbance to wetlands and reserve areas that would be affected by a large downstream sump and pipeline, while acknowledging the additional on-site pumping complexity, which is manageable with existing operational controls.

995 Bathurst also considered a range of borrow pit options, including sites north of Stockton, through a high-level assessment of environmental, operational and consenting factors. These northern options were not advanced because they posed greater potential effects on wetlands, headwater environments and other relatively undisturbed land.

1000 A key consideration was minimising overall disturbance and avoiding unnecessary expansion into new areas. Borrow pit options north of Stockton would have required additional disturbance outside the main development areas and introduced more complex consenting risks, including potential effects on DOC land and interactions with other developments. By contrast, the proposed borrow pits are within areas already associated with existing disturbance and the BPCP, allowing material sourcing to be integrated with planned works.

1005 Operational considerations pointed the same way. Northern Stockton borrow pits were less favourably located relative to key infrastructure, which would have increased haul distances, emissions and the Project footprint. Existing material sources within the Stockton area are sufficient to meet Project needs, so no additional northern borrow pit was required.

Mount Frederick South

1010 At MFS, mine planning alternatives focused primarily on access routes, pit sequencing, pit extents, and interaction with historical underground workings. Two fundamentally different development concepts were assessed: a north access option connecting via the existing Mount Frederick Block in the Stockton area, and a south access option linking MFS to the Upper Waimangaroa Haul Road.

1015 The north access option offered a shorter coal haul but required construction across steep, geotechnically challenging terrain and posed significant drainage risks to the headwaters of Deep Stream. Managing clean and mine-affected water under this option was assessed as complex and unreliable, with a high likelihood of direct discharges to sensitive headwater environments. As a result, despite its logistical appeal, this option was discounted.

1020 The south access option was comprehensively developed through several iterations, testing alternative alignments, bridge-versus-culvert crossings, and cut-and-fill volumes. This option enabled a West-to-East pit sequence, starting in the lowest strip-ratio areas, maximising early coal recovery and allowing progressive backfilling to minimise ex-pit disturbance. Importantly, it also enabled clean water diversions above the East Pit, materially reducing the mine-affected catchment draining to Deep Stream and Billo Stream.

1025 When assessed holistically, the south access option delivered the best balance of safety, simplicity in water management, and environmental risk reduction, and was therefore selected as the preferred approach.

1030 Within the MFS pit itself, alternatives were also considered around whether to exclude or mine through historical underground workings in the West Pit. A smaller pit shell avoided these workings but sterilised coal and left legacy water and stability risks in place. The larger pit shell deliberately incorporated underground workings and removed others, improving safety and reducing uncontrolled groundwater flow paths at the cost of increased disturbance. On balance, mining through the workings was selected as the preferred option due to improved long-term safety and water-management outcomes, despite its larger footprint.

1035

Escarpment Extended

At ESE, mine planning alternatives were particularly extensive and multi-layered due to the complexity of the existing mining footprint, heritage values, watercourses and historic underground workings. Alternatives were tested through iterative pit optimisation runs, alternative pit shells, alternative starter pits and multiple mine sequencing scenarios.

1040

Early options examined more expansive pit shells that mined through the headwaters and gorge of the Whareatea River. Although these options were economically attractive, they were rejected because of unacceptable environmental effects, rehabilitation complexity, and third-party risks. Subsequent options deliberately avoided the Whareatea River and its headwaters, explicitly setting aside economically viable coal to protect high-value receiving environments. These stand-offs became defining constraints in the preferred mine plan.

1045

Mine sequencing alternatives at ESE tested starting in the existing Escarpment Mine pit versus opening new starter pits in the Sullivan and Whareatea areas. Although the

1050 Escarpment first option benefited from existing disturbance, detailed analysis showed that a Sullivan first sequence delivered lower early strip ratios, better alignment with water management infrastructure, and improved flexibility for ELF placement and clean water diversions. Accordingly, Sullivan first was selected as the preferred mine sequence.

1055 Further design alternatives addressed the management of underground workings. Options ranged from leaving underground workings in place with reliance on pumping, to creating large in-pit sumps, to constructing targeted ex-pit-engineered seals outside the final pit. After assessing mining volumes, water containment effectiveness, and long-term risk, the ex-pit seal option was selected as the most effective and lowest-impact solution for isolating underground water pathways while minimising additional disturbance.

Upper Waimangaroa Haul Road

1060 Alternatives to the UWHR construction included public road haulage, aerial ropeways, slurry pipelines, and private haul roads using mining trucks and road trains.

1065 Aerial ropeway and pipeline options were initially considered to reduce surface disturbance, but were discounted due to high capital costs and limited operational flexibility. Slurry pipeline options were also rejected due to increased water demand and treatment risks, while public road haulage was ruled out due to payload limits, safety issues, and unacceptable traffic volumes.

1070 The preferred option was a private haul road using smaller mine vehicles, allowing a narrower road width than conventional mine-truck haulage and therefore reducing disturbance and construction cost. Within that approach, both true left-hand and true right-hand river alignments were tested. The true left-hand alignment was preferred because it avoided additional river crossings, wetlands and Transpower infrastructure, while identified geotechnical risks can be managed through design.

5.4.2.6 Infrastructure Siting

1075 Across the Project Sub-Areas, infrastructure siting and layout were guided by consistent principles: minimising disturbance; using existing disturbed areas where practicable; locating infrastructure close to operational areas and access corridors; preserving heritage sites and public access; meeting blast-clearance requirements; and reducing earthworks and costs. This led to a streamlined approach that integrated mine operations with support functions wherever feasible and relocated some non-critical facilities off-site to further

1080 reduce footprint and cost.

Stockton

1085 At Stockton, infrastructure siting was heavily influenced by the mine and associated processing facilities being an existing, long-established operation with extensive disturbance and embedded infrastructure. As a result, the primary siting consideration was whether additional or alternative infrastructure locations were required to service the broader BPCP, or whether existing Stockton infrastructure could continue to be utilised.

Alternatives considered included:

- > Expanding or relocating processing, water treatment or support infrastructure, and
- > Continuing to utilise existing Stockton infrastructure with incremental modifications.

1090 The alternatives assessment consistently favoured retaining existing Stockton infrastructure, including the CHPP, water management facilities and supporting services. This approach minimised new disturbance, avoided duplication of infrastructure, reduced capital cost, and limited additional consenting complexity. Stockton was therefore deliberately retained as the processing and logistics hub for BPCP, with infrastructure siting optimisation focused on integration rather than expansion into undisturbed areas.

1095

Mount Frederick South

1100 Given the steep, deeply incised terrain and bridge capacity limits, siting options at MFS are inherently constrained. As a result, the coal stockpile, temporary personnel buildings and laydown areas do not have practicable alternatives and are located on ELF pads sized to the landform, including a principal pad on the western side of the Waimangaroa River crossing and a smaller pad east of the West Sump. This placement keeps facilities close to haul access and out of high-value natural terrain, while ensuring workable geometry for operations.

1105 On-site infrastructure is intentionally minimised at this location, and there is an intention to use facilities at Stockton to reduce traffic, limit hardstand growth, and manage capital costs. A compact set of essential facilities, including a WTP, stockpile pad, fuel tanks, and laydown and staging areas, is the only infrastructure proposed to support the MFS Sub-Area. All infrastructure can be fully decommissioned and removed from this area upon closure.

Escarpment Extended

1110 Infrastructure for the ESE has been positioned on or near level terrain close to operations, using existing disturbed tracks and the existing Escarpment Mine disturbance footprint where possible. Iterative layout testing refined the design from multiple dispersed hubs to a single central infrastructure area, reducing duplicate hardstands, haul distances and overall

1115 disturbance. Non-essential heavy maintenance for light vehicles and road trucks is assumed to occur off-site, further reducing the on-site footprint and capital cost.

1120 Gatehouse options have also been evaluated to manage daily site access, blasting constraints, and public recreation interfaces. The preferred access-control location will be confirmed through detailed design, but the assessment has favoured options that avoid routine evacuation during blasting, keep administration and emergency response functions close to access control where practicable, minimise unnecessary vehicle movements further into the site, and maintain appropriate public access to DOC land where this can be achieved safely.

Upper Waimangaroa Haul Road

1125 The UWHR has been intentionally designed to exclude permanent ancillary infrastructure, incorporating only the essential elements required for road construction, operation and stormwater management. These elements include culverts, geosynthetic liners, slope reinforcement, sediment ponds, fill materials, and surfacing. Temporary or mobile laydown and sanitation facilities will be established in previously disturbed areas adjacent to the alignment where practicable during construction and for discrete maintenance activities.

1130 This approach avoids creating new long-term disturbance sites beyond those required for the haul road itself.

Options were also methodically assessed for public passage along or near the haul road.

5.4.2.7 Avoidance of Effects

1135 The alternatives assessment has been used as the primary mechanism to implement the effects management hierarchy, with avoidance addressed first through site selection and design constraints, followed by minimisation through layout refinement and operational controls, and finally remediation, mitigation and compensation where residual effects cannot be avoided.

1140 Avoidance has been embedded in mine planning from first principles and is reflected in several key design decisions. **Table 5-4** below summarises how mine planning has sought to avoid, or where that is not practicable, minimise adverse effects on key features and values (including heritage and ecology) from the outset. **Tables 5-5** and **5-6** then provide a further summary of the alternatives specifically considered for water and discharge management at each site, to demonstrate consistency with the requirements in Schedules 5 and 6 of FTAA.

1145

Table 5-4: Summary of Mine Planning Features and Avoidance / Minimisation Strategies

Project Location	Subject Area	Avoidance / Minimisation Strategy
Project-wide	Cultural, environmental and economic screening	Multiple potential Project areas, including Mount William South, Marshall's, Ironbridge and Wellington, were excluded from the BPCP where cultural or environmental sensitivity, technical complexity, or disproportionate effects outweighed their economic contribution. This demonstrates that the final Project footprint has been reduced through early options analysis.
Project-wide	Functional and operational need	The location of the pits is primarily dictated by the location, geometry, depth and quality of the in-situ coal resource. The pit layouts have then been refined to respond to operational constraints, including seam structure, stripping ratio, existing underground workings, minimum mining widths, geotechnical conditions, water management, AMD control, access, safety and proximity to infrastructure.
ESE	Utility / powerline infrastructure	The existing powerline from Mt Rochfort to the wider Denniston Plateau passes through the proposed ESE disturbance area. Complete avoidance is not practicable for the full mine life. The proposed response is staged realignment rather than removal, allowing the powerline to be retained and supply maintained as mining progresses.
ESE	Heritage	[REDACTED]
ESE	Heritage	[REDACTED]
ESE	Utility / Mt Rochfort access	Access and power supply to the Mt Rochfort repeater/ tower will be maintained during operations. Where the existing access is affected by mining, access will be managed through operational controls, including escorted

Project Location	Subject Area	Avoidance / Minimisation Strategy
		access through active mining areas where required. A light vehicle access route is proposed to be reinstated over the final landform at closure.
UWHR	Utility / Transpower infrastructure	The preferred UWHR alignment is on the true left-hand side of the Upper Waimangaroa River. This alignment avoids the need to cross the river to avoid Transpower towers and lines, and avoids the additional cost, construction complexity, and geotechnical risk associated with the alternative true right-hand-side alignment.
UWHR	Alignment and footprint	The true right-hand side UWHR option was not progressed because it would have required two significant river crossings and introduced greater geotechnical, ecological and cost risks. Selection of the true left-hand side alignment therefore minimises infrastructure complexity and reduces the overall disturbance and risk profile.
UWHR	Public and utility access	Options for public and utility access were considered as part of the UWHR design. The preferred approach avoids providing a fully duplicated public vehicle road, which would materially increase disturbance, while still allowing for managed public and utility access arrangements, including segregated pedestrian and cycle access and operational controls where required.
UWHR	Haul road design / disturbance minimisation	The UWHR has been designed around road-train haulage rather than conventional mine truck haulage. This allows a narrower running surface, lower axle loading and reduced construction requirements, thereby reducing the road footprint, earthworks, construction cost and ongoing maintenance requirements. The UWHR design also follows existing tracks and disturbance paths where practicable to do so.
MFS	Ecology	The Billo Stream headwater tarn, assessed as being of very high ecological significance, has been excluded from pit optimisation and the disturbance footprint. The Billo Stream and tarn are avoided, except for a limited haul-road crossing required to connect the West and East pit areas.

Project Location	Subject Area	Avoidance / Minimisation Strategy
MFS	Access / geotechnical and hydrological constraints	The southern access route to MFS was selected over the northern access option because it has lower earthmoving requirements, lower geotechnical stability risk and better water management outcomes. The northern access option was less preferred because of steep terrain, complex construction requirements and the risk of mine-affected water entering the headwaters of Deep Stream.
MFS	Pit sequencing and footprint	The preferred West-to-East pit sequence is linked to the southern access route. It enables mining to commence in the lower strip-ratio West Pit, supports more practical water management, allows placement of the WTP away from Deep Stream which has higher ecological values and water quality, and assists with minimising ex-pit engineered landforms.
MFS	Utility infrastructure	No specific public road or electrical line constraints were identified for the MFS pit design. The MFS layout is therefore able to avoid direct interaction with existing public roads and electrical lines, with infrastructure concentrated around the operational areas and access route.
ESE	Ecology / river avoidance	The Whareatea River headwaters and incised gorge are avoided through a standoff from the preferred pit shell. This forgoes otherwise potentially viable coal but avoids disturbance of the river gorge and headwaters, removes the need for stream diversion and reduces rehabilitation and closure liabilities.
ESE	Streams and pit design	Options to preserve, divert or excavate and reinstate affected streams were assessed. The preferred approach is to excavate affected streams within the footprint during mining and reinstate replicated channels through in-pit backfill, reducing operational challenges for haulage and drainage while allowing stream reconstruction as part of rehabilitation.
ESE	Clean water management	A clean water diversion has been incorporated to reduce the volume of clean water that may mix with mine impacted water requiring treatment and to manage water quality through the operating phases. This was selected because it sits within the current pit design and provides for both

Project Location	Subject Area	Avoidance / Minimisation Strategy
		clean and dirty water management functions at differing stages of mine development.
ESE	Infrastructure layout	ESE infrastructure has been consolidated into a central infrastructure area where practicable, using existing disturbed areas and considering terrain, proximity to mining, transport corridors, heritage sites, blast clearances, and the ex pit seal. This reduces duplicated infrastructure and minimises the overall operational footprint.
ESE and MFS	Water treatment plant location	WTP locations were selected having regard to access, geotechnical suitability, treatment requirements, discharge options, catchment effects, pumping requirements and operational logistics. At MFS, an on-site WTP was preferred over pumping to the McCabes treatment system at Stockton because it provides enhanced treatment for metals, TSS and pH and retains treated water within the Waimangaroa catchment.
ESE and MFS	AMD sludge management	Mechanical dewatering of AMD sludge is proposed because both sub areas have limited space for under-drained cells or geotube bags, and the Project seeks to minimise disturbed footprint. Dewatered sludge can be trucked to engineered landforms during mining, with dedicated disposal areas at Stockton available post-mining.
ESE and MFS	Passive water treatment	Passive treatment options were screened for suitability, with mussel shell reactors identified as the preferred option for relevant seepage locations due to their compact design, effectiveness, known performance and regulatory acceptance.
Project-wide	Public safety and access	A detailed, site-specific fly rock assessment has been used instead of relying solely on a blanket 750 m exclusion radius. This reduces the area of public land required to be closed during blasting while maintaining safety through a more precise exclusion zone based on pit design, blasting parameters and site conditions.
ESE and MFS	Sewage systems	At ESE, multiple smaller on-site wastewater treatment systems are preferred because they provide flexibility,

Project Location	Subject Area	Avoidance / Minimisation Strategy
		operational resilience and lower life-of-mine cost compared with full off-site removal. At MFS, containment tanks with cartage to the Stockton Bathhouse system are preferred given the smaller scale of the operation and the desire to avoid an on-site discharge.
ESE and MFS	Power supply	Generator power is proposed for MFS because mains reticulation is cost-prohibitive given the distance, terrain and relatively low loads. ESE will initially use generator power, with potential future mains upgrades if acceptable supply and pricing arrangements can be reached. This staged approach avoids premature or unnecessary network upgrades while maintaining operational resilience.

1150 5.4.2.8 Alternatives Considered for Water and Discharge Management

Water management considerations have been a primary driver of mine design and sequencing across all Project areas, rather than a secondary or mitigation-stage response. Key decisions, including access selection, pit sequencing, clean water diversion routing, and the siting of treatment infrastructure, have been directly influenced by the objective of separating clean and impacted water as early as possible and minimising the volume requiring treatment. This integrated approach reduces environmental risk, improves operational efficiency, and supports more robust long-term closure outcomes.

Stockton

1160 The water and discharge management framework for the Project has been developed to generally align with the Crown's preferred "Enhanced Base Case" for long-term management of AMD at Stockton, as identified in the Treasury Business Case. That approach builds on the existing Stockton treatment system, uses established active and passive treatment methods, and adopts a progressive improvement pathway to improve water quality outcomes over time.

1165 In addition, the design of the Millerton ELF has been specifically developed to direct AMD-affected seepage toward the MW16 sump within the Mine Creek catchment. This approach intentionally concentrates collection and treatment within an already highly modified and AMD-impacted receiving environment, thereby reducing the potential for unmanaged seepage to enter less-affected catchments, including the Twins and Miller/Granity systems.

1170 Consistent with that framework, the Project does not rely on wholly new or highly
centralised treatment solutions, nor on diversion-based approaches, but instead builds on
the established Stockton water management system and extends it to new mining areas in a
staged and adaptive manner. This reflects a deliberate preference for proven, site-specific
systems that can be incrementally improved while existing site capability, infrastructure and
1175 operational knowledge remain available, and then maintained beyond closure.

At Stockton, the preferred approach is to continue using and progressively optimise the
existing AMD management framework, including the Mangatini and St Patrick's systems and
the broader network of sumps, pumps, drains, monitoring arrangements and treatment
infrastructure.

1180 This approach is consistent with the Enhanced Base Case in that it:

- > Builds on established treatment systems with known performance characteristics;
- > Retains continuity of treatment, monitoring and operational knowledge while
Bathurst/BT Mining remains on site;
- > Enables incremental improvement in water quality outcomes over time; and
- 1185 > Avoids the need for large new off-footprint infrastructure that would introduce
additional environmental, consenting and delivery risks.

For the northern Stockton mining area, including Millerton, Hope Lyons and Rockies North,
two principal water management options were assessed: a large downstream Mine Creek
Sump and a network of smaller in-pit sumps within the proposed life-of-mine disturbance
1190 boundary. The Mine Creek Sump offered several potential advantages, including gravity
collection of runoff and underground outflows, substantial storage capacity for sediment
and AMD, reduced pumping requirements, and potential integration with future discharge or
hydro scheme opportunities. However, it was not selected as the current preferred option
due to its environmental and consenting constraints, including wetland impacts,
1195 infrastructure requirements within the MaPPS Reserve, potential placement of overburden
on DOC land, and the complexity of dam options outside existing mining authorisations.
That conclusion does not preclude future consideration of Mine Creek or other initiatives if
later monitoring, feasibility work or Crown transition planning demonstrates that they would
provide a better long-term AMD management outcome.

1200 The preferred approach is therefore to utilise a network of in-pit sumps integrated within the
active mining footprint, constructed progressively as mining advances. While this option
involves greater operational complexity, including increased pumping and more active
system management, it is consistent with the Treasury Business Case's preference for

practical, staged and adaptable management that builds from the current Stockton system.
It:

- > Significantly reduces the overall disturbance footprint;
- > Avoids new high-impact infrastructure in sensitive receiving environments;
- > Avoids locating major new water management infrastructure within the MaPPS Reserve;
- > Enables staged and adaptive water management aligned with mine sequencing; and
- > Integrates directly with the established Stockton treatment systems and operational practices.

Overall, when combined with the continued optimisation of the Mangatini and St Patrick’s treatment systems, the in-pit sump approach provides a robust, flexible and lower-impact solution that is both technically reliable and environmentally appropriate. It therefore represents the best practicable option for managing AMD at Stockton, while also supporting the Project’s broader objectives of progressive rehabilitation, minimisation of disturbance, long-term water quality improvement, and transition-ready management of AMD consistent with the direction of the Treasury Business Case.

Table 5-5 outlines the preferred water and discharge management methods that have been proposed for Stockton.

Table 5-5: Summary of Alternatives Considered for the Approach to Water and Discharge Management at Stockton

Preferred Method	Summary	Key Implications
Progressive improvement with ongoing active and passive treatment	Forms the primary “with BPCP” operational and closure scenario being proposed as part of this application, building on the existing Stockton active and passive treatment framework.	Supports sustained improvement in water quality, gradual ecosystem recovery, and controlled management of residual AMD sources over time, while remaining consistent with the Enhanced Base Case approach of optimising proven systems rather than replacing them.
Transition-ready long-term treatment post-closure	Assessed as part of mine closure and post-closure management pathways, with emphasis on retaining continuity of infrastructure, data,	Enables continued control of AMD beyond mining, reducing long-term environmental risk and supporting a smoother transition to future Crown-led or long-term management arrangements as conditions evolve.

Preferred Method	Summary	Key Implications
	monitoring and operational knowledge.	
Adaptive management with performance-based monitoring	Use of compliance, performance and reference monitoring to inform iterative adjustment of treatment intensity and strategies.	Allows treatment to evolve in response to observed trends, supporting efficiency while maintaining long-term progress toward environmental recovery or betterment, consistent with the adaptive management approach anticipated by the Treasury Business Case.

Other Project Areas

- 1225 The water management approach for the new BPCP areas has been developed around minimising the generation of AMD, separating clean and dirty water where practicable, and providing dedicated treatment infrastructure in areas where both historic and new AMD risks are present. At both ESE and MFS, the preferred approach is to manage water through a combination of pit sumps, clean-water diversions, dirty-water collection systems, active
- 1230 water treatment plants, sediment-management controls, and, in the longer term, passive treatment systems associated with ELF seepage.
- A key point of differentiation for the new Project areas is the emphasis on minimising AMD generation at source through ELF design, rather than relying solely on downstream treatment. Significant effort has been undertaken to optimise ELF configuration, including
- 1235 consideration of lift height, compaction, material placement, and cover system design, to limit oxygen ingress and water interaction with potentially acid-forming materials. These measures are intended to reduce the volume and strength of AMD generated over time, improve the effectiveness of subsequent treatment processes, and support more robust long-term closure outcomes. This represents a more integrated source-control approach
- 1240 than in historic mining areas such as Stockton, where AMD management has been more reliant on collecting and treating seepage from legacy landforms.
- For MFS, an on-site WTP was preferred over pumping mine-affected water to the existing McCabes treatment system at Stockton, as the MFS plant provides a higher level of treatment for metals, total suspended solids (TSS) and pH, while also retaining treated water
- 1245 within the Waimangaroa catchment. Several MFS WTP locations were assessed, with the preferred option being a full-size plant located approximately 600 m up the access road

from the coal transfer pad, balancing access, ground conditions, treatment efficiency and discharge effects.

1250 At ESE, the water management option assessment focused on the major infrastructure required to manage interactions between surface water and historic underground mine water. A key element is the proposed CWD, which was assessed through seven design options. The preferred option provides for both clean water and dirty water management within the current pit design footprint and includes sufficient width for access, although it requires careful management of erosion, stream intersections and potential seepage from

1255 impacted areas. In addition, three ex-pit seal options were assessed to manage potential connectivity between the proposed pit and historic underground workings. The preferred ex-pit seal V1 option was selected because it provides the smallest disturbance footprint, requires the least waste excavation and backfill, and is expected to contain underground water most effectively compared with larger sump-based alternatives. Passive treatment

1260 options, particularly MSRs, have also been identified for ELF seepage areas.

For the UWHR, water management options focus on construction and operational runoff control. The preferred approach is to minimise permanent infrastructure along the haul road and limit works to drainage and erosion-control features, including culverts, geosynthetic liners, slope reinforcement, sediment runoff-capture ponds and road-surfacing materials.

1265 Laydown and temporary construction areas are proposed on already disturbed ground where practicable.

Overall, water management for the new areas combines active treatment at ESE and MFS with clean water separation, sump storage, sediment controls, staged discharge management and future passive treatment, while the UWHR is managed through avoidance,

1270 drainage design and runoff control.

Table 5-6 presents the alternatives for water and discharge management in the other Project Sub-Areas while indicating the preferred option. It also highlights where additional consideration has been given to options throughout the Project.

1275 **Table 5-6: Summary of Alternatives Considered for Other Project Areas regarding Water and Discharge Management**

Project Location	Subject Area	Alternatives Considered and Preferred Approach
ESE	Clean Water Management	Construct the CWD predominantly within the pit envelope and in competent in-situ material, with flexibility to convert sections to dirty-water channels as mining advances. This approach minimises

Project Location	Subject Area	Alternatives Considered and Preferred Approach
		earthworks and treatment loads. Alternatives involving external diversion channels were considered but not preferred due to greater disturbance and complexity. The adopted approach reduces clean water inflows to disturbed areas, lowering treatment demand and improving operational efficiency over the life of the mine.
ESE	Streams	Excavate affected streams during operations and reinstate channels over backfill rather than constructing permanent diversions across undermined terrain. This approach reduces engineering and safety risks while enabling full coal recovery. Alternatives, including permanent stream diversion, were considered but not preferred due to instability risks and long-term maintenance requirements.
MFS	Water and Discharge Management	Site the WTP ~600 m up the access road and direct treated and high-flow discharges toward the Waimangaroa River, which has a lower baseline ecological value due to historic AMD impacts. Alternatives involving discharge to higher-value receiving environments (e.g. Deep Stream) were not preferred because of greater ecological sensitivity and the risk of adverse effects.
ESE + MFS	Water Treatment Methods	Active treatment is adopted for operations and early closure due to higher flows and treatment performance requirements, with passive systems (MSRs) preferred for post-closure when flows and contaminant loads reduce. Alternatives relying on passive treatment during operations were assessed but not preferred. Bench- and column-scale testing informed the preferred treatment train: CaO neutralisation, Metalzorb FZ coagulation, Rheomax flocculation, followed by lamella clarification and polishing ponds.
ESE + MFS	Sludge Management	Alternatives considered include mechanical dewatering, geotube-based passive dewatering, and aqueous sludge handling. Mechanical dewatering is preferred because it reduces sludge volume, improves handling efficiency, and suits placement within ELF. Geotubes and aqueous handling are retained as contingency options. Disposal within ELF is preferred. Long-term on-site sludge storage or dedicated disposal facilities were not preferred due to increased footprint and ongoing management requirements.
ESE + MFS	Source Control (Waste Rock)	Alternative waste rock management approaches, including conventional end-dumping and uncontrolled placement, were

Project Location	Subject Area	Alternatives Considered and Preferred Approach
		evaluated. ELF's are adopted to integrate geochemical and geotechnical controls, minimise oxygen ingress and water infiltration, and reduce AMD generation at source.
ESE + MFS	Cover Systems	Alternatives included forest (vegetated), engineered soil, and geosynthetic cover systems, as well as approaches with minimal or no cover. Forest cover is preferred where practicable to reduce oxygen ingress, support evapotranspiration, and enable rehabilitation. Engineered covers are applied in higher-risk areas requiring greater control. Thin or no-cover options and reliance on vegetation-only systems across all areas were not preferred due to performance variability and higher AMD risk.
UWHR	Construction Water Management	Portable WTPs are adopted to manage acidity and TSS during construction. Fixed or centralised systems were not preferred due to reduced flexibility and increased disturbance footprint.
UWHR	Material Use	Suitable Brunner Coal Measures and non-acid-forming granite are selected. Higher-risk materials, including Kaiata mudstone/sandstone and colluvium, were excluded due to AMD generation potential and geotechnical instability.
UWHR	Management of Unsuitable Materials	Disposal of unsuitable materials within ELF's (Stockton/ESE) is preferred. Alternative on-site disposal areas were not progressed due to additional footprint and long-term management requirements.
UWHR	AMD Risk Management	Engineered fill areas are adopted to apply source-control principles to road construction, analogous to ELF's. Alternatives included conventional unengineered embankments, which were not preferred due to risks of diffuse AMD generation and unmanaged seepage. Engineered fill areas manage material placement, oxygen ingress, and water infiltration, avoiding creation of distributed AMD sources along the haul road alignment.
Project-wide	Overall AMD Strategy	A hierarchy of controls is adopted, prioritising source control, followed by minimisation and treatment. Alternatives relying primarily on downstream treatment were not preferred due to greater long-term risk and reduced effectiveness.
Project-wide	Passive Treatment	MSRs are preferred for passive treatment due to proven performance and operational experience. Alternative passive

Project Location	Subject Area	Alternatives Considered and Preferred Approach
		systems were considered but MSRs provide the greatest confidence in long-term effectiveness.
Project-wide	Climate Change Resilience	Climate change allowances, including increased MSR sizing and design resilience, are incorporated. Alternatives without climate allowance were not preferred due to long-term performance risks.
Project-wide	Closure Philosophy	Long-term AMD management is expected to transition progressively toward passive or lower-intervention systems where flows and contaminant loads allow, while retaining active treatment where required to meet performance outcomes. Alternatives that rely unnecessarily on ongoing active treatment without source control, passive treatment opportunities or adaptive optimisation were not preferred due to higher long-term cost, operational risk and reliance on continued intervention.