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Mount Isa Transformation Study

Submission on near-term viability, system interfaces
and preservation of future system potential

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Attribution and follow-up	Yes. Bright Advisory is willing to be contacted for clarification or follow-up discussion.
Commercial-in-confidence	No

1. Purpose and central proposition

Bright Advisory Group Pty Ltd is an independent strategic and technical advisory practice focused on whether mineral projects, investments and supply systems can deliver their intended outcomes in practice. Its Principal, Karen Bright Volp, is a geologist and qualified lawyer with more than 25 years of international mining experience who has lived in the region and has worked internationally across IOCG, sedimentary copper and porphyry systems. Bright Advisory has no commercial interest in Glencore, CopperString or any North West Queensland copper project. This submission reflects independent analysis. Bright Advisory may provide advisory services in this field.

The Mount Isa Transformation Study is appropriately broader than immediate asset preservation. The submission guidelines state that the study will assess the end-to-end value chain of the Mount Isa Copper Smelter and Townsville Copper Refinery, their role in Australia's future industrial landscape, long-term industrial capability, potential future pathways, market and policy settings, regional impacts, workers, communities and heavy industry.

The central proposition of this submission is that the near-term viability pathway for the current Mount Isa-Townsville asset chain should be tested not only for whether it can preserve existing operations, but for whether it preserves or constrains the broader system's future potential. The study should not test only whether the current chain can survive under a central case. It should identify the conditions under which the chain remains viable, the assumptions that determine that outcome, the interfaces where those assumptions can fail, and the near-term decisions that preserve or foreclose later system options.

The purpose of the Transformation Study is not simply to determine whether today's asset chain survives, but whether today's decisions preserve the greatest number of viable future system configurations.

2. Near-term stabilisation without foreclosure

For the purposes of this submission, a three-to-five-year horizon is treated as a near-term stabilisation and decision window, not as the full transformation period. That horizon reflects the immediate support period for the Mount Isa Copper Smelter and Townsville Copper Refinery, and the practical timeframe within which near-term feed, power, logistics, market and operating assumptions must be tested.

The purpose of this window should not be merely to keep the existing chain operating. It should be to determine whether the current regional asset composition can move toward a more durable viability envelope, while ensuring that short-term support, contracts, infrastructure decisions and plant commitments preserve rather than foreclose broader future options.

Accordingly, the initial study should not seek to determine the optimal long-term regional copper system. Rather, it should establish a credible near-term viability envelope while preserving the greatest possible range of future system options, recognising that market conditions, infrastructure, projects, technology and policy settings will continue to evolve.

Recent corporate activity across the North West Minerals Province suggests the region may already be entering a phase of anticipatory recomposition as market participants reposition ahead of an expected future regional configuration. Acquisitions, toll-treatment arrangements and the aggregation of adjacent deposits indicate that market participants are positioning for a future regional configuration centred on shared infrastructure, integrated processing and operating optionality. These transactions should not be interpreted as evidence that regional viability has already been established. Rather, they represent hypotheses about future system configurations whose viability will ultimately depend on technical compatibility, commercial arrangements, infrastructure availability, energy, water and other factors that determine whether the emerging system can achieve and sustain coherence.

In short, the near-term task is stabilisation without foreclosure: sustaining the current chain only in ways that remain coherent with the wider regional, market and policy pathways the Transformation Study is intended to inform.

For this submission, composition means the arrangement of assets, feed sources, processing capability, infrastructure, commercial relationships, policy settings and operating responsibilities that together form the current Mount Isa-Townsville copper chain.

The current composition includes the Mount Isa Copper Smelter, Townsville Copper Refinery, Ernest Henry and other possible third-party feed, potential near-term feed from Eva and other regional projects, sulphuric acid and Phosphate Hill interdependencies, rail and logistics, power supply, CopperString assumptions, TC/RC conditions, by-product credits and Queensland/Commonwealth support.

The current viability envelope is the range of conditions under which that composition can remain operable, economically defensible and future-compatible over the near-term horizon. It should distinguish between a chain that is commercially viable without extraordinary support, viable with defined temporary support, technically operable but financially fragile, dependent on narrow assumptions occurring together, structurally non-viable in its present form, or viable only by constraining future system options.

Near-term survival may not be coherent with future success.

The initial study does not need to solve the future regional copper system. It does need to ensure that any near-term pathway does not narrow the practical set of future system configurations before those configurations have been properly tested.

3. Market stress shows why a system model is required

Recent copper-market developments show why the current chain cannot be assessed using a simple copper-price or demand assumption. Copper scarcity is now appearing differently across concentrate availability, smelter utilisation, treatment and refining charges, cathode inventories, import premiums, regional price premiums, by-product dependence and trade-policy effects.

Reuters reported on 20 July 2026 that Shanghai Futures Exchange copper stocks had fallen by more than 80% from mid-March, the Yangshan copper premium had reached about US$100 per tonne, LME inventories had fallen materially since late May, and 56% of LME stocks were already cancelled warrants awaiting withdrawal. The same report linked part of the market distortion to United States tariff expectations drawing refined metal toward the United States. Source: Reuters, “China imports at nine-month high buoy copper prices”, 20 July 2026, https://www.reuters.com/world/asia-pacific/china-imports-nine-month-high-buoy-copper-prices-2026-07-20/

Mitsubishi Materials has announced that it will cease copper concentrate processing at its Onahama plant by the end of March 2027, citing global competition, declining TC/RCs, uncertain business conditions and profitability pressure. The Onahama smelter has been reported at 354,000 tonnes per annum. Source: Reuters, “Mitsubishi Materials to end operations at its Onahama smelter by end-March 2027”, 25 March 2026, https://www.reuters.com/world/asia-pacific/mitsubishi-materials-end-operations-its-onahama-smelter-by-end-march-2027-2026-03-25/

Glencore states that the Mount Isa Copper Smelter treats more than 1 million tonnes per annum of copper concentrate. Source: Glencore Australia, “Mount Isa Mines copper smelter rebrick completed”, https://www.glencore.com.au/operations-and-projects/qld-metals/resourceful/resourceful-july-2022/mount-isa-mines-copper-smelter-rebrick-completed

The implication for Mount Isa is direct. If a significant Japanese smelter is exiting concentrate processing under current TC/RC and competitive conditions, the study should not assume that a remote, underfilled smelter can become self-sustaining simply because copper demand is strong.

A strong copper price may help the mine. It does not automatically feed the smelter. A tight cathode market may benefit refined-metal sellers. It does not necessarily restore concentrate-processing margins. The study should therefore specify whether any assumed market improvement relates to copper price, concentrate availability, TC/RCs, cathode premiums, by-product revenues, acid demand, smelter utilisation, trade-policy settings or regional industrial economics.

Each affects a different part of the chain.

4. The key risk is at the interfaces

Specialist analysis of markets, metallurgy, projects, infrastructure, economics, policy and regional impacts is essential. The outcome will also depend on whether assumptions translate consistently across those workstreams.

The purpose of this submission is not to challenge specialist analysis. It is to encourage explicit testing of the interfaces between workstreams, because assumptions that are reasonable within one discipline may become fragile or incompatible when transferred across the full system and projected through time.

Key translation points include:

- mine schedules into deliverable feed;
- feed into concentrate quality and processing compatibility;
- processing into recovery and cost;
- project timing into smelter and infrastructure utilisation;
- power availability into connection cost and delivered tariffs;
- tariffs back into project economics;
- market assumptions into TC/RC and by-product economics;
- public support into a credible path to reduced support;
- short-term contracts into long-term flexibility.

Individually reasonable assumptions can become collectively incompatible. This matters because the mine, smelter, refinery, transmission owner, government, financier and infrastructure provider each control only part of the system.

To the extent that commercial propositions or internal decision criteria are not visible to all participants in the study process, the analysis should distinguish between what is technically possible, commercially available to Glencore, commercially available to third-party producers, financeable by project owners, investable for infrastructure providers and justifiable as public-policy intervention.

The model should also distinguish between development delays and operational interruptions. A development delay occurs when a project is late reaching production. An operational interruption occurs when an operating mine, processor, logistics chain or power system is temporarily unable to deliver expected output. Operational interruptions can affect production continuity and should be tested across the near-term viability envelope.

5. Feed must be tested as deliverable, compatible and economic

The existence of copper resources in North West Queensland does not establish that sufficient and suitable feed can reach the Mount Isa processing system within the required timeframe. Feed should not be counted solely as nominal contained copper. Regional copper tonnes should not be treated as

smelter feed unless they are technically compatible, commercially accessible, financeable, logistically deliverable and available within the relevant window.

The relevant question is:

What economically available and technically compatible feed can be delivered, in what quantity, at what time and under what commercial structure?

A credible near-term feed assessment should reconcile project status and probability, realistic production schedules, concentrate mineralogy and chemistry, current plant operating envelopes, required blending or pre-treatment, logistics and delivered cost, tolling or offtake structures, plant modifications, financing requirements and downside cases where expected projects are delayed, underperform or experience operational interruptions.

The study should distinguish between identified feed, technically compatible feed, commercially accessible feed, financeable feed, deliverable feed within the three-to-five-year window and feed that preserves future optionality. Those are not the same category. This distinction is especially important because near-term analysis necessarily relies on immediate assets and near-term projects such as Eva while treating broader third-party feed as less defined.

The risk is that uncertain future feed becomes a soft assumption that allows the current chain to appear more robust than it is. Clarity around weightings, assumptions, constraints and dependencies, and how they interact across time and system interfaces, is essential to developing a risk-aware model.

Such a model should be capable of showing which assumptions are load-bearing, which are independently controllable, which depend on other participants, which fail under timing slippage or operational interruption, and which near-term decisions narrow later recomposition options.

It should allow assumptions to be adjusted, consequences to be tested along the timeline, and impacts to be traced across feed, processing, power, logistics, commercial terms and public-support settings.

Without that model, a pathway may appear viable under a central case but fail when assumptions shift, timing changes or constraints emerge at the interfaces between workstreams.

6. TC/RC and contract architecture are part of the system

Treatment and refining charges should not be treated only as a sensitivity line in a financial model. They form part of the commercial architecture that determines how value, volatility and loss are distributed between miners, traders, smelters, refiners, customers and potentially government.

A fixed benchmark TC/RC provides planning stability. A zero benchmark transfers more value toward the miner and leaves the smelter more dependent on by-products, free metal, downstream margin or other support. A spot-indexed structure transmits immediate concentrate scarcity directly into processor economics. A floor, tolling arrangement or strategically underwritten structure distributes risk differently again.

Reported July 2026 concentrate sales by Antofagasta to some Chinese smelters using spot-indexed pricing with a floor illustrate that pricing architecture itself is changing in response to current concentrate and smelting conditions: https://www.mining.com/web/antofagasta-agrees-spot-indexed-copper-ore-sales-with-some-chinese-smelters-smm-says/

Benchmark Source has also reported record-low 2026 copper concentrate TC/RC arrangements: https://source.benchmarkminerals.com/article/chinese-smelters-reportedly-agree-to-record-low-copper-concentrate-tc-rcs

The study should therefore ask not only what TC/RC assumption should be used, but under what commercial structure concentrate can continue to flow while both producer and processor retain a pathway to durable profitability. If the smelter is kept operating by commercial terms that are unsustainable for one side, the system has not become self-sustaining. It has merely moved the loss.

7. CopperString should be treated as a future-system dependency

CopperString is a major enabling component of the future North West Queensland system. However, assuming that CopperString exists and relevant assets connect does not, by itself, establish that those projects will be viable.

Powerlink describes the Eastern Link as just under 350 kilometres of 330 kV transmission line from Reid River near Townsville to Hughenden, and states that work has included detailed design, approvals, securing critical electrical equipment and construction readiness. Source: Powerlink, “CopperString”, https://www.powerlink.com.au/projects/copperstring

An Australian Energy Regulator area-plan report refers to major construction of the Eastern Link commencing by 2028 and commercial operations by 2032, subject to approvals. Source: AER, “Powerlink CQ-NQ Area Plan Report, January 2026”, https://www.aer.gov.au/system/files/2026-02/Powerlink%20-%20CQ-NQ%20-%20Area%20Plan%20Report%20-%20January%202026%20-%20PUBLIC.pdf

The Office of the Coordinator-General currently describes CopperString 2032 as a prescribed project and critical infrastructure project that is progressing approvals. It describes the project as approximately 1,000 kilometres of high-voltage overhead electricity transmission lines connecting the North West Minerals Province to the National Electricity Market. The project information is supplied by the proponent and stated to be subject to change. Source: Office of the Coordinator-General, “CopperString 2032 project”, https://www.coordinatorgeneral.qld.gov.au/projects/find-a-project/prescribed-projects/copperstring-2032-project

The current delivery structure also creates an institutional interface. Powerlink states that a new QIC-managed entity will develop, deliver, own, operate and maintain CopperString, while Powerlink continues Eastern Link activities during the transition. Source: Powerlink, “CopperString”, https://www.powerlink.com.au/projects/copperstring

Electricity becomes usable industrial power only when the complete delivery chain - including transmission, substations, connection infrastructure, commercial agreements and commissioning - is in place. A mine may state that CopperString will provide future grid power while still lacking certainty that the relevant connection point is funded and scheduled, required transformers and switchgear are reserved, the network can deliver the required load and power quality, the project has included connection infrastructure in its capital estimate, the delivered tariff fits the project model and all of this aligns with its proposed commissioning date.

For the initial three-to-five-year stabilisation window, CopperString should therefore be treated primarily as a future dependency and potential enabler of later system options, not as a resolved input to the current asset-chain economics. The timing risk is not limited to the transmission line. Construction delays, weather events, industrial action, equipment supply constraints, connection delays and commissioning issues may all affect when power becomes usable at specific sites.

The study should test whether near-term feed, processing, support and infrastructure decisions preserve the ability to benefit from CopperString. It should not assume that delivered power will be available to relevant users within the three-to-five-year stabilisation window. The material question is not only whether the Eastern Link is built. It is on what date the complete electrical delivery chain, including constrained equipment and user connections, creates usable operating capacity for particular mines, processors and generators.

8. Questions and recommended action

The initial study should explicitly test the following questions before carrying assumptions into later work or policy recommendations:

- What conditions define the three-to-five-year viability envelope of the current Mount Isa-Townsville asset chain, and which assumptions are determinant?
- When the study refers to a self-sustaining market, which market is meant: concentrate, cathode, TC/RCs, acid, by-products, power, logistics, regional project financeability or the integrated chain?
- Which identified feed sources are technically compatible, commercially accessible, financeable and deliverable within the study period?
- What happens if one or more assumed sources are delayed, underperform or experience operational interruptions?
- Are CopperString assumptions being treated as usable delivered power, transmission availability or a future-system dependency?

- Which near-term decisions are reversible, and which create contract, processing, infrastructure or policy lock-in?
- Which constraints are commercially available for Glencore to address, which require government coordination, and which cross corporate and government boundaries?

The recommended action is to:

1. Define the initial-study viability envelope.
2. Develop a risk-aware model that allows assumptions, constraints and dependencies to be adjusted and traced through time across feed, processing, power, logistics, commercial terms and public-support settings.
3. Test feed as deliverable, compatible and economic, not merely identified as regional copper.
4. Test downside, delay and operational-interruption cases.
5. Treat CopperString as a future-system dependency, not as a resolved near-term input.
6. Apply a future-optionality test to each material near-term intervention.
7. Carry only tested assumptions into later studies.

The test for each material near-term decision should be simple:

- What future options does it preserve?
- What future options does it constrain?
- What does it make more expensive?
- What might it render impossible?

9. Closing

The Mount Isa-Townsville copper chain is not only a collection of operating assets. It is the current expression of a broader regional system whose future composition remains uncertain.

The quality of the Study's recommendations will depend not only on the strength of individual technical workstreams, but on whether the assumptions that connect them remain compatible over time and whether near-term interventions preserve future system options. Transformation should not be measured solely by whether today's configuration survives. It should be measured by whether today's decisions preserve the widest range of viable future system configurations.

The success of this Study will therefore depend not only on identifying a credible near-term viability envelope, but on ensuring that the decisions taken within that envelope preserve the greatest feasible range of future system options as projects mature, infrastructure is delivered, market conditions evolve and future studies progressively refine the region's long-term development pathway.

A pathway that keeps today’s assets operating while embedding assumptions that foreclose tomorrow’s options is not a successful transformation pathway.

Bright Advisory would welcome follow-up discussion regarding the cross-workstream interfaces, risk-aware modelling and future-optionality tests raised in this submission.

Declarations and methodology note

Commercial-in-confidence: No. Follow-up: Yes. Attribution: Yes. Interest declaration: Bright Advisory has no commercial interest in Glencore, CopperString or any North West Queensland copper project. This submission reflects independent analysis. Bright Advisory may provide advisory services in this field.

This submission applies selected elements of Bright Advisory Group Pty Ltd’s proprietary system-assessment methodology. The concepts and analytical structure concerning system composition, viability-envelope assessment, cross-interface assumption testing, risk-aware modelling and recomposition remain the intellectual property of Bright Advisory Group Pty Ltd and are presented for the limited purpose of contributing to the Mount Isa Transformation Study.