



CobaltBlue

# Cobalt Blue Holdings Limited

Sustainability Self Assessment  
and Roadmap 2023/24



# Statement from the Chief Executive Officer



The world is undergoing an energy revolution where fossil fuels are rapidly being replaced by renewable energy sources to mitigate the effects of climate change. This transition will require the adoption of technologies that can safely and reliably store renewable energy for consumption on a continuous basis and for applications such as Electrical Vehicles (EVs). The primary storage technology is batteries.

Cobalt is a key component in lithium-ion battery chemistry. Whilst only comprising a small proportion of the elements that make up a modern battery, cobalt is the key component that delivers a long performance life, thermal stability, energy density and frequent charging/discharging properties. About two-thirds of the world's production of cobalt comes from the Democratic Republic of the Congo (DRC), where risks associated with human rights abuses and poor environmental performance are prevalent, particularly in artisanal and small-scale mining. Battery manufacturers and industries that use cobalt in their products, investors and ultimately consumers are looking to the sustainable and ethical sourcing of battery materials.

There have been a number of recent legislative developments from many countries in an attempt to create a rechargeable battery supply chain that ensures an adequate supply of responsibly sourced raw materials. One of the most notable examples is the Inflation Reduction Act (IRA) in the United States.

The IRA includes ~US\$390Bn of spending/credits over the next 10 years related to energy and climate change. The US Treasury Department is targeting strict provenance guidelines on critical mineral sourcing and content requirements in order to stimulate domestic and aligned country EV production and battery investment. The IRA stipulates minimum thresholds for extracting or processing critical minerals within North America or Free Trade Agreement (FTA) countries, such as Australia.

## Statement from the Chief Executive Officer

Meanwhile, COVID supply chain disruptions and the Russia-Ukraine war have exposed EU dependency on critical raw materials. The European Commission has enacted the Critical Raw Materials Act (CRMA). This piece of legislation aims to mitigate these dependencies through:

- 1 an onshore Critical Raw Materials (CRM) supply chain;
- 2 supply chain diversification; and
- 3 sustainable sourcing including circularity (recycling).

In our discussions with potential commercial partners (primarily electric vehicle manufacturers, battery makers and commodity traders), securing responsibly sourced battery raw materials is paramount. Procurement teams have been mandated to enter into long-term relationships with raw material producers that comply with global legislation such as the IRA and CRMA.

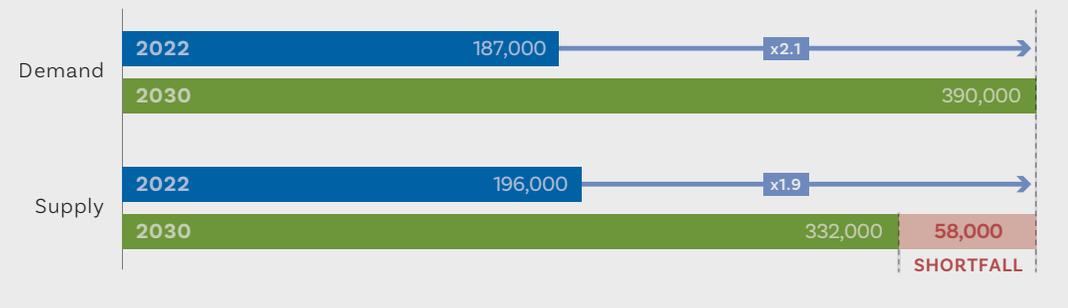
## The need for cobalt

According to estimates from Benchmark Minerals, production from existing mines or projects nearing execution will not meet necessary cobalt demand to by 2030. The primary reason for the shortfall is the more rapid than expected adoption of EVs, which are forecast to dominate global vehicle sales by 2040. The world's producers are not only in a race to sufficiently supply the market, but cobalt end-users are competing for responsibly sourced material.

According to energy transition consultant/industry expert Rho Motion, global electric vehicle sales are forecast to rise from 10.5 million units (13% penetration rate) in 2022 to:

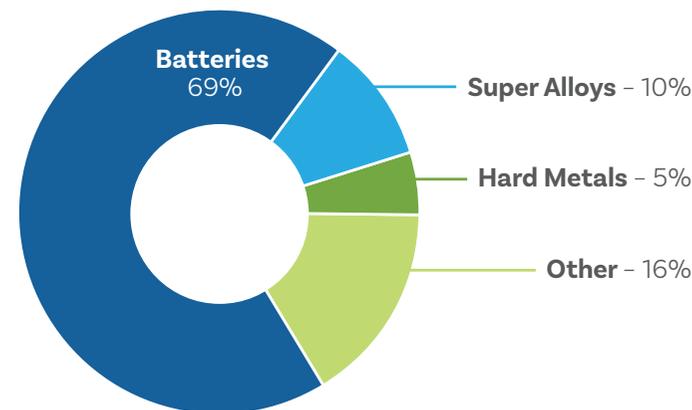
- 47 million units (43% penetration rate) in 2030
- 88.6 million units (76% penetration rate) in 2040

### Cobalt demand vs supply (tonnes per annum)



Source: Benchmark Minerals, Cobalt Blue Holdings

### Cobalt demand breakdown (% by industry)



Source: Benchmark Minerals, Cobalt Blue Holdings

## Statement from the Chief Executive Officer

Given the increasing global demand for cobalt and the concentration of current cobalt supply from the DRC and subsequent processing in China, it is important that alternative cobalt extraction and processing facilities be developed. The cobalt supply constraint does pose a substantial risk to the delivery of battery-reliant technologies such as EVs that can take advantage of renewable energy generation to facilitate a substantial reduction in carbon emissions over the next few decades.



**Joe Kaderavek**

*Chief Executive Officer and Director*

Cobalt Blue Holdings Limited

*“The primary reason for the shortfall is the more rapid than expected adoption of EVs, which are forecast to dominate global vehicle sales by 2040.”*

# This report

This is the third annual sustainability report that demonstrates how Cobalt Blue Holdings Limited (COB) is meeting the requirements of the Cobalt Institute Responsible Assessment Framework (CIRAF) and management tool for its Broken Hill Cobalt Project ('BHCP' or the 'Project'), and emerging opportunities to source cobalt units from waste streams including historical mine tailings. In addition, this report considers sustainability metrics from other schemes (e.g., Initiative for Responsible Mining Assurance (IRMA)) and provides commentary on how the BHCP is tracking in regard to sustainable and ethical development. COB is committed to the progressive implementation of ESG (Environmental, Social & Governance) certification for the BHCP using a reputable scheme upon reaching a Final Investment Decision and/or project offtake partner requirements. COB has been working with the Australian Government to promote a "Made in Australia" ESG certification scheme for critical minerals extracted and/or refined in Australia.

As an emerging cobalt mining and technology company, COB has prepared and committed to a number of policies and procedures which have a high degree of consistency with the various CIRAF risk categories. We consider that our systems of work and corporate positions meet all of the CIRAF risk categories across our project offices and operational sites. We have applied the CIRAF to the development of the BHCP in its and the expected performance of the Project during its construction and operation.

COB has undertaken this assessment in accordance with CIRAF conformance Level 1 which covers the most material risks for cobalt at the global scale. COB does not operate in high-risk countries, so the risks related to Conflict (R4), Child Labour (R6) and Artisanal and Small-Scale Mining (R7) have not been addressed. The assessment of COB's operations demonstrates that it meets all of the CIRAF requirements, with the exception of partial compliance with the Human Risks aspect; where some



**Broken Hill**  
Cobalt Project

**Kwinana**  
Cobalt Refinery

**CWSP**  
Cobalt in Waste  
Streams Projects



## This report

elements of the human rights assessment criteria are not yet compliant (such as third-party assurance – due diligence systems and public reporting). COB operates solely within Australia in regard to our operations. As such we consider the risks associated with human rights are generally low. These matters will be developed further in due course. COB does have a Procurement Policy which provides a due diligence process for the assessment of suppliers' credentials.

Similarly, a high-level self-assessment of the BHCP against the IRMA reporting categories has been undertaken. This assessment has demonstrated that many aspects of the Project are already in place as well as the additional work that would be required to meet the IRMA certification standards.

*“COB has been working with the Australian Government to promote a ‘Made in Australia’ ESG certification scheme for critical minerals extracted and/or refined in Australia.”*



# Cobalt Blue Holdings Limited

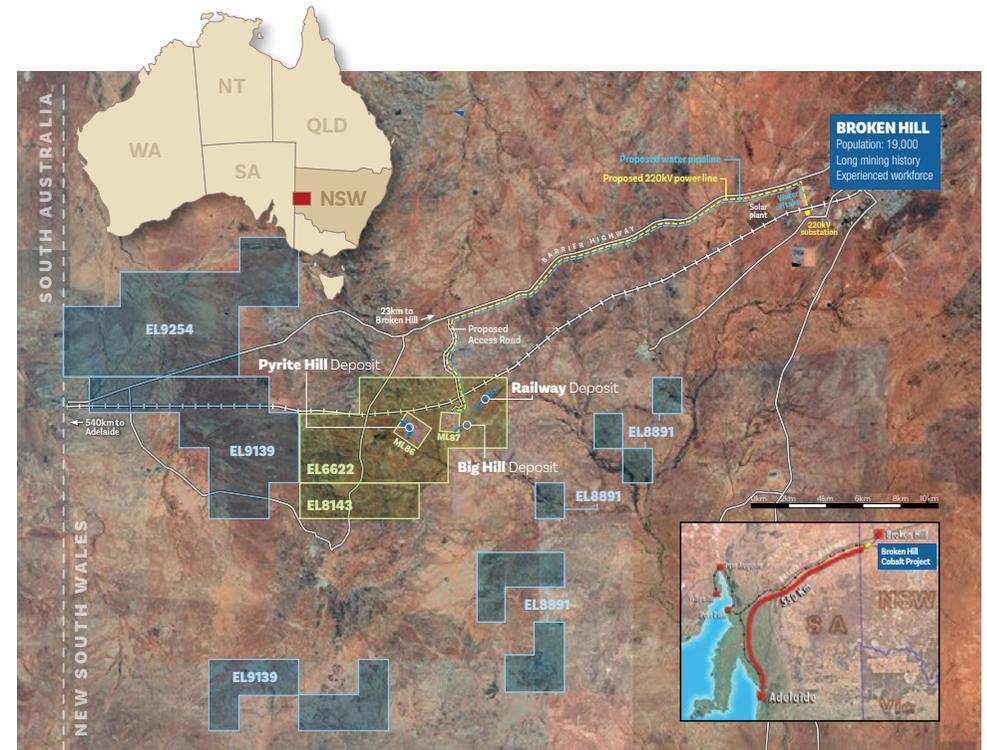


COB is a cobalt focused mining and technology company that is listed on the Australian Securities Exchange (ASX:COB). The company is governed by an independent Board of Directors. For further information see Cobalt Blue Holdings – Green energy technology.

COB is developing the BHCP, located near Broken Hill, New South Wales, Australia. The BHCP is situated in a stable jurisdiction that applies rigorous employment, health and safety, and environmental practices that are enforced by well-resourced regulators at state and national levels. COB is currently undertaking a Feasibility Study on the BHCP with the aspiration of making an investment decision in 2024.

The BHCP has a Production Target for contained cobalt of 67,000 tonnes over an operating life of around 20 years. The sulphide ore will be processed on-site in accordance with our patented processing technology to produce approximately 3,500 tonnes/annum (cobalt metal equivalent) in Mixed Hydroxide Precipitate (MHP) containing around 36% Cobalt and 7% Nickel. The MHP will be transported to the COB Cobalt Refinery for further processing to a high-grade battery ready cobalt sulphate with a cobalt content > 20.5%.

The operation is large-scale and will be one of the largest cobalt producers in the world. COB is also investigating additional cobalt unit supply opportunities within Australia via the recovery of cobalt from historical mine wastes such as tailings.



# Sustainability

COB views all of our decisions and activities through our corporate values of honesty, integrity, fairness and respect. These values drive our commitment to a financially successful business but also sustainability and our desire to create an enduring beneficial legacy for the communities in which we operate as well as for the people and societies who benefit from battery enabled technologies.

Our approach to sustainability reflects our desire to integrate financial, health and safety, environmental and community aspects in all aspects of our business. COB has developed a comprehensive suite of policies, procedures and guidance materials that guide our employees and business activities to ensure ethical and sustainable outcomes are achieved. Our commitment to sustainability is described in the COB Sustainability Policy.

COB has strong governance and assurance processes that rely on the following elements:

1. General risk management where we utilise our risk management policy, procedures and risk assessment template to identify hazards and risks, particularly those with material business consequences (financial, health & safety, environment, social & cultural heritage, community/reputation/government, and legal), and to then develop risk management plans to implement controls to reduce the residual risks to tolerable levels.
2. Annual reviews where self-assessment and feedback is sought from staff and other stakeholders on the effectiveness of our policies and procedures, then relevant updates are made and communicated throughout the Company.
3. The COB Audit & Risk Committee Charter provides guidance to its subordinate technical committees to ensure sustainability is being proactively managed. The Health & Safety, Risk and Stakeholder Engagement committees meet at least quarterly to promote the implementation of best practice throughout the business.

The BHCP is not yet an operational site. As such, COB has not published comprehensive Annual Sustainability Reports, however business governance is reported annually to the Australian Securities Exchange.



# Key activities in 2023/2024

COB is executing a Feasibility Study for the BHCP. The Feasibility Study includes:

- Ongoing resource definition drilling and allied activities such as geotechnical, groundwater and waste rock assessments. One hundred and fifteen drill holes were executed during 2022/23 along with associated track construction in excess of 20km long. Rehabilitation of most drill site and access tracks has been undertaken. Rehabilitation will be regularly reviewed, and where necessary, maintenance undertaken during 2023/24, to ensure that the disturbance areas function in a similar manner to the surrounding landscape
- Comminution of the 5000 tonnes of ore extracted from the bulk sample was undertaken on site to produce around 800 tonnes of pyrite concentrate that was utilized as kiln input feedstock at the Demonstration Plant.
- A Demonstration (Metallurgical Processing) Plant was constructed, commissioned and is now operating to validate the metallurgical flowsheet, to derive engineering data, and to provide certainty to investors. Around 35 local residents from Broken Hill have been employed in a variety of roles at the Demonstration Plant, including five people who identify as Aboriginal.
- Field investigations including those for biodiversity, Aboriginal cultural heritage, soils and groundwater were completed as input for the Environmental Impact Statement. A Project disturbance footprint was developed to avoid or minimize impacts on Aboriginal cultural sites, creek lines and riparian vegetation. Further assessment for other environmental and socio-economic aspects of the Project is also underway.
- Detailed engineering and costing of the BHCP, specifically process plant, mine plant, waste management and utilities infrastructure. BHCP has engaged with energy providers to develop a Power Purchase Agreement based on renewable generation and also on-site solar or solar-thermal generation.

All approvals for the abovementioned activities are in place and no non-compliances have been reported.



## Key activities in 2023/2024

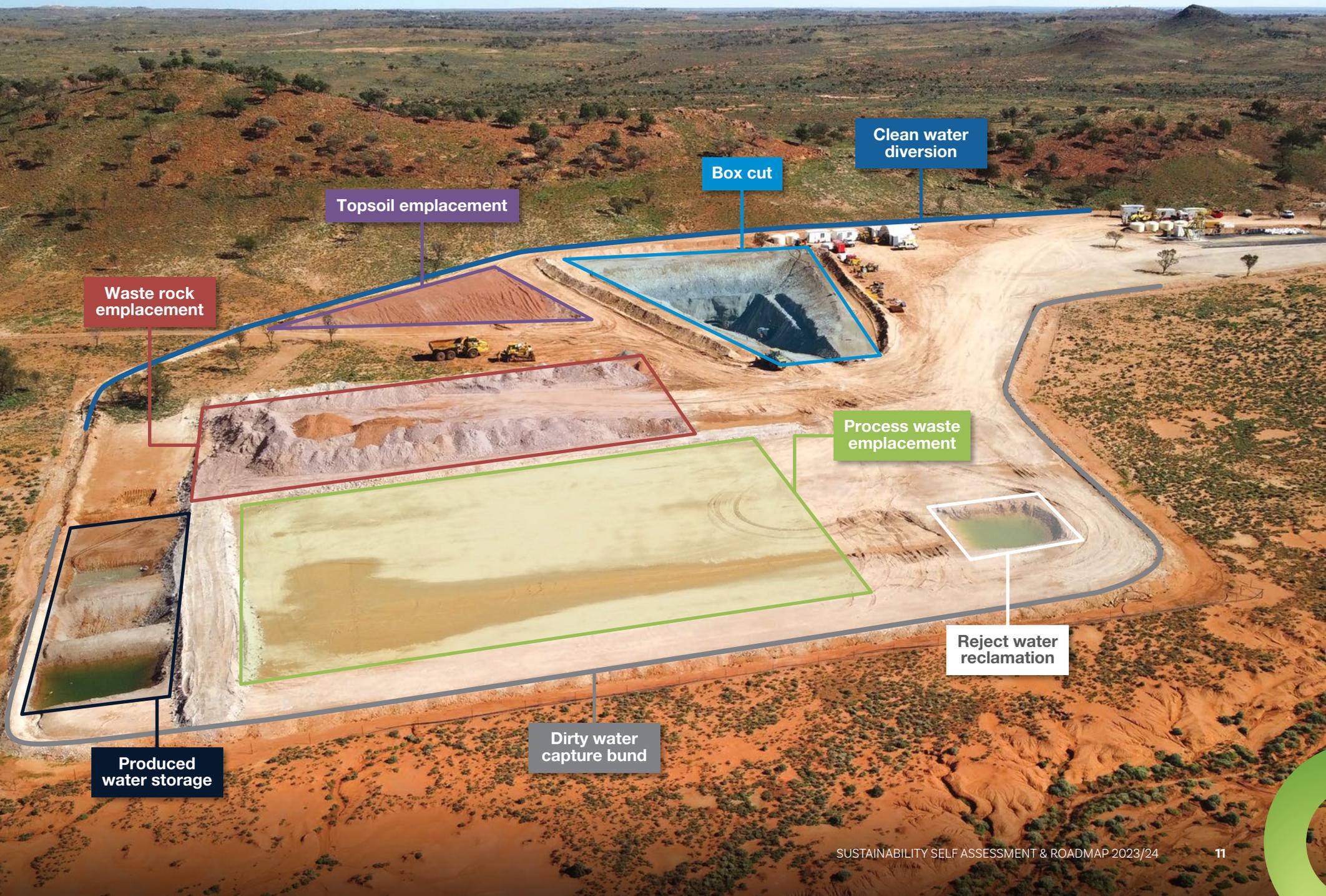
A summary of some environmental metrics for BHCP operations during 2022/23 is provided below.

Environmental Aspect	Application	Metric
Fresh water consumption	Drilling operations (including track dust suppression) and process water for comminution	7,743 kL
	Demonstration Plant operations – 25 mm industrial water supply and 25 mm sewer connection	154 kL
Diesel (excluding light vehicle usage)	Drilling operations, ore comminution and Demonstration Plant Operations	152,240 L
Electrical power	Demonstration Plant (grid purchase)	298,043 kWh
	Solar generated at Demonstration Plant	1,282 kWh
Greenhouse gas emission*	From diesel	421 t CO <sub>2</sub> -e (Scope 1)
	From electricity	241 t CO <sub>2</sub> -e (Scope 2)
Land disturbance	Exploration (drilling & tracks)	17 ha

\* Calculated using the Australian Government Clean Energy Regulator National Greenhouse and Energy Reporting Emissions Calculator



**Figure 1:** Bulk sample showing environmental controls – the underground box cut, waste and ore storage pads



# Cobalt Industry Responsible Assessment Framework (CIRAF)

On 9 January 2019, the Cobalt Institute (CI) launched the Cobalt Industry Responsible Assessment Framework (CIRAF). The CIRAF is a management tool which allows participants to demonstrate that they are aligned with good global practices on responsible production and sourcing. It strengthens the ability of cobalt producers and buyers to assess, mitigate, and report on responsible production and sourcing risks in their operations and supply chain. The CIRAF also enables a more coherent and consistent approach to cobalt due diligence and reporting by the cobalt industry.

The management framework for risk assessment and mitigation outlined in the CIRAF is aligned with the leading global standard on responsible mineral supply chains; the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD DDG).

COB aspires to be one of the world's largest producers of cobalt for battery production. Whilst we operate in Australia in accordance with strict regulatory requirements, we recognise the importance of transparently communicating how we responsibly explore for, mine, refine and reprocess cobalt. The CIRAF provides a robust and well accepted methodology to assess our operation's performance or risks and a mechanism for sharing our assessment with all stakeholders.

COB is committed to working as part of the global cobalt industry with the Cobalt Institute and other stakeholders to further develop a robust framework for the delivery of sustainable and ethical sources cobalt to facilitate decarbonisation of the global economy and to provide an enduring legacy within the communities in which we operate. We look forward to producing cobalt in a responsible and transparent manner that is consistent with our corporate values of honesty, integrity, fairness and respect.



# CIRAF requirements

The following sections outline COB's self-assessment against the CIRAF requirements.

## Level 1: General Requirements and Human Rights

### Step 1: General Requirements

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- Agreement with the CIRAF Statement of Commitment, to be signed by senior management.
- Provide a Statement of Legal Compliance (or equivalent document such as a business or mining license) in country of operation.
- Materiality assessment of the risk categories. Review through a credible mechanism is only required if material risks are different from stated material risks in the CIRAF requirements.

### Step 2: Human Rights

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- Evidence of risk-specific policy.
- Evidence of risk-specific management system aligned with OECD Due Diligence Guidance, 3rd party assurance of the management system.
- Evidence of public reporting.

## CIRAF requirements

### Level 1

#### Step 1: General Requirements

##### i. Agreement with CIRAF Statement of Commitment

By signing the statement below, COB commits to adopt and implement CIRAF as follows:

1. Provide a Statement of Legal Compliance.
2. Undertake an annual assessment at our cobalt operations (namely the Broken Hill Cobalt Project) for material risks identified in CIRAF.
3. For the category of human rights, obtain third party assurance of the human rights policy and due diligence management system within two years of the Broken Hill Cobalt Project commencing operations.
4. Publish a summary of the assessment and related activities on an annual basis.



**Joe Kaderavek**

*Chief Executive Officer and Director*

Cobalt Blue Holdings Limited / Broken Hill Cobalt Project Pty Ltd



## CIRAF requirements

### ii. Statement of legal compliance

COB's Code of Conduct outlines the Company's commitment to making a positive economic, social and environmental contributions to each of the communities in which it operates, while complying with all applicable laws and regulations, and acting in a manner that is consistent with its foundation principles of honesty, integrity, fairness and respect.

COB is committed to maintaining a culture that seeks to provide 'beyond compliance' outcomes, rather than conforming to minimum standards prescribed by law. We do not knowingly assist any third party in breaching the law, or participate in any criminal, fraudulent or corrupt practice. To support this behaviour, COB has corporate policies, procedures and management tools, provides training and awareness to staff, undertakes risk assessments and incident investigations, and encourages an open dialogue between everyone who works for or on behalf of the company. Our Directors, employees, contractors and consultants are required to comply with the COB Code of Conduct at all of our operations. The COB Procurement Policy outlines the expectations we have for all suppliers, including our expectation of ethical business conduct. The Audit & Risk Committee administer our compliance system(s) and operate in accordance with the COB Audit & Risk Committee Charter.

To date, COB has undertaken all our exploration and development activities in compliance with relevant Australian and New South Wales laws, regulations and statutory instruments, including but not limited to:

- Exploration Licenses No 6622, 8143, 8891, 9139 and 9254;
- Mining Lease No 86, 87;
- Mining Operations Plan (approved 20 May 2022) and Exploration Activity Approval (approved 16 September 2021);
- Development Consent DA 2020/24 Mod 1 (Broken Hill Cobalt Project Demonstration Plant);
- s252 Permit to enter land (NSW Mining Act) – for environmental studies;
- s138 Permit to undertake an environmental investigation in the Barrier Highway road reserve;
- Water Management Act 2000 – Water Access Licenses.

In addition, Cobalt Blue Holdings has conformed to all compliance and due diligence aspects required for listed companies in Australia as prescribed by the Australian Securities and Investment Commission and the Australian Stock Exchange.



## CIRAF requirements

### iii. Materiality assessment

The CIRAF decision tree describes material risks for different types of operations. At present, COB operates exploration activities and a demonstration scale cobalt processing facility which are not specifically referenced in the decision tree. Notwithstanding the scale of our current operations, we have attempted to assess the materiality of the risks associated with the Broken Hill Cobalt Project which is currently undergoing a Feasibility Study.

CIRAF Material Risk	Broken Hill Cobalt Project	Comments
R1 Environmental Impacts	Yes	<p>Main environmental risks associated with the BHCP include:</p> <ul style="list-style-type: none"> <li>■ Waste management / acid mine drainage.</li> <li>■ Surface and groundwater management.</li> <li>■ Air quality (dust generation).</li> <li>■ Greenhouse gas Scope 1 &amp; 2 emissions.</li> <li>■ Site post-closure rehabilitation.</li> </ul>
R2 Biodiversity Impacts	Yes	<ul style="list-style-type: none"> <li>■ Six well represented Plant Community Types present on site – clearing ~2200 ha of degraded vegetation will be required for BHCP. Project disturbance footprint developed to avoid or minimize impacts to creek line vegetation and Aboriginal cultural objects.</li> <li>■ Presence of Barrier Range Dragon and Purple Wood Wattle (listed species). Project footprint developed to avoid or minimize impacts to listed species.</li> <li>■ Biodiversity offset.</li> </ul>
R3 OHS and working conditions	Yes	Mining and industrial occupation risks, several high-risk mining operations. Implementation of rigorous safety management systems.
R5 Human Rights Impacts	Yes	<ul style="list-style-type: none"> <li>■ Comprehensive stakeholder engagement underway.</li> <li>■ Consultation with Barkandji Native Title Aboriginal Group Corporation and Registered Aboriginal Parties.</li> <li>■ No armed security presence.</li> <li>■ Payment of award or above wages/salary.</li> <li>■ Development of community enhancement initiatives.</li> <li>■ Co-operation with local and state government, Broken Hill Foundation, local business groups to co-ordinate socio-economic aspects influencing Broken Hill (eg, housing, airport).</li> </ul>

## CIRAF requirements

### iii. Materiality assessment (continued)

CIRAF Material Risk	Broken Hill Cobalt Project	Comments
R8 Livelihoods	Yes	<ul style="list-style-type: none"> <li>■ Consultation with and compensation for financial losses with landholder (Western Lands Leaseholder).</li> <li>■ Commitment to employing local people where possible.</li> <li>■ Commitment to develop Aboriginal Employment Strategy with relevant stakeholders.</li> </ul>
R9 Resettlement	No	No resettlement is required for the BHCP.

## Level 1

### Step 2: Human Rights

The COB Code of Conduct and Human Right Policy outlines the company's commitment to human rights as described in the Universal Declaration of Human Rights to ensure of all of our stakeholders' civil, political, economic, social and cultural rights are understood and respected. The COB Procurement Policy also outlines the expectations we have for our suppliers in regard to their responsible and transparent respect for human rights. Where COB sources third party sources of cobalt, a supply chain due diligence assessment will be undertaken to determine, as far as possible, its provenance and implications for human rights impacts.

CIRAF Human Rights Risk	Broken Hill Cobalt Project	Comments
Human Rights Policy	Yes	COB Human Rights Policy.
Supplier requirements	Yes	<ul style="list-style-type: none"> <li>■ COB Procurement Policy.</li> <li>■ COB sources cobalt from within Australia only.</li> </ul>
Process/procedure describing COB's management system for identifying risks and mitigation actions	Yes	<ul style="list-style-type: none"> <li>■ COB Risk Management Policy.</li> <li>■ COB Procurement Policy.</li> <li>■ COB Risk Assessment template.</li> </ul>
3rd party assurance statement	No	Not applicable at this stage.
Public reporting	No	At this stage, COB has not produced a Sustainability Report that addresses human rights matters.

# Initiative for Responsible Mining Assurance (IRMA) Standard for Responsible Mining

A high-level assessment of conformance and identification of future action has been undertaken for the BHCP using the IRMA Standard for Responsible Mining. Note that this assessment is general in nature and does not use the IRMA self-assessment process. COB makes no claim to meeting the IRMA Achievement Levels, however we have used the IRMA assessment principles and reporting criteria as a guide for this self-assessment.

COB is committed to the progressive or staged implementation of Environmental, Social and Corporate Governance certification for the BHCP using a reputable scheme such as IRMA upon reaching a Final Investment Decision and/or project offtake partner requirements.

## Key:

- + largely on-track and compliant with IRMA, may have further documentation or evidence requirements
- 0 elements of the IRMA requirements in place but further analysis, systems or reporting required
- NA not applicable. BHCP is not impacted by this IRMA requirement



## IRMA Standard for Responsible Mining

### Business Integrity

Reporting category	Status	Commentary
Legal Compliance	+ 0	Compliance with all NSW and Federal regulatory requirements, including monitoring and reporting. Inspections by regulators. Improvement opportunities addressed where identified.  Numerous approvals, licenses and permits required for operation of BHCP – applications in play.
Community and Stakeholder Engagement	+	Stakeholder Engagement Strategy being undertaken during project development, including; register, consultation log, meeting minutes, social media and events. Independent Social Impact Assessment being undertaken. Strong engagement with Broken Hill community.
Human Rights Due Diligence	+ 0	Human Rights Policy, Code of Conduct, Diversity Policy, HR Policy & Procedure Manual. Equal Opportunity, Workplace Harassment and Bullying Policy. All publicly available. Training of staff and informed contractors. Further identification, risk assessment, documentation and reporting required.
Complaints and Grievance Mechanism and Access to Remedy	+	Complaints and grievance policy, complaints register, provision of company contact phone and email, record of resolution actions.
Revenue and Payments Transparency	+	Publicly revenue and expenditure reporting available via quarterly and annual ASX reports, includes payments to government. Code of Ethics and anti-corruption training.

## IRMA Standard for Responsible Mining

### Planning for Positive Legacies

Reporting category	Status	Commentary
Environmental and Social Impact Assessment and Management	+	Comprehensive Environmental and Social Impact Assessment being undertaken for NSW State Significant Development Approval, consistent with Secretary's Environmental Assessment Requirements. Includes stakeholder consultation and provision of information. EIS will be available on the company and NSW Government web site.
Free, Prior and Informed Consent	0	Commenced Right to Negotiate process with Barkandji Native Title Aboriginal Group Corporation in regard to Native Title land. COB recognition of Indigenous People and their association with land in company statements.
Obtaining Community Support and Delivering Benefits	+	Letters of support from Broken Hill City Council, Regional NSW, Australian Major Project Status, support from local business and community groups. COB social investments. COB thought leadership in addressing Broken Hill liveability issues.
Resettlement	NA	No resettlement of any individuals or people.
Emergency Preparedness and Response Requirements	0 +	Development of Emergency Management Responses with local emergency responders and regulators in place. Site risk assessment and training undertaken. Few identified risks to impact off-site stakeholders.
Planning and Financing Reclamation and Closure	0 +	Rehabilitation and closure plan to be progressively developed and implemented. Provision of fully costed rehabilitation bond to NSW Government. Internal financial provisions for rehab and closure.

## IRMA Standard for Responsible Mining

### Social Responsibility

Reporting category	Status	Commentary
Fair Labour and Terms of Work	+ 0	Human Resources Policy and procedures. Employee induction/training. Wages/salary in accord with Australian industrial relations standards. No child or forced labour at BHCP or supply chain. Further development of recruitment strategy and implementation of HR system.
Occupational Health and Safety	+ 0	Documented OH&S policy, procedures, committee, consultation and system developed. Compliance with NSW OH&S legislation, including reporting, investigation and remediation. Further development for BHCP ongoing.
Community Health and Safety	+	Risk assessment identified few if any aspects of BHCP to contribute to community H&S impacts. Design of waste management to avoid failure mechanisms. COVID-19 management plan.
Mining and Conflict-Affected or High-Risk Areas	NA	BHCP is not in a high risk or conflict area.
Security Arrangements	+	No armed security. No significant security threats likely. Passive security – fencing and CCTV to deter trespass. CCTV communicated to workforce. NSW Police orientation.
Artisanal and Small-Scale Mining	NA	The BHCP is not artisanal or small-scale mining. No sourcing from unregulated mines. No SSM in the region.
Cultural Heritage	+ 0	Extensive Aboriginal cultural heritage assessment and management undertaken by archaeologists and Registered Aboriginal Parties. Impacts avoided where possible. CHMP to be developed for BHCP.

## IRMA Standard for Responsible Mining

### Environmental responsibility

Reporting category	Status	Commentary
Waste and materials management	+ 0	Selection of Integrated Waste Landform to minimise on and off-site chemical and physical risks of sulphidic waste. Detailed waste assessment and engineering design. Best practice progressive rehabilitation. Comprehensive management and monitoring system in preparation.
Water management	+ 0	Water to be supplied (1.5 GL/y) via new pipeline from licensed source. Licensed groundwater allocation in place. Water recycling and efficiency in project design. Generally low potential for water quality or quantity impacts.
Air quality	+ 0	No point source emissions to air in project design. Process air emitted via scrubbers designed to POEO (Clear Air) Regulations. Fugitive dust is the main air quality issue – no nearby residential receivers and very low off-site impact given arid environment.
Noise and vibration	+ 0	Processing plant and mine designed to meet OH&S standards. Noise amenity issues unlikely given closest residential receiver is > 8km distant. Vibration due to blasting assessed with no predicted impact.
Greenhouse gas emissions	+ 0	Net zero target by 2040. Scope 2 electricity consumption accounts for ~90% GHG emission. BHCP looking to renewable power purchase agreement for 100% electricity, battery storage on-site, heat recover / on-site power generation, transition to electric mine fleet and ancillary equipment may occur in second part of the Project.
Biodiversity, Ecosystem Services and Protected Areas	+ 0	Biodiversity assessment undertaken. Avoid threatened species where possible. Biodiversity offsets to be provided.
Cyanide and/or Mercury	NA	No cyanide or mercury used at BHCP.

# Commitment to net zero CO<sub>2</sub> emissions by 2040

The BHCP is committed to achieving carbon neutrality by 2040.

## BHCP indicative emissions profile

We have undertaken a high level, indicative assessment of the CO<sub>2</sub> emissions from the major sources of emission for the BHCP. Carbon emissions from the use of electrical power accounts for in excess of 90% of the BHCP carbon footprint:

- ~80MW flat load electrical power, 400kt/year CO<sub>2</sub>-e Scope 2 based off NSW National Energy Market emission factors.
- ~14M litres diesel, 33 kt/year CO<sub>2</sub>-e Scope 1.
- ~30kt limestone, 6 kt/year CO<sub>2</sub>-e Scope 1.

## Opportunities

Several carbon emission reduction or abatement opportunities are being actively pursued in project developments. These include:

- Nearby solar (54MW), wind (104MW) and compressed air generators. BHCP is looking to negotiate a Power Purchase Agreement to make efficient use of nearby renewables with less transmission loss. Adoption of a 100% renewable power generation source will reduce BHCP CO<sub>2</sub> by > 90% to less than 50kt/yr.
- On-site battery for 10–20 MW for ~1hr capacity for emergency shutdown. Opportunity for minimizing peak grid power costs.
- Heat recovery from exothermic POx circuit to produce ~15 MW on-site electricity generation.
- On site solar or solar/thermal generation – investigation of ~50MW on-site generation.
- Electrification of mine fleet (main diesel consumption) transition during first half of Project.
- Carbon offsets.





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