

Our Approach	3
Boundary and Scope	4
Our Value Chain	5
Our ESR Journey	6
Governance & Compliance	7
Ethical Business Practices	8
Economic Contribution & Value Sharing	8
Anti-Bribery & Anti-Corruption	9
Materiality & Disclosure	9
Voluntary Alignments & Commitments	11
Our Stakeholders	13
Transparency in Disclosure	13
Industry Body Participation	14
Risk Management	15
Internal Audit	16
Performance & Disclosure Benchmarking	17
ESR Approach	19
ESR Targets	20
ESR Performance Metrics	22
Appendix A: GRI14 Minesite Disclosure Table	23
Glossary	27
Contact Information	30

Environment & Social Responsibility Approach



Our Approach

Northern Star's approach is to create sustainable and profitable value for our shareholders and other stakeholders through ongoing review and improvement of our environmental, social and governance performance. We aim to achieve this by identifying, managing, and mitigating risks and impacts from our Operations while delivering superior outcomes for our shareholders, our people, our communities, and our natural environment.

Our approach to environment and social responsibility is underpinned by our STARR Core Values and framed by our governance structures and systems. Our STARR Core Values, together with our Code of Conduct and our Group policies, are fundamental to the sustainability of our Operations. They

are our decision compass and integral to the working lives of all our employees and Operations, and they define what it means to work at Northern Star. They are at the heart of our culture and the way we do business.

Our commitment to improving our Environment, Social and Governance (ESG) performance is clearly demonstrated through the business wide ESG targets and KPIs that we set ourselves and through our ESG performance targets forming meaningful proportions of our leadership team's remuneration. By monitoring and tracking local to global ESG developments and priorities, we ensure that we remain informed and able to proactively respond to our stakeholders and the ESG issues important to them.

\$1.8^B

Cash Earnings

\$5.19^B

Total Economic Value Add in FY24

\$129.6^M

FY24 Gold Royalties¹

1.62^M

FY24 Ounces of Gold Sold

We do this using a range of approaches including sector, industry and peer benchmarking and gap analyses, stakeholder and investor surveys, and employee ESG focus groups. We benchmark our ESG performance and levels of assurance against that of our peers to provide guidance for improving our performance and ESG disclosures. We are committed to transparently reporting our ESG performance and to act on areas identified for improvement.

¹ Includes payments made to Western Australian Government and private royalties.

Boundary & Scope

The Northern Star FY24 Annual Report (Report) and the additional disclosures in our environment and social responsibility (ESR) disclosure suite, provide information on Northern Star's sustainability performance across its Operations during the period 1 July 2023 to 30 June 2024.

The Report and our ESR disclosures should be read in conjunction with our public disclosures on our Company website <https://www.nsrld.com/sustainability>. Northern Star's assets included in our ESR disclosure suite are listed in Figure 1 below.

Figure 1 Organisational Boundaries

Corporate Office, Perth, Western Australia			
Kalgoorlie Production Centre	Yandal Production Centre	Pogo Production Centre	Exploration
Carosue Dam Operations	Bronzewing Operations	Pogo Operations	Central Tanami Project
Kanowna Belle Operations	Jundee Operations		Tanami Regional
KCGM Operations	Thunderbox Operations		
South Kalgoorlie Operations			

4,044

Employees at 30 June 2024

2,975

Contractors at 30 June 2024

7,019

Our global workforce at 30 June 2024

3

Production Centres



Robert Mills, Projects Superintendent, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Our Value Chain

The value chain of a gold mine involves several key stages: exploration, extraction, processing, refining, and distribution. Also recognised in this value chain is the rehabilitation of the land from which the gold ore was initially extracted.

During exploration, geologists and surveyors identify potential gold reserves using advanced techniques and equipment, supported by consumables like drilling materials.

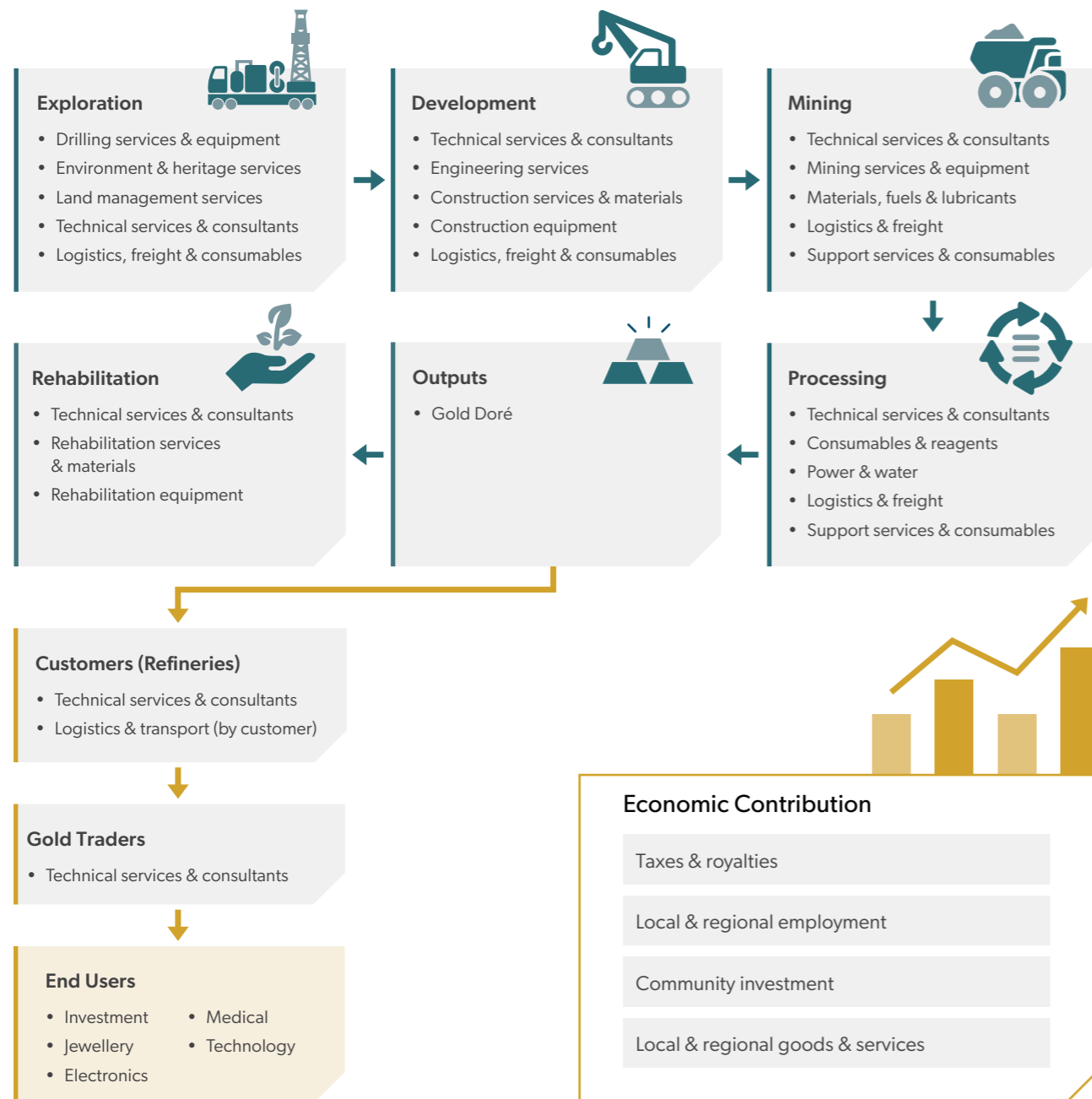
In the extraction phase, heavy machinery and equipment are used to excavate and transport ore, with consumables such as explosives and fuel being crucial.

Processing the ore requires specialised equipment for crushing, grinding, and chemical separation, along with consumables like reagents. Gold doré bars produced onsite are sold to refineries for further processing and on selling.

The refineries use specialised equipment and chemicals to produce refined gold ready for marketing and distribution both domestically and internationally.

We sell all our physical gold to the Perth Mint. Ultimately end users purchase this refined gold for use in various areas including investment, jewellery, medical equipment, technology, and electronics.

Figure 2 Northern Star's Value Chain



Our ESR Journey

Northern Star has continued to embrace and progress our environment and social responsibility journey with ongoing focus and commitment to maintaining responsible and sustainable exploration and mining practices.

In FY24 we continued to progress our climate related projects with renewable energy infrastructure installations and implementation of more forward looking modelling; we continued to look at opportunities to improve water recycling at our sites, and turned our attention to the initial phases of TNFD analysis and

implementation; our communities and stakeholders remained a key area of focus for us, with ongoing community investment and engagement activities; work on alignment to the GISTM over time, using a risk-informed approach, continued in our technical services teams; our supply chain considered ESR matters through supplier reviews and our modern slavery mitigation programs; safety and critical controls remain a significant priority for our workforce; and we continued to ensure our ESR disclosures were transparent and informative.

Figure 3 Our FY24 ESR Journey



Governance & Compliance

As an Australian Securities Exchange (ASX) listed gold mining company, we are subject to, and conduct our business in accordance with the ASX Listing Rules, and the laws and regulatory requirements of the Australian and US jurisdictions within which we operate.

The Board and Management are committed to the highest standards of corporate governance including 100% alignment with the ASX Corporate Governance Council's 'Corporate Governance Principles and Recommendations'.

Our sustainability framework aims to promote transparency and responsible behaviour. Our principles and processes are periodically reviewed to ensure we maintain the highest standards of corporate governance.

Since the end of FY21, female Board participation has increased 5%, from 33% to 38% of all Directors (at 30 June 2024).

During FY24 the Board had seven Non-Executive Directors and one Executive Director, being the Managing Director & CEO, Stuart Tonkin. The Board supports the view that its Directors having diversity in gender, age, skillset, background, and tenure helps ensure more perspectives contribute to decision-making.

Ethical Business Practices

Northern Star actively promotes a corporate culture committed to ethical business practices, compliance with the law and exercising integrity in decision making by our people and in our Operations through our STARR Core Values, Code of Conduct and other key core corporate governance policies.

All inductions completed by our workers cover these key documents. Northern Star's policy commitments for responsible business conduct apply to all the Company's activities and business relationships equally.

Employees and other stakeholders who suspect or see unethical, illegal or improper behaviour within the

Company are encouraged to report and are protected under our Whistleblower Policy which provides for a confidential, anonymous, and retaliation-free process for people to report their concerns, with confidence the Board will be made aware of material breaches of the Code of Conduct.

Whistleblower reports are standing items for discussion on all Audit & Risk Committee and Board agendas.

In FY24 Northern Star received and addressed 17 Whistleblower Policy reports, all of which were reported to and discussed by the Audit and Risk Committee and the Board.

Economic Contribution & Value Sharing

Northern Star continues to be a positive contributor to Australian and Alaskan economies and communities, particularly in the regional areas where we operate through direct and indirect financial support.

Payments for goods and services and employee wages are pivotal for local economies and communities. Money spent locally and regionally initiates a cycle of economic activity, fostering growth and investment in the community. Wages provide our employees with the means to support themselves, stimulating demand for goods and services and sustaining local jobs, and continues to circulate within the community, amplifying the economic impact through a multiplier effect.

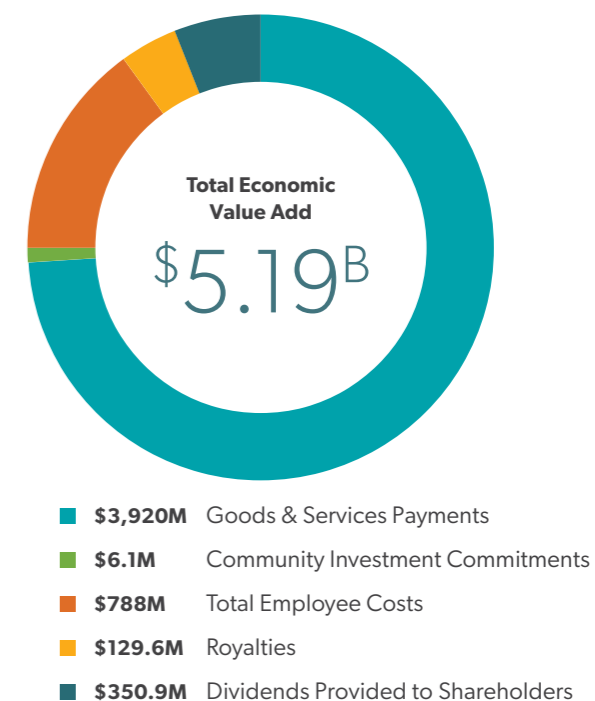
Additionally, Northern Star contributes to the State and national economies in which we operate through payments of royalties and other taxes, which contribute to funds for essential public services.

Northern Star remains committed to maintaining our strong support of our local and regional communities through our long-term partnerships, and support of local and regional community initiatives, local governments, education bodies, non-government organisations and charities.

For instance, two of Northern Star's three production centres are located in Western Australia's Goldfields region. The importance of the Goldfields to our Company cannot be underestimated. Central to our Company's growth objectives in Western Australia is a strong residential workforce in Kalgoorlie-Boulder, supporting local businesses and thriving regional communities. Approximately 83% of

our employees working across the Kalgoorlie Production Centre (excluding the Carosue Dam Operations) live and work in Kalgoorlie-Boulder, Coolgardie, and Kambalda, delivering in aggregate more than \$110 million in annual wages locally. Our Operations also help to drive regional investment and procurement.

Figure 4 FY24 Economic Contribution



Thunderbox Processing Plant, Thunderbox Operations, Yandal Production Centre, Western Australia

Anti-Bribery & Anti-Corruption

In accordance with Northern Star’s Anti-Bribery and Anti-Corruption Policy, it is the policy of the Company to conduct its business fairly, honestly, transparently, with integrity and in compliance with the law in all jurisdictions where it operates (and in compliance with all legislation having extra-territorial jurisdiction over the Company).

The Policy sets out Northern Star’s committed opposition to bribery and corruption and to ensure all relevant persons

understand their individual responsibilities for compliance in connection with our business and operations. The Policy is supported by internal training programs, our Code of Conduct, and incident reporting and investigation processes for suspected breaches.

Northern Star recognises that maintenance of a robust culture of integrity, transparency and compliance, is critical to our long-term success.

Figure 5 Anti-Bribery & Corruption Status

0

- # of all confirmed incidents of corruption in FY24
- # incidents when contracts with business partners were terminated or not renewed due to violations related to corruption
- # public legal cases regarding corruption brought against the organisation or its employees during the reporting period and the outcomes of such cases
- # of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation in which the organisation has been identified as a participant
- # Main outcomes of completed legal actions, including any decisions or judgments

Materiality & Disclosure

Northern Star consistently evaluates and explores forthcoming opportunities for disclosure, encompassing reporting frameworks and standards to align with Company objectives. This process prioritises stakeholder input, which allows us to delineate material topics and refining our approach in response.

In our ongoing efforts to enhance the depth and calibre of our disclosures, we systematically gauge our voluntary reporting against key industry material topics as defined by prominent reporting standards and frameworks. This practice affords insight into our stakeholders’ key areas of interest. Subsequently, we transparently share information enabling stakeholders to evaluate and benchmark our sustainability performance.

The Company’s Materiality Matrix (Figure 6) was reviewed and updated during FY24 to continuously improve our disclosures, strategic action plans, and stakeholder engagement programs and ensure our FY24 ESR suite of disclosures contain the most material topics for our stakeholders.

The materiality assessment incorporated consideration of impacts that are potentially material to our industry according to GRI and SASB; changing regulatory and socioeconomic influences; input from employee surveys and ESG engagement focus group sessions; results from social impact assessments and community feedback; commentary from external reviews, and interviews conducted by an independent third party with key stakeholder engagement resources.

The Company’s material topics for inclusion in this disclosure and the FY24 Annual Report are provided in Figure 7. These material topics were derived from our materiality assessment update which was undertaken in FY24.

Figure 6 Northern Star’s Materiality Matrix at 30 June 2024



In FY24 Northern Star has elected to release our environmental and social responsibility disclosures in a suite format, with each disclosure focussing on our approach to each of the material topics below. Each disclosure contains information related to our governance processes around the material topic, as well as key information on compliance with minimum internal or regulator standards and key performance metrics.

The Northern Star FY24 Annual Report, FY24 Corporate Governance Statement, FY24 Modern Slavery Statement and our website disclosures also form part of our overall disclosure.

Figure 7 Material Topics for Disclosure in FY24

Environment	Social & Safety
Environmental Management	People & Culture
Water Security	Safety & Critical Risk Control
Tailings & Waste Management	Community Engagement & Support
Climate Change & GHG Emissions	Supply Chain Management

Voluntary Alignments & Commitments

In this disclosure we demonstrate our voluntary alignment with the following:

Figure 8 Voluntary Alignments



Global Reporting Initiative (GRI) Standards

The GRI Standards enable an organisation to report on their impacts on people, the environment, and the economy in a standardised manner. The aim is to increase an organisation's transparency in reporting and demonstrate its contribution to organisational sustainability. Northern Star has prepared the reported information in accordance with the GRI Universal Standards. Northern Star's FY24 GRI, SASB and UN SDG Alignment Index is available on our Company website.



Sustainability Accounting Standards Board (SASB)

The SASB Standards are aimed at connecting businesses and investors on the financial impacts of sustainability. Northern Star uses the Mining and Metals Sustainability Accounting Standard, updated in December 2021 to guide its sustainability disclosures.



Task Force on Climate-Related Financial Disclosures (TCFD)

The Financial Stability Board created the TCFD to improve and increase reporting of climate related financial information. The reports produced satisfy stakeholders' requirements for clear, detailed, and quality financial information on the impacts of climate change including potential risks and opportunities. Northern Star has disclosed in alignment with TCFD recommendations since 2019.



United Nations Sustainable Development Goals (UN SDGs)

The United Nations members developed 17 Sustainable Development Goals, which are an urgent call for action by all countries in partnership to achieve a more sustainable future. We recognise our impact on, and opportunity to positively contribute to all 17 UN SDGs. Northern Star has been reporting against the UN SDGs in our annual Sustainability Reports since 2018. In FY23 we completed an updated assessment of our alignment with the goals (refer to our Sustainability Reporting website for additional information), which highlighted our priorities for the following ten UN SDGs where we believe we make the greatest impact:

- UN SDG 1 – No poverty
- UN SDG 3 – Good health and wellbeing
- UN SDG 4 – Quality education
- UN SDG 5 – Gender equality
- UN SDG 6 – Clean water and sanitation
- UN SDG 8 – Decent work and economic growth
- UN SDG 10 – Reduced inequalities
- UN SDG 13 – Climate action
- UN SDG 15 – Life on land
- UN SDG 17 – Partnerships for the goals

We also participate in, or are included in, the following external ESG performance benchmarking initiatives and assessments conducted by global third-party rating agencies:

- CDP (Climate Change and Water Security)
- S&P Global (Dow Jones Sustainability Index)
- Sustainalytics
- V.E Connect (Moody's)
- MSCI
- ISS (Environmental, Social and Governance)
- FTSE4Good

In conjunction with these ratings, we have continued to focus on the quality and availability of our own ESG metrics and to allow transparency in the information we provide to our stakeholders. We also engage directly with investors and custodians, responding to general and specific questions about ESG practices within our operations.

We use the outcomes of these assessments and engagements to change or improve how we disclose our performance in ESG and consider what further steps we can take which may benefit the business and improve our ESG performance. Being aligned to and reporting against the SASB, TCFD, CDP and GRI Standards, Northern Star is well placed to report against the International Sustainability Standards Board (ISSB) Standards when they are adopted through the ISSB's consolidation of the SASB, GRI and TCFD reporting requirements.

In FY24 we also took our first steps towards adopting the TNFD Recommendations by:

- undertaking benchmarking against our peers;
- conducting a gap analysis against the TNFD required governance disclosures; and
- commencing an analysis of our nature related dependencies, impacts, risks and opportunities at our Yandal Production Centre.

Our Stakeholders

Northern Star is committed to ongoing positive stakeholder collaboration and engagement.

Our corporate governance framework adopted by the Board includes key policy documents which set

out Northern Star’s standards for stakeholder engagement.

Figure 9 Our Stakeholders



Transparency in Disclosure

Northern Star recognises that trust among stakeholders and investor confidence are nurtured through transparent disclosure practices.

We are dedicated to providing clear and unambiguous information regarding our corporate structure, operations, performance, and governance in our communications. This commitment serves to foster genuine dialogue with our shareholders and stakeholders.

Aligned with Northern Star’s Continuous Disclosure Policy and Shareholder Communication Policy, our public disclosures adhere to principles of integrity, openness, fairness, and accountability.

Northern Star consistently evaluates and enhances our periodic disclosures to uphold these standards in all external communications.

In our pursuit of transparency, we actively engage with proxy advisors and extend invitations to shareholders for questions to our Board and Auditor before our Annual General Meeting.

This opportunity, whether in advance or during the meeting (whether in person or through hybrid meeting technology), underscores our dedication to open communication and accountability.

Industry Body Participation

In order to maintain a broad understanding of emerging social expectations and issues that relate to our business, we regularly engage with our host communities, investors, Indigenous stakeholders, governments and other relevant third parties.

We are active leaders and members in industry representative bodies, including:

Figure 10 Northern Star’s Industry Body Participation

 <p>Chamber of Minerals & Energy (Western Australia)</p>	 <p>Alaska Miners Association (USA)</p>	 <p>Association of Mining & Exploration Companies (Australia)</p>	 <p>Alaska Metal Mines (USA)</p>
 <p>Chamber of Commerce & Industry (Western Australia)</p>	 <p>National Mining Association (USA)</p>	 <p>Committee for Perth (Western Australia)</p>	 <p>Gold Industry Group</p>

Risk Management

Environment and social responsibility factored prominently in our decision-making, strategic planning, and risk management processes during FY24.

Leveraging our company-wide Risk Management Standard, we continued to identify and assess potential risks, ensuring that these risks receive due consideration from senior management and the Board.

Our process for the identification, analysis, evaluation, and treatment of risk, is in line with ISO 31000:2018

Risk Management - Guidelines. This process provides a consistent and structured approach to understanding, communicating, and managing risk at Northern Star.

The Audit and Risk Committee (ARC) oversees the risk management framework, while the ESS Committee specialises in addressing ESR risks, providing regular updates to the Board.

In FY24, management reviewed climate change related and other

ESR risks, with updates communicated to the ESS Committee. These risks are integrated into the organisation's strategic risk profile.

Northern Star continued the progressive implementation of our new enterprise risk and assurance software across all of our sites, and capturing all recording, monitoring and reporting of outcomes of risk and opportunity management and assurance through the system.

Internal Audit

Internal audit is undertaken by the Group Audit & Risk (GAR), supported by outsourced internal audit service providers.

The GAR function is governed by an Internal Audit Charter approved by the ARC. The GAR function provides risk-based assurance on whether risk management, internal control and governance processes are appropriately designed and operating at the level expected by the Board.

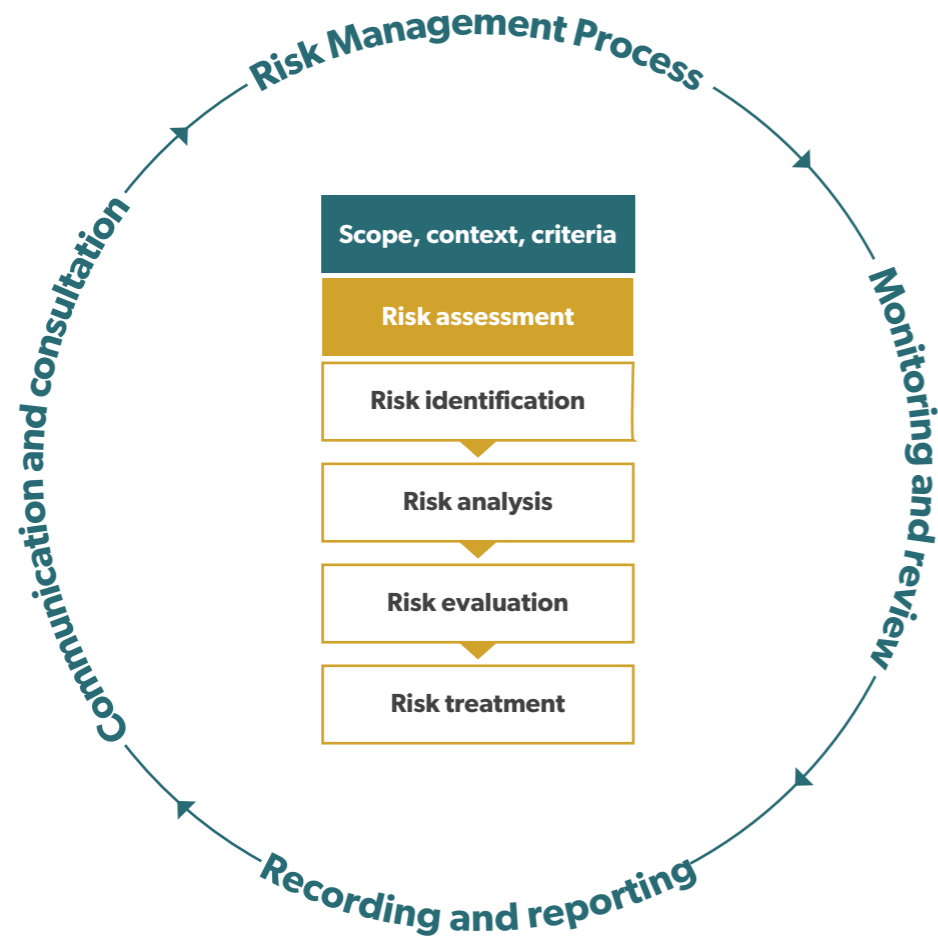
The ARC evaluates the GAR function's staffing levels and scope of work to ensure they are appropriate given the level of assurance required over the organisation's key risks and controls. The ARC approves the annual internal audit plan, reviews internal audit findings and monitors that audit actions have been implemented by management.

The ARC approves the appointment and dismissal of the GAR and assesses

their performance, independence and objectivity. The GAR reports to the ARC, with functional oversight provided by the Chief Financial Officer.

While internal and external audit activities are separate and independent of each other, there is strong collaboration between both audit functions to maximise the effectiveness of assurance activity and minimise duplication of assurance effort and resources.

Figure 11 ISO31000 Risk Management Process



Sean Bloch, Mine Surveyor, Mt Charlotte KCGM Operations, Kalgoorlie Production Centre, Western Australia

Performance & Disclosure Benchmarking

Annually the ESG Engagement team within Northern Star undertakes a detailed ESG benchmarking comparison of our various performance metrics against a selected group of peer gold mining companies.

The benchmarking compares public ESG performance disclosures in peer Sustainability Reports, performance

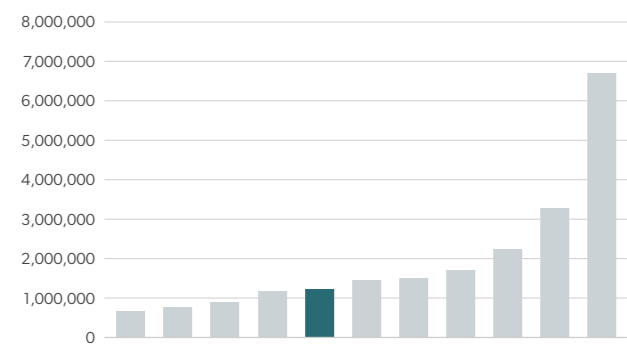
data tables and peer websites. Consideration is also given to analysts or ratings agency information where it is available.

This benchmarking is aimed at providing guidance on areas where we believe Northern Star is demonstrating commensurate or better levels of ESG disclosures or

performance in comparison to our peers, and where we could improve. Below is a selection of some of the key benchmarks completed during our FY24 review.²

Northern Star's performance is shown in the dark green colour on the benchmarking charts on this page and page 18.

Figure 12 Total Scope 1 & Scope 2 GHG Emissions (T CO₂-e)



Scope 1 and 2 emissions are significantly influenced throughout our peer group by the nature of each organisations' energy supplies, and also by the nature of the mining and processing techniques applied across their various operations.

Northern Star's Total Scope 1 and Scope 2 GHG emissions sits approximately in the middle of the peer group, however the tonnes of actual GHG emissions is significantly lower than the peers with the highest GHG emissions.

It's anticipated that the further roll out of renewable energy projects, and "grid greening" will have a positive impact on emissions and emissions intensity for all peer group companies with grid connecting power supplies.

Figure 13 Scope 1 & 2 Emissions Intensity (T CO₂-e/oz)

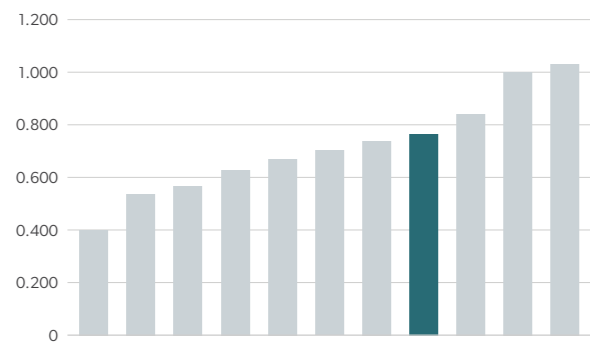
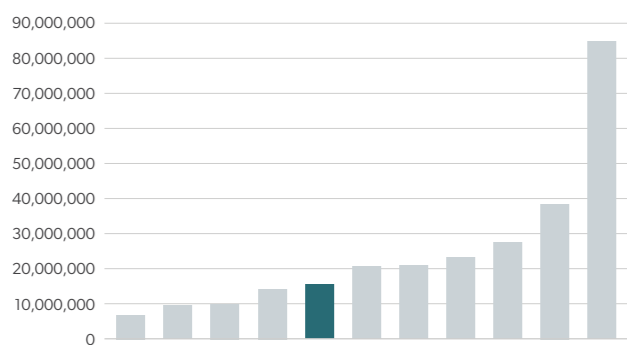


Figure 14 Energy Consumption (GJ)



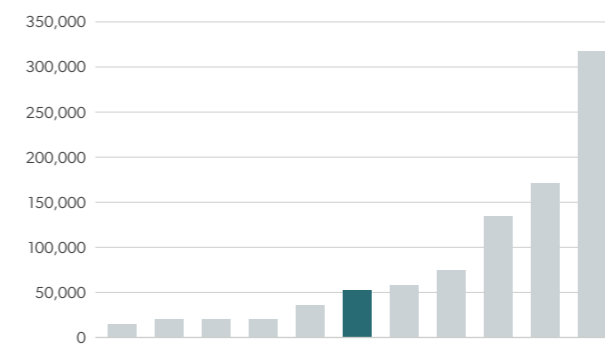
Energy consumption across our peer group is relatively comparable for those operations of similar scale and nature of mining or processing techniques. Organisations undertaking heap leach facilities tend to have a much lower energy intensity per tonne of ore processed, but a much higher intensity per ounce of gold produced. Northern Star does not operate any heap leaching facilities.

² Benchmarking is undertaken in November annually, therefore the figures in the charts may slightly vary on current Northern Star or peer disclosures that have been updated since that time.

In addition to these metrics, Northern Star has continued to monitor and benchmark its position relative to its peers and industry best practice in relation to important areas of focus such as:

- Alignment and progress against the TCFD and the TNFD
- Application of Limited and Reasonable Assurance against the GRI
- Psychosocial and physical health and wellbeing initiatives and performance
- Human rights, modern slavery and other relevant supply chain metrics.

Figure 15 Total Water Withdrawal (ML)



While GRI and ICMM require reporters to disclose their water "consumption" using a set calculation (water withdrawal less any water discharges) this doesn't give an accurate picture of the actual volume of water being "used" in a given year by organisations that are capturing and recycling large amounts of water that are retained in storage dams.

Northern Star monitors total water used as it is more reflective of water no longer available in an ecosystem for other uses.

Our total water use is significantly lower than the majority of our peer group.

Figure 16 Total Water Used (ML): Water Consumption (Water Withdrawal - Water Discharged) + Water Recycled

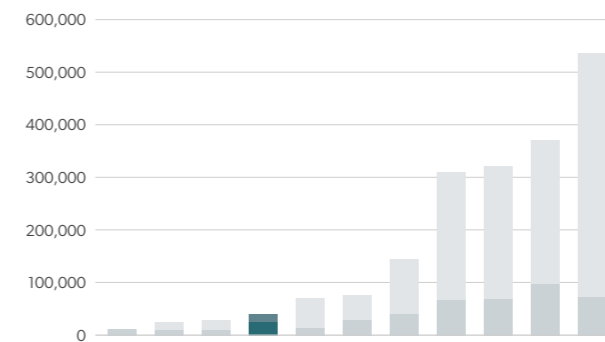
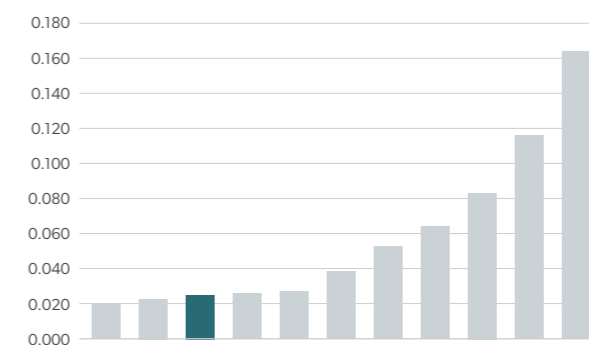


Figure 17 Total Water Used Intensity (ML/oz gold)



Northern Star's total water used per ounce of gold produced is at the lower end of the peer group. This is in part because our Operations do not have large water harvesting or storage facilities (ie. large scale water dams) and we aim to minimise the water stored on our TSF's. This reduces losses through evaporation and aligns with our tailing's facility operational requirements.

ESR Approach

Integrating ESR is a company wide approach that respects nature, supports and engages our community, and values our workforce.

We aim to minimise our environmental impacts through practices and technological improvements, including renewable energy sources and efficient resource management.

We are committed to responsible land management and minimising and mitigating long term liabilities.

Engaging actively with local communities is central to our approach, building relationships based on trust and shared prosperity. We uphold fair labour standards and are committed to the safety

and well-being of our workforce, fostering a culture of fairness, honesty and respect.

By embedding these principles in our ESR approach, we aim to create sustainable value for our Company, respecting the environment, and our stakeholders.

Figure 18 Our Integrated ESR Approach



ESR Targets



Our ESR targets demonstrate the key areas where we are committed to continuous improvement. In FY24, we remained on track with our 10 focus areas. Progress towards our longer-term goals is actively underway.

Further insights into our efforts across these focus areas can be found in the respective sections of our ESR disclosure suite, detailing the ongoing initiatives undertaken by Northern Star.

Table 1 ESR Targets

Focus Area	Category	Targets	Status at 30 June 2024 (on track to meet target)
Biodiversity	Report on progress of phased implementation of the TNFD	Conform by FY26	✓
Community Investment	Economic investments and commitments in host communities and regions per annum	maintain at least \$6M annually	✓
Decarbonisation	Reduce Scope 1 and 2 absolute Emissions relative to 01 July 2020 baseline of 931 kt CO ₂ -e	35% by 30 June 2030	✓
Diversity	Female representation (all employees)	maintain at least 23% annually	✓
	Female representation at the Board Level	maintain at least 30% annually	✓
Environment	Material environmental incidents	0 annually	✓
Human Rights	Implement risk mitigation plans for major contracts where suppliers are identified as having a high likelihood of impacting human rights	100%	✓
Indigenous Procurement	Continue to develop sustainable supply contracts with Indigenous businesses	\$20M p/a from FY25	✓
Safety and Health	Fatalities	0 annually	✓
Tailings Management	Disclosures in accordance with the Northern Star's Global Tailings Management Standard	Annually	✓
Water Stewardship	Proportion of water recycled or reused per annum relative to net total water consumption	maintain at least 40% annually	✓
	Establish a baseline year for future water efficiency projects	Determine by FY26	✓



Nick McCormick, Fixed Plant Fitter
Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

ESR Performance Metrics

Category	Material Risk	Sustainability Metric	FY24	FY23	FY22
Environment	Biodiversity, GHG Emissions, Climate Change, Waste & Water Management	Net Zero Ambition for Emissions by 2050			
		Total Scope 1 & 2 GHG emissions (t CO ₂ -e)	1,233,730	1,202,401	1,163,635
		Scope 1 & 2 GHG emissions intensity (t CO ₂ -e/tonne ore processed)	0.045	0.045	0.044
		Scope 3 GHG emissions (t CO ₂ -e)	665,134	629,816	378,203
		Electricity consumed from renewable sources (GJ)	39,313	37,598	29,463
		2030 Emissions Reduction target	35% reduction on FY20 baseline		
		Responsible Environmental Stewardship			
		Cost of regulatory infringements received (\$USD)	-	600,000	-
		Rehabilitation completed per annum (ha)	42.4	66.6	140.3
		Proportion of waste recycled/reused - excluding tailings or waste rock (T)	10,369	5,938	5,131
		Total volume of fresh and other water withdrawn (ML)	49,841	52,531	46,574
		Total volume of water recycled/reused (ML)	12,252	14,039	15,970
		Total volume of water discharges (ML)	28,547	27,717	27,535
		Net volume of fresh and other water consumed (ML)	23,267	24,814	19,039
Net water consumption efficiency (ML/tonne ore processed)	0.0008	0.0009	0.0007		
Social	Employment Conditions & Opportunities	Fostering Diversity & Inclusion			
		Our employee workforce (excluding contractors)	4,044	3,587	3,409
		Indigenous employment in Australia (%)	2.08	2.15	2.61
	Training & Development	Female employment (%)	23.4	23.1	23.1
		Talent Management, Skills Development			
		Graduates, Undergraduates, Trainees, Vacation Students & Interns	307	247	326
	Community Support & Engagement	Number of Apprentices (including trade upgrades)	101	76	73
		Number of employees participated in leadership development training	121	141	90
		Managing Community Expectations & Demonstrating Contribution			
		Total funds committed to community investment, and sponsorships (A\$M)	6.1	6.6	6.1
		% Local employment Pogo	56.8	59	73
		% Kalgoorlie workforce residential (excluding Carosue Dam)	83.1	91	90
		Supporting Local and Indigenous businesses			
		Procurement spend (A\$M):	3,926	3,014	2,643
• Western Australia		2,903	2,200	1,972	
• Other Australia		379	400	298	
• Alaska		178	167	156	
• Other	465	248	217		
• Indigenous Spend (Direct) ³	9.54	5.2	5.1		
Safety Management & Risk Control	Safety Management & Risk Control				
	Lost Time Injury Frequency Rate: Contractors	0.2	0.9	0.6	
	Lost Time Injury Frequency Rate: Employees	0.8	1.0	0.5	
	Total Reportable Injury Frequency Rate: Contractors	2.7	2.95	2.5	
	Total Reportable Injury Frequency Rate: Employees	2.0	3.45	1.5	
% close out of hazard identification events reported	96	99	94		
Compliance - Regulatory, Business, Standards	Respecting Communities & Resolving Issues				
	Total community complaints received	20	-	1	
	Proportion of community complaints resolved	20	1	-	
Number of sites with Social Impact Assessment Reports	2	2	2		
Governance	Governance Structure & Ethical Conduct	Demonstrating Ethical behaviour			
		Number of material Whistleblower complaints received	17	10	1
	Number of material Whistleblower complaints investigated	17	10	1	
	Business Continuity & Return on Equity	Economic Contribution			
		Dividends Paid (A\$M)	350.9	261	227
		Gold sold (Moz)	1.62	1.56	1.56
Total revenue (A\$B)		4.9	4.1	3.8	
Royalties and taxes paid to governments (A\$M)	129.6	99	90		
Cash Earnings ⁴ (A\$B)	1.8	1.2	1.1		

³ Comprises a portion of the total spend that occurred directly and indirectly with Indigenous businesses in FY24. For full details on Total Spend (Direct & Indirect) with Indigenous Businesses refer to the remuneration report within the FY24 Annual Report.

⁴ Cash Earnings means Underlying EBITDA less sustaining capital, net interest and corporate tax paid.

Appendix A: Minesite Disclosure Table

GRI 14 Material Topics	Corporate		Yandal Production Centre						Pogo Production Centre		Kalgoorlie Production Centre					
			Jundee Operations		Bronzewing Operations		Thunderbox Operations		Pogo Operations		Carosue Dam Operations		Kalgoorlie Operations		KCGM Operations	
	Country	Australia	Country	Australia	Country	Australia	Country	Australia	Country	Alaska	Country	Australia	Country	Australia	Country	Australia
	Topic Disclosures	Company Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data	Topic Disclosures	Site Level Data
GHG Emissions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Air Emissions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Biodiversity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Waste	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tailings	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Water & Effluents	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Closure & Rehabilitation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Economic Impacts	Y	Y			Y				Y					Y		
Local Communities	Y	Y			Y				Y					Y		
Rights of Indigenous Peoples	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land & Resource Rights	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Artisanal & Small-Scale Mining	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Security Practices	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Critical Incident Management	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Occupational Health & Safety	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Employment Practices	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Child Labour	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forced Labour & Modern Slavery	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freedom of Association & Collective Bargaining	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Discrimination & Equal Employment Opportunity	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anti-corruption	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Payments to Governments	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public Policy	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conflict-affected & High-risk Areas	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Sunrise at Carosue Dam Operations, Kalgoorlie Region, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance is received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsr ltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure

and Northern Star cautions readers against reliance on any forward-looking statements or guidance. There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout the ESR Disclosure Suite there are references to supporting information on our website which the reader is encouraged to view. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Au

The chemical symbol for gold

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

B or bn

Billion

Board

Board of Directors

CDP

Carbon Disclosure Project

CO₂

Carbon dioxide

CO₂-e

Carbon dioxide equivalent

Company

Northern Star Resources Ltd
ABN 43 092 832 892

Contractor(s)

Externally employed contracted workers engaged by the Company to support Operations

Corporations Act

Corporations Act 2001 (Cth)

CME

The Chamber of Minerals and Energy of Western Australia

DEMIRS

Department of Energy, Mines, Industry Regulation and Safety (Western Australian)

Director

A director of the Company duly appointed under the Corporations Act

Doré

A doré bar is a semi-pure alloy of gold and silver. It is usually created at the site of a mine and then transported to a refinery for further purification.

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESR Disclosure Suite

Refers to the nine separate disclosures related to environment and social responsibility information available on the Northern Star Company website. These comprise: ESR Approach at Northern Star, People & Culture at Northern Star, Safety & Critical Risk Control at Northern Star, Community Engagement & Support at Northern Star, Supply Chain Management at Northern Star, Environmental Management at Northern Star, Climate Change at Northern Star, Water Security at Northern Star, and Waste & Tailings Management at Northern Star

ESR Performance Data Tables

Detailed spreadsheets containing key environment and social responsibility metrics for Northern Star for FY24 and relevant preceding years available from the Company website

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GAR

Group Audit and Risk

GHG

Greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, and nitrogen trifluoride)

GISTM

Global Industry Standard on Tailings Management

GJ

Gigajoule; one billion joules

GoldSTARR

Northern Star's Employee Hub for physical, mental and financial health

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

ha

Hectare

ICMM

International Council on Mining and Metals

K or k

Thousand

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant

kl

kilolitre; one thousand litres

KMP

Key Management Personnel

KPI

Key Performance Indicator

Limited Assurance

Audit and assurance undertaken by an external auditor on whether the data or statements made in this or related disclosure(s) have been prepared in accordance with GRI

LTIFR

Lost Time Injury Frequency Rate; calculated based on the number of lost time injuries occurring in a workplace per 1 million hours worked

M or m

Million

ML

Mega-litre; one million litres

MW

megawatt; one million watts

Net Zero

Net Zero refers to achieving a balance between the amount of operational Scope 1 and Scope 2 greenhouse gas Emissions produced and those removed

Net Zero Ambition

Net Zero Ambition is our ambition to achieve Net Zero by 2050, as expressed in our Climate Change Policy

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

Operations

mining and mineral processing activities conducted by Northern Star Resources

Oz

Ounce

P&C

People and Culture

PEP

Performance Evaluation Process

Reasonable Assurance

Audit and assurance undertaken to a higher level on whether the data or statements in this or related disclosure(s) have been prepared in accordance with GRI

SASB

Sustainability Accounting Standards Board

Scope 1 Emissions

Emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level

Scope 2 Emissions

Emissions released to the atmosphere from the indirect consumption of an energy commodity

Scope 3 Emissions

Indirect greenhouse gas Emissions other than Scope 2 Emissions that are generated in the wider economy. They occur as a consequence of the activities of a facility, but from sources not owned or controlled by that facility's business

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

STARR Core Values

Northern Star's Core Values of Safety, Teamwork, Accountability, Respect and Results

T or t

Tonnes; one thousand kilograms

TCFD

The Financial Stability Board's Task Force on Climate-related Financial Disclosures

TNFD

The Taskforce on Nature-related Financial Disclosures

TRIFR

Total Reportable Injury Frequency Rate; calculated according to the number of reportable work-related injuries or illness for each one million hours worked

TSF

Tailings Storage Facility

UN

United Nations

UN SDG(s)

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

WHS

Work, Health and Safety

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Ifrah Ali, Geotech and Jane Lenton, Geologist in the field at Twin Peaks, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

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Northern Star Resources Ltd

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Media Officer mediaofficer@nsrld.com

Compliance compliance@nsrld.com

ASX Code NST

Share Registry MUFG Corporate Markets
(formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

Environmental Management at Northern Star

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

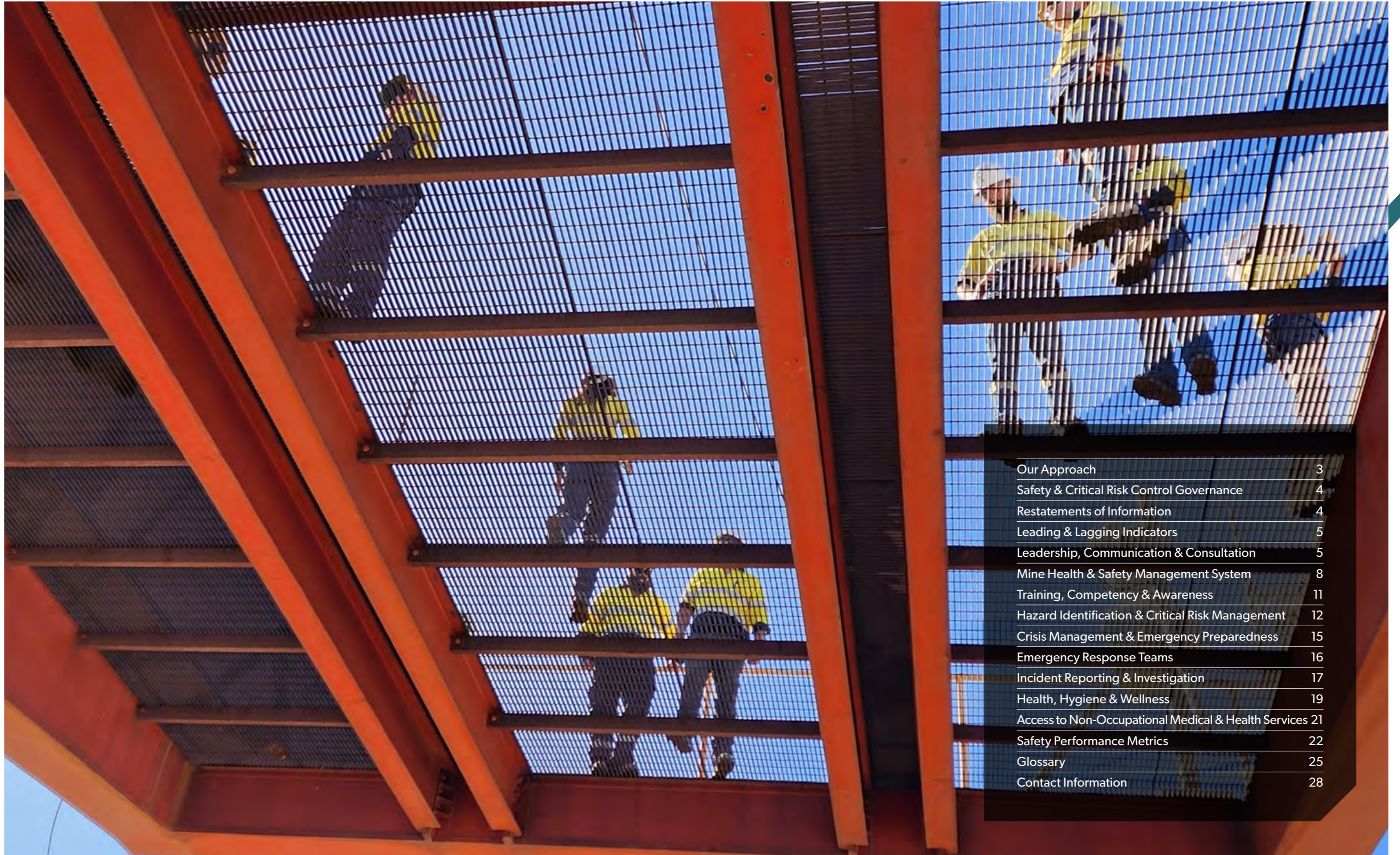
FY24 Performance Data Tables

FY24 GRI, SASB and UN SDG Alignment Index

FY24 Tailings Disclosure Report

FY24 Biodiversity Values

Cover Image: Western Australian Goldfields native vegetation at sunset, Kalgoorlie Operations, Kalgoorlie Production Centre, Western Australia



Our Approach	3
Safety & Critical Risk Control Governance	4
Restatements of Information	4
Leading & Lagging Indicators	5
Leadership, Communication & Consultation	5
Mine Health & Safety Management System	8
Training, Competency & Awareness	11
Hazard Identification & Critical Risk Management	12
Crisis Management & Emergency Preparedness	15
Emergency Response Teams	16
Incident Reporting & Investigation	17
Health, Hygiene & Wellness	19
Access to Non-Occupational Medical & Health Services	21
Safety Performance Metrics	22
Glossary	25
Contact Information	28

Safety & Critical Risk Control



Our Approach

At Northern Star, continuously improving the health, safety, and wellbeing of our workforce is a priority. This commitment is reflected in our comprehensive safety programs, training, and risk management programs.

Our approach is guided by a Mine Health and Safety Management System (MHSMS) that aligns with best practice and regulatory requirements, ensuring that safety principles are integrated into our Operations culture.

26,002

Number of Active Field Leadership Interactions Reported

7,008

Number of Inspections Reported

883

Number of Risk Management Events Reported

17,339

Critical Control Verifications Completed

0.5¹

LTIFR (Workforce)

96%

Percentage of hazards rectified

2.4¹

TRIFR (Workforce)

124,499

Hours of Workforce Safety Training Completed²

In FY24, Northern Star is pleased to have made progress in several key safety focus areas:

- Risk Register and Validation Sessions: Our risk management process was strengthened through the transfer of operational and strategic risk registers into the CGR platform, an enterprise risk and assurance system implemented in FY24. Cross-functional teams assisted in reviewing and validating register information for accuracy and completeness.
- ChemAlert Review and Audit: An extensive review and audit of our ChemAlert system, which holds chemical safety data, and our chemical handling procedures was completed.
- Permit to Work System Review: We have continued to review our Permit to Work (PTW) system to enhance its effectiveness in controlling high-risk work activities. This review includes updates to procedures and training and is scheduled for completion in FY26.
- Principal Mining Hazards Manual and Gap Analysis: We have completed the development of new detailed Principal Mining Hazards Management Plans Manuals for all Operations. These plans address hazards such as geotechnical structure instability, hazardous energy, confined spaces, roads and other areas where mobile plant operate, mine shafts and winding systems, hazardous substances, explosives, fire and explosion, and inrush of any substance.

¹ 12 month moving average per million exposure hours at 30 June 2024 under the Western Australian Mines Safety & Inspection Act 1994.

² Safety training delivered to our employees and contractors in FY24. Further information is available on page 11.

Safety & Critical Risk Control Governance

Northern Star's Board has oversight of workplace health and safety risks and opportunities within the organisation assisted by the Environmental, Social & Safety (ESS) Committee's review of operational risks and the Audit & Risk Committee's review of the Company wide strategic risk register.

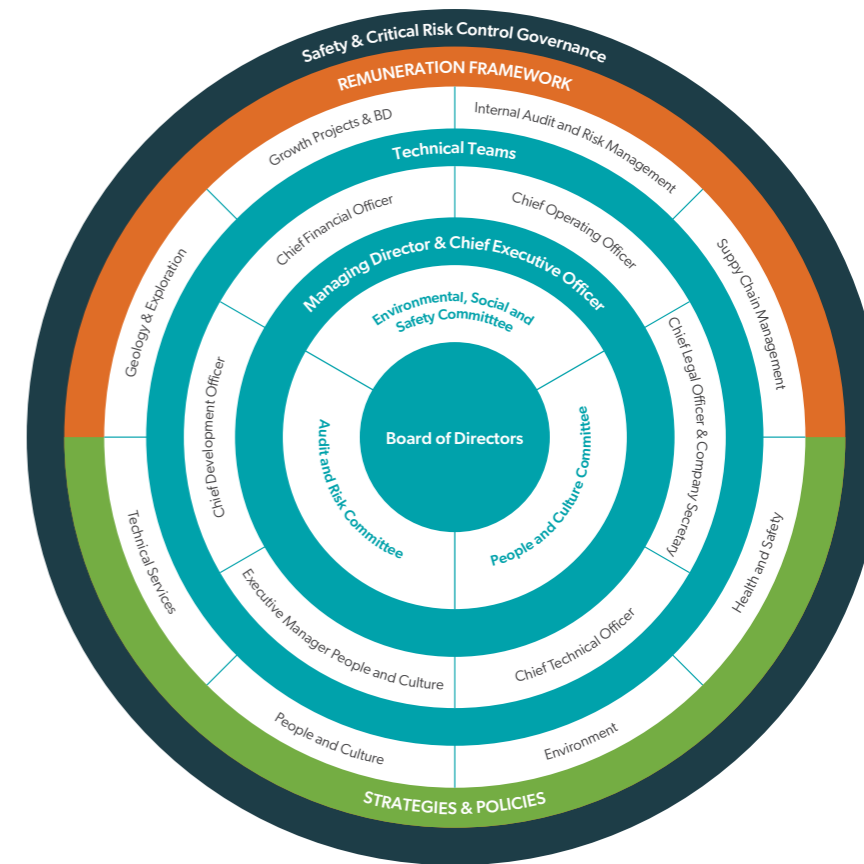
The Company's workplace health and safety governance structure is shown in Figure 1. Workplace health and safety related matters are considered quarterly by the Board through its ESS Committee meetings.

The function of the Committee is to assist the Board in fulfilling its corporate governance responsibilities by reviewing and making appropriate recommendations to the Board on workplace health and safety.

In addition, the Committee will refer any material safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

Northern Star's Chief Operating Officer has workplace health and safety reporting and disclosure responsibilities within their portfolio supported by the Group Manager – Health & Safety, and the Health & Safety teams in the corporate office and on our sites.

Figure 1 Safety & Critical Risk Control Governance



Restatements of Information

FY23 Employee LTIFR has been amended from 1.0 to 1.2 due to the reclassification of an FY23 injury from FAI to LTI in August 2023. FY23 Employee TRIFR has been amended from 3.5 to 3.6 due to the reclassification of an FY23 injury from FAI to RWI in July 2023. This has resulted in a restatement of our FY23 Workforce TRIFR from 3.2 to 3.3. The Workforce LTIFR for FY23 has been rounded up from 0.95 to 1.0



Nicole Campbell, Hygiene Technician
KCGM Operations, Kalgoorlie Production Centre, Western Australia

Leading & Lagging Indicators

At Northern Star, we employ a range of leading and lagging indicators to measure and enhance our safety performance. These indicators provide valuable insights into our health and safety management system, enabling us to proactively address potential issues and continuously improve our safety practices. Measuring both leading and lagging indicators allows us to take a balanced approach to safety management.

Leading indicators help us identify and address potential risks before they lead to incidents, fostering a proactive safety culture. Lagging indicators, on the other hand, provide insights into past performance, helping us learn from incidents and implement measures to prevent recurrence.

Leadership, Communication & Consultation

Leadership, communication and consultation is key in a culture where safety and wellbeing of the workforce is seen as a priority.

Safety Leadership Program

In FY24, we advanced the Safety Leadership Program, aimed at strengthening our leaders' ability to uphold and promote high safety standards. Originally a 2-day course, the program has been streamlined into a one-day session, supporting our leaders' dedication to embedding health and safety principles into their everyday activities.

The Safety Leadership Program equips leaders with the skills to advocate for safety, communicate best practices, and reinforce our goal of a risk-based, human-centered workplace. This is supported through interactive workshops, real-life scenario analyses, and practical tools that enable leaders to identify and mitigate potential hazards.

The program emphasises the importance of empathetic communication and active listening, fostering a culture where safety concerns are promptly addressed and resolved. By empowering leaders with these skills, safety continues to be an integral part of our organisational culture and daily operations.

Our leaders are upskilled to verify critical controls, identify potential hazards, conduct risk assessments, lead value-adding investigations, and implement effective safety measures through the hierarchy of controls. The program incorporates the Resilience Shield, which equips leaders with strategies to enhance their mental and emotional resilience. Through this program, our leaders further enhance their skill and expertise needed to uphold a proactive safety culture and maintain a resilient, risk-based, human-centered workplace.

By tracking leading and lagging indicators we can:

- **Identify Trends:** Detect patterns in safety performance over time, allowing us to address emerging risks;
- **Benchmark Performance:** Compare our safety performance against industry standards and best practice. This helps us understand how we are performing relative to our peers and identify areas for improvement; and
- **Drive Continuous Improvement:** Use data-driven insights to refine our safety programs and initiatives, ensuring they remain effective and relevant.

Communication & Consultation

Northern Star's Safety Consultation and Communication Charter² outlines the roles and responsibilities of Health and Safety Representatives (HSRs) in the Yandal and Kalgoorlie Production Centres, and Miners' Representatives (MRs) in the Pogo Production Centre.

It details the establishment and functioning of Site Safety Committees and the procedures for HSR/MR elections and meetings. According to the Charter, HSRs/MRs are elected employee members responsible for promoting safety, reviewing incidents, and making recommendations to improve workplace safety. Regular meetings facilitate consultation between management and employees, ensuring that safety processes are effectively implemented.

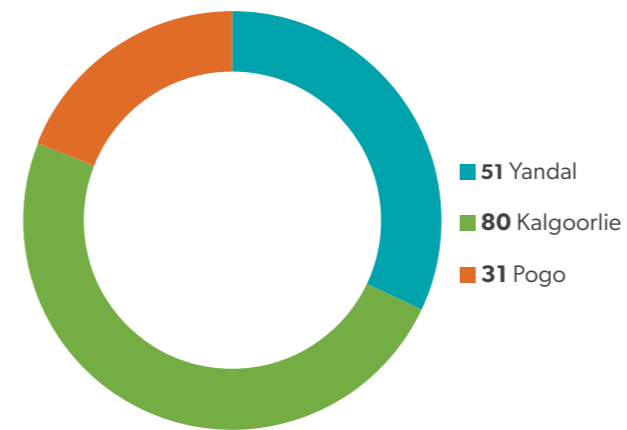
Engaging with our employees is recognised by Northern Star as critical to fostering a proactive and collaborative health and safety culture. We strive to achieve this through regular safety meetings, infield coaching and mentoring sessions. Our employees are encouraged to discuss safety concerns, provide feedback, and suggest improvements.

Health & Safety Representatives and Miners' Representatives

Our HSR's and MR's are employees elected by their peers to represent the health and safety interests of other workers. These representatives play a crucial role in improving workplace health and safety by advocating for safe practices and addressing concerns within their designated work group. HSR Committee Meetings are held regularly, with over 53 meetings reported in FY24.

During these meetings, our HSR/MR employees are actively involved in consultation and decision-making processes related to health and safety procedures, initiatives and improvements. This allows Northern Star to consider the perspectives of our employees when implementing new safety measures, and aims to make them more practical and effective while still aligning with regulatory requirements and best practice.

Figure 2 Employee HSRs/MRs by Production Centre at 30 June 2024



In FY24, Northern Star launched the Health and Safety Representative Infield Day Program, aimed at empowering our HSR's and MR's through increased field engagement.

Under this initiative, HSRs/MRs spent at least one day each month conducting infield health and safety tasks, including workplace inspections, hazard identification, and critical control verifications.

To support the program, guidelines and checklists were developed in collaboration with our subsidiary Northern Star Mining Services (NSMS) and site safety managers. These resources ensure that HSR/MRs are well-prepared to perform their duties effectively and consistently.

Highlight – The Value of Our Health & Safety Representatives and Miners' Representatives

Our HSR's or Miners Representatives (MR's) as they are referred to at Pogo, are an essential part of Northern Star's communication and consultation processes, supporting all workers to have an opportunity to actively participate in safety. They help to facilitate consistent open communication between all levels of the business, and from all workgroups to senior management.

They are given time within their normal role to allocate to their duties, which might include: running pre-start safety meetings, undertaking field inspections, meeting with management to discuss safety concerns, and engaging with other workers to discuss safety matters.

When asked how they contribute to their role as a MR, Jacob said:

"By running or participating in safety meetings and more importantly toolbox meetings - where the pulse of the workforce has an open venue to participate in. I enjoy many parts of the role but the most I enjoy working as a group to help make our workplace and lives safer and enjoyable"

Jacob Hicks, Pogo, NSMS UG



When asked about his role as MR at Pogo, David "Bear" Meagher said:

"Taking an active role really helps to bring ownership of the safety culture back to each worker here on site. It is a great way to meet people from other departments that you may never encounter in your normal day to day work. This then builds a better community on site." David has been at Pogo for over 7 years and contributes to his role by actively participating in the safety culture at Pogo. "I encourage others to become miners reps, join the ERTs, be mental health first aiders, and to take an active role while here on site."

David "Bear" Meagher, Pogo, Geology



² NSR-OHS-057-CHA - Safety Consultation and Communication Charter



Paul Munro, H&S Advisor
Kanowna Belle, Kalgoorlie Production Centre, Western Australia

Mine Health & Safety Management System

At Northern Star, our Mine Health and Safety Management System (MHSMS) provides a comprehensive framework, designed to manage and mitigate the risks associated with mining and mineral processing operations.

Our MHSMS aligns with industry best practice and regulatory requirements, ensuring that safety principles are integrated into our Operations culture. The framework is designed to be a continuously improving system, enabling the incorporation of lessons learned, new technology and regulatory changes to remain relevant and effective.

In accordance with regulations and our MHSMS, workers have the right to stop unsafe work if they have reasonable concern that they (or someone else) would be exposed to a serious and immediate WHS risk. Workers are also able to raise workplace health and safety issues or concerns without fear of reprisal.

Our MHSMS encompasses 14 elements that apply to our workforce across all Operations. These elements include:

- Leadership, Commitment and Policy;
- Management and Operational Control;
- Accountability, Responsibility and Resources;
- Emergency Preparation and Response;
- Objectives, Targets and Plans;
- Health and Wellness;
- Legal and regulatory Requirements;
- Records and Information Management;
- Training, Competency and Awareness;
- Procurement and Contractor Management;
- Communication and Consultation;
- Monitoring, Measurement and Evaluation; and
- Risk Management.













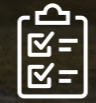
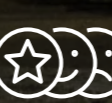
- Review and Improvement

The MHSMS structure and function is provided in Figure 3 overleaf.

Key documents serving a vital role in our overall safety system include:

- **Health and Safety Policy:** outlines our commitment to providing a safe and healthy work environment for all employees, contractors, and visitors;
- **Cardinal Rules:** the fundamental safety rules that apply to our workforce, and cover critical areas such as hazard identification, personal protective equipment usage, and emergency procedures;
- **Health & Safety Management System Manual:** Details the structure and components of our health and safety management system. It includes procedures for hazard identification, risk assessment, incident reporting, and continuous improvement;
- **Health and Safety Strategy Plan:** Strategic plan outlining our long-term goals and objectives for health and safety;
- **Contractor Safety Management Requirements Guideline:** sets out the safety requirements for all contractors working on our sites;
- **Event Reporting & Investigation Guidelines:** the process for reporting and investigating safety incidents; and
- **Safety Management Manuals & Plans:** These documents cover specific areas such as exploration activities, high-voltage/low-voltage electricity management, helicopter operations, principal mining hazards and site-specific safety plans. They provide detailed procedures and protocols to manage safety risks in these areas.

Figure 3 Northern Star’s Mine Health and Safety Management System

1	2	3	4	5	6	7	8
							
Leadership, Commitment and Policy	Accountability responsibility resources	Objectives, targets and plans	Legal and other requirements	Training, competence and awareness	Communication and consultation	Hazard identification and risk management	Management and Operational
<p>Embed and further enhance the foundation of safety, leadership to improve the overall effectiveness of safety leaders across the Company.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Implementation of our Safety Leadership Program 	<p>Provide adequate resources to support the mine safety management system implementation in line with Western Australian legislative reform.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Development of our Health & Safety Graduate Program 	<p>Principal Mining Hazard Management Plans including risk assessments / bow tie analysis are implemented across all Australian Operations.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Alignment of Health and Safety strategic planning across our Operations 	<p>Develop and implement a documented process for tracking and complying with all relevant safety laws, regulations, and standards to ensure a robust safety management system.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Integration of our Mine Health and Safety Management System 	<p>Enhance training capabilities through innovative technology platforms aligning training framework and systems across the Operations.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Achieved training compliance goals Migration of our learning management system to Moodle 	<p>Develop a comprehensive health and safety communication strategy that promotes effective consultation and communication between all identified key stakeholders.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Deployment of our Health and Safety Representative (HSR) Infield Coaching and Mentoring Program 	<p>Embed critical risk management practices across sites and support the enhancement of the operational risk management framework to effectively identify, assess, and mitigate risks.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Embedding Critical Risk Management and delivering the Plan on a Page. Development of our Principal Mining Hazard Manual and conducting a gap analysis. 	<p>Develop an implementation framework for any new health and safety initiatives and exposures that impact operational activities ensuring a systematic and controlled approach.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Development and deployment of our online Health Hub for the mobilisation of shutdown workers
9	10	11	12	13	14		
							
Emergency preparedness and response	Health and Wellness	Records and Information Management	Procurement and Contractor Management	Monitoring, measurement and evaluation	Review & Improvement		
<p>Guide the continual development of the Company’s emergency management and response framework to improve operational capabilities.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Emergency Management Plan alignment and implementation 	<p>Develop and implement a comprehensive health and hygiene monitoring framework across the Company.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Launch of our online Health Hub clinic management system to align site health systems. 	<p>Develop and implement an automated and integrated reporting framework to verify the accuracy of health and safety data analytic.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Development of PowerBI Health and Safety reports Improvements in our document control process 	<p>Lead and collaborate with contract owners to embed the safety and health elements of the contractor management framework.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Development of the Health and Safety Contractor Management Module in the Health Hub, set to launch in FY25 	<p>Develop and deploy an internal auditing and compliance framework to audit health and safety performance data, improve reporting information, and develop targeted strategic initiatives.</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Conducted an audit against our Mine Health and Safety Management System 	<p>Conduct an evaluation of safety data management performance, incident reporting and site-specific hazard control verifications, generate review outputs, and deliver improvement opportunities</p> <p>Actions Progressed in FY24</p> <ul style="list-style-type: none"> Improvement to our Flash Notification workflow 		

Our MHSMS framework is designed to be a continuously improving system, enabling the incorporation of lessons learned, new technology and regulatory changes to remain relevant and effective.

Training, Competency & Awareness

At Northern Star, we undertake a comprehensive array of training programs across all our Operations for both our employee and contract workforce, and with our exploration and corporate teams. This training is intended to help equip our workforce with skills and knowledge to aide in minimising risks and incidents in the work environment.

Our training programs are delivered via a combination of online, in person and in field processes. Our online training platform is designed to increase accessibility and consistent messaging across all our areas of our business.

In FY24, our key areas of training focus included:

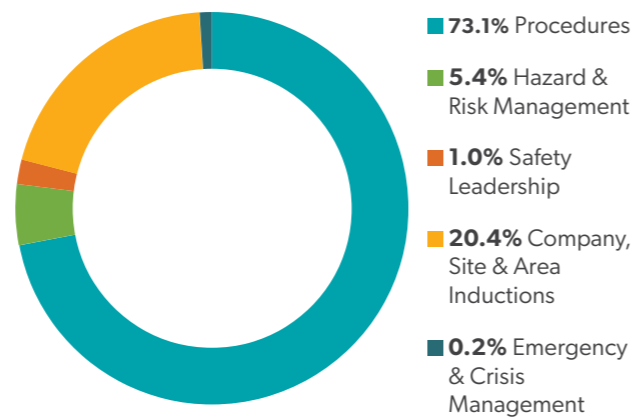
- **Health and Safety Training:** This training aligns with the Work Health and Safety (WHS) legislation in Western Australia, which commenced on 31 March 2022. This training is focused on educating employees and contractors on best practices to identify, prevent, and manage workplace hazards. The primary objective is to ensure all personnel understand the legal requirements and safety protocols necessary for their roles. At Pogo, regular safety training continued to meet Federal requirements as a minimum.
- **Technical Skill Development:** These sessions are targeted at enhancing the technical capabilities of our workforce. Topics include hazard identification, incident investigation, and active field leadership.
- **Competency-Based Training:** Compliance and competency-based training is delivered through our online platform and supplemented by infield verifications of competency. This training is aimed at ensuring that

our workforce is competent for the requirements of their specific roles. Roles are mapped to a set of minimum competencies and compliances required by Northern Star, and our workforce is assigned these roles allowing our online system to track their progress and when updates or scheduled refresher training is required.

- **Continuous Improvement and Awareness:** Northern Star continuously reviews and enhances its training programs to address emerging risks and incorporate the latest industry best practices.

In FY24, we recorded over 124,499 hours of safety training for employees and contractors across various levels of the business.

Figure 4 Workforce Safety Training Completed During FY24



Safety Prestart Meeting
Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Hazard Identification & Critical Risk Management

Risk and change management is fundamental to our operations and health and safety strategy. Our risk management framework is designed to facilitate the identification, assessment, and mitigation of risks associated with our mining and mineral processing activities. Our risk management framework is an integral part of the MHSMS and includes the following key components:

Critical Risk Standards

Our 10 Critical Risk Standards³ form a crucial part of our fatality prevention program and risk management strategy, addressing principal mining hazards such as fall of ground, hazardous energy, confined spaces, mobile plant equipment, lifting operations, hazardous substance, explosives, fire and hazardous workplace exposures. These Critical Risk Standards ensure that critical controls are identified, implemented, and monitored and improved.

Risk Identification & Control Tools

- **Risk Registers:** Our risk registers provide a centralised and documented register of identified hazards and associated controls across our Operations for safety, environment, economic, social, regulatory, climate and other relevant risks in accordance with our Risk Management Standard⁴. These registers are maintained in a dedicated enterprise risk and assurance system implemented in FY24, CGR, and are validated, reviewed and updated in accordance with our schedule set out by our Risk Management Standard.
- **Hazard Identification:** We undertake systematic audits, inspections and consultation sessions with our workforce to identify potential hazards in our operations.
- **Risk Assessment:** Where a hazard has been identified, an assessment is completed to determine its potential impact. This assessment helps prioritise urgency of risk mitigation controls and allow for more effective resource allocation.
- **Management of Change (MoC):** Our MoC process manages changes in Operations that could impact health and safety. This process ensures that any operational changes are thoroughly assessed for potential risks and that appropriate controls are implemented before changes are made.
- **Control Implementation:** Controls are implemented across Northern Star using the hierarchy of controls. Physical controls are complemented by associated training and relevant documentation.
- **Critical Control Verification (CCV):** To ensure the effectiveness of our critical controls, we have implemented scheduled Manager and Supervisor CCV's. These schedules involve regular checks and validations of safety measures, enhancing our ability to manage high-risk activities consistently.

Site Design and Operational Risk Management

Risk identification and control processes are integrated into both site design and operational risk management at Northern Star. These processes address a variety of risks, including:

- **Heat Management in Surface and Underground Mines:** We implement ventilation and cooling systems to manage heat levels in underground mines, ensuring safe working conditions.
- **Flood Risk Analysis and Mitigation:** We conduct thorough flood risk assessments and implement mitigation measures to protect our operations from water ingress.
- **Inclement Weather:** Our plans include protocols for dealing with adverse weather conditions, ensuring the safety of our workforce and the stability of our Operations.
- **Isolations and Lockouts:** We have stringent isolation and lockout procedures to control hazardous energy during maintenance and other high-risk activities.
- **Tag Boards:** Tag boards are used to track and manage the status of equipment and personnel, ensuring that all safety measures are in place and adhered to.

³ Fall of Ground NSR-OHS-001-CRS, Hazardous Energy NSR-OHS-002-CRS, Working At Height NSR-OHS-003-CRS, Confined Space NSR-OHS-004-CRS, Mobile Plant Equipment and Vehicles NSR-OHS-005-CRS, Lifting Operations NSR-OHS-006-CRS, Hazardous Substances NSR-OHS-007-CRS, Explosives NSR-OHS-008-CRS, Fire NSR-OHS-009-CRS, Hazardous Workplace Exposures NSR-OHS-010-CRS

⁴ Risk Management Standard NSR-COR-019A-STA

Highlight – Implementing Critical Risk Management

To support the Company five-year strategy and the three major production centres, Northern Star conducted a gap analysis of Critical Risk Management (CRM) practices. This gap analysis identified thirty-three (33) critical risks relevant to our mining operations, exploration and project sites, focusing on critical risks identified by industry peers, historical data on mining fatalities in Western Australia, and specific risks at our Pogo Operations in Alaska.

To manage these critical risks, Northern Star developed ten (10) critical risk standards to underpin the Company Mine Health and Safety Management System. The standards outline the necessary requirements to manage high-risk work activities and ensure workforce safety.

The rollout of the critical risk standards began in 2023, with considerable progress completed across the Australian operations extending to Pogo Operations in Alaska. The implementation process involved:

- Developing and delivering a 12-month implementation plan on a page;
- Assigning critical risk champions and subject matter experts to support implementation;
- Conducting audit level manager critical control verifications and supervisor field based critical control verifications;
- Training the workforce on the new critical risk standards; and
- Completing a gap analysis on each standard and developing action plans where required.

Key Steps in the CRM Implementation Process

- Assess, trial and implement an electronic and application-based CRM platform.
- Establish critical risk subject matter expert focus groups and develop improvement plans.
- Provide training and coaching to champions, subject matter experts, and leaders.
- Consistently communicate legislated Principal Mining Hazards and critical risk information.
- Establish targets for critical control verification and track progress.
- Regularly review and improve critical risk documentation and processes.

Specific Focus Areas and Milestones

The CRM implementation plan is structured to drive a standardised rollout across operations, with specific focus areas and milestones:

- Critical Risk workshops conducted in the Corporate office during July and August 2023, covering Standards 5 - Mobile Plant and Equipment and Standard 2 - Hazardous Energy;
- In October 2023, the commencement of monthly CRS focus areas across operations commencing with Standard 1 - Fall of Ground; and
- Developing a dedicated webpage to support site implementation, with Company risk owners scheduling workshops and networking opportunities.

“CRM is critical in maintaining Operational control and preventing serious injuries or fatalities. Workers understand and implement all critical controls before performing any task to safeguard our workforce”

Rob Williamson, General Manager, Jundee Operations

“While our standards are stringent, our workforce conducting verifications in the field ensures these critical controls are not merely procedural, they are verified and in place to protect lives. By fostering a culture where high-risk work is discussed on every shift and critical controls are known, implemented, and verified, at Northern Star everyone goes home safely to their family and friends”

Nick Strong, General Manager, KCGM Growth Project



Hawkin Hwang, Senior Geologist
KCGM Operations, Kalgoorlie Production Centre, Western Australia

Crisis Management & Emergency Preparedness

Emergency preparation and response are a fundamental part of our commitment to safety. Northern Star has in place detailed crisis and emergency management plans which aim to prepare personnel for a range of emergency situations.

Understanding the likelihood of an emergency and the potential consequences and mitigation strategies needed is at the core of our plans and structure.

Figure 5 Crisis & Emergency Management Structure

Level 3

Crisis Management

- Business Continuity
- Liability
- Reputation

Level 2

Emergency Management

- People
- Environment
- Assets
- Recovery

Level 1

Emergency Response

- Life Saving
- Fire Fighting
- Rescue



Plans for foreseeable scenarios are in place and regularly audited and tested by with the assistance of external specialists' facilitators to test their robustness. Teams at site and the corporate office undertake regular emergency scenario drills to ensure that Northern Star is prepared to respond appropriately to any real event and recover quickly after. These drills are crucial for identifying potential gaps in our plans and making necessary improvements.

Northern Star's Emergency Management Standard sets the over-arching requirements that all Operations shall have in place to effectively manage an emergency event. The aim of this Standard is to:

- provide a minimum standard of emergency response & management planning;
- establish the use of Prevention, Preparation, Response and

Recovery (PPRR) as the method of managing emergency incidents, with the primary focus being on Prevention of an incident that may trigger an emergency response;

- to provide further detail on the structures, workflows and how teams interact and interrelate to ensure an integrated approach; and
- to give guidance around the preparation of plans and procedures for emergency management.

Sitting under this Standard is our Crisis Management Plan (Corporate), Emergency Management Plans (Operations), and Operations specific emergency response procedures. Enterprise risk management, emergency management and safety and security management are a seamless management continuum. The components are not independent processes or phases and they often

need to be managed concurrently to minimise impact, ensure continuity and expedite recovery.

Consultation in relation to emergency management is undertaken:

- Internally: we engage with our workforce through regular training sessions and drills to ensure everyone understands their roles and responsibilities during an emergency.
- Externally: we collaborate with local stakeholders, including nearby mines, communities, and emergency services, to enhance our preparedness and response capabilities. This includes mutual aid agreements and joint training exercises with local emergency services to ensure coordinated and effective responses to incidents.

Emergency Response Teams

In conjunction with Northern Star's emergency management system, our Emergency Response Teams (ERT) play a critical role in managing significant events and alleviating threats to life, our assets, the environment and business continuity. As such, our emergency response departments across the Company are provided with ongoing support from the corporate health and safety team to ensure effective competency is maintained across the business.

Providing scenario training opportunities to our emergency response teams is a critical part of their skills development, and we actively support our teams to participate in regional emergency response competitions. These teams consist of trained volunteers who are ready to respond to emergencies at any time. ERT members undergo extensive training, including first aid, firefighting, and rescue operations, to ensure

they are equipped to handle various emergency situations. Regular drills and refresher courses are conducted to maintain their skills and readiness.

In FY24 Northern Star was represented at multiple inter-company and inter-site emergency response competitions held in Perth and the Western Australian Goldfields (Australia), and in Kellogg (Idaho, USA).

Highlight – ERT Teams (Training & Competitions)

During FY24 teams from our KCGM Operations, Thunderbox Operations, Carosue Dam Operations and Kalgoorlie Operations participated in the 2024 Chamber of Minerals and Energy (CME) Surface Mine Emergency Response Competition. The competition is designed to promote, encourage, and improve mine site emergency response capabilities by providing ER Teams with realistic scenarios to test the skills they have developed in training, receive feedback from experienced personnel in each emergency response discipline, and identify opportunities on how to improve their overall capabilities and skillset.

The overall results for the competition were: 1st Place: NST Kalgoorlie Operations, 2nd Place: Norton Paddington, 3rd Place: Gold Fields Agnew, 4th Place: NST KCGM Operations. The teams' performances were fantastic throughout the competition with Northern Star teams receiving the following awards at the presentation night:

NST Kalgoorlie Operations	1st Place	Rope Rescue Incident Management – Ashton Cornwell Confined Space Best Captain – Robert Donohue Best New Captain – Robert Donohue	
	2nd Place	Road Crash Rescue Overall, First Aid	
	3rd Place	Team Skills Overall BA Skills	
NST KCGM Operations	1st Place	Hazardous Materials	
	2nd Place	First Aid Individual Theory (Sarah Jones)	
	3rd Place	Road Crash Rescue First Aid Theory Overall, First Aid	
NST Thunderbox Operations	2nd Place	Team Skills Overall BA Skills	
	3rd Place	Rope Rescue Best New Team	

Incident Reporting & Investigation

Northern Star has in place a set of systems and procedures to ensure that incidents can be effectively reported by all employees and contractors and communicated in a timely manner to ensure lessons learned are captured and circulated to reduce the risk of a repeat event.

Incident investigations are undertaken in accordance with our Incident Reporting Standard⁵ requirements and are led by a trained Supervisor or Manager and include a Health and Safety Representative. Northern Star utilises a step-by-step process that follows the Incident Cause Analysis Method (ICAM) methodology and allows for either a basic or complex investigation depending upon the nature, actual or probable outcome of an incident or near miss.

The Standard details the protocols for reporting safety, health, and environmental incidents at Northern Star. It mandates that:

- all incidents be logged in Northern Star’s designated reporting system;
- reporting must adhere to specified reporting and classification requirements set out in our procedures⁶;
- application is across all of Northern Star’s operations, including mines, projects, exploration sites, our accommodation camps on commercial property leases, and corporate offices.

Quality incident investigations and the implementation of SMART corrective actions with Northern Star can eliminate or reduce the chances of similar incidents re-occurring in the future by allowing us to identify deficiencies or potential improvements in our management system which can be addressed.

Incidents must be investigated in accordance with our procedures⁷, which include various steps such as

securing the incident site, gathering and documenting evidence, and conducting interviews. The framework details the roles and responsibilities of different personnel involved in the investigation process, from the Chief Operating Officer to site Health and Safety personnel.

The process incorporates tools like the ICAM for detailed examination and specifies the use of the InControl system for recording and managing health, safety and environment-related data. The document provides a structured investigation approach to ensure thoroughness and effectiveness in uncovering the causes of incidents and implementing appropriate corrective actions.

Northern Stars’ Health and Safety communication encompasses the dissemination of significant incident alerts and sharing positive outcomes to foster a learning culture within the organisation. Monthly Health

and Safety Snapshots serve as a vital tool, providing our wider team with relevant updates on safety metrics, trending data, actionable insights and core focus areas. These snapshots are instrumental in ensuring that all staff, including contractors, remain informed and engaged with our safety objectives.

Contractor engagement is further emphasised through active participation in incident reporting and investigations, where shared insights and experiences contribute to our collective safety knowledge. This collaboration is extended to lessons learned sessions, where contractors are encouraged to share their perspectives and improvements, enhancing our overall health and safety framework and driving a commitment to sustainability and continuous improvement in all operational aspects.

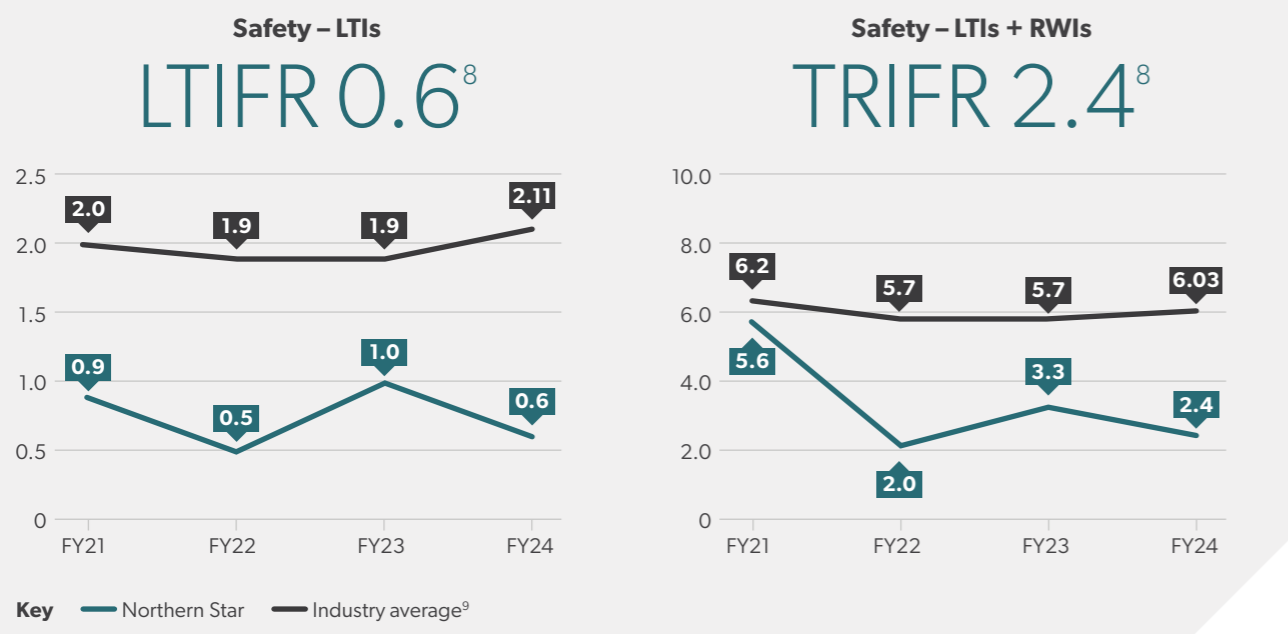
To effectively manage trends and enhance performance across operational areas, Northern Star implements a multi-faceted approach. Utilising data analytics for trend analysis through reports such as Health and Safety Executive, Site Operations and Critical Control. These assist in identifying performance declines or improvements, allowing for pre-emptive action. Regular root cause analysis ensures that underlying issues are addressed, preventing recurrence and enhancing safety. Comparing performance against industry standards through benchmarking identifies areas needing focus, while targeted training programs address specific skill gaps revealed by trends.

In Figure 6, we compare the FY22 Industry Safety Performance against our safety performance for a nine month period. During FY22, on 31 March 2022 the legislation and safety metrics

in Western Australia changed and therefore references to LTIFR and TRIFR only apply for the 9 months of FY22 from 1 July 2021 to 31 March 2022.

Establishing feedback mechanisms encourages a culture of continuous improvement at Northern Star. Regular reviews assess the effectiveness of strategies, necessitating adjustments to optimise outcomes. Promoting a strong safety culture, introducing performance incentives, and fostering cross-departmental collaboration can further drive improvements and sustain high safety standards. By adopting these strategies, Northern Star can proactively manage incident trends and continuously enhance our safety and operational performance.

Figure 6 LTIFR & TRIFR (Per Million Exposure Hours) for Northern Star Employees and Contractors at all Operations in Australia and Alaska, USA.



⁵ Incident Reporting Standard (NSR-OHS-008-STA).
⁶ Health & Safety Incident Reporting Procedure (NSR-OHS-001-PRO) and Environmental Incident Reporting & Investigation Procedure (NSR-ENV-002-PRO).
⁷ Investigation Procedure (NSR-OHS-049-PRO).
⁸ at 31 March 2024 (DEMIRS - first nine months).
⁹ FY24 Industry means the DEMIRS Safety Performance in the Western Australian mineral industry 2021-22 – first nine months (Metalliferous excluding coal total). This is the most recent Industry safety performance information released by DEMIRS during June 2024.

FY23 Industry means the DMIRS Safety Performance in the Western Australian Mineral Industry – Accident and Injury Statistics 2020-21 Metalliferous total.
 FY22 Industry means the DMIRS Safety Performance in the Western Australian Mineral Industry – Accident and Injury Statistics 2020-21 Metalliferous total.
 FY21 Industry means the DMIRS Safety Performance in the Western Australian Mineral Industry – Accident and Injury Statistics 2019-20 Metalliferous total.



Isolation and lockout system in place at our LV Workshop, Jundee Operations, Yandal Production Centre, Western Australia

Health, Hygiene & Wellness

Northern Star employs and engages a number of health professionals to support the policies and procedures that look after the health and wellbeing of our employees and contractors. It is important that not only occupational health is managed (such as workplace health exposures and workplace injuries), but that the general health and wellbeing of employees is considered and supported as well as meeting the requirements outlined in policies, standards, and legislation.

Occupational Hygiene

Occupational hygiene monitoring (also known as occupational exposure monitoring) is crucial to evaluate the risk of exposure to each specific health hazard. This type of assessment is conducted at all Northern Star Operations by qualified professionals like occupational hygiene consultants or technicians.

An annual monitoring program divided into quarters is developed to quantitatively assess the exposure risk of workers to the hazardous agents identified within our Operations, to detect any changes in exposure profiles within the workplace. In addition, this regular sampling regime provides a continuous validation of controls and demonstrates compliance with an exposure standard.

As part of the FY24 occupational exposure monitoring program, atmospheric sampling of various hazardous chemicals including gases, fumes and dusts, and noise sampling to measure workers' daily exposures to noise were completed. Figure 7 & 8 provide an overview of the total number of samples collected within Northern Star Operations⁹ for FY24.

Sampling results were submitted to the DEMIRS reporting system as part of our legislative requirements. Elevated results that exceeded the adopted exposure standard were further investigated and actions taken to eliminate or reduce the risk of subsequent exposures. An investigation report was also submitted in SRS as part of DEMIRS' requirements.

Occupational Health & Wellness

Northern Star has a Health Monitoring program in place to provide an additional control for workers who have a risk of exposure to hazardous chemicals or substances throughout their role. Some of these exposures include noise, respirable crystalline silica, lead, and arsenic. The health monitoring program is developed through reviewing exposure data, each worker's role and the controls in place in the workplace, to determine who will be enrolled in the program.

Health monitoring assessments involve taking a work and brief medical history from the participant, an agent specific medical examination, and medical testing such as a blood sample or audiometric test. The results are reviewed by a Registered Medical Practitioner who can determine if exposure levels are normal, if further testing is required or if further workplace controls should be implemented.

Figure 7 Occupational Hygiene Samples Collected

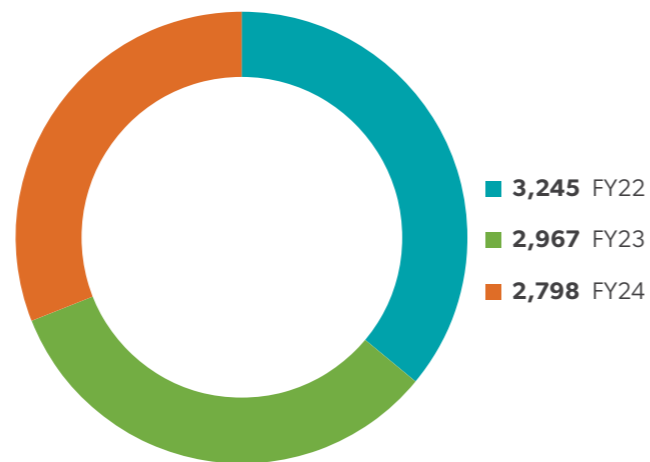
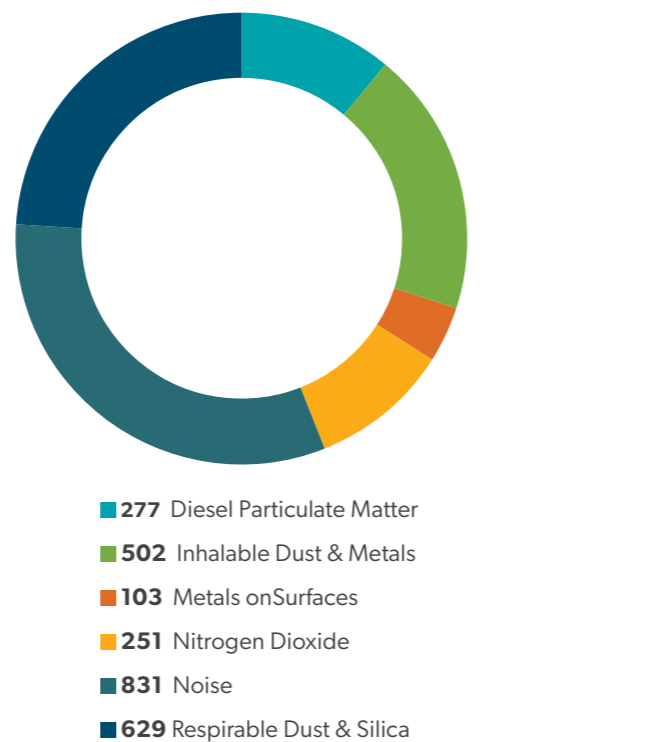


Figure 8 Examples of some of the key occupational hygiene samples collected in FY24



⁹ Excludes Pogo Operations data due to different methodologies and terminology.

Highlight – Northern Star’s Health & Safety “Hub”

The Northern Star Health and Safety Hub was designed and developed with six core modules in mind, fostering the highest standards of health and safety for our workforce and contractors within pre-employment medicals, health management, worker mobilisation and onboarding, injury management, health and safety

contractor management framework and health monitoring.

The Hub is designed to manage worker health from onboarding throughout employment, streamline processes, ensure compliance, and provide proactive support, making health and safety an integral part of our operations. By transitioning

from a manual, paper-based system to a digital platform, the Hub offers a more efficient, secure, and streamlined approach to managing health and safety related information. This modernisation has enabled cleaner data, quicker access to health records, and improved overall management of worker health and safety.

Completed:

Mobilisations | FY24, Q1

Streamlines mobilisation for shutdown workforce deployment across operations



Health Management | FY24, Q3

Onsite health clinic management



Pre - Employment | FY22, Q1

Internal recruitment
Pre-employment
Medical management



Planned:

Injury Management | FY25, Q3

Effective injury management and recovery support



Contractor Management | FY25, Q1

Contractor management system ensuring compliance, safety, and efficient operations



Health Monitoring | FY25, Q1

Contractor management system ensuring compliance, safety, and efficient operations



Health & Safety Hub

Completed:

Pre -Employment Medical

This module enables practitioners to log in and complete pre-employment medicals efficiently. It streamlines the process, with live, accurate health assessments. Onsite occupational health nurses (OHN) can easily access and update medical information, enhancing data integrity and compliance.

Health Management

This module equips our onsite OHN with the tools to efficiently manage and document health data. This digital module allows OHN to record patient information, track treatments, and schedule follow-ups, by providing a centralised platform for health management.

Mobilisations

Enables contractor groups to efficiently upload and manage all required site entry documents. This includes pre-employment medical assessments, medical declarations, police clearances and drug and alcohol lab results for review enhancing compliance and safety.

Planned:

Injury Management

The injury management module will be developed to provide an efficient system for tracking and supporting injured workers throughout their recovery process. This digital platform aims to streamline documentation, monitoring, and coordination of treatment plans, facilitating a comprehensive and proactive approach to injury management and worker rehabilitation.

Health Monitoring

The health monitoring module sits within the Clinic Management and allows the management of all worker results associated with monitoring. This module gives the ability to review health trends of an individual that may be related to workplace exposures

Contractor Management

The Contractor Management module is currently under development to further embed the 5-tier Health and Safety Contractor Management Framework. This enhancement aims to ensure rigorous oversight and compliance, promoting a safer and more efficient working environment for all contractors through the tendering, mobilisation, work execution and demobilisation.

Access to Non-Occupational Medical & Healthcare Services

Northern Star undertakes a range of programs across our sites to ensure our employees have access to non-occupational medical and healthcare services to supplement their own personal services and our work-related services.

Each year we offer:

- health and fitness assessments and exercise support programs can be provided by dedicated exercise physiologists at our Yandal and Kalgoorlie Production Centres;
- monthly health topics delivered by health professionals on site;
- team and individual health challenges focused on hitting exercise goals;
- ergonomic assessments at our site and corporate offices; and
- our accommodation camp services teams provide support and information on healthy eating and drinking options.

Northern Star continue to partner with a private health insurance provider to offer a subsidised health plan with extensive benefits for our eligible workforce.



Highlight – Supporting Our Employees Health

Classes and sport are on offer at Northern Star’s FIFO sites on most nights of the week. At Jundee Mine Site there is a high engagement site wide and is one of the reasons why people love coming to site. Yoga, Circuit and Pilates classes are on offer each week, as well as soccer, basketball, touch rugby and beach volleyball.

The benefits of this are that it increases the morale around the site, encourages people to engage in physical activity which has many physical and mental benefits, increases department interactions and collaboration, leading to enhanced teamwork, one of Northern Star’s core values, and provides healthy entertainment after work. Jundee prides itself on the healthy, active culture, and physical activity is celebrated around site.

Over the last 12 months, Jundee has benefited from upgrades of the soccer pitch which can also be used as a cricket or tennis court. The basketball court has been upgraded to a Dream Court and a fence has been installed to improve the safety of the facility.

Testimonials from our employees:

“Having organised fitness classes and sports after work has been a great way to wind down and take your mind off work at the end of the shift. It’s also a great way to meet new people from around the site and maintain your fitness. The thing I like best about the classes is I don’t have to plan my own workout. I can just go to a session and participate. I have found that the Yoga and stretching really helps with and muscle tension I have built up throughout the week, I always feel great afterwards.”

Louise Neill,
Jundee, Project Geologist Growth

“Having sport onsite is really beneficial because it not only allows an alternative to the gym to achieve exercise on site, it also encourages interaction between workers from different departments and companies to build the Jundee community”

Jonathon Anderson,
Jundee, Metallurgist

Playing basketball after shift at our purpose built court at Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Safety Performance Metrics

		FY24	FY23	FY22
Workforce (Employee & Contractor) Injury Rates (DEMIRS: first nine months MSIA)¹⁰				
Workforce (Employees & Contractors)	Exposure Hours ¹⁰	11,735,047		
	LTIFR (first 9 months) ¹⁰	0.6	Refer to Workforce (Employee & Contractor) Injury Rates below for FY23 and FY22	
	TRIFR (first 9 months) ¹⁰	2.4		
Employee Injury Rates (GRI)¹¹				
Employees	Exposure Hours	7,515,335	6,909,806	5,908,185
	LTIFR ¹¹	0.8	1.2	0.5
	TRIFR ¹¹	2.0	3.6	1.5
Contractor Injury Rates (GRI)¹¹				
Contractors	Exposure Hours	8,595,900	7,785,619	7,193,719
	LTIFR ¹¹	0.2	0.9	0.6
	TRIFR ¹¹	2.7	3.0	2.5
Workforce (Employee & Contractor) Injury Rates (GRI)¹¹				
Workforce (Employees & Contractors)	Exposure Hours	16,111,235	14,695,424	13,101,903
	LTIFR ¹¹	0.5	1.0	0.5
	TRIFR ¹¹	2.4	3.3	2.0
Employee Injuries (GRI)				
Employees	Fatalities	-	-	-
	Lost Time Injuries	6	8	3
	Restricted Work Injuries	9	17	7
Contractor Injuries (GRI)				
Contractors	Fatalities	-	-	-
	Lost Time Injuries	2	7	4
	Restricted Work Injuries	21	16	14
Workforce (Employee & Contractor) Injuries (GRI)				
Workforce (Employees & Contractors)	Fatalities	-	-	-
	Lost Time Injuries	8	15	7
	Restricted Work Injuries	30	33	21
Leading Indicators				
Leading Indicators	Active Field Leadership Interactions Reported	26,364	25,571	23,305
	Inspections Reported	7,061	6,923	8,216
	Risk Management Events Reported	883	744	574
	Critical Control Verifications Completed	17,339	1,679	-
	Hazard Identifications Reported	11,957	11,700	12,816
	Hazard Identification Reports Closed Out	11,476	11,583	12,096
Workforce Safety Training Completed				
Number of Sessions/ Items Completed	Procedures	364,081	341,615	209,469
	Hazard & Risk Management	13,346	13,310	20,154
	Safety Leadership	151	324	70
	Company, Site & Area Inductions	50,771	46,116	37,747
	Statutory Positions Appointed	765	379	447
	Emergency & Crisis Management	53	143	120
Number Training Hours Completed	Procedures (hrs)	91,020	85,403	52,367
	Hazard & Risk Management (hrs)	6,673	6,655	10,077
	Safety Leadership (hrs)	1,208	2,592	560
	Company, Site & Area Inductions (hrs)	25,386	23,058	18,873
	Statutory Appointments (hrs)	-	-	-
	Emergency & Crisis Management (hrs)	212	572	480

¹⁰ During FY22, on 31 March 2022 the legislation and safety metrics in Western Australia changed and therefore references to LTIFR and TRIFR only apply for the 9 months of FY22 from 1 July 2021 to 31 March 2022.

¹¹ 12 month moving average per million exposure hours at 30 June 2024



Emergency Response Team conducting fire fighting training at their hot fire training ground facility at KCGM Operations, Kalgoorlie Production Centre, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsr ltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

Board

Board of Directors

CME

The Chamber of Minerals and Energy of Western Australia

Company

Northern Star Resources Ltd
ABN 43 092 832 892

Contractor(s)

Externally employed contracted workers engaged by the Company to support Operations

Corporations Act

Corporations Act 2001 (Cth)

Critical Risk Standards

Northern Star has 10 Critical Risk Standards which apply across the Company mines, projects and exploration sites to define the health and safety performance requirements to prevent serious and or fatal injuries

DEMIRS

Department of Energy, Mines, Industry Regulation and Safety

Director

A director of the Company duly appointed under the Corporations Act

EAP

Employee assistance providers(s)

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ERT

Emergency Response Team

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESR Disclosure Suite

Refers to the nine separate disclosures related to environment and social responsibility information available on the Northern Star Company website. These comprise: ESR Approach at Northern Star, People & Culture at Northern Star, Safety & Critical Risk Control at Northern Star, Community Engagement & Support at Northern Star, Supply Chain Management at Northern Star, Environmental Management at Northern Star, Climate Change at Northern Star, Water Security at Northern Star, and Waste & Tailings Management at Northern Star

ESR Performance Data Tables

Detailed spreadsheets containing key environment and social responsibility metrics for Northern Star for FY24 and relevant preceding years available from the Company website.

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FIFO

Fly-in fly-out; those personnel who fly to our Operations and stay in an accommodation village while at work

FY

Financial Year ending 30 June

GoldSTARR

Northern Star's Employee Hub for physical, mental and financial health

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

HSR

Health and Safety Representative

ICAM

Incident Cause Analysis Method

Incident

means the partial or whole damage or destruction of an area of cultural or heritage significance without Traditional Owner consent and/or required legal or regulatory approvals

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant

KMP

Key Management Personnel

LTIFR

Lost Time Injury Frequency Rate; calculated based on the number of lost time injuries occurring in a workplace per 1 million hours worked

M or m

Million

MERC

Mine Emergency Response Competition

Mine Health Safety Management System

Northern Star's set of structured policies, procedures and plans used to assist in mitigating and controlling safety and health

NSMS

Northern Star Mining Services Pty Ltd, a wholly owned subsidiary of Northern Star Resources Ltd

OHS

Occupational Health and Safety

Officer

An officer of the Company defined under the Corporations Act

PPE

Personal Protective Equipment

Principal Mining Hazards

As defined in the Work Health and Safety (Mines) Regulations 2022 (Western Australia). A principal mining hazard at a mine is any activity, process, procedure, plant, structure, substance, situation or other circumstance relating to the carrying out of mining operations at the mine that has a reasonable potential to result in multiple deaths in a single incident or a series of recurring incidents

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Ltd

SMERC

Surface Mine Emergency Response Competition

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

STARR Core Values

Northern Star's STARR Core Values of Safety, Teamwork, Accountability, Respect and Results

TRIFR

Total Reportable Injury Frequency Rate; calculated according to the number of reportable work-related injuries or illness for each one million hours worked

UMERC

Underground Mine Emergency Response Competition

UN SDG(s)

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

WASM

Western Australian School of Mines (Curtin University of Technology)

WHS

Work, Health and Safety

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Joseph Ieraci, Charge Up Operator, and Zachary Belle, Charge Up Operator, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

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General Enquiries info@nsrld.com

Media Officer mediaofficer@nsrld.com

Compliance compliance@nsrld.com

ASX Code NST

Share Registry MUFG Corporate Markets
(formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

Environmental Management at Northern Star

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

FY24 Performance Data Tables

FY24 GRI, SASB and UN SDG Alignment Index

FY24 Tailings Disclosure Report

FY24 Biodiversity Values

Cover Image: Elevated walkway at Pogo Operations
Photo Credit: Robert McGill, Geologist - Exploration
Pogo Operations, Pogo Production Centre, Alaska



Our Approach	3
People & Culture Governance	4
Restatements of Information	4
Our Employees	5
Local Employment	5
Freedom of Association	5
Employee Attraction, Retention & Engagement	7
Employee Development Pipeline	9
Culture & Engagement	12
Development & Training of our People	13
Gender Pay Gap & Pay Equity	14
Diversity & Inclusion	15
Supporting Our People & Their Families	17
Employee Wellbeing, Mental Health & Support	19
People Performance Metrics	22
Glossary	25
Contact Information	28

People & Culture



4,044

Employees, excluding contractors²

7,019

Our global workforce, including contractors²

23.4%

Female employment in our workforce^{1,2}

1,531

New employees joined our team in FY24¹

Our Approach

To deliver our strategy Northern Star has developed a clear plan to attract, retain and support the best talent. We understand our collective and individual responsibilities to drive results, enhance performance and make Northern Star a place where we are excited to work.

Our culture is critical to us, and one of the reasons people choose to work for us is to be part of that culture, contribute to it and benefit from it. Our Purpose and STARR Core Values are well understood, and they guide our leaders and all our employees to create a consistent and cohesive culture.

840
Internal Promotions in FY24¹

307
Current Graduates, Undergraduates, Trainees and Interns^{1,2}

We are proud to have continued to grow respect and accountability during FY24, with 840 employees being internally promoted to new roles, and 121 frontline

121
Frontline Leaders have completed Leadership Insights Training in FY24¹

101
Current Apprentices (including Trade Upgrades)^{1,2}

leaders completing our Leadership Insights Training. Further information is available on pages 7 and 17.

¹ Direct employees only, excludes contractors
² At 30 June 2024

People & Culture Governance

Northern Star's Board has oversight of people and culture risks and opportunities within the organisation assisted by the People & Culture Committee's oversight of operational risks and the Audit & Risk Committee's oversight of the Company wide risk management framework.

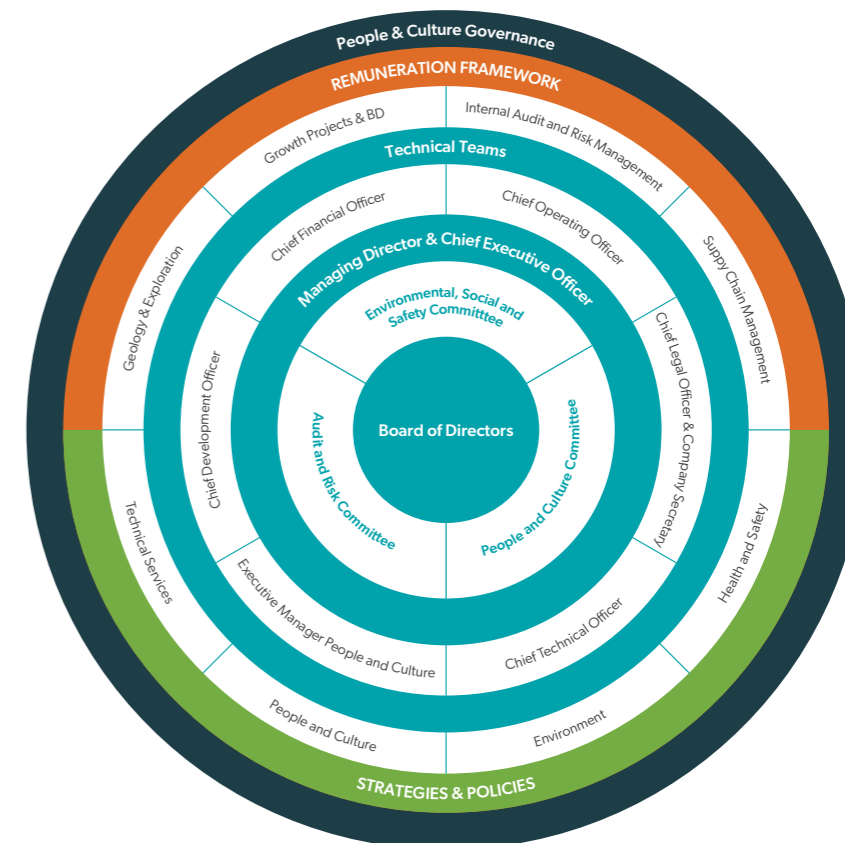
The Company's people and culture governance structure is shown in Figure 1. People and Culture related matters are considered quarterly by the Board through its People & Culture Committee meetings.

The function of the Committee is to assist the Board in fulfilling its corporate governance responsibilities by reviewing and making appropriate recommendations to the Board on:

- Culture;
- Talent Management and retention;
- Remuneration and assessment of performance;
- Leadership development; and
- other matters referred to the Committee by the Board.

Northern Star's Chief Operating Officer has People & Culture reporting and disclosure responsibilities within their portfolio supported by the Executive Manager - People & Culture, and the People & Culture team based across our Operations.

Figure 1 People & Culture Governance



Restatements of Information

Nil restatements from our FY23 Sustainability Report.



Jessey Braddock, Senior Tradesperson – Mechanical - Processing, Bill Randall Jnr., Maintenance Shift Supervisor - Processing, and Dave Holle, Processing Manager, KCGM Operations, Kalgoorlie Production Centre, Western Australia

Our Employees

The majority of our employees are engaged in permanent full-time work. Across our Operations we have the following data points:

- 94% of our employees are employed on a permanent basis,
- 4% on a fixed term basis; and
- 2% on casual contracts.
- Female employment rate reached 23.4% in FY24.
- The age demographic for our employees has been maintained at an average age of 39 years old.

As Northern Star continues to grow in line with our 5-year Strategy we have grown our workforce to support our operations.

Our turnover rate has remained relatively steady even as we grow our workforce.

- New starter rate was 40% in FY24 compared to 34.7% in FY23.
- Turnover rate has been maintained at 28% in FY24, noting this percentage is calculated from a higher total number of employees.

Figure 4, overleaf provides information on our employee statistics as at 30 June 2024:

- Our employee composition is consistent with past years;
- Our employee development pipeline continues to grow as we offer opportunities for people to join mining and enhance their skills.

Figure 2 Employee New Starter & Turn Over Rate Trends

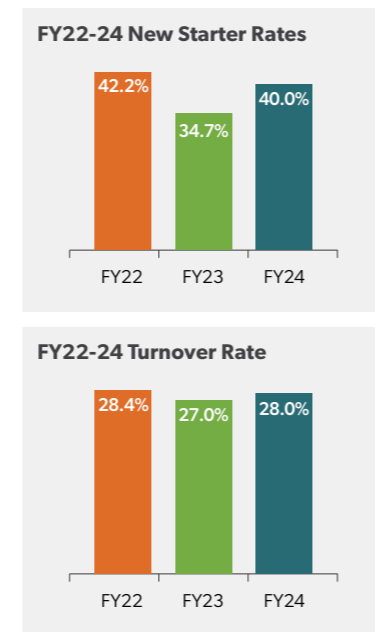


Figure 3 GRI2-30: % of Employees Covered by Collective Bargaining Agreements

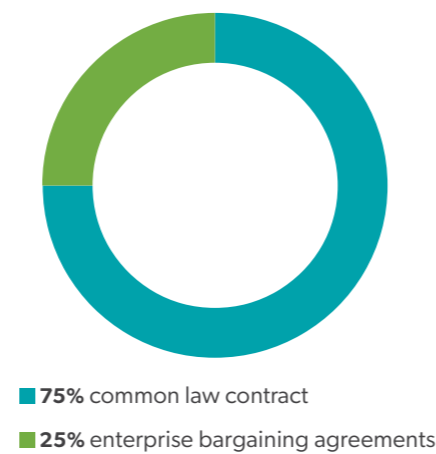
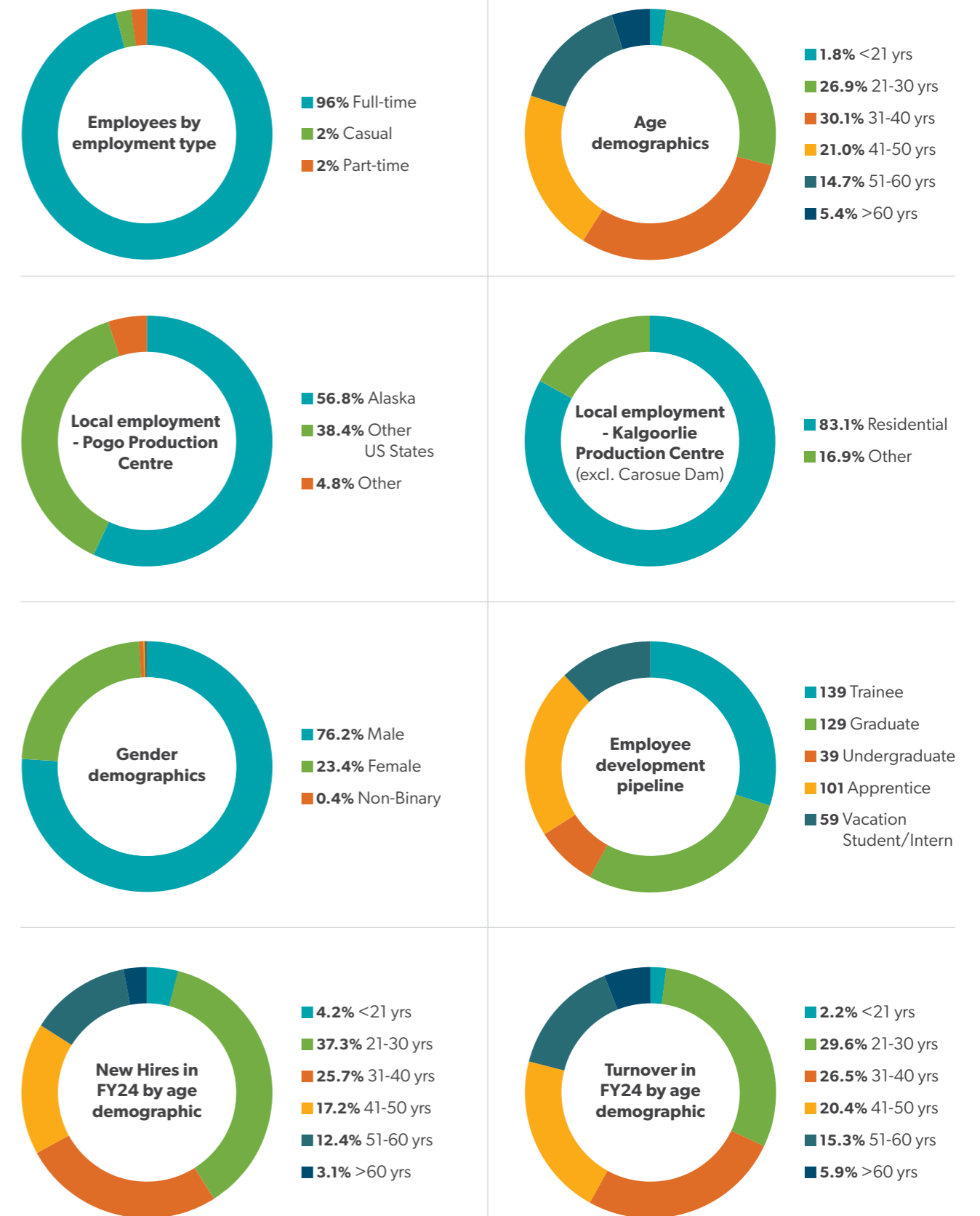


Figure 4 Northern Star Employee Summary, as at 30 June 2024



Local Employment

Northern Star is committed to supporting employment opportunities for people that reside within the communities in which we operate.

At 30 June 2024, we had:

- 83.1% local employment in Kalgoorlie Production Centre. Local employment is defined as our employees who work in the Kalgoorlie Production Centre (excluding Carosue Dam Operations) and are residential in the City of Kalgoorlie-Boulder and surrounds.
- 56.8% local employment in Pogo Production Centre. Local employment is defined as our employees who work in the Pogo Production Centre and are residential in Alaska.

In FY24 we attended 6 employment forums, which are recruitment events to attract prospective employees within the Kalgoorlie and Yandal Production Centres.

Freedom of Association

In our Australian Operations, 25% of our employees (853) are covered by enterprise bargaining agreements, with the remaining 75% of employees (2,532) covered by common law contracts.

Common law contracts are employment contracts between an employer and an employee which incorporate statutory minimum requirements such as relevant awards and other legislation.

Our contractor workforce comprises predominantly full-time workers, with work performed including, but not limited to, underground mining services and support, drilling services, camp services, logistics and haulage and specialist mining, civil and shutdown support roles.

Employee Attraction, Retention & Engagement

Attracting, engaging and retaining our workforce remains a central focus for Northern Star.

Internal Growth Opportunities

We recognise the importance of development to our people and we are continuously improving our systems and processes to enable our people to seek growth opportunities.

As a result, we are proud to have promoted 840⁴ people during FY24, while 380 took the opportunity to transfer to a different Northern Star site within Australia and share their skills, knowledge and experience even further.

Talent Management

During the year we launched our Talent Management and Succession Planning Strategy. We have taken a centralised approach as part of the strategy, with our senior leaders now coming together to elevate the visibility of opportunities in their teams. As a result we have developed specific targeted development programs to support our key talent to achieve their development goals.

Facility Improvements

We have also improved facilities across many of our sites, to make them more functional, comfortable and modern. Two key areas of our focus in FY24 were:

- improvements to accommodation and recreation facilities; and
- redevelopment of the Black Street Administration Building at our KCGM Operations.

International Recruitment

During the year Northern Star engaged a third-party contractor to assist with sourcing international talent for residential maintenance roles. As a result we successfully placed 8 international mechanical fitters in our residential operations in the Kalgoorlie Production Centre, from Ghana, Zambia and Zimbabwe on Northern Star sponsored visa subclass 482 skills shortage visas.

We plan to expand the recruitment services to include boilermakers during FY25. Our contracting partner provided a comprehensive recruitment, mobilisation and support service for our international candidates. This allowed our new employees a seamless integration into their new residential communities and Northern Star.

Highlight – Our International Mechanical Fitters

Our new international recruits were provided with a pre-arrival pack outlining essential items to bring to Australia, an overview of their future workplaces, and information about Australian culture and lifestyle. They also received airport pick up and an orientation day trip around Perth, along with assistance in organising everything from their tax file numbers, health insurance cover, mobile phone activation, to opening of bank accounts.

Once our new international employees arrived in Kalgoorlie, Northern Star provided them with an orientation of Kalgoorlie and assisted with short term accommodation to ensure an easy transition whilst they looked for a place to reside. Northern Star also offered advice and direction to community groups they can join, helping with their integration.



Noah Falanga, Mechanical Fitter at Kanowna Belle, saw the beach for the first time upon his arrival to Australia from Zambia. Noah has nothing but appreciation for Northern Star for the opportunity and life changing experience. He has become the role model for the next generation in his community back home. To them, Noah is an example of success that derives from hard work, dedication and persistence.



Nic Hardwick, Geologist – Discovery, Bronzewing Operations, Yandal Production Centre, Western Australia

Highlight – Supporting Future Careers

Our Thunderbox Operations hosted students from the WA School of Mines: Minerals, Energy and Chemical Engineering streams this year.



For many it was their first time on a mine site and the visit provided a real-life understanding of what they may encounter in their future careers.

The students were able to observe the end-to-end process of gold mining and were given some great insight from our Thunderbox Team.

⁴ 806 promotions in Australia and 34 promotions in Pogo, Alaska

Employee Development Pipeline

Northern Star understands the importance of investing in our people and in the future of the mining industry. We have created several entry pathways into our business, on permanent employment contracts, which can accommodate people from a diverse range of educational and industry backgrounds.

We believe supporting individuals into employment at all levels of the organisation and retaining our people are key

drivers for our success. In a competitive and challenging labour market, we have expanded cultural, developmental, and financial benefits to retain and attract employees through increased job satisfaction.

The development opportunities provide growth for our people whilst also retaining talent and knowledge in the business.

Highlight – Developing our Apprentices

Robert’s connection with Northern Star Mining Services (NSMS) began in 2022 through the Kalgoorlie Clontarf Foundation partnership. This connection was cultivated through various events and career days, reflecting a mutual commitment to career pathways.

Robert’s interest in becoming a Heavy Duty Fitter emerged during Year 11 when he completed his Certificate II in Engineering. Following his high school graduation in 2022, he commenced his apprenticeship with NSMS in early 2023 at our Mt Charlotte Operations, later transitioning to the Wonder Operations to remain close to his family in Leonora.

In addition to his apprenticeship, Robert remains involved with the Kalgoorlie Clontarf Foundation.

“The best parts of the apprenticeship are the onsite learning, the supportive team environment and the mentors who genuinely care about my development.”

Robert Tullock, Apprentice – Fitter – Heavy Duty, Thunderbox Operations



Highlight – The Value of Our Apprentices

The 2024 Northern Star Apprenticeship Program has experienced a significant growth with over 90 apprentices engaged across our Australian operations, completing qualifications in electrical, light and heavy mechanical, boilermaking, auto electrical and communication trades.

The Apprenticeship Program aims to develop highly skilled and professional tradespeople to support the ongoing maintenance of our operations and ensure the efficiency and availability of plant and equipment.

This year we implemented an in-depth orientation introducing our apprentices to the mining industry, highlighting the importance of site safety, and maintaining personal wellbeing through lifestyle balance. With the support of our experienced maintenance teams, apprentices will complete on-site training and TAFE studies over 4 years, further enhanced with off-site training opportunities through the valued support of our specialised contractors.

The ongoing success of the Northern Star Apprenticeship Program continues to provide a positive impact on our operations.



“Since starting my auto electrical apprenticeship with Northern Star I have experienced amazing support and guidance. The orientation at the beginning of my apprenticeship was super helpful in preparing me for the work environment and gave me a good opportunity to ask questions. Working with my team has been excellent; everyone is supportive and eager to share their knowledge and skills. Whilst only being seven months into my apprenticeship I feel I have already gained so much practical experience that will help me through the rest of my apprenticeship and I am excited for my future with Northern Star”.

Skyla Newman, Apprentice - Auto Electrical, KCGM Operations



“Embarking on my boilermaker apprenticeship has been a journey of growth, learning, and hands-on experience. Each challenge faced is a step toward mastering the craft and shaping my future in this trade and with Northern Star”

Jake Zagoridis, Apprentice - Fixed Plant Boilermaker, Thunderbox Operations

⁵ STARR Core Values (NSR-COR-024-POL)



Nathan Kehoe, Environmental Coordinator - Senior, Pogo Operations, Pogo Production Centre, Alaska

Culture & Engagement Surveys

Northern Star conducts biennial culture and engagement surveys to better understand the experience and engagement of our workforce. Employee responses are collected anonymously by a third party.

Our culture survey measures people's experience of the STARR Core Values, employee engagement, wellbeing, psychosocial risk factors and identifies how we can strengthen our culture. It helps prioritise the activities that may best support an inclusive, engaged and responsive work culture.

In FY24, we have prioritised delivering actions identified from analysis of the results of our FY23 culture survey. Actions centred around mitigating risk of loss of, or harm to, our people, as well as improving our culture of respect and communication.

Actions to mitigate the risk of psychosocial harm to our workforce include:

- Updating our Code of Conduct⁶ and Safety and Health Policy⁷ to demonstrate leadership commitment to both psychological and physical health and safety;

- Development of a customised sexual harassment e-learning program, that covered respectful behaviours, upstander actions, consent and reporting mechanisms;
- Verifying and validating our approach to managing psychosocial hazards and risk factors; and
- Developing our Human Resources leaders to take a trauma informed approach to investigations.

Actions to improve our culture of respect, and improve communication:

- Implementation of STARR Actions Recognition Program (refer to highlight below for further information);
- Communication through regular site newsletters and updates distributed across sites; and
- Quarterly operational update videos of operational leaders made available to all employees. These provide insights into the results, strengths and success of our Operations.

Our next employee culture and engagement survey is planned for launch in FY25, and results will feature in our FY25 ESR disclosures.

Highlight – STARR Action Recognitions

Our STARR Actions Program continues to grow, with 2,079 recognitions during FY24. 46% of these were about our Teamwork value.

The program is about increasing positive reinforcement from leaders and peers, through quickly and consistently giving feedback and recognition to people when they are doing the right thing.

"Transparent, consistent and fast communication"

"Think broadly, think critically, act together"

"Many teams, one goal"

STARR Action nominees may be recognised by their peers, their leaders and by their General Managers.

Many are celebrated in monthly site newsletters, pre-shift meetings and in our Annual STARR Awards in December.



⁶ Code of Conduct (NSR-COR-001-POL)

⁷ Safety & Health Policy (NSR-COR-002-POL)

Developing & Training Our People

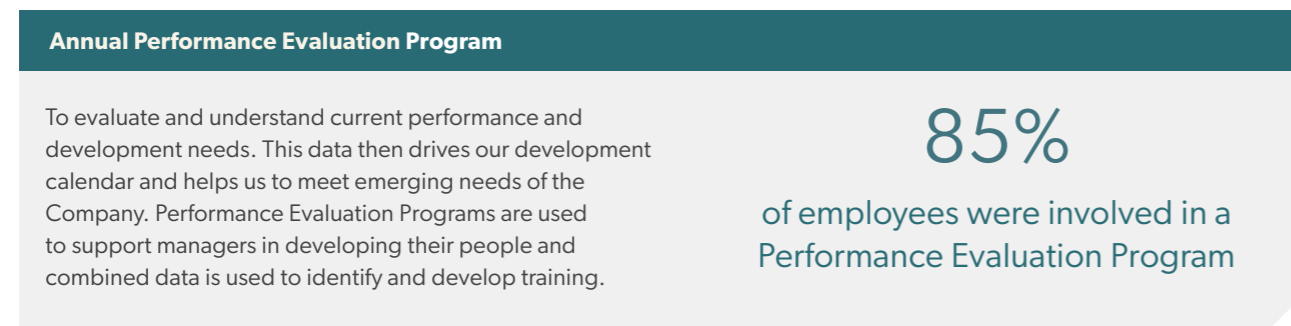
With a continued focus on culture, development and providing a working environment that lives the STARR Core Values, Northern Star continued in FY24 to build our strength as a preferred employer.

A well-established Performance Evaluation Process forms a foundation for conversations across the

year for individual growth and development and informs our succession planning process and Talent Management program.

In FY24, we continued to improve and grow our suite of development offerings, both in competency-based training, professional and leadership development.

Figure 5 Northern Star Annual Performance Evaluation Program



Jundee Operations, Yandal Production Centre, Western Australia



Rachel James, Geologist and Jigme Lobzang, Pit Technician, KCGM Operations, Kalgoorlie Production Centre, Western Australia

Gender Pay Gap & Pay Equity

Northern Star structures its remuneration based on role responsibility. There is no difference in how remuneration is applied based on gender. We are committed to ensuring that we remunerate employees fairly and without bias.

Pay reviews are conducted as part of the Company's standard remuneration review processes (for example at commencement, at annual salary reviews, out-of-cycle pay reviews and performance reviews).

Gender Pay Gap

The phrase "gender pay gap" is based on a comparison of the median salary or total remuneration for females compared to the median salary for males within an organisation. The gender pay gap should not be confused with the analysis of whether females and males being paid for the same role or comparable job, this is pay equity.

An internal gender pay gap review was conducted by Northern Star for the period 1 April 2023 to 31 March 2024 for our Australian Operations (being a statutory requirement in Australia). See footnote 8 on page 16. The mean gender pay gap for total remuneration is 18.89% in favour of males.

Contributing factors to the gender pay gap results identified were:

- Northern Star's workforce composition which consisted of 26% female and 74% male representation for the reporting period in question;
- Experience, seniority levels and time in role. There is higher female representation in entry and development roles, and lower representation in senior roles at Northern Star.

This disproportionate representation can drive a higher gender pay gap.

Pay Equity

Pay equity is the principal of equal or comparable pay for work of equal value e.g. like-for-like roles or comparable jobs regardless of gender, race, ethnicity or other protected characteristic by law.

An internal gender pay equity was conducted in March 2024 for our Australian Operations which reviewed the average base salary for females and males in like-for-like roles. The variance between average base salary was less than 1% and was 0.72% in favour of males. Further review was conducted for variances identified above 5% for either gender and unjustifiable differences were rectified.

Diversity & Inclusion

To further improve the experience of Inclusion at Northern Star, and support a thriving and diverse workforce, in the last 12 months we have:

- Continued to improve our data collection, to better understand our employee composition;
- Increased the visibility and access of our workforce composition data for senior leaders;
- Improved the accessibility of our General Induction with more videos and subtitles, which facilitate clarity of understanding for our employees;
- Improved our communications, including quarterly update videos from senior leaders, recognising success and highlighting community engagement;
- Partnered with the Traditional Owners of our Australian sites to commence development of site-specific Cultural Awareness Training and introduction videos; and

- Continued to support a broad range of community programs, with a focus on regional locations.

These are the behaviours that our people said demonstrates Respect in Action at Northern Star:

“Be inclusive and value difference”

“Respect our people, community and environment”

Mental Awareness, Respect and Safety

In FY24, Northern Star partnered with Edith Cowan University’s Mental Awareness, Respect and Safety (MARS) team on testing the effectiveness of a Diversity and Inclusion Capability Maturity Model.

Through this research, we aim to better understand our current organisational maturity, and set strategies to continue to develop an inclusive and diverse workplace culture at Northern Star.

WIMWA

On 21 and 22 September 2023, Northern Star attended the Women in Mining Western Australia (WIMWA) summit, as well as being a Platinum Sponsor to the event.

WIMWA aims to encourage women to increase their presence in the industry, provide a strong network for women, and advocate for the industry to be proactive in attracting and retaining women in the resources sector. The annual summit in Western Australia is a major in-person conference to facilitate net-working and promote discussion

amongst women and about women who work in the mining industry in Australia, to support them in their career development. As well as sponsoring the program we send a number of delegates (both female and male) from across our Western Australian Operations.

The sponsorship and attendance at the WIMWA event allowed Northern Star to engage with industry and prospective future employees.

Figure 6 Female Participation in Key Roles Within Northern Star at 31 March 2024⁸

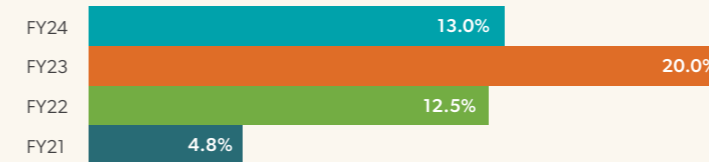
Executive KMP (excluding MD & CEO)



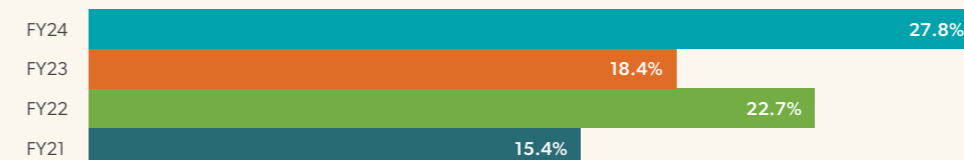
Directors (including MD & CEO)



Other Executives/GM's



Senior Managers



Other Managers



Non-Managers



⁸ In preparation for its 2023/2024 Workplace Gender Equality Agency Report submission, Northern Star did a thorough review of the manager classifications in its Human Resources Information System. This review has resulted in several reclassifications, which explain the change in female participation percentages in the Senior Managers and Other Executives categories from the FY23 Sustainability Report.



Astal Woods, Apprentice – LV Mechanic, Raditya Putra, Apprentice – LV Fitter & Calvin Myburgh, LV Fitter, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Supporting Our People & Their Families

In FY24 we continued to see the positive impact of our Parental Leave Policy with a total of 131 employees taking time off work to spend with their families and new children from both our Australian and Alaskan Operations.

A total of 131 employees were on Parental Leave in FY24 (including those who commenced their Parental Leave in FY23 and were still on leave in FY24). Of the 131 employees, 89 returned to work in FY24, 38 were still on leave at 30 June 2024 and 4 elected to resign before returning to work.

The return-to-work percentage in FY24 remained high with more than 96% of our employees returning back to work.

In FY24 we extended our Parental Leave Policy to include our Pogo Operations in the United States, with 16 employees accessing the benefits of the Policy in the first

year. This Policy is designed to promote a work/life balance and facilitate a smooth transition back to work following a period of leave.

Figure 7 Employees who took paid parental leave in FY24

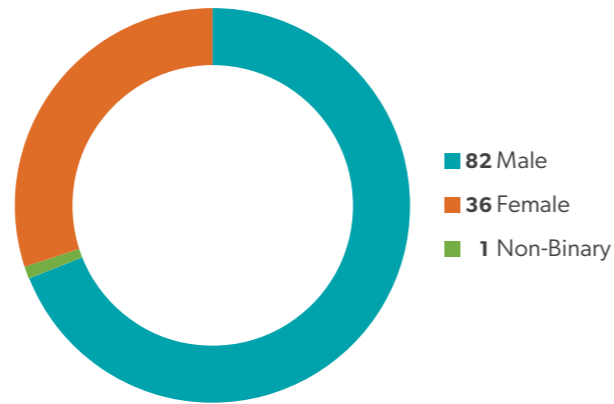


Table 1 Paid Parental Leave Benefits for Australia and Alaska.⁹

Continuous Service	Primary Carer Paid Leave (Available at half pay)	Primary Carer Return to Work Payment	Secondary Carer Paid Leave (Available at half pay)
< 12 months	No entitlement	Not applicable	No entitlement
1 year or more and less than 2 years	4 weeks' pay	Month 1 – 0.5 weeks' payment Month 2 – 0.5 weeks' payment	1 weeks' pay
2 years or more and less than 3 years	8 weeks' pay	Month 1 – 1 weeks' payment Month 2 – 1 weeks' payment	2 weeks' pay
3 years or more and less than 4 years	12 weeks' pay	Month 1 – 1.5 weeks' payment Month 2 – 1.5 weeks' payment	3 weeks' pay
4 years or more and less than 5 years	16 weeks' pay	Month 1 – 2 weeks' payment Month 2 – 2 weeks' payment	4 weeks' pay
5 years or more	20 weeks' pay	Month 1 – 3 weeks' payment Month 2 – 3 weeks' payment	4 weeks' pay

Highlight – Northern Star Mining Services Open Day

In August 2023, Northern Star Mining Services (NSMS) hosted an open day at their Operations and Training Centre in Kalgoorlie, Western Australia.

Employees and their families were able to tour the newly established training centre, getting a taste of underground operations through the virtual reality mining truck simulators. New underground machines were on display, including jumbos, loaders, trucks and a specialised underground mining utility. All of the equipment was ready to commence work at our operations in the Goldfields region.

It was a great experience for all involved to showcase the facilities, our growth, and our commitment to engagement.



Highlight - Parental Leave in Alaska, USA

Northern Star is proud of the impact the new Pogo Parental Leave policy is having on the lives of our US workforce and their families, and we look forward to the value and diversity it brings to our future workforce.

Leroy Knutsen

Leroy is one of our experienced and longest tenured employees at Pogo, having been hired in 2003 before the mine was in production.

Leroy was one of our 16 employees who has received parental leave after the new Parental Leave Policy USA became effective 1 July 2023.

In June 2023 Leroy welcomed his daughter Ila Zabrina Knutsen into the world. Ila was born in the Philippines. Leroy said, "I was so excited to have the ability to travel to the Philippines to bring my wife Lea and new baby home"

Receiving paid parental leave has enabled Leroy more time to bond.

**Leroy Knutsen, Surface Operator
Pogo Operations**



Alexis Ramirez

Alexis Ramirez, Accountant at our Pogo Operations, joined the Northern Star team in 2020. Pogo Operations were pleased to support Alexis as she commenced Parental Leave in May 2024 as the primary carer of her son, Primo "Trip" Ramirez III.

Alexis was the first female employee to access the new benefits through Pogo's Parental Leave policy. She was thrilled to find out that the policy would be implemented after advocating herself for its benefits in alleviating financial stress and the pressure of job retention during the time off. Alexis says that she was lucky to receive so much support throughout her pregnancy from her team, where they could not be happier for her to now take the time off to spend with family, but also can't wait for her to return to work. She is reminded each day of how special her Northern Star team is.

"As the primary caregiver, I cannot stress the relief I have to know that my benefits and pay remain the same for quite some time. It has eased the burden of welcoming our son and knowing that my work as a mother is just as valued as my work as an Accountant. Trust me, I miss the busy days as an Accountant, but I cannot be more thankful for this precious time with my son while he is so young and changing every day. Knowing that my position is on hold until I am ready to return cannot be understated."

**Alexis Ramirez, Accountant
Pogo Operations**



⁹ In addition, for Primary Carer's Australian employees receive a top up payment to their superannuation and Long Service Leave balance and Alaskan employees receive a top up to their 401K for the period they were on unpaid leave.

Employee Wellbeing, Mental Health & Support

We know that when our people are thriving, it improves our ability to deliver our results, safely.

Mental health is complex, and our programs and resources need to be able to meet people's current needs where they are. In addition to traditional employee assistance programs, the following is a short overview of the programs we offer our people.

Individual support:

- Healthy lifestyle support with onsite exercise physiologists;
- GoldSTARR - mental health and wellbeing support through online resources;
- Employee mental health e-learning;
- Employee mental health, stress and resilience training;
- Employee Assistance Program; and
- Mental Health First Aiders.

Connection with others:

- Push-Up Challenge team events (a charity event supported by Northern Star, fundraising for mental health and raising awareness of mental health issues);

- Accommodation camp and site events;
- Social Clubs; and
- Volunteer leave (1 paid day per year for employees to donate their time to a charity).

Developing our leadership capability

To support mental health and wellbeing, we have continued to develop our leadership capabilities. Highlights from FY24 include:

- Improved our leadership training to help identify and manage psychosocial hazards and risk factors in the workplace;

- Continued to deliver Leadership Insights¹⁰, with a focus on providing a psychologically safe and healthy workplace and relationships with our people, with 121 participants in FY24; and
- 16 employees became Mental Health First Aiders in our Kalgoorlie Production Centre, and a further 18 completed refresher training.

Using our existing governance and safety management systems as a foundation, we are embedding a sustainable and practical risk management approach to identify, assess, and manage psychosocial hazards and factors at work, and

implement effective controls. Over the last 12 months we have:

- Updated our Code of Conduct and Health & Safety Policy to reflect our commitment to providing our workers, contractors, and visitors with a psychologically and physically healthy and safe workplace;
- Enhanced our response to critical incidents and significant near misses, to mitigate the impact of traumatic events, including psychoeducation, post incident debriefs and check-in calls by our EAP service provider;
- Upskilled our HR team in undertaking trauma informed investigations;

- Improved our Mental Health for Manager training to identify, assess and manage psychosocial risk factors in the workplace; and
- Improved our data collection of employee experiences to better understand the presence of psychosocial hazards in the workplace.

Working closely with our people, leaders and service providers we continue to improve on our wide range of existing programs, policies and systems to prevent harm, respond to ill-health, and promote flourishing of our employees.

Figure 8 Northern Star Additional Employee Benefits

 Mental Health and Wellbeing	 Reward and Recognition	 Advice and Protection	 Employee Share Offers	 Additional Leave	 Parental Support	 Health Insurance	 Salary Packaging
Employee Assistance Program Mental Health First Aiders Mindsight Intranet	GoldSTARR portal Employee Discounts Wellbeing Centre Employee Recognition	Superannuation (AU) & 401K Retirement Plan (US) Advice Income Protection (AU) Vivo Virtual Care (AU) Life Insurance (US) Employee Paid Supplemental Insurances (US) Workers Compensation Insurance	Employee Share Offers and Performance Rights Offers Employee Share Match Plan	Employee Leave Parental Leave Family & Domestic Violence Leave Volunteer Leave Study Leave	Paid Parental Leave Childcare – YMCA Kalgoorlie (AU)	Subsidised Premium Private Health Insurance	Salary packaging offers including vehicles, remote area housing benefits, remote area flights and superannuation (AU)
Casual Employees							
Fixed Term Employees							
Full Time and Part Time Employees (including apprentices & graduates)							

¹⁰ Leadership Insights is a custom-built in-house program that provides foundational leadership skills



Shagai Yadamsuren, Geology Technician & Patrick Pangilinan, Geology Technician, KCGM Operations, Kalgoorlie Production Centre, Western Australia

People Performance Metrics

	Kalgoorlie Production Centre			Yandal Production Centre			Pogo Production Centre			Other			Total		
	Male	Female	Non-Binary	Male	Female	Non-Binary	Male	Female	Non-Binary	Male	Female	Non-Binary	Male	Female	Non-Binary
Employment by Gender and Region at 30 June 2024															
Full Time Permanent	1,497	497	9	694	158	4	583	59	-	126	92	-	2,900	806	13
Part Time Permanent	2	32	-	-	-	-	-	1	-	2	39	-	4	72	-
Full Time Fixed Term	77	30	-	9	3	-	9	2	-	15	6	-	110	41	-
Part Time Fixed Term	-	2	-	-	-	-	-	-	-	-	1	-	-	3	-
Long Term Leave	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Casual	57	21	-	6	1	-	5	-	-	1	4	-	69	26	-
Total	1,633	582	9	709	162	4	597	62	-	144	142	-	3,083	948	13
	2,224			875			659			286			4,044		
New Starters by Gender & Region at 30 June 2024															
New Starters	641	243	-	273	86	-	196	23	-	30	39	-	1,140	391	-
Total	884			359			219			69			1,531		
Turnover by Gender & Region at 30 June 2024															
Turnover	394	177	6	214	51	3	164	16	-	18	20	-	790	264	9
Total	577			268			180			38			1,063		
Parental Leave for FY24															
Entitled to Parental Leave Payment in FY24 ¹¹	1,270	448	15	600	112	7	515	48	-	124	114	-	2,509	722	22
On Parental Leave in FY24 ¹²	42	35	1	24	2	-	15	1	-	1	10	-	82	48	1
Received Parental Leave Payment in FY24	42	28	1	24	2	-	15	1	-	1	5	-	82	36	1
Returned from Parental Leave in FY24	36	14	1	19	-	-	12	-	-	1	6	-	68	20	1
Still on Parental Leave as at 30 June 2024	6	17	-	5	2	-	3	1	-	-	4	-	14	24	-
Did Not Return from Parental Leave	-	4	-	-	-	-	-	-	-	-	-	-	-	4	-
Age by Gender and Region at 30 June 2024															
<21 years old	35	14	-	11	3	-	11	-	-	-	-	-	57	17	-
21-30 years old	461	187	2	187	58	1	143	14	-	18	18	-	809	277	3
31-40 years old	452	176	4	235	29	-	202	19	-	43	57	-	932	281	4
41-50 years old	335	121	1	116	33	3	139	18	-	45	38	-	635	210	4
51-60 years old	248	72	2	110	29	-	68	7	-	31	27	-	457	135	2
>60 years old	102	12	-	50	10	-	34	4	-	7	2	-	193	28	-
Total	1,633	582	9	709	162	4	597	62	-	144	142	-	3,083	948	13
	2,224			875			659			286			4,044		
	<21	21-30	31-40	41-50	51-60	>60	Total								
Employment Type by Age at 30 June 2024															
Full Time Permanent	55	955	1,125	802	572	210	3,719								
Part Time Permanent	-	-	32	25	10	1	68								
Full Time Fixed Term	16	69	34	18	11	3	151								
Part Time Fixed Term	-	8	3	-	-	-	11								
Long Term Leave	-	-	-	-	-	-	-								
Casual	3	57	23	4	3	5	95								
Total	74	1,089	1,217	849	596	219	4,044								
							FY24	FY23	FY22						
Industrial Action															
Number of Strikes or Lockouts	-														

¹¹ Eligible employees are those that are permanent (full time or part time), and have completed 12 months or more of continuous service.

¹² Commenced parental leave during FY24 or continued their parental leave from FY23 into FY24



Blue Tree Project - Supporting our workforce to speak up when experiencing mental health concerns, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia.

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

401 K

An employer-sponsored, defined-contribution, personal pension (savings) account in the United States

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

Board

Board of Directors

Company

Northern Star Resources Limited
ABN 43 092 832 892

Contractor(s)

Externally employed contracted workers engaged by the Company to support Operations

Corporations Act

Corporations Act 2001 (Cth)

Director

A director of the Company duly appointed under the Corporations Act

EAP

Employee assistance providers(s)

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESR Disclosure Suite

Refers to the nine separate disclosures related to environment and social responsibility information available on the Northern Star Company website. These comprise: ESR Approach at Northern Star, People & Culture at Northern Star, Safety & Critical Risk Control at Northern Star, Community Engagement & Support at Northern Star, Supply Chain Management at Northern Star, Environmental Management at Northern Star, Climate Change at Northern Star, Water Security at Northern Star, and Waste & Tailings Management at Northern Star

ESR Performance Data Tables

Detailed spreadsheets containing key environment and social responsibility metrics for Northern Star for FY24 and relevant preceding years available from the Company website.

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FIFO

Fly-in fly-out; those personnel who fly to our Operations and stay in an accommodation village while at work

FY

Financial Year ending 30 June

GoldSTARR

Northern Star's Employee Online Hub for physical, mental and financial health

GRI

Global Reporting Initiative

Group

Northern Star Resources Limited and all of its wholly owned subsidiaries

HR

Human Resources

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant

KMP

Key Management Personnel

LV

Light Vehicle

MARS

Mental Awareness, Respect and Safety, Edith Cowan University, Western Australia

Non-Binary

Non-Binary includes gender identities that demonstrate a diversity of expression beyond the binary framework. In addition, purely for the purposes of the data disclosed in this document, we have included in the expression "Non-Binary" the individuals who, when invited to identify their gender, responded with either "prefer not to say" or "prefer to self-describe".

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

P&C

People and Culture

PEP

Performance Evaluation Process

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Limited

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

STARR Core Values

Northern Star's Core Values of Safety, Teamwork, Accountability, Respect and Results

TAFE

Technical and Further Education Institutions, Australia

UN

United Nations

UN SDG(s)

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

Workforce

Northern Star employees and contractor employees

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Dave Holle, Processing Manager at our Fimiston processing plant, KCGM Operations, Kalgoorlie Production Centre, Western Australia

Contact Information

Northern Star Resources Ltd

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Investor Relations	investorrelations@nsr ltd.com
General Enquiries	info@nsr ltd.com
Media Officer	mediaofficer@nsr ltd.com
Compliance	compliance@nsr ltd.com
ASX Code	NST
Share Registry	MUFG Corporate Markets (formerly known as Link Market Services)

Additional Website ESR Disclosures:

- Environment & Social Responsibility Approach
- People & Culture at Northern Star
- Safety & Critical Risk Control at Northern Star
- Community Engagement & Support at Northern Star
- Supply Chain Management at Northern Star
- Environmental Management at Northern Star
- Climate Change at Northern Star
- Water Security at Northern Star
- Waste & Tailings Management at Northern Star
- FY24 Performance Data Tables
- FY24 GRI, SASB and UN SDG Alignment Index
- FY24 Tailings Disclosure Report
- FY24 Biodiversity Values

Cover Image: Andy Durko, Apprentice - Mobile Plant Maintenance, KCGM Operations, Kalgoorlie Production Centre, Western Australia



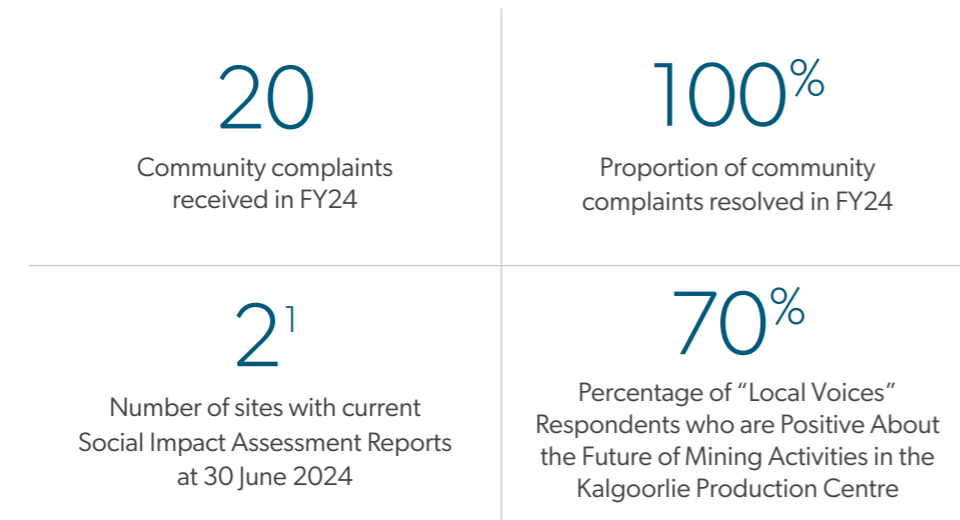
Our Approach	3
Community Engagement & Support Governance	4
Restatements of Information	4
Social Impact Assessment & Needs Analysis	5
Community Complaints & Grievances	7
Indigenous Relations	9
Cultural Heritage	11
Community Investments & Partnerships	12
Community Performance Metrics	18
Glossary	21
Contact Information	22

Community Engagement & Support



Our Approach

Northern Star values its connection to the communities in which it operates and actively encourages open dialogue with local communities and key stakeholders. The Company regards its positive reputation as a vital strategic advantage and seeks to ensure that local communities benefit from its presence.



Northern Star drives our relationships with local communities and key stakeholders by:

- Developing, implementing, and maintaining management systems to identify, assess and manage impacts on the community at all stages of its Operations, as a fundamental part of its long-term strategy.
- Recognising that communities are comprised of internal and external stakeholders.
- Establishing mutually acceptable methods of communication, consultation, and participation processes to create enduring and beneficial relationships built on shared respect and trust.
- Engaging in open and honest dialogue with local communities over their concerns about the impacts of the Company's mining activities in their locality and incorporating these concerns into studies and business plans.
- Encouraging consultation and providing opportunities for local communities to share in the benefits which flow from mining activities in their regions, including local employment and business opportunities.

¹ Social Impact Assessment publication dates: KCGM Operations 2021, Pogo Operations 2022.

- Valuing diversity through the recognition and respect of different local cultures, values, traditions, and customs, and by providing our workforces with location specific cross-cultural awareness training and upholding adherence to the Company's STARR Core Values.
- Incorporating sustainable development initiatives in business plans to ensure that the social and economic benefits obtained by communities are safeguarded in the long-term.
- Holding our leaders accountable for their responsibilities to local communities at all stages of the Company's activities and operations.
- Monitoring, continuously improving and reporting our stakeholder relations performance.

As a minimum, Northern Star will honour its obligations under all applicable legislation and in line with our STARR Core Values and provide sound guidelines and processes to respect and positively engage our local communities.

Community Engagement & Support Governance

Northern Star's Board has oversight of community and social risks and opportunities within the organisation assisted by the Environmental, Social & Safety (ESS) Committee's oversight of community and social licence related risks and the Audit & Risk Committee's oversight of the Company wide risk management framework.

The Company's community engagement & support governance structure is shown in Figure 1. Social performance related matters are considered quarterly by the Board through its ESS Committee meetings.

The function of the Committee is to assist the Board in implementing the Company's, environmental, social and safety strategies and ensuring responsible and sustainable business practices. In particular, the Committee will assist the Board in its oversight, monitoring and review of the Company's practices in the following key areas:

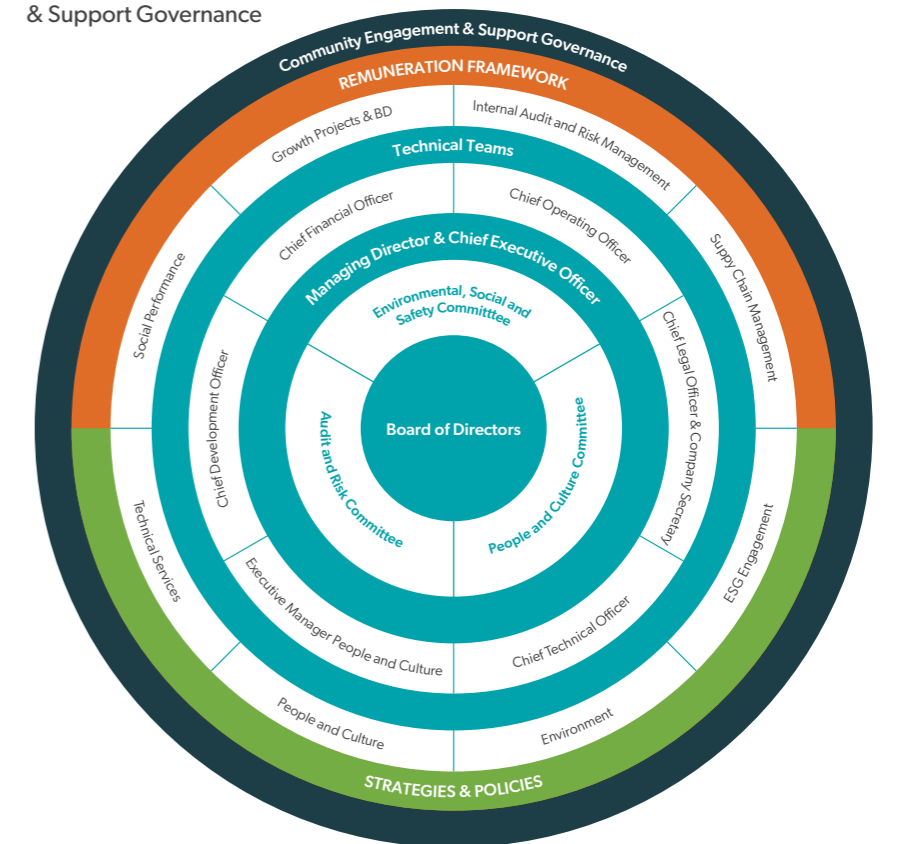
- human rights, including modern slavery
- community and social responsibility
- native title, cultural heritage, and land access
- sound business ethics and fair and ethical dealings with stakeholders, and
- long term environmental, social and safety strategic goals.

In addition, the Committee will refer any material environmental, social and safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

Development and delivery of Northern Star's social performance

function is overseen by the ESS Committee and the Chief Legal Officer & Company Secretary (reporting to the Managing Director and to the Board), supported by the ESG engagement team, legal, business development team, and the social performance team on our sites.

Figure 1 Community Engagement & Support Governance



Restatements of Information

Nil restatements from FY23 Sustainability Report.

\$6.11M

Community investment commitments in FY24

149

Community projects financially supported in FY24

0

Materially adverse heritage related incidents in FY24

0

Materially adverse community related incidents in FY24

Social Impact Assessment & Needs Analysis

Northern Star acknowledges the recommendations of the International Council on Mining and Metals (ICMM) that requires companies to engage with stakeholders based on an analysis of the local context. We recognise that the data generated by independent, objective social impact assessments (SIAs) can be a valuable source of information on how we are achieving social performance and how we can improve.

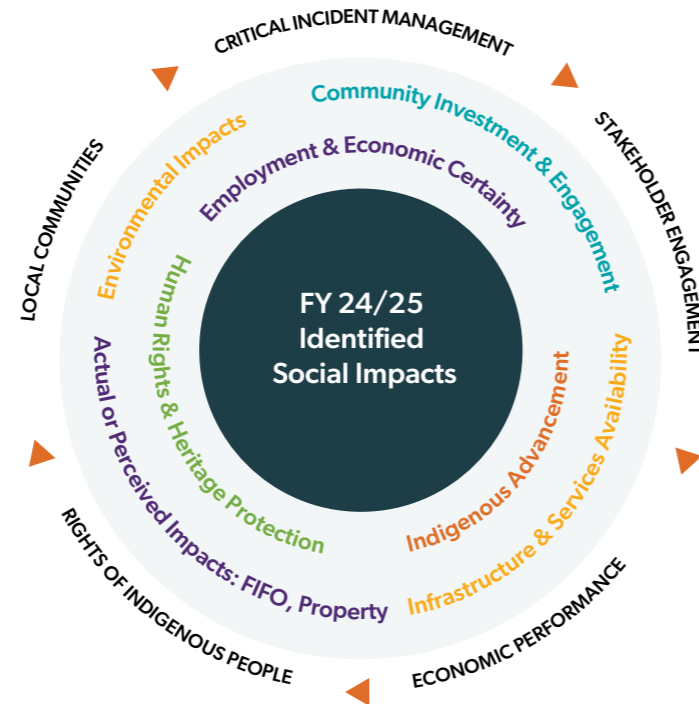
The findings of SIA reports are used to prioritise the social performance team’s work, targeted to key stakeholder areas of interest and needs, and maximise the impact of our social performance. Findings undertaken on our individual sites are used to direct social performance and stakeholder engagement efforts tailored to operational environments.

Northern Star’s aspiration is that social impact assessments and needs analyses are conducted for each operation, with associated Social Impact Management Plans to be developed, that consider our material risks/

opportunities at different life stages of operations and major projects.

A major growth project or change in mining operations triggers the need for a Social Impact Assessment.

Figure 2 Northern Star’s Identified Social Impacts & Management Processes



Highlight – Stakeholder Engagement

Our stakeholder policy outlines the importance of engaging in open and honest dialogue with our local communities regarding potential impacts of mining activities and incorporating these concerns into studies and business plans.

Stakeholder Engagement is also an important component of critical incident management. Consideration and engagement with local stakeholders inform operational plans, particularly when there is potential for significant social implications because of a critical incident.

How we manage community expectations, engagements and planning is a key strategic consideration.

Engagement with our stakeholders helps inform closure planning, rehabilitation & post-mine land use. Ongoing consultation with relevant environmental stewards, Environmental Protection Authorities, Government Departments and Public Environmental Reviews are well considered as part of our mine closure planning.



Insights from Previous SIA’s

A Social Impact Assessment was prepared prior to Northern Star’s ownership of the KCGM Operation for the Fimiston South Project, a major project extending KCGM’s life of mine to 2035. It provided insights into several key themes:

- Environmental Impacts
- Certainty about Future Mining Activities (life of mine)
- Risk of Increasing FIFO Employment combined with Support for Long-term Local Employment Opportunities
- Support for Aboriginal Employment and Procurement
- Support for Tourism Infrastructure
- Support for Local Industry
- Provision of Local Funding and Grants

This insight has been important in identifying key areas of social impact management for Northern Star’s growth activities in the Kalgoorlie Production Centre.

Highlight – “Local Voices” in Kalgoorlie

Northern Star has committed to an independent public participation tool known as “Local Voices” to measure and monitor social perceptions in the Kalgoorlie-Boulder Community. The tool is also designed to act as a needs analysis for identifying themes of greatest community interest.

Local Voices’ long-term trends, as identified following 5 years of community surveys and over 3,000 participants, provide focus areas that our leaders in the Kalgoorlie Production Centre then use to inform decisions.

Areas of focus include:

- environmental impacts
- perceived dependency on mining
- social investment activities
- employee sentiment
- sentiment towards FIFO activities
- infrastructure and services – childcare, health, housing

Over a 5-year period (2019-2024), 70% of survey participants have consistently seen benefit to the activities at KCGM Operations on the regions’ future economic prosperity.

Community Complaints & Grievances

Northern Star’s Code of Conduct, Stakeholder Policy, Whistleblower Policy, Human Rights Policy and Equal Employment Opportunity Policy collectively describe the mechanisms for internal and external stakeholders to seek advice and raise concerns. External complaints, grievances and concerns are also addressed in accordance with our External Complaints Grievances and Concerns Procedure.

The Company is committed to providing for and cooperating in, the remediation of negative impacts that it may have caused or contributed to. Disputes (complaints or grievances) are a natural part of any human relationship, including that between a mining company, its host communities and the broader stakeholder population. However, complaints and grievances that are left unresolved or unmanaged can lead to an increased risk of conflict, the potential to delay or stop site activity and prevent Company access to resources.

Northern Star’s reputation and social licence to operate may be negatively impacted by the Company’s failure to provide for remediation and to co-operate in the remediation of the Company’s negative impact.

- A “grievance” is defined as a matter of concern held by a stakeholder that relates to the Company and/or its activity.
- A “complaint” is defined as a grievance that a stakeholder requests the Company to acknowledge, consider and formally respond to.

The process to lodge a grievance is widely communicated and accessible to the community:

- All stakeholders are made aware of their ability to express a grievance and/or lodge a complaint with the Company. They are equally made aware of the process and timeframe for receiving a Company response to their complaint or grievance.
- If an external stakeholder raises a grievance or makes a formal complaint relating to the Company, the site General Manager and/or a representative of the Environment or Social Performance Team is notified immediately.

A Company representative then contacts the stakeholder to clarify the nature and detail of the complaint or grievance. This information is recorded.

- All stakeholders have the right to raise a grievance or lodge a complaint with the Company and can expect that it be dealt with in a respectful and timely manner in all instances.

Figure 3 Number of Community Complaints Reported in FY24

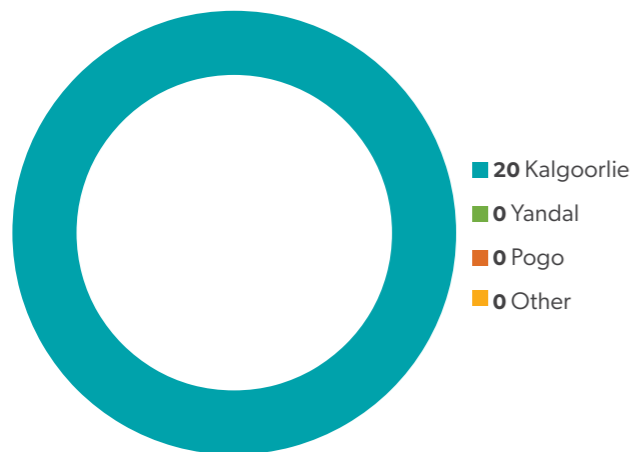


Figure 4 Number of Community Complaints Resolved in FY24

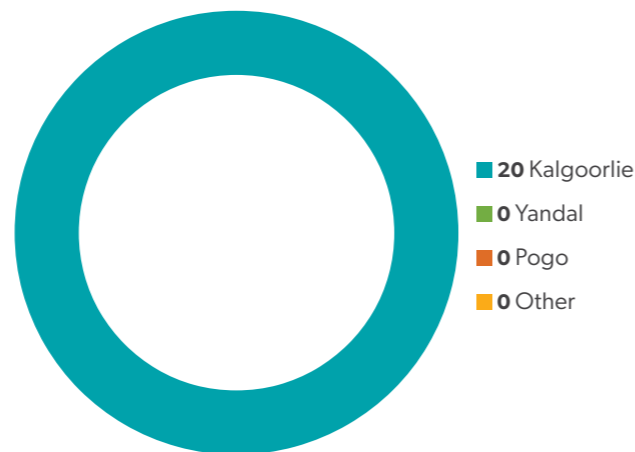


Figure 5 Former Williamstown resident Mr Bourke



Highlight – Listening to our Williamstown Residents

Demonstrating Northern Star listens to its community members and takes appropriate action based on their concerns, remains the strongest driver of trust locally.

A positive example of procedural fairness in action is the Williamstown Relocation Program. Since November 2021, Northern Star has been implementing a voluntary relocation program to financially assist residents and landowners to relocate from Williamstown.

The relocation program was initiated in response to community concern about the impact of nearby mining activity, with Northern Star undertaking extensive consultation involving over 60 households from April to October 2021 to understand community sentiment and explore potential solutions.

Over the past two years, the community’s response to the relocation program (based on our guiding principles of procedural

fairness and respectful engagement) has been overwhelmingly positive with over 80% of residents and property owners supported (financially and with in-kind support) to relocate from Williamstown.

Northern Star continues to engage with remaining residents of Williamstown in relation to the Company’s activities with the potential to create social impacts or disturbance.

Indigenous Relations

Indigenous People Statement

Northern Star recognises the traditional rights of Indigenous people, and their enduring right to maintain their cultures and customs, and meaningful access to their traditional lands. We acknowledge that Indigenous people are some of the most marginalised people around the world, enduring forms of social exclusion and are often under-represented in political decision-making processes. We consider Indigenous people to be key stakeholders and that to thrive as a business, we need to gain and maintain these enduring trust-based relationships.

This makes the engagement of Indigenous people critically important for Northern Star, to better understand the enduring and unique connections they have to their traditional lands and waters, and how Northern Star’s operations impact on that.

Northern Star commits to the 2013 ICMM Position Statement on Indigenous people and Mining. Northern Star undertakes cross-cultural awareness training for all Manager level employees and above, as well as a making a cross-cultural awareness E-Learning module available for all employees and contractors. This training is designed to complement site-specific cross-cultural awareness training facilitated by Traditional Owners across our Australian Operations, which is a site training requirement for our employees and contractors.

Highlight – Wiluna Remote Community School

Students at a remote Goldfields school now have access to more on-country learning opportunities and interschool activities following the purchase of a four-wheel-drive bus. The 22-seater coaster, funded through Northern Star’s Community Investment Program, is equipped with a four-wheel-drive conversion, lifted suspension, bull bar, and snorkel air intake, allowing it to tackle tough northern Goldfield’s terrain.

Principal Emidio Boto said:

“Our core curriculum up here in Wiluna is two-way science, we’re teaching the kids ranger work, we’re teaching them about the land and the country, and we have to take them out.

But we’ve had to limit (on-country trips) to small groups, but now we can take a full class.”

“We’re a very sporting school but we’ve had to knock back interschool competitions because we can’t take the kids down, we didn’t have a bus but now we’re able to take a full team.

There’s just so much that we can now do with the kids that we weren’t able to do before”.

Emidio Boto
Principal Wiluna Remote Community School



Engagement Approach

We commit to complying with all domestic, national, and international laws applicable to our relationships with Indigenous people. Our engagement with Indigenous people is aligned with the ICMM Position Statement on Indigenous People and Mining, and our commitment to uphold the principles of Free, Prior and Informed Consent (FPIC).

This commitment includes the engagement of Indigenous people in relation to projects situated on their traditional lands. This allows us to understand any areas of concern, and factor that into our operational planning and priorities. Northern Star supports reconciliation through adoption of our Human Rights Policy, making cross-cultural awareness training accessible to all employees and contractors, and through social partnerships with not-for profit Indigenous organisations including [Clontarf](#), [MADALAH](#) and [Shooting Stars](#).

Agreement Making

Northern Star commits to agreement making processes with all Indigenous people whose land we operate on, and who hold relevant legal Indigenous land tenure as awarded by the relevant State, Territory or Federal government.

In Australia, this commitment extends to all Aboriginal first people who have either a determined or registered Native Title Claim under the *Native Title Act 1993* (Commonwealth) or recognised freehold tenure under the *Aboriginal Land Rights Act 1976* (Northern Territory).

In Western Australia, our operations are either subject to a Native Title determination or are subject to a Native Title claim, under the *Native Title Act 1993* (Commonwealth).

In the Northern Territory of Australia, the Central Tanami Project, in which we own a 50% joint venture interest, is located on freehold Indigenous land, under the *Aboriginal Land Rights Act 1976* (Northern Territory).

The Pogo mine in Alaska US is located wholly on State land.

As part of our agreement making process, Northern Star aims to enter into land access and heritage protection agreements with Indigenous people on whose land we operate, to:

- Identify the process for engaging Indigenous people on proposed activities.
- Seek feedback on proposed activities.
- Reach agreement on what mining or exploration activities can occur on the land.
- Agree on how Northern Star will undertake those activities.
- Set parameters for benefits that will be delivered to the Indigenous people in return for the mining or exploration activities proceeding.

Northern Star upholds the FPIC principles within all negotiations, which are always conducted in good faith. Where parties consider existing or inherited agreements to be outdated and not in line with contemporary agreement conditions, Northern Star will consider entering into agreement modernisation discussions, and will align with the heritage protection legislation in Western Australia.

During FY24 Northern Star has negotiated and executed two land access and compensation agreements with Traditional Owner groups in the Kalgoorlie and Yandal Production Centres and one agreement was executed in FY23. The Company has also made progress with three other Traditional Owner groups in relation to negotiation protocols and terms of new agreements.

Figure 6 Northern Star continues to commit to FPIC

Free	Prior	Informed	Consent
No coercion, intimidation, or manipulation	Permission sought well in advance of the activity contemplated with respect for the timelines of the Indigenous group	Information about all aspects of the project is provided	One of the options is that the Indigenous Group may withhold consent
Must be able to say no	Sufficient time to allow for information to be gathered and shared to the decision-making process of the group	Time to understand, access, and analyse information	Need to consider the who (ie. the correct Indigenous group), what (ie. for a specific purpose), and how (ie. clear written agreement)
No divide and conquer tactics	Consent reached before the project begins	Preliminary scientific and other studies on impacts are done	
		Capacity provided	

Cultural Heritage

Northern Star understands that physical and spiritual cultural heritage is critically important to Indigenous people and provides a connection between their past and contemporary existence. Our overarching process for managing heritage risks is as follows:

- Northern Star’s cross-functional team consists of Legal, Social Performance, Environment, Geology and Mining who are responsible for working between project and production teams and Traditional Owners to understand where a planned activity may adversely impact an area which may include a heritage site, in advance of the proposed ground disturbance occurring.
- If this engagement process indicates that an area of heritage value may be adversely impacted, representatives of the team will further engage with the relevant Traditional Owners and the broader project team to evaluate means of avoiding the impact, acknowledging and incorporating the views of Traditional Owners.
- If the adverse impacts to the heritage site or area cannot be avoided, and the Traditional Owners do not consent to the activity proceeding, then Northern Star will not proceed with the activity in the manner proposed.



In FY24:
 Material heritage related incidents
 Heritage related infringements
 Cost of heritage related infringements (\$)

Community Investments & Partnerships

Northern Star proudly invests in our communities through strategic partnerships by financial and in-kind contributions. These collaborations are aimed towards achieving sustainable benefits for communities in Australia and Alaska and to create long lasting, positive impacts for both present and future generations.

Our relationships within our communities are strengthened by our employees, contractors and their families who live and work in our operating areas, and through our links with local governments, education bodies, non-governmental organisations (NGO’s) and charities within these areas.

Northern Star has established clear Donations and Sponsorship Guidelines² based on our Donations and Sponsorship Policy³ to ensure fairness and consistency across all its operations.

Our community investment is strongly guided by the United Nations Sustainable Development Goals. This approach ensures that contributions are carefully balanced each year and are directed towards initiatives that address local and regional improvements in these focus areas:

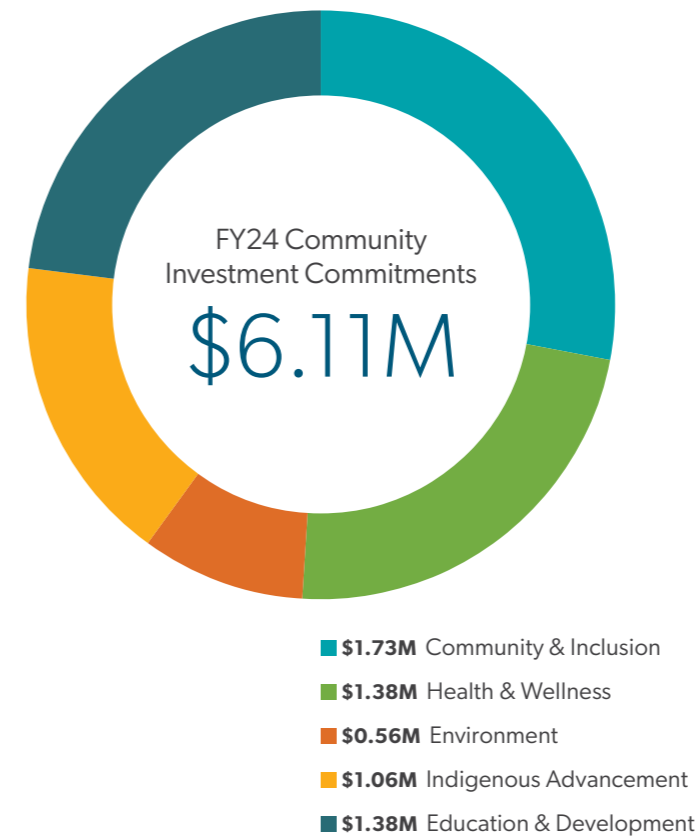
- Community & Inclusion:** Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. Support inclusion of all, including breaking down barriers between different groups.
- Health & Wellness:** Support food security and improved nutrition and promote sustainable agriculture. Ensure healthy lives and promote well-being for all, at all ages
- Environment:** Work to preserve the environment whilst there is increasing pressure on natural resources.
- Indigenous Advancement:** Promote Indigenous communities and provide equal access to education and opportunities.
- Education & Development:** Support and promote lifelong learning opportunities for all.

By integrating an employee match initiative into our Community Investment Policy, we support employee nominated causes or fundraising initiatives that are directly connected to a registered charity or approved community-based initiative.

We encourage our employees’ charity efforts with paid Volunteering Leave under the Company’s leave policy.

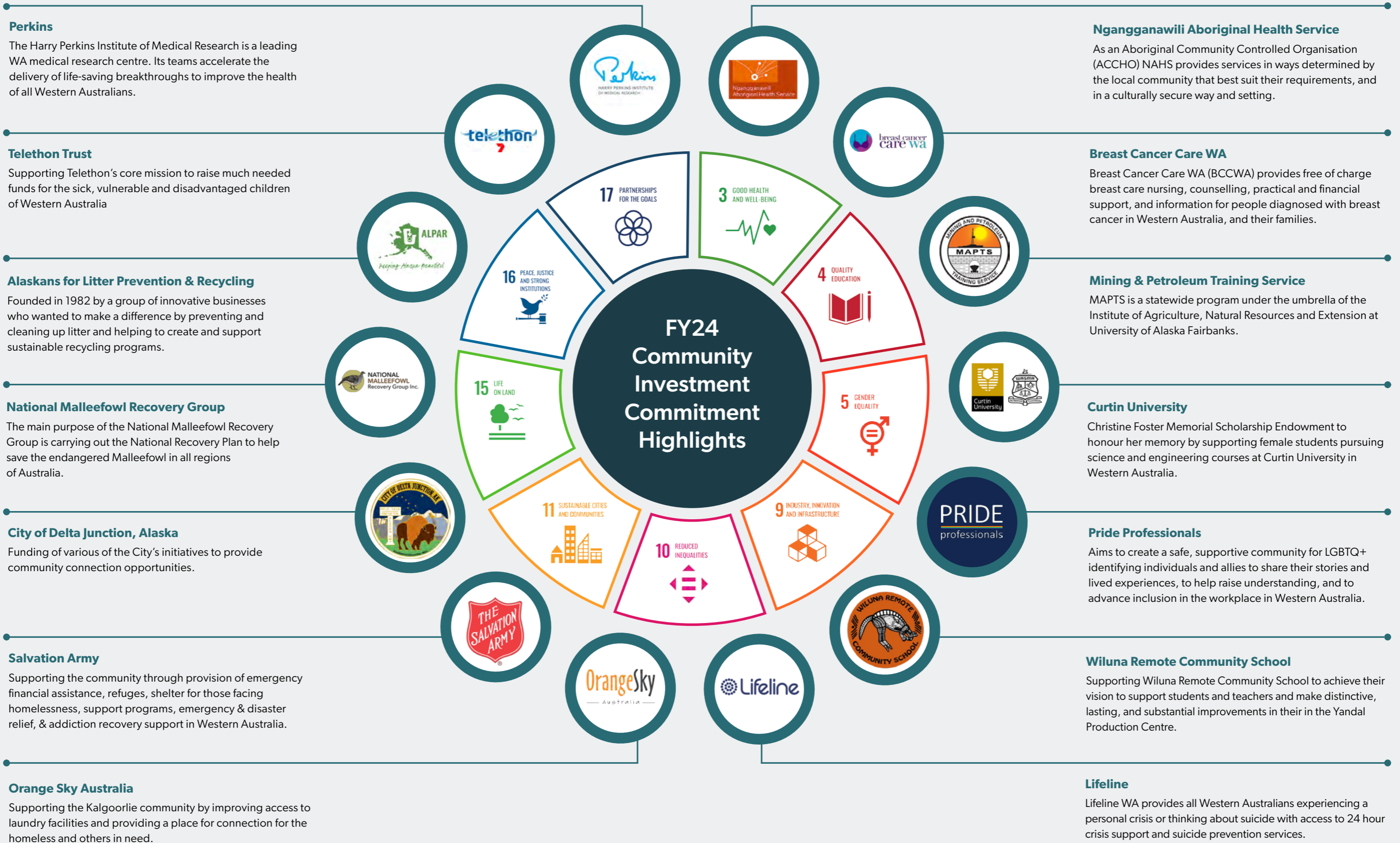
Over the past 12 months, Northern Star has committed or maintained investments with just under 150 organisations and groups to deliver sustainable development outcomes within the communities we operate.

Figure 7 Community Investment Committed Funds in FY24



² Donations and Sponsorship Guidelines (NSR-COR-014D-GUI)
³ Donations and Sponsorship Policy (NSR-COR-014-POL)

Figure 8 Some of our Valued Partners and Community Investment Commitments for FY24





Highlight – Our Perth Symphony Orchestra Partnership

“Thank you for making this event possible for all our students and staff at Boulder Primary. The students were engaged and had so much fun. It is the best musical incursion we’ve had this year”

David Callow
Principal, Boulder Primary School

The Perth Symphony Orchestra breaks all the rules. Perth Symphony Orchestra brings symphonic music to people who might not ordinarily hear it, and in ways they may not have thought possible, providing a truly magical and memorable experience for everyone whilst showcasing Western Australia’s remarkable talent.

Through a partnership with Northern Star, Perth Symphony Orchestra aimed to reach into regional communities, engaging, inspiring and connecting people to one another.

Connecting the community through arts and shared experience, a free concert was held in September 2023 in Kalgoorlie-Boulder, WA.

In addition, enhancing community well-being and local capacity for cultural development in Kalgoorlie-Boulder, the Perth Symphony Orchestra delivered music programs across schools in the community, for over 250 students.



The free family concert attracted over 1,500 Goldfields residents.

A second free concert and additional school engagements are planned for August 2024.



Highlight – Helping Support the City of Delta Junction’s Waste Management Services

Northern Star donated a loader which is helping the City of Delta Junction’s landfill facility meet its goal of operating a clean and continually efficient waste management program. The loader significantly expands the capacity of the landfill and directly impacts the city’s bottom line.

“This is an incredibly important primary piece of equipment that fulfills much needed regulatory requirements specifically related to moving top cover as mandated by the Alaska Department of Environmental Conservation and directed by the Environmental Protection Agency,” says Kendall Greenleaf, City Administrator, City of Delta Junction.

Operationally, the multifunctional loader also helps to meet the expectation people have of access to a clean landfill that is ready to accept the disposal of garbage. It is a critical workhorse for the day-to-day functions of efficiently emptying dumpsters, pushing trash into the landfill, and creating an effective, safe environment for resident and commercial users.

“Without Northern Star’s donation of the 2018 Volvo wheeled loader, the City would be extremely limited operationally and likely unable to meet the expectations of a fully functional landfill, perhaps even facing the need to shutdown”

The loader donation is just one element in a broader effort to support a healthy, sustainable community.

In addition, our Pogo operations are a long-time supporter of Alaska Litter Prevention and Recycling sponsoring the trash bags used by like-minded citizens who understand the importance and value of a clean city. The 2024 event reported that more than 23.5 tons of winter trash was collected in Interior Alaska from roads, neighbourhoods, and parks surpassing the event’s goal of collecting 17 tons of trash. Pogo employees participated in the annual event both from the Fairbanks headquarters and the mine site.





Rebekah Collins, Graduate Geologist and Tristan Truebody, Geologist at the Mt Charlotte Headframe KCGM Operations, Kalgoorlie Production Centre, Western Australia

Community Performance Metrics

		FY24	FY23	FY22
Community Investment Commitments				
Funds Committed	Kalgoorlie Production Centre (\$M)	0.69	0.67	0.51
	Yandal Production Centre (\$M)	0.44	0.42	0.28
	Pogo Production Centre (\$M)	0.92	1.23	0.90
	Corporate (\$M)	4.07	4.25	4.46
	Total (\$M)	6.11	6.58	6.15
Organisations & Groups Directly Supported	Kalgoorlie Production Centre	49	53	47
	Yandal Production Centre	12	6	22
	Pogo Production Centre	22	32	19
	Corporate	66	73	49
	Total	149	164	137
Grievances and Complaints				
Complaints & Grievances	Number of grievances and/or complaints received	20	-	1
	Proportion of grievances and/or complaints resolved	20	2	-
Community Incidents				
Community Related Incidents	Number of material community related incidents	-	-	-
	Number of community related infringements	-	-	-
	Cost of community related infringements (\$)	-	-	-
Heritage Management				
Heritage Related Incidents	Number of material heritage related incidents	-	-	-
	Number of heritage related infringements	-	-	-
	Cost of heritage related infringements (\$)	-	-	-



Skyla Newman, Auto Electrical Apprentice and Stephen Wypewi, LV Apprentice
KCGM Operations, Kalgoorlie Production Centre, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsr ltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

Board

Board of Directors

Company

Northern Star Resources Ltd
ABN 43 092 832 892

Contractor(s)

Externally employed contracted workers engaged by the Company to support Operations

Corporations Act

Corporations Act 2001 (Cth)

Director

A director of the Company duly appointed under the Corporations Act

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESR Disclosure Suite

Refers to the nine separate disclosures related to environment and social responsibility information available on the Northern Star Company website. These comprise: ESR Approach at Northern Star, People & Culture at Northern Star, Safety & Critical Risk Control at Northern Star, Community Engagement & Support at Northern Star, Supply Chain Management at Northern Star, Environmental Management at Northern Star, Climate Change at Northern Star, Water Security at Northern Star, and Waste & Tailings Management at Northern Star

ESR Performance Data Tables

Detailed spreadsheets containing key environment and social responsibility metrics for Northern Star for FY24 and relevant preceding years available from the Company website

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground in Kalgoorlie, Western Australia

KMP

Key Management Personnel

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

STARR Core Values

Northern Star's Core Values of Safety, Teamwork, Accountability, Respect and Results

UN

United Nations

UN SDG(s)

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556

Contact Information

Northern Star Resources Ltd

ABN 43 092 832 892

Corporate office

Level 4, 500 Hay Street, Subiaco WA 6008 Australia

Telephone

+61 8 6188 2100

Website

www.nsr ltd.com

Email

ESG Enquiries	esgperformance@nsrltd.com
Investor Relations	investorrelations@nsrltd.com
General Enquiries	info@nsrltd.com
Media Officer	mediaofficer@nsrltd.com
Compliance	compliance@nsrltd.com
ASX Code	NST
Share Registry	MUFG Corporate Markets (formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach
People & Culture at Northern Star
Safety & Critical Risk Control at Northern Star
Community Engagement & Support at Northern Star
Supply Chain Management at Northern Star
Environmental Management at Northern Star
Climate Change at Northern Star
Water Security at Northern Star
Waste & Tailings Management at Northern Star
FY24 Performance Data Tables
FY24 GRI, SASB and UN SDG Alignment Index
FY24 Tailings Disclosure Report
FY24 Biodiversity Values

Cover Image: Mt Charlotte Headframe Illuminated Pink for National Women's Day,
Photo Credit: Frank McCubben, Health & Safety Advisor KCGM Operations,
Kalgoorlie Production Centre, Western Australia



Our Approach	3
Supply Chain Management Governance	4
Restatements of Information	4
Supply Chain	5
Responsible Sourcing	6
Supplier Engagement & Screening	8
Contract Management	9
Contractor Management	10
Local Procurement	11
Indigenous Procurement	12
Modern Slavery and Human Rights	13
Supply Chain Performance Metrics	14
Glossary	17
Contact Information	20

Supply Chain Management



Our Approach

Northern Star's operations are supported by a centralised Group procurement team that coordinates a global supply chain. As at 30 June 2024, Northern Star had 2,691 Tier 1 suppliers¹ who had been active in the previous 12 months.

Northern Star aims to partner with responsible suppliers who contribute to our goals of sustainable operations and respect for human rights in global supply chains. We prioritise the use of local suppliers, while ensuring our supply chain risks are mitigated through strong regional relationships.

\$3.93^B

FY 24 Total Group Procurement Spend

\$643^M

FY24 Local Procurement Kalgoorlie Production Centre

\$2.9^B

Total Goods & Services Spend in Western Australia in FY24

2,691

Number of Active Tier 1 Suppliers in FY24

\$6.5^M

FY24 Local Procurement Yandal Production Centre

\$9.5^M

Direct Spend with Indigenous Suppliers in FY24²

0

Instances of Suspected or Actual Modern Slavery Identified in FY24

In FY24, over \$828M representing 21% of total Group procurement spend was to suppliers located locally to our Kalgoorlie and Yandal production centres in Western Australia, and our Pogo production centre in Alaska, United States.

¹ All references to suppliers in this disclosure are references to Tier 1 suppliers, unless otherwise stated.
² Comprises a portion of the total spend that occurred directly and indirectly with Indigenous businesses in FY24. For full details on Total Spend (Direct & Indirect) with Indigenous Businesses refer to the remuneration report within the FY24 Annual Report.

Supply Chain Management Governance

Northern Star's Board has oversight of supply chain risks and opportunities within Northern Star, assisted by the Environmental, Social & Safety (ESS) Committee's oversight of operational risks and the Audit & Risk Committee's oversight of the Company wide strategic risk register.

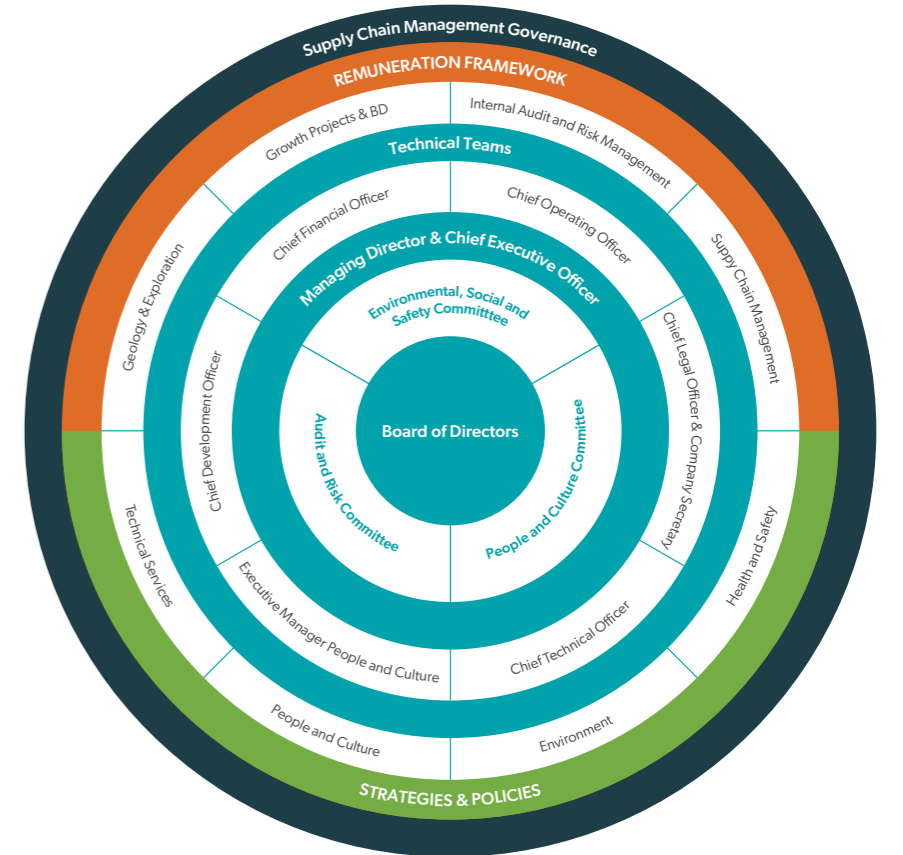
The Company's supply chain management governance structure is shown in Figure 1. Supply chain related matters are considered quarterly by the Board through its ESS Committee meetings.

The function of the Committee is to assist the Board in implementing the Company's, environmental, social and safety strategies and ensuring responsible and sustainable business practices. In particular, the Committee will assist the Board in its oversight, monitoring and review of the Company's practices in the following key areas:

- human rights, including modern slavery risks;
- sound business ethics and fair and ethical dealings with stakeholders; and
- long term environmental, social and safety strategic goals.

In addition, the Committee will refer any material environmental, social and safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

Figure 1 Supply Chain Management Governance



Development and delivery of Northern Star's supply chain function is overseen by the Chief Financial Officer (reporting to the Managing Director

and to the Board), supported by the procurement teams in the corporate office and on our sites.

Restatements of Information

Nil restatements from our FY23 Sustainability Report.

Supply Chain

Northern Star's Operations are supported by a centralised contracts and procurement function, that coordinates a global supply chain of around 2,700 Tier 1 suppliers to ensure supply continuity.

We engage a network of Tier 1 suppliers both nationally and internationally to procure goods and services that are essential for our production activities. Where feasible, we procure materials from local suppliers within the regions we operate in, thereby maximising the local economic impact as well as reducing our global carbon footprint through shipping reductions.

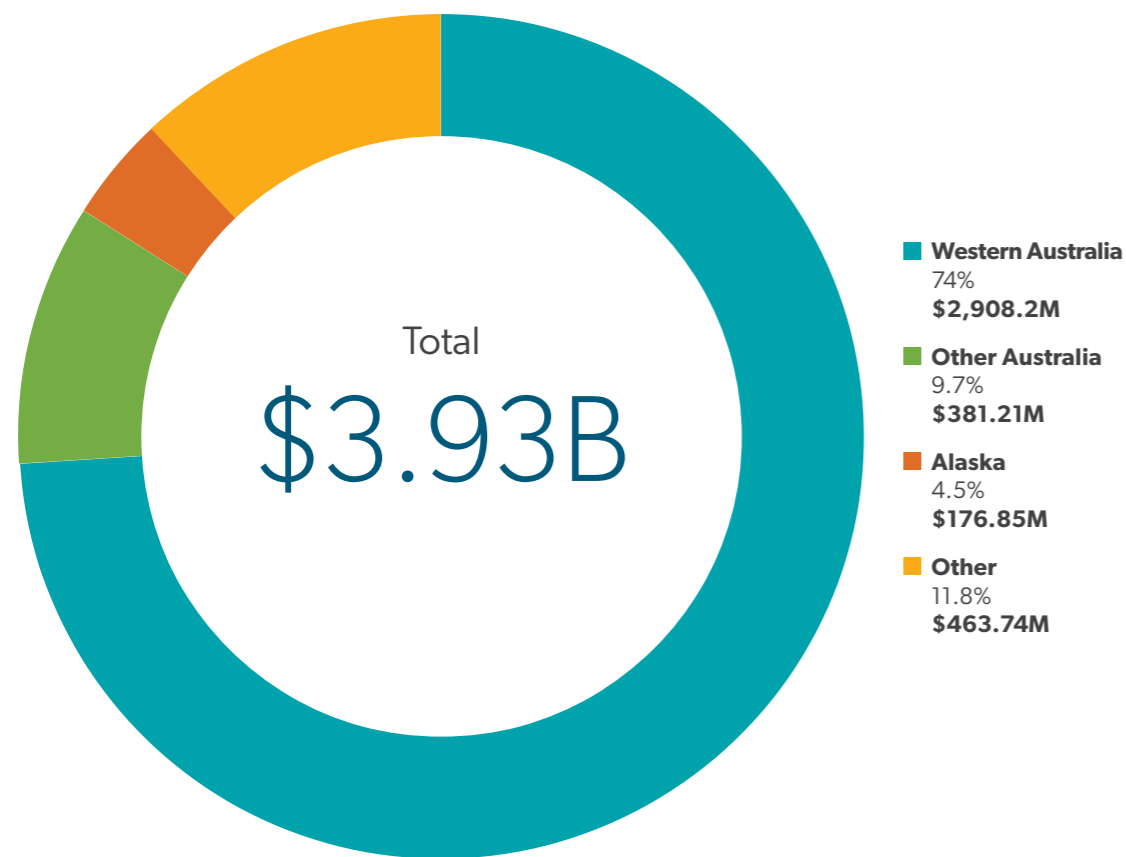
For more advanced, or specialised equipment and materials, the Company will seek these resources globally. In FY24, Northern Star spent \$3.93B on goods and services globally.

This expenditure included just over \$2.9B in Western Australia alone, which was up from \$2.2B in FY23.

As part of our global supply chain, we also consider supply chain resilience factors. This means that we consider, evaluate and monitor issues such as:

- logistics of supply delivery and storage;
- identifying and sourcing critical spares;
- monitoring inventory stock levels and site capacities;
- monitoring of global potential impacts on supply chains such as pandemics, climate change impacts, local and regional weather impacts;
- monitoring global demand or supply shortages; or
- factoring in long lead and delivery requirements.

Figure 2 Supplier Spend by Location of Supplier³



³ Supplier spend is calculated using the location of the supplier as registered in our Company procurement system.

Figure 3 Examples of Our Global & Local Sourcing



Responsible Sourcing

Northern Star is committed to responsible sourcing and aims to partner with suppliers who respect and adopt positive safety, environmental, social and governance standards and who demonstrate alignment with the standards and values of the Company.

Our Purchasing Policy⁴ outlines our requirements for ensuring that the selection criteria used for sourcing goods and services considers not only value for money, but also considers items such as: suppliers previous experience and past performance; health, safety and environmental requirements associated with the provision of the goods or services; and risks, including supply or supply routes.

Our Supplier Code of Conduct⁵ sets out the minimum standards of conduct expected from all Suppliers wishing to do business with Northern Star. Suppliers are required to be compliant with Northern Star's Code of Conduct⁶ and our Anti-Bribery and Anti-Corruption Policy⁷.

The Company requires its suppliers to operate with confidentiality, honesty, fairness and integrity and to observe the rule and spirit of the legal and regulatory environment in which the Company operates.

⁴ Purchasing Policy (NSR-FIN-058-POL)

⁵ Supplier Code of Conduct (NSR-COR-032-POL)

⁶ Code of Conduct (NSR-COR-001-POL)

⁷ Anti-Bribery and Anti-Corruption Policy (NSR-COR-026-POL)



Mohammad Hossen, Mechanical Technician and Tom Rose, Site Services Technician
Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Supplier Engagement & Screening

Northern Star is committed to responsible sourcing through considering health, safety, environmental, social and governance criteria in our tender process and our contracts award.

As part of tender processes, we request that selected prospective suppliers disclose key details of their workplace health & safety (WHS), environmental, social responsibility and other relevant practices. In addition, we have in place a detailed internal ESG screening tool which can be used

to better understand how our prospective suppliers may mitigate modern slavery risks, consider climate related actions, contribute to Indigenous and community initiatives, and support diversity and inclusion.

As part of our supplier on-boarding process, suppliers must confirm their compliance with both our Supplier Code of Conduct⁸ and our Standard Terms and Conditions⁹ which reinforce our expectations with regards to safety, environment and social governance.

Figure 4 Our top 5 areas of goods and services expenditure in FY24 were:

Services	Goods
Underground Mining Services	Diesel
Drilling	Mobile Assets ¹⁰
Engineering Services	Processing materials and consumables
Mobile Equipment Hire	Electricity
Labour Hire	Explosives

⁸ Supplier Code of Conduct (NSR-COR-032-POL)

⁹ Australia (NSR-FIN-025-STA), Pogo (NSR-FIN-047-STA), Labour Hire (NSR-FIN-040-STA)

¹⁰ Mobile assets including equipment such as trucks, loaders, graders, drilling jumbos, and other similar mobile equipment.

Contract Management

Northern Star has in place a Contract Management Guideline¹¹ which sets out the management of all contracts between the Company and its suppliers. It includes the mandatory deliverables required during the contract management phase of any contract lifecycle.

As part of our contract management guideline, we recommend that all high risk and/or high value contracts have a Contract Management Plan¹² (CMP) developed. This CMP should detail the actions that will be taken to preserve contract value and be created upon award.

Details in the CMP may include monitoring requirements of a contractor's performance, and processes for ensuring that the contractor conducts its operations in compliance with the contract, Company standards and relevant applicable legislation.

The Company uses a contract risk register for monitoring performance throughout the duration of the contract to reflect changes in risk status if applicable. The risk register is phased by activity in line with the risks relevant to the scope. The contractor and Company periodically review the risk register and monitor compliance to it.

As part of the contract deliverables, key tasks and milestones are set out with the responsibility and frequency due date determined to ensure that contract management has clear and fixed terms of achievement. An ongoing assessment of supplier performance regarding deliverables, targets and milestones is carried out, to track progress. Audits may be instigated for matters such as workplace health and safety performance and/or environmental issues.

In the instance where supplier non-performance occurs or where goods/services do not meet quality requirements or expectations, Northern Star may consider exercising its contractual rights or other rights at law.

Close out of a contract can occur once an inspection of works completed is performed and the delivery of the contract scope is completed. Contractor files and performance documentation is collected, and all residual payments are finalised. A contract close out meeting is then completed.

Contractor Management

Effective contractor engagement and management remain critical aspects of safety in our operations at Northern Star. Over the past year, we have made progress in enhancing our existing processes to continuously improve our safety compliance.

5-Tier Safety Contractor Management Framework

Our primary initiative has focused on aligning expectations with workplace health and safety legislative requirements. This effort culminated in the creation of a 5-tier safety contractor management framework. This framework establishes safety guidelines and protocols for managing contractor relationships and work processes, and aligning contractors with our minimum required safety standards.

Contractor Management Intranet Page

To support organisation-wide contractor management and improve effective communication, we developed a contractor management intranet page. This digital platform serves as a central hub for resources, updates, and contact points. It is designed to aid in streamlining communication across the Company, providing contractors with access to critical information and support.

In FY25, our objective is to continue embedding the 5-tier safety contractor management framework across Northern

Star. This involves ensuring that all contractors are compliant with the framework and that our internal teams are equipped to manage contractor relationships effectively.

Contractor Engagement

Additionally, we have focused on:

- **Enhanced Training and Inductions:** Providing comprehensive safety training and inductions for all contractors to improve their understanding and compliance with our safety protocols.
- **Regular Audits and Reviews:** Conducting regular audits and reviews of contractor performance and compliance with safety standards to identify areas of compliance with our safety requirements, and areas for continuous improvement.
- **Improved Resource Access:** Providing contractors with easier access to the necessary tools, guidelines, and support through our intranet page and other communication channels.

More information on our safety management and engagement with our contractors is available in our ESR Disclosure Suite - Safety & Critical Risk Control at Northern Star FY24.

Electronic Supplier Engagement Platform



During FY25 Northern Star plans to commence the roll out of a new electronic supplier engagement portal and will commence engagement with all new tenderers through that system. With the new portal we anticipate improved:

- safety and risk management in relation to suppliers
- governance and compliance mechanisms
- contractor relationships
- collaborative opportunities for information sharing, such as modern slavery risk management tools and modern slavery supplier audit outcomes
- cost control and tailored RFx processes

¹¹ Contract Management Guideline (NSR-PRO-001-GUI)

¹² Contract Management Plan Template (NSR-PRO-001-PLA)



Mitch Wilson, Operator – Porphyry Underground
Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

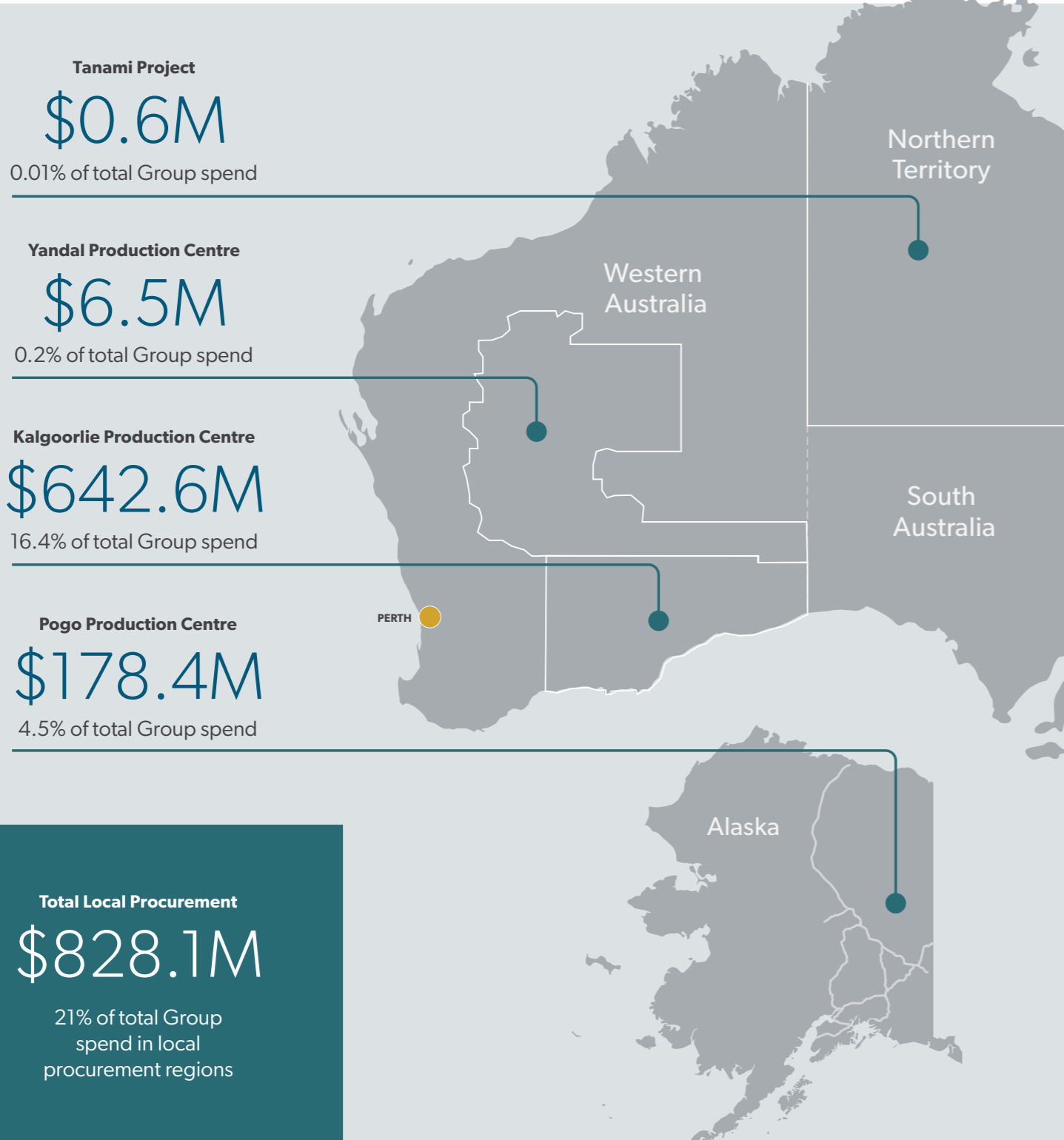
Local Procurement

Supporting suppliers and businesses within the regions in which we operate continues to be a focus for Northern Star. We aim to be part of the communities in which we operate and consistently consider the positive impact of supporting local businesses when assessing procurement opportunities

to ensure we maximise opportunities within our local supply chains.

Our local procurement areas (as shown in Figure 5) are centred around our Kalgoorlie, Yandal and Pogo production centres.

Figure 5 Local Supplier Spend by Production Centre¹³



Indigenous Procurement

Northern Star recognises the value Indigenous businesses create within our supply chain, as well as the immense benefits they generate for Aboriginal and Torres Strait Islander people, communities, and local economies.

Promoting and encouraging Indigenous business through procurement and capacity building is a significant means of supporting the Traditional Owners on whose land we are privileged to operate. We aim to create opportunities for Indigenous businesses in the following priority:

- Traditional Owner Businesses - to give Traditional Owners the opportunity to establish or grow businesses on their Country.
- Local Indigenous Businesses - businesses located in the Kalgoorlie or Yandal regions.
- Indigenous Businesses based in Western Australia.

As a Company, Northern Star is committed to the continuous development and establishment of sustainable supply contracts with Indigenous businesses. Across all Australian Operations, our team is creating procurement contract opportunities for Traditional Owner businesses and local Indigenous businesses.

This includes:

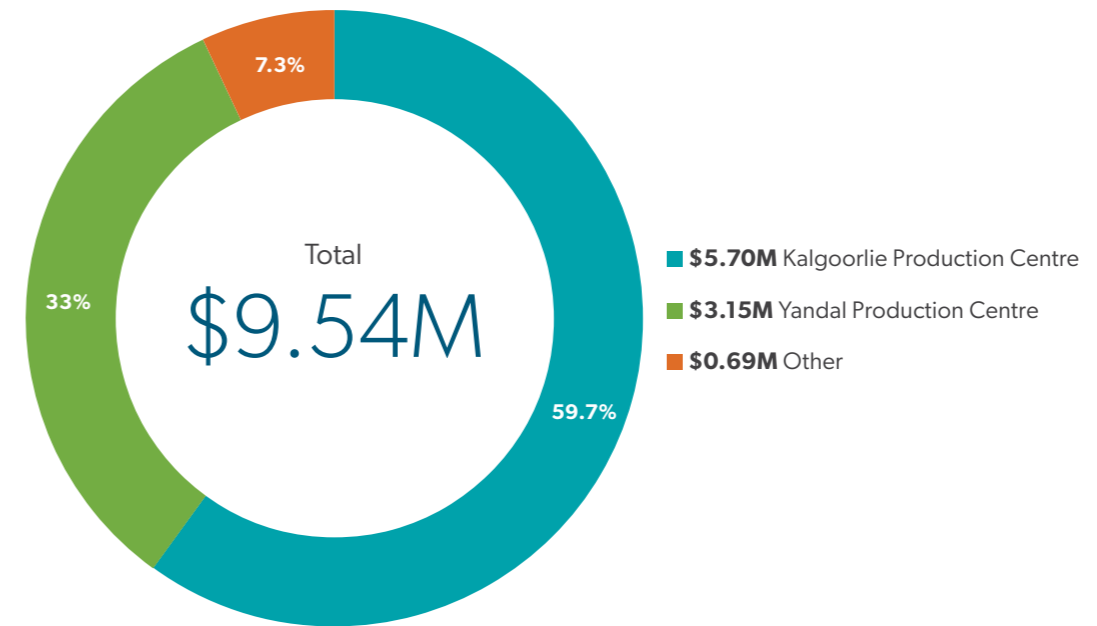
- understanding Indigenous business capabilities and capacity, and how we may assist local Indigenous businesses and Traditional Owners businesses to grow in partnership with Northern Star.
- identifying and removing barriers to participation in our supply chain, and actively facilitating long-term, sustainable contract opportunities

We engage in both direct and indirect procurement with Indigenous businesses.

- Direct procurement is goods or services procured directly by Northern Star from an Indigenous Business.
- Indirect procurement is goods or services procured by other Northern Star suppliers from Indigenous Businesses to assist with works they have been engaged by Northern Star to deliver.

Our verification processes have been developed to ensure that our Indigenous procurement performance data is able to be assured by an independent external third party and that our expenditure is supporting accredited Indigenous businesses, following the accreditation requirements set by the West Australian government in their supply chain.

Figure 6 Direct Spend¹⁴ with Indigenous Businesses During FY24 by Production Centre^{15,16}



¹³ Local supplier spend is defined as spend within postcode areas for Western Australian: Kalgoorlie – including areas such as Hannans, Boulder, Binduli, Bandy Creek and Boorabbin; Yandal – including areas such as Lake Darlot, Leinster, Boorara, Lake Carnegie, and Angelo River; and State boundaries for Alaska and Northern Territory.

¹⁴ Comprises a portion of the total spend that occurred directly and indirectly with Indigenous businesses in FY24. For full details on Total Spend (Direct & Indirect) with Indigenous Businesses refer to the remuneration report within the FY24 Annual Report.

¹⁵ Excludes a \$1.55M payment in Yandal that was finalised on 02 July 2024.

¹⁶ Amounts include GST.

Modern Slavery and Human Rights

Northern Star is committed to continuous improvement in all aspects of our business operations, and this extends to our commitment to take meaningful steps to identify and mitigate modern slavery risks and maintain responsible and transparent supply chains.

The Northern Star Board has ultimate responsibility for ensuring the appropriate processes are in place to assess, monitor, identify and manage any modern slavery risks to Northern Star's business, as well as remediating and reporting on suspected or actual instances of modern slavery.

Our internal Modern Slavery Working Group oversees the identification and assessment of modern slavery risks within our operations and supply chains, and devises initiatives to address and mitigate these risks. This includes supplier due diligence practices, training and awareness initiatives, and effective data collection. The Modern Slavery Working Group comprises personnel from our Legal, Procurement and ESG Engagement teams.

Progress in FY24 included:

- Expanded our human rights training to include more concise general awareness modules for all employees and contractors.
- Improved the data we collect and analyse in relation to our supply chain, leading to more SAQ responses and a higher understanding of our supply chain.
- Strengthened our understanding of our supply chain through assessment of indirect suppliers.
- Contributed to the upcoming review of the *Modern Slavery Act 2018* (Cth).
- Increased focus on supplier ESG screening in terms of assessment of information received, to improve the understanding of our supply chain, and potentially improve the quality of our supply chain to further mitigate modern slavery risks in our supply chain.
- Completed the SAQ process on our suppliers who either failed to respond to the SAQ request or returned a verified SAQ score of high or critical inherent risk in the FY23 risk assessment.
- Assisted the Board and leadership team in enhancing their oversight of modern slavery risks and mitigation actions.



Steffi Milling, Geologist and James Thomas, Project Geologist, Porphyry Solar Array Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Supply Chain Performance Metrics

		FY24	FY23	FY22
Procurement Spend by Location of Tier 1 Supplier				
Supplier Spend¹⁷	Western Australia (\$M)	2,903	2,200	1,972
	Other Australia (\$M)	379	400	298
	Alaska (\$M)	178	167	156
	Other (\$M)	465	248	217
	Total (\$M)	3,926	3,014	2,643
Local Procurement by Region				
Local Procurement by Region	Yandal Production Centre (\$M)	6.5	9.2	7.9
	Kalgoorlie Production Centre (\$M)	642.6	477.4	457.9
	Tanami Project (\$M)	0.6	2.6	2.6
	Pogo Production Centre (\$M)	178.4	166.6	156
	Total Local Procurement (\$M)	828.1	655.9	624.5
Local Procurement by Region (% of total group spend)	Yandal Production Centre (%)	0.2	0.3	0.3
	Kalgoorlie Production Centre (%)	16.4	15.8	17.3
	Tanami Project (%)	0.01	0.1	0.1
	Pogo Production Centre (%)	4.5	5.5	5.9
	Total Local Procurement (%)	21.1	21.7	23.6
Indigenous Procurement				
Direct Spend with Indigenous Businesses¹⁸	Yandal Production Centre (\$M)	3.15	2.4	0.3
	Kalgoorlie Production Centre (\$M)	5.70	2.7	0.6
	Other (\$M)	0.69	0.1	4.1
	Total (\$M)	9.54	5.2	5.1
Supply Chain Risk Analysis				
Modern Slavery & Human Rights	Number of suppliers issued SAQs for completion	156 ¹⁹	131	133
	Number of suppliers responded to SAQs	79	49	74
	Number of third-party supplier audits completed	10	1	6
	Number of material human rights or modern slavery issues identified	-	-	0
	Number of corrective action plans issued	4	1	3
	Percentage of action plans completed (%)	25	100	100
	Number of contracts terminated	-	-	-
Conflict Areas				
Conflict Areas	Number of Tier 1 suppliers identified in conflict areas	-	-	-

¹⁷ Supplier spend is calculated using the location of the supplier as registered in our Company procurement system.

¹⁸ Comprises a portion of the total spend that occurred directly and indirectly with Indigenous businesses in FY24. For full details on Total Spend (Direct & Indirect) with Indigenous Businesses refer to the remuneration report within the FY24 Annual Report.

¹⁹ One of the SAQ requests was submitted in July 2024.



Contractors haulage vehicle being loaded at Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsr ltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

B or bn

Billion

Board

Board of Directors

CAP

Corrective action plan

CMP

Contract Management Plan

Company

Northern Star Resources Ltd
ABN 43 092 832 892

contractors

Externally employed contracted workers engaged by the Company to support operations

Corporations Act

Corporations Act 2001 (Cth)

Director

A director of the Company duly appointed under the Corporations Act

Employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

Indigenous Business

Northern Star defines an Indigenous business as a business that is owned at least 51 per cent by Indigenous Australians, verified through completing a formal registration process with Supply Nation and/or the Aboriginal Business Directory of WA

K or k

Thousand

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground in Kalgoorlie, Western Australia

Kg or kg

Kilogram

kl

kilolitre; one thousand litres

KMP

Key Management Personnel

KPI

Key Performance Indicator

Local Procurement

Procurement from a defined area surrounding our Operations, established by selected postcode boundaries for Western Australia or State boundaries for Alaska and Northern Territory

M or m

Million

Modern slavery:

An umbrella term used to describe serious exploitation and human rights violations. Practices that constitute modern slavery can include:

- human trafficking;
- slavery;
- servitude;
- forced labour;
- deceptive recruiting for labour or services;
- debt bondage;
- forced marriage; and
- child labour

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

Oz

Ounce

SAQ

Self-assessment questionnaire

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

Tier 1 Supplier

Suppliers that Northern Star engages directly to provide goods or services to our operations. Suppliers and contractors are interchangeable expressions throughout this disclosure

UN

United Nations

UN SDGs

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

WHS

Workplace health and safety

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Underground mining services contractors participating in a safety prestart meeting at the start of shift, Thunderbox Operations, Yandal Production Centre, Western Australia

Contact Information

Northern Star Resources Ltd

ABN 43 092 832 892

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Investor Relations investorrelations@nsr ltd.com

General Enquiries info@nsr ltd.com

Media Officer mediaofficer@nsr ltd.com

Compliance compliance@nsr ltd.com

ASX Code NST

Share Registry MUFG Corporate Markets
(formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

Environmental Management at Northern Star

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

FY24 Performance Data Tables

FY24 GRI, SASB and UN SDG Alignment Index

FY24 Tailings Disclosure Report

FY24 Biodiversity Values



Cover Image: Underground mining services contractors participating in a safety prestart meeting at the start of shift, Thunderbox Operations, Yandal Production Centre, Western Australia



Our Approach	3
Environmental Management Governance	4
Restatements of Information	4
Environmental Management System	5
TNFD Alignment	7
Biodiversity, Conservation & Land Management	9
Reclamation & Closure Preparedness	11
Rehabilitation Levy	13
Air Emissions	15
Environmental Compliance	17
Environmental Performance Metrics	20
Glossary	23
Contact Information	26



Environmental Management



0
Number of materially adverse environmental incidents reported in FY24

0
Number of major or catastrophic environmental incidents reported in FY24

383
Land cleared in FY24 (Ha)

42.4
Land rehabilitated in FY24 (Ha)

Our Approach

Northern Star values the diverse environments we operate in. We work to ensure we have robust systems in place to identify and manage potential environmental impacts from our activities and regularly review whether these systems are achieving their purpose.

Northern Star aligns our Environmental Management System (EMS) with ISO14001:2015. This International Standard provides guidance on the systems and processes that are required for good environmental management. It also provides guidance for ensuring the system is regularly reviewed for effectiveness and opportunities for improvement.

100%
Percentage of sites with approved closure plans in FY24

\$3.77M
Calculated DEMIRS MRF Levy for Western Australian Operations for FY24

All our activities require regulatory approval, and we work to ensure compliance with all our legal obligations. In FY24 Northern Star developed a Land Access and Approvals automated workflow system that allows for a simultaneous assessment by various subject matter experts of proposals within the operations which require or impact on land access. By involving the environmental, geology,

0
Number of regulatory infringements received in FY24

\$0
Cost of regulatory infringements received in FY24

technical services, land management, legal and social performance teams in all projects which impact on our land access, this coordinated and comprehensive review provides a clear pathway for operational success, in mitigating the risk of any approvals, consents, consultation and other necessary steps being overlooked and in understanding the necessary timeframes to facilitate accurate project management.

Environmental Management Governance

Northern Star's Board has oversight of environmental risks and opportunities within Northern Star assisted by the Environmental, Social & Safety (ESS) Committee's oversight of operational risks and the Audit & Risk Committee's oversight of the Company-wide risk management framework.

The Company's environmental management governance structure is shown in Figure 1. Environmental related matters are considered quarterly by the Board with particular focus being applied in the ESS Committee meetings.

The function of the Committee is to assist the Board in implementing the Company's, environmental, social and safety strategies and ensuring responsible and sustainable business practices. In particular, the Committee will assist the Board in its oversight, monitoring and review of the Company's practices in the following key areas:

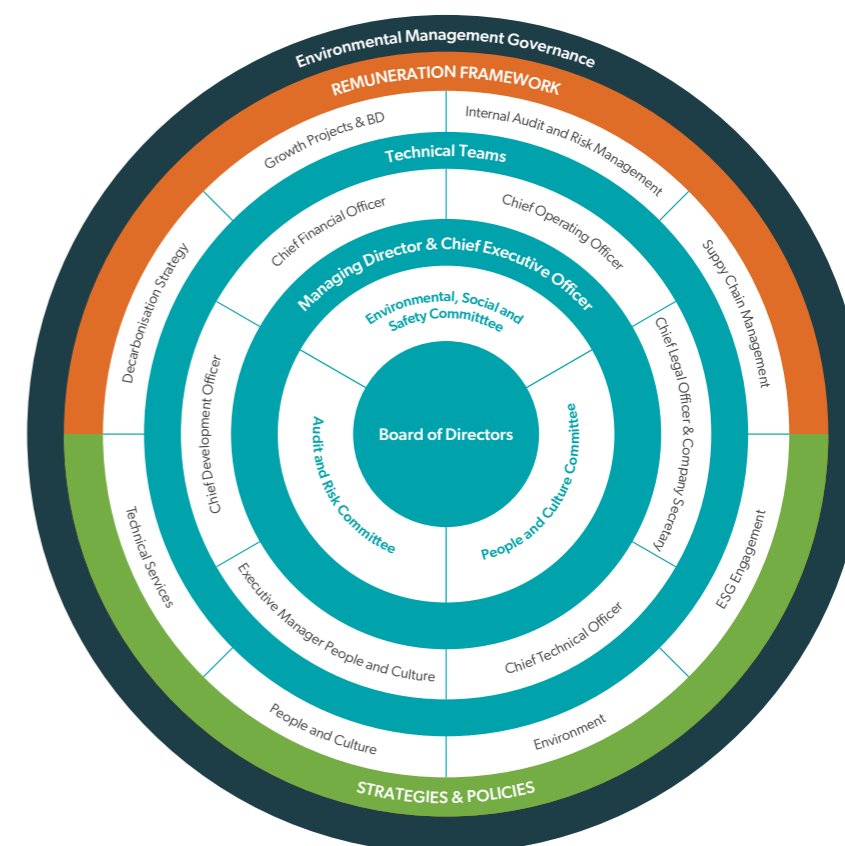
- environmental management
- community and social responsibility
- land access
- sound business ethics and fair and ethical dealings with stakeholders, and
- long term environmental, social and safety strategic goals.

In addition, the Committee will refer any material environmental, social and safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

Development and delivery of Northern Star's environmental management function is overseen by the ESS Committee and the Chief Operating Officer to whom all the site General Managers report, the Chief Legal

Officer & Company Secretary to whom the Environment Manager in the corporate office reports, (reporting to the Managing Director and to the Board). Northern Star employs technical expertise that support the implementation of our Environmental Policy, Global Standards and all environmental systems and procedures. This expertise includes a team in our corporate office that supports our site-based teams in the on-ground implementation of environmental management.

Figure 1 Environmental Management Governance



Restatements of Information

- Nil restatements from our FY23 Sustainability Report.

Environmental Management System

Northern Star has aligned our Environmental Management System (EMS) with ISO14001:2015 and applies the principles of continuous improvement which includes:

- Establishing objectives and processes as required;
- Implementing the processes;
- Measuring and monitoring the processes and reporting results; and
- Taking action to improve performance of our EMS based on results.

During FY22, Northern Star commissioned external consultants to undertake a review of our Environmental Management System (EMS) to assess our alignment with ISO14001:2015. This review included a gap analysis and subsequent action plan that Northern Star implemented over the following two years.

The Northern Star EMS is aimed at ensuring the Company has a set of robust processes and practices that enable Northern Star to systematically manage and minimise any environmental impacts resulting from its operations.

The Northern Star EMS follows the Plan-Do-Check-Act Model:

- **Plan:** Assess risks, establish objective & targets and develop plans to achieve them.
- **Do:** Implement and set out to do what was planned.
- **Check:** Measure and monitor progress against planned objectives.
- **Act:** Correct and improve plans based on lessons learned.

This model allows for a cycle of continuous review and improvement.

Northern Star has elected not to be externally certified against ISO 14001 at this stage. Alignment with ISO 14001 provides the framework and on-ground benefits in Environmental Management without the need for certification.

We will periodically review our EMS to understand our progress and identify where further improvements can be made.

This may also incorporate a structured internal management review of the EMS to ensure it is meeting its purpose and objectives.

Figure 2 Northern Star EMS Initiatives in Progress



Northern Star’s EMS is applicable to all stages of mine life from project feasibility through to closure and relinquishment. Following on from our FY23 disclosures, work has progressed around the ongoing development and continuous improvement of our EMS in the following key areas.

Leadership & Awareness

In FY24 Northern Star developed and implemented an EMS Awareness Program aimed towards increasing knowledge and understanding of environmental management amongst site leaders focussing on what their responsibilities are when it comes to implementing the EMS.

This training program involves both in-person and online learning modules which will be included as a competency for all site leaders ensuring environmental management is driven from the highest level. To further guide relevant teams, a Company-wide Environmental Management System Manual was developed to document the scope, objectives and requirements of the EMS to guide implementation across the business.

Risk Management & Compliance

Risk management and compliance is a key focus for effective environmental management across the business. In line with ISO14001 requirements, all sites participated in a review of their Environmental Aspects and Impacts Register with information feeding into the identification of Significant Environmental Aspects and Formal Risk Assessments to ensure these risks are managed appropriately. Environmental risks have been captured in the CGR platform, an enterprise risk and assurance system implemented in FY24.

During FY24 a standardised Environmental Obligations and Compliance Management Procedure was developed and implemented to ensure a consistent and streamlined approach to environmental compliance across the business.

Northern Star uses online databases to manage environmental obligations and compliance. INX InForm is used to record all environmental obligations and associated conditions to proactively manage and track compliance related tasks. INX InControl is used to record any environmental hazards and incidents ensuring appropriate investigations where required and assigned corrective actions.

Performance Evaluation & Continuous Improvement

Internal Global Standards Audits are scheduled and conducted for each operational site and are a high-level check of overall conformance with the EMS. The implementation of internal legal obligations audits will continue into FY25 and provide detailed insight into improvements in compliance management and associated processes.

TNFD Alignment

The Taskforce on Nature-related Financial Disclosures (TNFD) is a taskforce of 40 Individual members consisting of financial institutions, corporate organisations, and market service providers with the aim of developing and delivering a risk management framework, the TNFD Recommendations, for organisations to manage and disclose their nature-related risks and opportunities. The nature aspect of the TNFD Recommendations includes land, ocean, fresh water and atmosphere (air emissions excluding greenhouse gases).

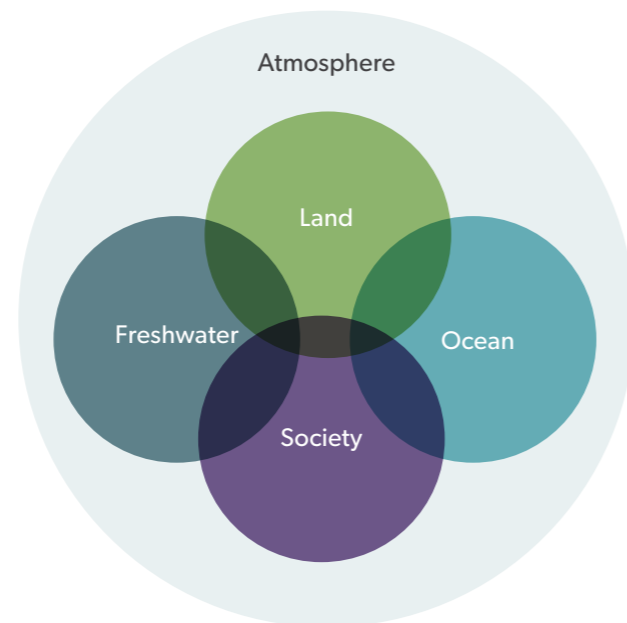
The TNFD Recommendations aim to provide guidance to organisations, enabling them to assess, understand and disclose their nature-related dependencies, impacts, risks and opportunities in relation to their business operations. This knowledge will assist businesses and their external stakeholders, such as financial investors, to integrate nature considerations into business decision making.

Since the TNFD release in September 2023, Northern Star has begun to work towards adopting the recommendations in the management and disclosure of our nature-related risks and opportunities. Figure 4 provides the recommended disclosures.

We believe adapting our disclosures to meet the TNFD Recommendations will assist in accurately and appropriately disclosing our nature-related information, for use by our investors and other stakeholders in understanding our approach to nature and assessing our performance.

We plan to meet the recommended disclosures in a staged approach, similar to our adoption of the Taskforce on Climate-related Financial Disclosure (TCFD) recommendations, which we commenced in 2018 and continue to enhance today.

Figure 3 Nature’s four realms – Land, ocean, freshwater and atmosphere (TNFD 2023)



In FY24 we took our first steps towards adopting the TNFD Recommendations by:

- undertaking benchmarking against our peers;
- conducting a gap analysis against the TNFD required governance disclosures; and
- commencing an analysis of our nature related dependencies, impacts, risks and opportunities at our Yandal Production Centre.

Figure 4 TNFD 2023 Recommended Disclosures

TNFD recommended disclosures			
Governance	Strategy	Risk & impact management	Metrics & targets
Disclose the organisation’s governance of nature-related dependencies, impacts, risks and opportunities.	Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation’s business model, strategy and financial planning where such information is material.	Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.

The benchmarking examined a number of Northern Star’s peers and the public commitments or disclosures they have made in regard to the TNFD Recommendations. Northern Star’s commitment to align with the TNFD recommendations through a staged approach and the work we commenced this year is aligned with most of our peers.

Figure 5 Northern Star’s TNFD Analysis Plan



The gap analysis conducted between the TNFD governance disclosure recommendations and existing Northern Star governance and risk management processes indicates that the work we have previously completed to align governance and risk management processes to the TCFD disclosure recommendations, creates good alignment between our processes and the TNFD recommendations.

As part of our ongoing TNFD work, we will strengthen nature related governance and risk management disclosures to better meet the recommendations.

Our analysis of our Yandal Production Centre is ongoing and will be expanded to our Kalgoorlie and Pogo Production Centres in future years. It aims to identify appropriate first steps that Northern Star can take to align with the TNFD Recommendations and develop a comprehensive multi-year staged action plan with clear short, mid, and long-term goals for our three Production Centres to build on TNFD alignment. Northern Star has engaged a specialist consultant to assist with this process.

We intend to disclose our alignment with the recommendations, commencing in our FY25 reporting with:

- detailed information on our nature-related risk and governance policies and processes;
- progress of our Yandal Production Centre analysis; and
- any identified short- and medium-term goals.

Biodiversity, Conservation & Land Management

Northern Star works within a variety of natural environments that must be understood and protected. Our Biodiversity Management Global Standard¹ guides our high-level approach to managing biodiversity across all our sites, and site risk assessments guide specific actions to protect biodiversity in and around each site.

Northern Star understands the significance of biodiversity and land management to the Native Title holders of the lands we operate on. We work to ensure that sufficient consultation with Traditional Owners is undertaken and are continuously working to improve and strengthen our engagement with them.

Northern Star applies the 'mitigation hierarchy' to ensure we minimise the impact on biodiversity as much as possible. This hierarchy means we aim to:

Avoid clearing and disturbing vegetation as much as possible – this means finding existing disturbed land to place facilities instead of clearing new areas. We did this at Jundee Operations in the Yandal Production Centre, for example, where our solar farm has been placed on a waste rock dump rather than undisturbed areas and at Porphyry where the solar farm was placed on an area previously used as a laydown area.

Minimise clearing that is required. We do this by optimising clearing footprints.

Rehabilitate all areas disturbed by our operations where possible at mine closure; however, we progressively rehabilitate areas where possible.

Offset where significant impact cannot be avoided, Northern Star provides biodiversity offsets to compensate for the impacts. Our offset site south of Coolgardie in the Kalgoorlie Production Centre provides conservation and protection for malleefowl habitat to offset the impact of our tailings facility at Carosue Dam Operations. Northern Star is protecting and monitoring an active malleefowl population at this site which contains 800 ha of critical breeding habitat and is being managed in accordance with the approved Offset Management Plan². Key components of this plan include securing a conservation covenant over the offsite location, excluding grazing, controlling feral predators and weeds, and installing bushfire protection measures such as firebreaks. Annual monitoring of the active malleefowl population at the offset location occurs with the results reported on annually under regulatory requirements.

Northern Star has continued to monitor significant butterfly populations in the Kalgoorlie region to contribute to the understanding of their distribution and breeding patterns. We have also continued our malleefowl monitoring program at Carosue Dam Operations and our offset site.

Baseline studies such as vegetation, flora and fauna surveys help us understand the biodiversity values in and around our operations and planned disturbance areas. These are undertaken utilising external expertise, but we also seek input from appropriate internal and external stakeholders. In Australia, we are increasingly consulting with Traditional Owners to understand the cultural values associated with biodiversity by conducting ethnobotanical and in some cases ethnozoological surveys. Traditional Owners are given the opportunity, if desired, to harvest plants and other material prior to clearing.

The understanding of biodiversity values gained from baseline studies ensures we can undertake an appropriate level of environmental impact assessment (EIA) to understand the potential impacts on biodiversity from our operations. Where specific risks are identified, targeted measures are implemented to effectively apply the mitigation hierarchy described above.

At a project level, once regulatory approval is granted to disturb land, Northern Star's internal land disturbance procedures are followed. These processes are different for our Australian and Alaskan Operations but ensure that all land disturbance is conducted in line with relevant statutory and regulatory requirements and that the impact of clearing on the environment is minimised in line with our Environmental Policy³.



Highlight – Land Conservation at Northern Star

In FY24, Northern Star's Offset Management Plan was approved by the Federal Department of Climate Change, Energy, the Environment and Water (DCCEEW). The offset site has been placed under a Conservation Covenant under the Soil and Land Conservation Act 1945 which provides protection from clearing and disturbance in perpetuity for the site.



This site offsets impacts to Malleefowl habitat at our Carosue Dam Operations which resulted from clearing land for an expansion to the tailings storage facility. The Offset Management Plan outlines the land management actions, completion criteria, monitoring and reporting that will be undertaken over the next 30 years as we protect and

enhance the quality of malleefowl habitat at the site.

Northern Star is working with local groups such as the Goldfields Nullarbor Rangelands Biosecurity Association (GNRBA) to measure, monitor and control feral animals at the site.

We will also implement other actions in FY25 outlined in the Offset Management Plan, such as installing fencing to exclude stock and a firebreak. The annual monitoring of the malleefowl population will occur so we can determine if our management measures are effective in protecting and enhancing the habitat.

¹ Northern Star Biodiversity Management Global Standard (NSR-ENV-005-STA)

² Carosue Dam TSF Cell 4 Exempt East Location 55 (EEL55) Offset Management Plan (CDO-ENV-001-PLA)

³ Northern Star Environmental Policy (NSR-COR-003-POL)



Sunrise streaming through winter fog at Carosue Dam Operations
 Photo Credit: Robert Mills, Projects Superintendent, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

Reclamation & Closure Preparedness

Northern Star prepares closure and reclamation plans for all its sites in accordance with our Reclamation and Closure Preparedness Global Standard¹. These plans are approved by the relevant regulators and are updated every three years or when new projects are implemented on site. They contain more detail as sites progress toward final closure.

Planning for closure commences at the very beginning of a mine's life. As a new mine undergoes planning and design, attention is given to how it will be rehabilitated and closed at the end of its life. Consideration is given to final landform design, topsoil requirements, reuse, removal or demolition of buildings and other infrastructure, as well as ensuring the long-term stability of pits and waste rock dumps.

Each closure and reclamation plan establishes closure objectives and criteria, along with strategies to achieve these. These are informed by site-specific risk assessments that identify the risks to safety or the environment closure. If plans change at a site, the closure risks and

requirements of the new plans must be considered and provided to the regulator for approval.

Opportunities for progressive rehabilitation are identified where practicable. Northern Star looks to streamline rehabilitation costs by scheduling them alongside other projects that also use the same required equipment.

Although there are regulatory requirements associated with closure planning, an important component is engaging with relevant stakeholders to understand their requirements and expectations for the final land use around our operations. Northern Star undertakes a stakeholder mapping exercise to ensure we identify who needs to be consulted with regards to our closure objectives. This includes ensuring that not only regulators, but Traditional Owners and neighbouring pastoralists have input into our closure planning, for example. Northern Star has the opportunity, if feasible, to leave infrastructure such as bores or tracks that would benefit these stakeholders.

Northern Star ensures there is adequate financial provisions for implementing closure requirements and regularly undertakes a detailed analysis to update our closure provisioning across our operations. This involves identifying costs associated with the following and can include items such as:

- infrastructure demolition;
- making mine pits and underground mines and shafts safe;
- ensuring surface water flows are appropriate;
- ensuring remaining landforms such as tailings facilities and waste landforms are safe, stable and non-polluting;
- rehabilitating disturbed land;
- undertaking relevant studies to inform closure activities (e.g. contaminated sites assessments);
- monitoring and reporting of closure activities and rehabilitation; and
- project management.

Highlight – Closure Preparedness

The emphasis on closure starts early in the planning stages for new mines.

Regulatory requirements stipulate that all mining proposals must include closure plans. These plans assess potential environmental risks associated with mine closure and outline strategies to mitigate these risks before mining operations commence.

Northern Star operates multiple sites at various stages of development, including:

- Mines in the planning phase
- Active operational sites
- Sites under care and maintenance, where mining activities have been suspended.

Closure plans initially cover broad aspects and become more detailed over time. As a site approaches final closure, we engage with key stakeholders to explore potential post-mining land uses that could benefit them. For instance, we might leave certain infrastructure, such as groundwater bores or access tracks, that pastoralists could utilise. Each site must establish closure completion criteria-specific, measurable targets that must be met before regulatory approval is granted for closure.

Closure plans are reviewed every three years or whenever new activities are planned at a site. For example, if new renewable projects are installed or waste rock dumps are expanded, the closure plan must be updated to reflect these changes.

In FY25, Northern Star plans to conduct a comprehensive review of closure practices across Australia to enhance consistency in closure planning and completion criteria across all our sites.



¹ Northern Star Reclamation and Closure Preparedness Global Standard (NSR-ENV-003-STA)

Rehabilitation Levy

In Western Australia (WA), the Mining Rehabilitation Fund (MRF) is managed by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS).

The MRF is a pooled fund that all mining operators in WA contribute into to ensure the State government has the funds necessary to undertake rehabilitation at abandoned mines sites.

The levy payable is based on the type and extent of disturbance at each site, as well as the amount of rehabilitation already undertaken.

Mines are required to review their disturbance each year and report this to DEMIRS with an estimate of the levy payable. DEMIRS reviews this information and issues each mine with an invoice to be paid into the MRF.

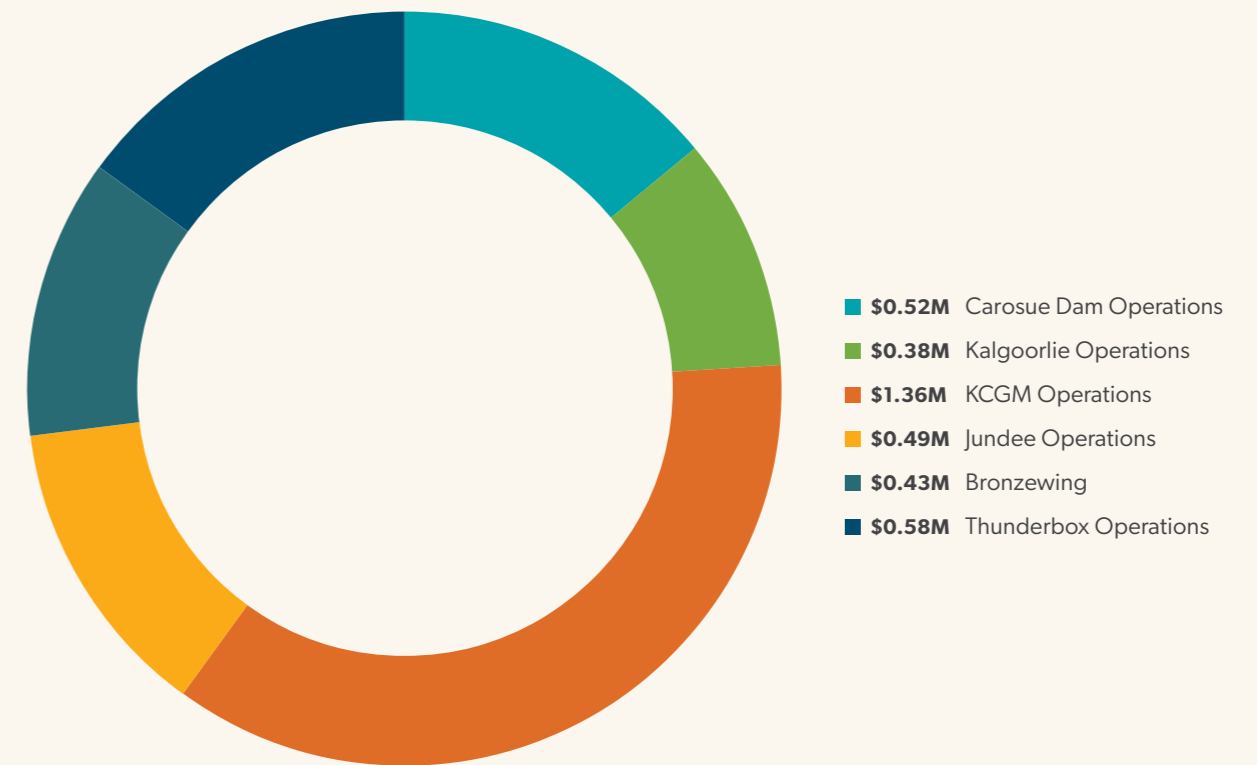
In FY24, Northern Star's total rehabilitation liability for our Western Australian Operations was calculated to be \$380,306,741. This is expected to result in a payable levy of \$3,772,991.

In addition to our Western Australian rehabilitation levy, our Pogo Operations in Alaska have a bond in place to cover rehabilitation liabilities. The current bond placed directly with the ADNR is US\$94.3M.

Separate to the MRF levy, every year Northern Star estimates its closure liability² in accordance with our Reclamation and Closure Preparedness Standard. It does this by assessing all areas disturbed and existing infrastructure and estimates how much it will cost to undertake the closure requirements.

This includes calculating demolition costs, removal costs, earthworks and rehabilitation costs. It also includes estimating the cost of ongoing monitoring of rehabilitation and compliance reporting associated with sites undergoing closure activities.

Figure 6 MRF Levy in Western Australia by Operations FY24 (\$M)



² Recorded in our audited Financial Statements as a liability.



Air Emissions

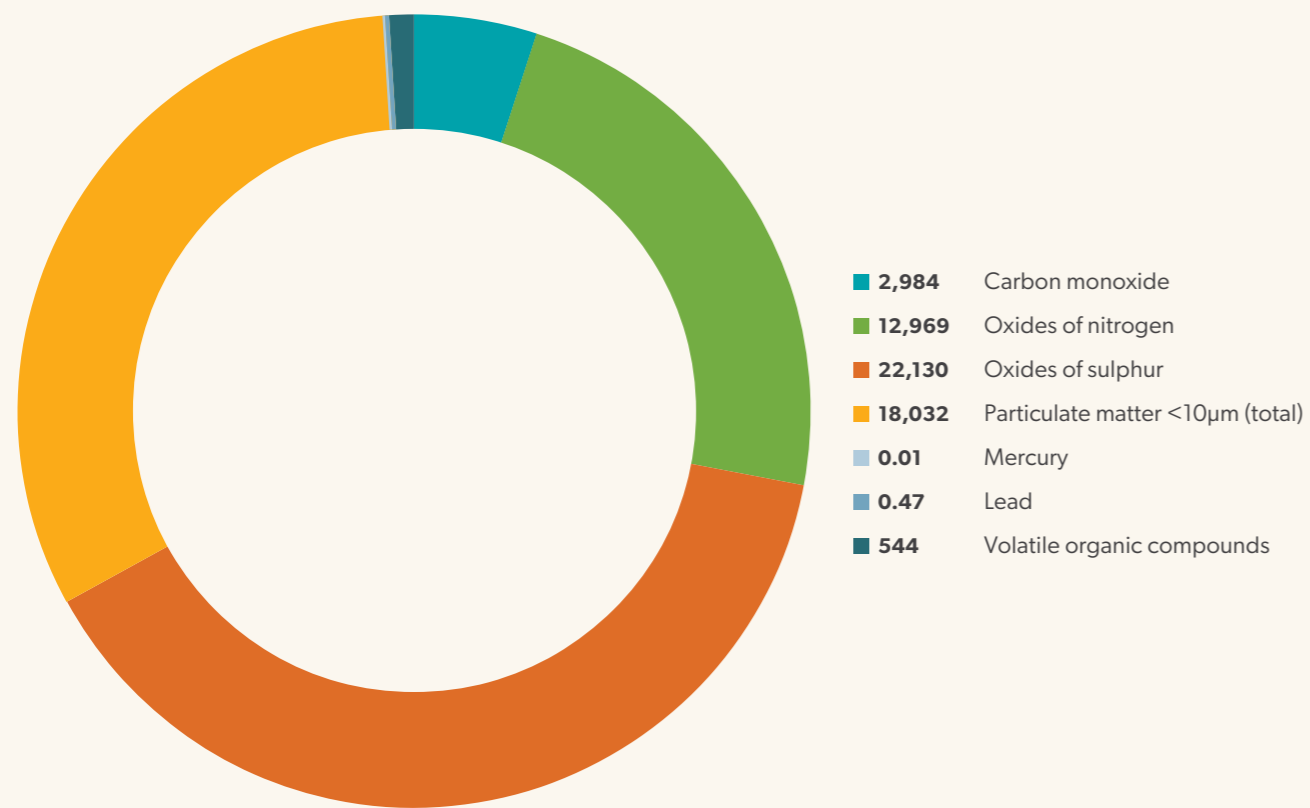
Northern Star monitors and manages air emissions across our sites with a particular focus on local communities located close to our operations. Whilst air quality can be affected by a variety of sources, our focus is on ensuring we minimise any negative impact of our Operations on these communities.

Northern Star has obligations in both Australia and the United States to report on our air emissions via the following frameworks:

- Our Australian sites report data through the National Pollutant Inventory⁵
- Our Alaskan site reports data through the Toxics Release Inventory⁶

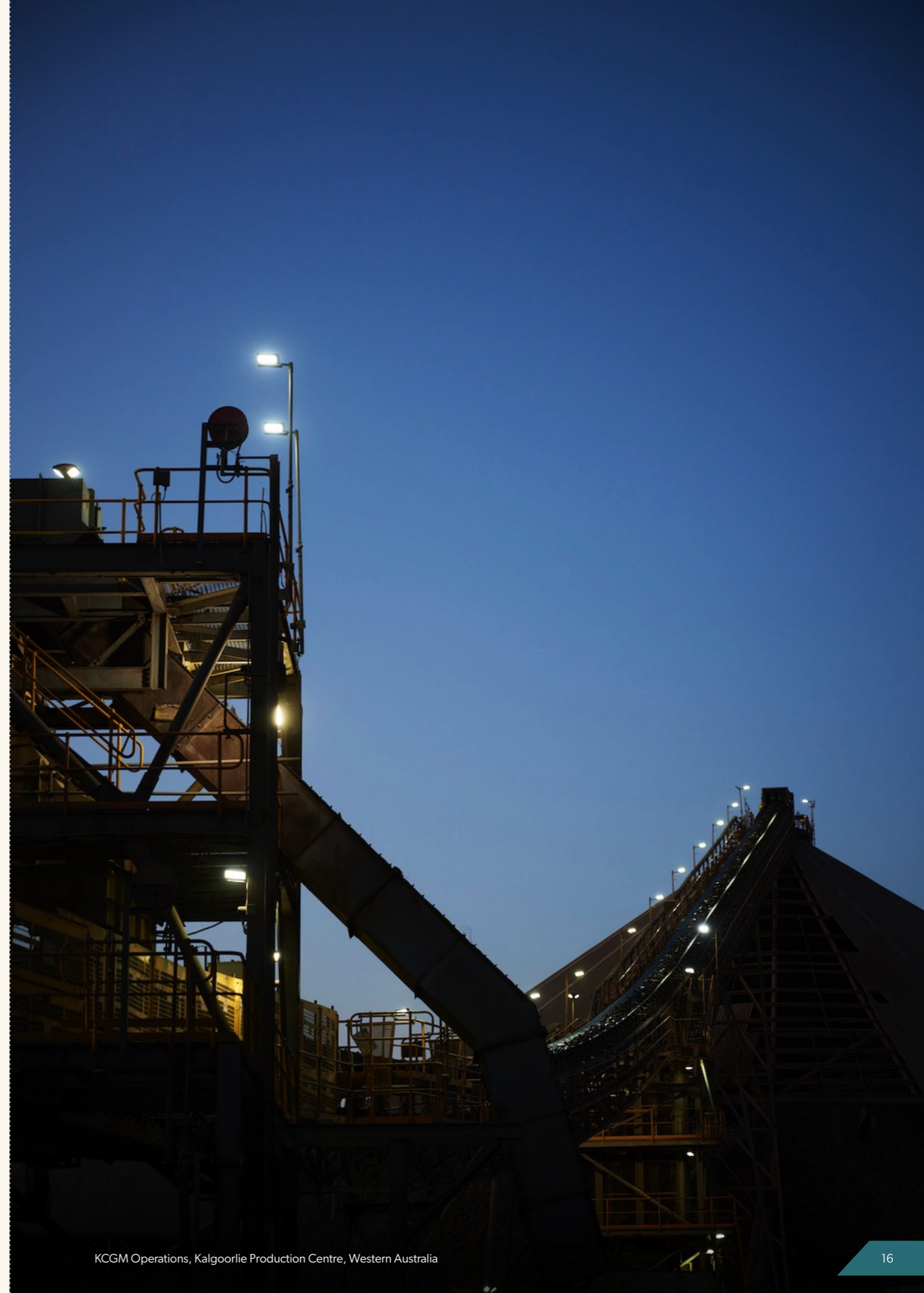
The air quality metrics disclosed are calculated in accordance with the Australian Government’s National Pollutant Inventory methodology to ensure consistency in calculation methods across regions.

Figure 7 FY24 Measured Air Emissions (T)



⁵ www.npi.gov.au

⁶ www.epa.gov/trinationalanalysis



Environmental Compliance

Before work of any sort can occur on ground, there is always at least one, if not more, environmental approval required. The work required to obtain these approvals can take months and years to complete as the following needs to occur:

- Exploration drilling finds the gold deposits and maps their location to a level of accuracy that identifies a viable project;
- Engineers design the project – where pits, waste rock dumps, laydown areas, roads, etc are going to go;
- A diverse team of environmental specialists, engineers and planners identify the potential environmental impacts from what is planned and the associated management strategies to avoid or minimise any impacts;
- Project information including the designs and environmental assessment and management plans are provided to the regulators, seeking an assessment and approval of the project;
- The regulator assesses the information and approves the project. There is usually a public consultation process that occurs as part of the assessment.

Once the project is assessed and approved we are notified and so long as we comply with all other land access requirements, can proceed with the project. All environmental approvals are granted with conditions which are designed to ensure that environmental harm is avoided and minimised.

Northern Star maintains an environmental obligations register, which holds copies of all our approvals and permits, and the conditions associated with each of these approvals and permits. Tasks are created within the system, allocated to a responsible person with reminders set to ensure tasks are completed within required timeframes. This system is key to us maintaining compliance with our obligations across our multiple sites.

Annual compliance reports to regulators outline our performance against our approvals with any incidents or non-compliances identified and rectified.

Northern Star has a system of tracking all environmental incidents. This system logs the key details around the incident and identifies corrective actions with timeframes for completion. Some incidents require external reporting to the regulators within certain timeframes post the incident; others require notification in annual compliance reports.

Key information captured includes the type of incident and the 'consequence rating', which is an indication of the environmental impact caused by the incident. All our incidents for FY24 were classed as either having an 'insignificant' or 'minor' consequence rating. Our Risk Management Standard⁷ defines the incident categories as:

- **Insignificant:** Negligible or localised low-level environmental impact, with no regulatory reporting requirement. Most of these incidents are minor spills on already disturbed land;
- **Minor:** Measurable environmental impact, immediate clean-up or remediation with minimal resources required, recoverable or expected to show signs of recovery within 12 months, reportable to regulators;

These incidents include any non-conformance to approval conditions or larger spills that require reporting to regulators, or where temporary impacts to vegetation have occurred;

- **Moderate:** Measurable environmental impacts that are recoverable or expected to show signs of recovery within 1-2 years, reportable to regulators;
- **Major:** Measurable environmental impacts that are recoverable or expected to show signs of recovery within 3-10 years, reportable to regulators; and
- **Catastrophic:** Severe, long term (>10 years) and possibly irreversible impacts to species, habitats or ecosystems, reportable to regulators.

Figure 9 Environmental Incidents by Consequence FY24

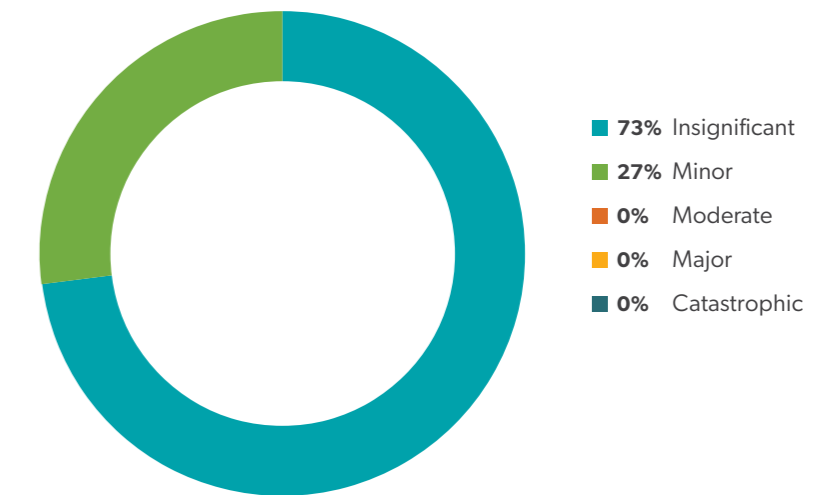
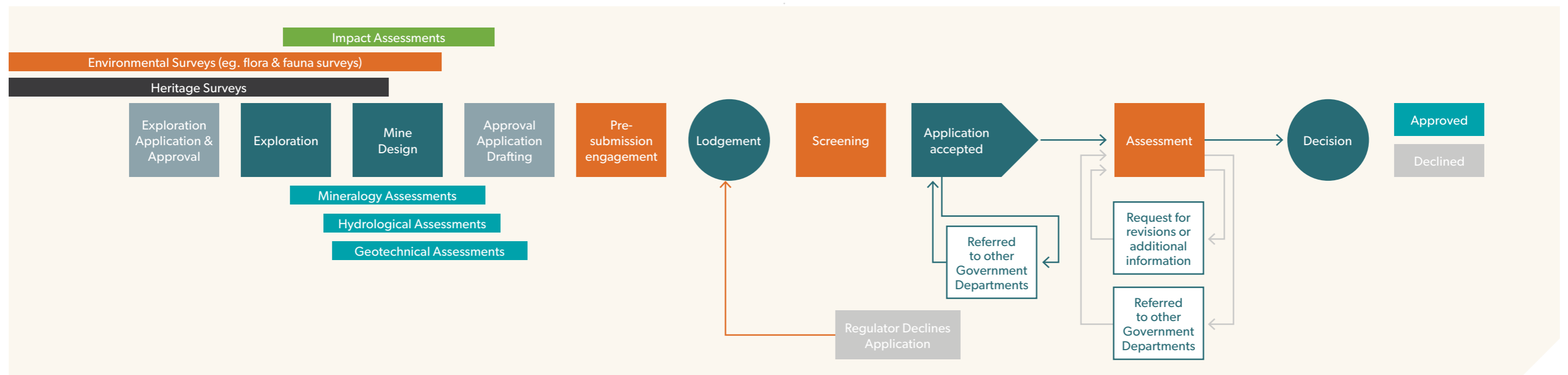


Figure 8 Example of a type of regulatory approval process that must be completed before project commencement



⁷ NSR-COR-019A-STA - Risk Management Standard.

Environmental Performance Metrics

		FY24	FY23	FY22
Environmental Incidents				
Material Incidents	Number materially adverse reported	-	-	-
Incidents reported by consequence	Insignificant (%)	73	79	75
	Minor (%)	27	21	24
	Moderate (%)	-	-	1
	Major (%)	-	-	-
	Catastrophic (%)	-	-	-
Regulatory Infringements				
Fines and Penalties	Number of regulatory infringements received	-	1	-
	Cost of regulatory infringements received (\$USD)	-	600,000	-
Conservation & Land Management				
Land Cleared	Carosue Dam Operations (ha)	99.8	205.2	102
	Kalgoorlie Operations (ha)	49.2	29.5	9
	KCGM Operations (ha)	22.3	380.5	49
	Jundee Operations (ha)	88.9	-	147
	Bronzewing Operations (ha)	-	95.6	45
	Thunderbox Operations (ha)	109	-	219
	Pogo Operations (ha)	3.5	5.6	8
	Tanami (ha)	10.8	0.2	-
	Total (ha)	383	716.6*	580*
Land Rehabilitated	Carosue Dam Operations (ha)	-	25.3	8
	Kalgoorlie Operations (ha)	28.1	27.2	29
	KCGM Operations (ha)	4.49	-	-
	Jundee Operations (ha)	-	-	3
	Bronzewing Operations (ha)	-	-	57
	Thunderbox Operations (ha)	4.6	-	10
	Pogo Operations (ha)	-	0.2	-
	Tanami (ha)	5.2	13.8	34
	Total (ha)	42.4	66.6*	140*
Rehabilitation & Closure Planning				
Closure Plans	Percentage of sites with approved closure plans (%)	100	100	100
Rehabilitation Liability	Carosue Dam Operations (\$)	53,694,974	47,619,929	45,470,058
	Kalgoorlie Operations (\$)	38,808,433	38,702,463	38,602,625
	KCGM Operations (\$)	136,850,832	129,000,450	125,009,258
	Jundee Operations (\$)	49,009,759	31,508,069	41,330,366
	Bronzewing Operations (\$)	43,386,539	30,642,839	28,939,488
	Thunderbox Operations (\$)	58,182,239	47,111,560	47,907,245
	Pogo Operations (\$)	N/A	N/A	N/A
	Tanami (\$)	7,012,490	7,012,490	6,769,463
	Total \$	386,948,022*	331,600,556*	336,519,449*^
Air Emissions				
Air Emissions (T)	Carbon Monoxide (CO)	2,984	3,731	3,436
	Oxides of Nitrogen (NOx)	12,969	13,575	11,456
	Oxides of Sulphur (SOx)	22,130	20,929	26,162
	Particulate matter <10µm	18,032	15,442	12,976
	Mercury (Hg)	0.0149	0.0146	0.0214
	Lead (Pb)	0.472	0.380	0.248
	Volatile Organic Compounds (VOCs)	544	545	433

* Totalised data includes Operations that are no longer part of Northern Star's assets and therefore not listed separately in the table

^ Northern Star divested Western Tanami in June 2022, resulting in the reduction in rehabilitation liability in FY23.



Carosue Dam Operations processing plant at night,
Photo Credit: Robert Mills, Projects Superintendent,
 Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance is received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure

and Northern Star cautions readers against reliance on any forward-looking statements or guidance. There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout the ESR Disclosure Suite there are references to supporting information on our website which the reader is encouraged to view. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ADNR

State of Alaska Department of Natural Resources

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Au

The chemical symbol for gold

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

Biodiversity

The variety of all life forms on Earth

Board

Board of Directors

Company

Northern Star Resources Ltd
ABN 43 092 832 892

Contractor(s)

Externally employed contracted workers engaged by the Company to support Operations

Corporations Act

Corporations Act 2001 (Cth)

Director

A director of the Company duly appointed under the Corporations Act

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

EMS

An Environmental Management System (EMS) is a structured system which helps an organisation to identify the environmental impacts resulting from its business activities and to improve its environmental performance. The system aims to provide a methodical approach to planning, implementing and reviewing an organisation's environmental management.

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESR Disclosure Suite

Refers to the nine separate disclosures related to environment and social responsibility information available on the Northern Star Company website. These comprise: ESR Approach at Northern Star, People & Culture at Northern Star, Safety & Critical Risk Control at Northern Star, Community Engagement & Support at Northern Star, Supply Chain Management at Northern Star, Environmental Management at Northern Star, Climate Change at Northern Star, Water Security at Northern Star, and Waste & Tailings Management at Northern Star

ESR Performance Data Tables

Detailed spreadsheets containing key environment and social responsibility metrics for Northern Star for FY24 and relevant preceding years available from the Company website.

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GNBRA

Goldfields Nullarbor Rangelands Biosecurity Association is the largest biosecurity region in Western Australia.

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

INX

A software system made up of a number of modules which can be used for tracking events, actions, incidents, compliance requirements, flights, training and other related activities

ISO14001

The internationally recognised standard for environmental management systems

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground in Kalgoorlie, Western Australia

Limited Assurance

Audit and assurance undertaken by an external auditor on whether the data or statements made in this or related disclosure(s) have been prepared in accordance with GRI

Malleefowl

an Australian bird (*Leipoa ocellata*) of variegated gray, brown, white, and black plumage, that lays up to 35 eggs in an incubating mound

MRF

Mining Rehabilitation Fund is a pooled fund that all mining operators in WA contribute into to ensure the State government has the funds necessary to undertake rehabilitation at abandoned mines sites

Officer

An officer of the Company defined under the Corporations Act

Operations

mining and mineral processing activities conducted by Northern Star Resources

Reasonable Assurance

Audit and assurance undertaken to a higher level on whether the data or statements in this or related disclosure(s) have been prepared in accordance with GRI

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

T

tonne; 1000 kilograms

TCFD

The Financial Stability Board's Task Force on Climate-related

Financial Disclosures

TNFD

Taskforce on Nature-related Financial Disclosures

UN

United Nations

UN SDG(s)

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556

Contact Information

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Investor Relations investorrelations@nsr ltd.com

General Enquiries info@nsr ltd.com

Media Officer mediaofficer@nsr ltd.com

Compliance compliance@nsr ltd.com

ASX Code NST

Share Registry MUFG Corporate Markets
(formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

Environmental Management at Northern Star

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

FY24 Performance Data Tables

FY24 GRI, SASB and UN SDG Alignment Index

FY24 Tailings Disclosure Report

FY24 Biodiversity Values

Cover Image: Fall Foliage at Pogo

Photo Credit: Arkadiusz Turolski, Geologist - Exploration
Pogo Operations, Pogo Production Centre, Alaska



Our Approach	3
Climate Change Governance	4
Restatements of Information	5
Our Planned Pathway to 2030	6
Climate Change Commitment	6
Progressing our Decarbonisation Pathway	7
Emissions Reduction Achieved So Far	10
Climate Change Related Disclosures - IFRS & ASRS Alignment	11
TCFD Alignment	11
Climate-Related Risks & Opportunities	13
Energy Production, Consumption & Efficiency	15
Carbon Footprint	16
Scope 1 Emissions	17
Scope 2 Emissions	17
Scope 3 Emissions	18
Safeguard Mechanism	19
Climate Change Performance Metrics	20
Appendix A: Scenario Analysis Process	21
Appendix B: Financial Quantification Analysis	29
Appendix C: Scope 3 Methodology	31
Appendix D: Assumptions Used in Net-Zero Ambition and Emissions Reduction	33
Glossary	37
Contact Information	40

Climate Change



35%

Target Reduction in absolute Scope 1 & Scope 2 Emissions by 2030

788kt CO₂-e

Scope 1 GHG Emissions in FY24

455kt CO₂-e

Scope 2 GHG Emissions in FY24

665kt CO₂-e

Scope 3 GHG Emissions in FY24

Our Approach

Northern Star's continued alignment with the Task Force on Climate-related Financial Disclosures (TCFD) has assisted us to understand and build resilience and capability in our business in relation to the physical and transitional risks and opportunities posed by climate change.

As part of our risk mitigation strategy, Northern Star has continued to focus on:

- assessing and reducing our greenhouse gas (GHG) emissions footprint;
- analysing the physical and transitional risks and opportunities arising out of the effects of climate change on our Operations, and ensuring control measures are incorporated into our business practices;
- quantifying potential financial implications of climate change on our business through modelling; and
- maintaining our strong climate change governance processes.

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

100kt CO₂-e

between 1 July 2021 and 30 June 2025, where 1 July 2021 represents business as usual baseline levels (includes 50 kt CO₂-e by 30 June 2024 and 50 kt CO₂-e by 30 June 2025)

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

150kt CO₂-e

between 1 July 2021 and 30 June 2026, where 1 July 2021 represents business as usual baseline levels (includes 50 kt CO₂-e by 30 June 2024, 50 kt CO₂-e by 30 June 2025, and 50 kt CO₂-e by 30 June 2026)

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

200kt CO₂-e

between 1 July 2021 and 30 June 2027, where 1 July 2021 represents business as usual baseline levels (includes 50 kt CO₂-e by 30 June 2024, 50 kt CO₂-e by 30 June 2025, 50 kt CO₂-e by 30 June 2026, and 50 kt CO₂-e by 30 June 2027)

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

250kt CO₂-e

between 1 July 2021 and 30 June 2027, where 1 July 2021 represents business as usual baseline levels (includes 50 kt CO₂-e by 30 June 2024, 50 kt CO₂-e by 30 June 2025, 50 kt CO₂-e by 30 June 2026, 50 kt CO₂-e by 30 June 2027, and 50 kt CO₂-e by 30 June 2028)

As disclosed in our 2017-FY23 Sustainability Reports, the Company has completed scenario analysis studies, see Appendix A for more information. These determined that a proactive effort scenario, which limits the average global temperature increase to below 2°C, would be most advantageous for reducing the impacts of climate change on our business and the planet. Progressing on from these findings, we announced an ambition to achieve Net Zero by 2050 and our planned pathway to reduce Scope 1 and Scope 2 Emissions by 35% by 2030.

Northern Star's position on Climate Change

We accept the science of climate change as reported by the Intergovernmental Panel on Climate Change.

We are committed to the Paris Agreement and a net-zero carbon future, on a 1.5°C pathway.

We acknowledge the invitation made to the private sector by the United Nations to scale up efforts and support actions to reduce emissions and/or build resilience and decrease vulnerability to adverse effects of climate change.

We understand the importance of understanding and adapting to climate change related risks.

Our Climate Change Policy commits Northern Star to developing and implementing a climate change strategy that:

- focusses our activities in reducing Scope 1 and Scope 2 Emissions;
- aligns our operations with the 1.5°C Ambition;
- use our influencing capability to reduce Scope 3 Emissions; and
- contributes to the 1.5°C Ambition beyond our business by influencing government and funding business relevant projects to help remove or avoid emissions.

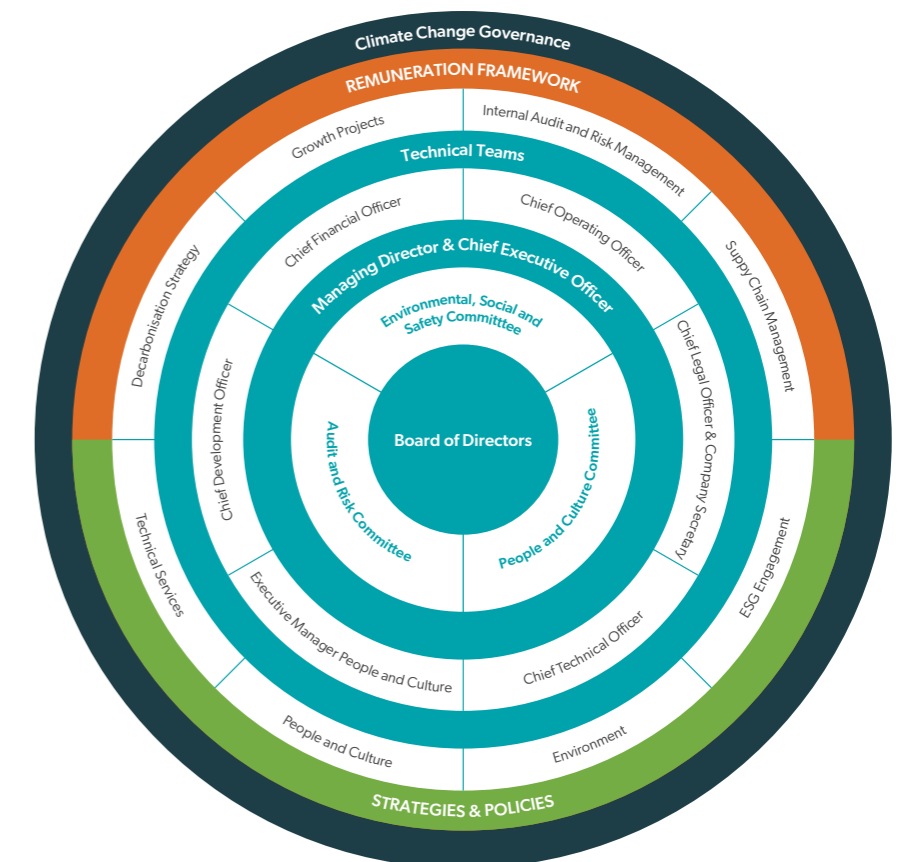
Climate Change Governance

Figure 1 Climate Change Governance

Northern Star's Board has oversight of the physical and transitional risks posed by climate change assisted by the ESS Committee's oversight of environmental and social performance risks, and climate change related risks and the Audit & Risk Committee's oversight of the Company-wide risk management framework.

The Company's climate change related governance structure is shown in Figure 1. Climate change related matters are considered quarterly by the Board through its ESS Committee meetings.

Northern Star's Chief Technical Officer who reports to the Managing Director & CEO is responsible for developing and implementing the Company's clean energy transition projects. The Company's Chief Legal Officer & Company Secretary has climate change related disclosure responsibilities within her portfolio.



Restatements of Information

The following items are restated from our FY23 Sustainability Report:

- Increase in Scope 1 Emissions at Carosue Dam Operations for FY23 by 40 t CO₂-e (from 118,958 t CO₂-e to 118,998 t CO₂-e) due to oil and grease reconciliations
- Increase in Scope 1 Emissions at Thunderbox Operations for FY23 by 2 t CO₂-e (from 160,145 t CO₂-e to 160,147 t CO₂-e) due to oil and grease reconciliations
- Decrease in Scope 3 Emissions for Category 1: Purchased Goods and Services for FY23 by 13,718 t CO₂-e (from 358,413 t CO₂-e to 345,235 t CO₂-e) due to an error in the US EPA factors applied.
- Increase in Scope 3 Emissions for Category 3: Fuel and Energy for FY23 by 59 t CO₂-e (from 207,580 t CO₂-e to 207,639 t CO₂-e) due to updated fuel data from final NGERs totals.
- Increase in Energy Consumed at Pogo Operations for FY23 by 52,372 GJ (from 1,116,336 GJ to 1,168,708 GJ) due to a calculation error on Heating Oil combusted (does not affect emissions).
- Increase in Energy Consumed at Pogo Operations for FY22 by 46,866 GJ (from 1,064,880 GJ to 1,111,746 GJ) due to a calculation error on Heating Oil combusted (does not affect emissions).



Steffi Milling, Geologist and James Thomas, Project Geologist, Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

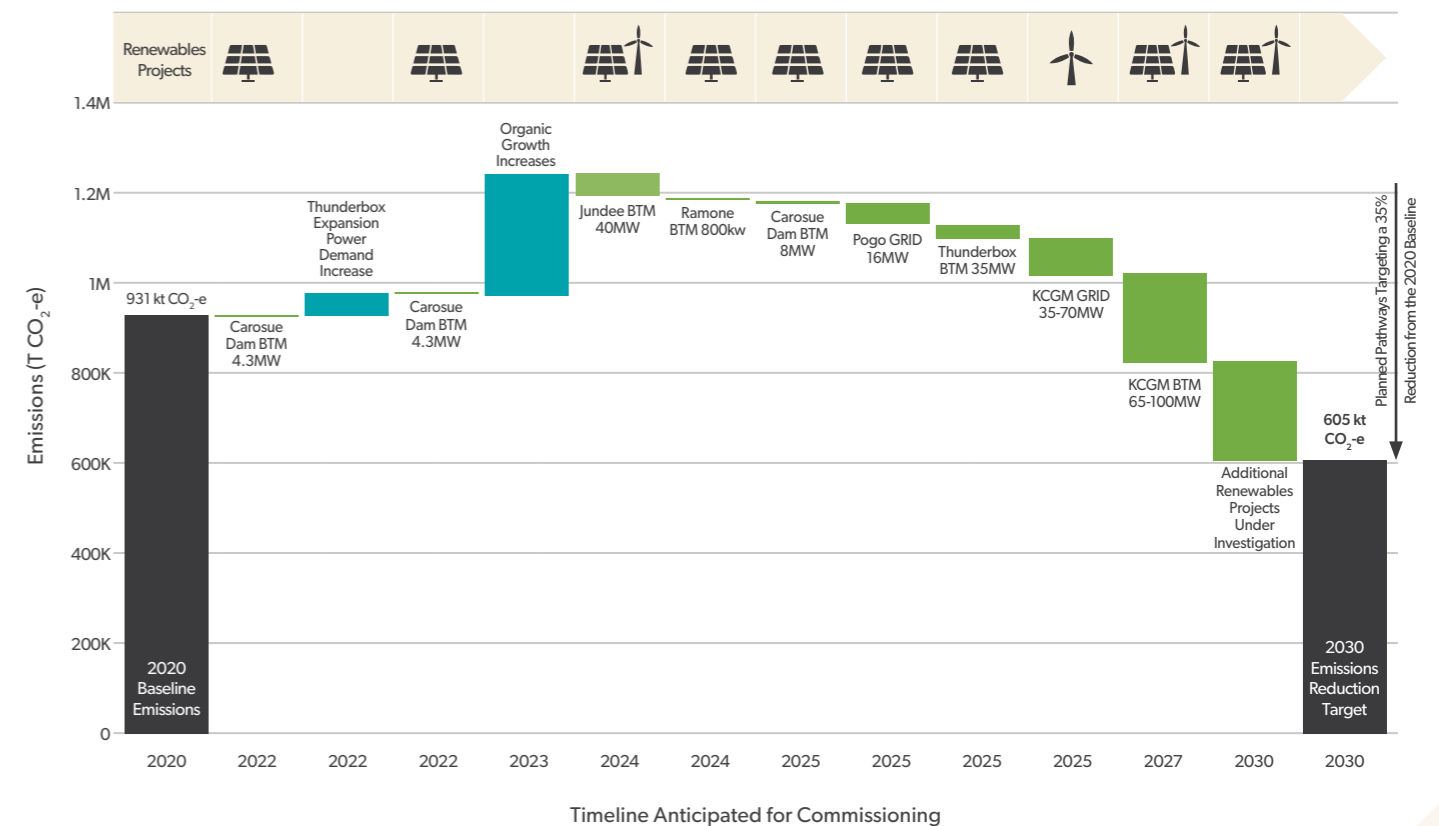
Our Planned Pathway to 2030

At Northern Star we are continuing our journey to meet our commitment of a 35% reduction in Scope 1 and Scope 2 Emissions by 2030. Achieving this target will see a reduction in greenhouse gas emissions from our baseline (1 July 2020) of 931kt CO₂-e down to approximately 590 kt CO₂-e.

On our path towards our 2030 goal, our focus continues to be on the transition away from self-generated and purchased diesel or gas-generated electricity, which is the biggest contributor to our Scope 1 and 2 Emissions.

Northern Star believes we can achieve our electricity transition goal using known and available technologies such as solar, wind and battery electric storage systems. We are progressing our projects using configurations of these three technologies as we believe they are feasible, timely, and cost effective, while still providing us with security of supply and lower overall power costs.

Figure 2 Northern Star's Planned Pathways targeting 35% Emissions Reduction by 2030



Climate Change Commitment

Northern Star remains committed to the Paris Agreement and a Net Zero carbon future, on a 1.5°C pathway.

Since announcing our [Net Zero Ambition on 22 July 2021](#), we have outlined our decarbonisation pathway for achieving our 2030 Emissions Reduction Targets of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving Net Zero operational Emissions by 2050. This is updated periodically as we progress existing projects and identify new projects.

We have continued to:

- engage with investors on our decarbonisation strategy;
- align with the Task Force on Climate-related Financial Disclosures (TCFD);
- work on Emissions Reduction projects and future modelling programs;
- improve our Scope 3 accounting;
- integrate climate change risks and opportunities in our operational risk registers; and
- complete financial quantitative analyses of material physical and transition risks and opportunities identified in our TCFD reporting.

As we approach 2030 and address our transition to 2050, Northern Star has recognised that emissions abatement will become more challenging, and we are actively planning the pathway from 2030 to 2050 by investigating the following areas:

Maximum Green Power

We understand that maximising our renewable energy penetration will require more energy storage in order to assure reliability of energy supply. We have identified opportunities for medium- to long-duration energy storage technologies and are actively engaging with researchers, developers and suppliers to understand the capabilities, costs and constraints of storage technologies.

Transition to a Green Fleet

As another significant contributor to our Scope 1 Emissions, we recognise that the diesel vehicle fleet is another important area of focus and we need to identify, assess and plan for the inevitable transition from diesel to electric vehicles for our specific Operations. This transition will challenge us with constraints in vehicle availability, operability and the significant increase in power demand that we will experience as we transition. Northern Star is engaging with subject matter experts that can model our forecast future power demand and original equipment manufacturers who are developing their range of electric fleet. Once a solution has been identified and conceptually modelled, we will begin to forecast this transition into our decarbonisation pathway.

Energy Efficiency Opportunities

Renewable energy deployment and supply to our Operations must be balanced with a thorough understanding of our energy demand profiles, involving a robust assessment of any areas for improvement in existing and new assets. The importance of this challenge will become more apparent as we balance growth in energy demand with the deployment of clean energy to meet that demand.

Emerging technologies

We are excited by the rapidly evolving landscape of low-carbon technologies and are open to considering any technology that will help us decarbonise our business. The technologies that we have already deployed at Northern Star, such as wind, solar and batteries, were once considered exceptional and uneconomical. While not aspiring to be first-movers, Northern Star is a fast-follower and keen to incorporate technology that is safe, secure, cost effective and low-carbon. We are investigating a range of options, such as human-induced regeneration projects, simple drop-in biofuels, dynamic charging of heavy-duty electric mining vehicles and green hydrogen for vehicles, energy storage or fuel.

¹ 16th June 2023

² 17th October 2023

³ 1st August 2023

⁴ 21st February 2024

Progressing Our Decarbonisation Pathway

During FY24 Northern Star progressed towards our target of a 35% reduction in Scope 1 and 2 Emissions (from a 1 July 2020 baseline of 931 kt CO₂-e) by 2030. We implemented several renewable energy projects which will contribute to our sites transitioning away from being solely reliant on diesel or gas-generated electricity. Figure 2 shows our current planned pathways targeting 35% emissions reduction by 2030.

Northern Star's progress during the year included:

- entering into a 15-year Power Purchase Agreement (PPA)¹ with Zenith Energy for supply of electricity to the Jundee Operations (refer to highlight on page 8);
- entering into a Power Purchase Agreement (PPA) with Aggreko² for supply of electricity to our Porphyry Operations incorporating 4 MW of solar generation and a 4MW BESS. This solar generation was integrated into the existing gas power station network (operated by Aggreko) and has achieved total RE penetration of 28% and reduced carbon emissions by over 5 kt CO₂-e/a. The project was completed successfully and energised at the end of January 2024.
- successfully completing and energising the Ramone solar and battery renewable project³. It consists of 800kW of solar generation and 300kW/445kWh of battery storage. This project achieves a renewable energy penetration of approximately 13% and, in addition to a cost saving from decreased diesel usage, saves approximately 1.5 kt CO₂-e/a.
- entering into a Power Purchase Agreement (PPA) with Pacific Energy⁴ for supply of electricity to the Carosue Dam Operations incorporating 8 MW of solar generation. Site works have begun and the new 8MW of solar is forecast to be energised by the end of March 2025 (refer to page 9 for more information).

These projects will be taken into account when measuring our performance against climate change related remuneration key performance indicators (refer to Figure 7).

In addition to progressing the projects in our Decarbonisation Pathway, Northern Star is continuously investigating the feasibility of other projects, large and small. Potential projects are evaluated and ranked based on key variables that help to evaluate the risk and opportunity they present, including economic viability, timeline to energisation, operational integration, and the amount of carbon reduction they are expected to achieve.

Highlight – Jundee Wind, Solar and BESS Project

In June 2023 Northern Star entered into a 15 year Power Purchase Agreement (PPA) with Zenith Energy for supply of electricity to the Jundee Operations. The PPA included the provision of 24MW of wind, 16MW of solar energy and a 12MW/13.4MWh BESS. Once operational the renewable energy is expected to achieve a renewable penetration of almost 58% and reduce Jundee Operations' carbon dioxide emissions by over 51 kt CO₂-e/a.

The Jundee Operations project is progressing well, with solar and BESS energised in late FY24. The wind turbines erection has commenced and they will be progressively commissioned in H1 FY25.

Figure 3 Wind turbine blades in laydown yard at Jundee Operations

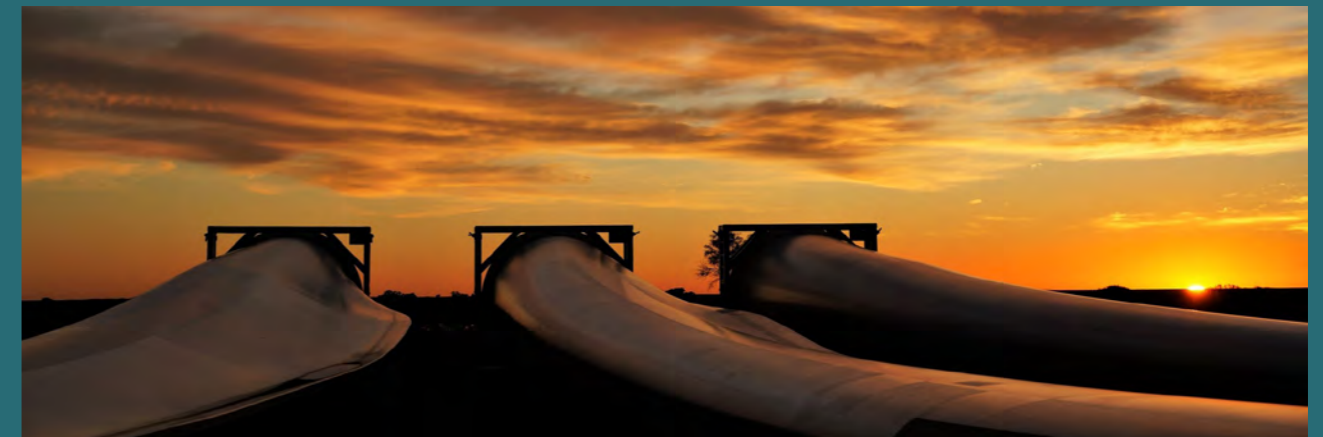


Figure 4 Completed solar farm at Jundee Operations



Highlight – Carosue Dam Operations Solar Project (Stage 3)

In February 2024 Northern Star entered into a Power Purchase Agreement (PPA) with Pacific Energy for supply of electricity to the Carosue Dam Operations (CDO) incorporating 8 MW of solar generation. This solar generation will be integrated into the existing gas power station network (operated by Pacific Energy) and is in addition to the 6MW of solar generation capacity that is already operational at CDO (operated by Nomadic Energy).

The new 8MW plant will bring the total renewable energy penetration at CDO from 6.5% to 13.5% and is expected to reduce carbon emissions by over 8 kt CO₂-e/a. Site works have begun and the new 8MW of solar is forecast to be energised by the end of March 2025.

Figure 5 Clearing has been completed for the new 8MW solar plant at Carosue Dam Operations (existing solar farm adjacent)



Figure 6 Existing solar array at Carosue Dam Operations

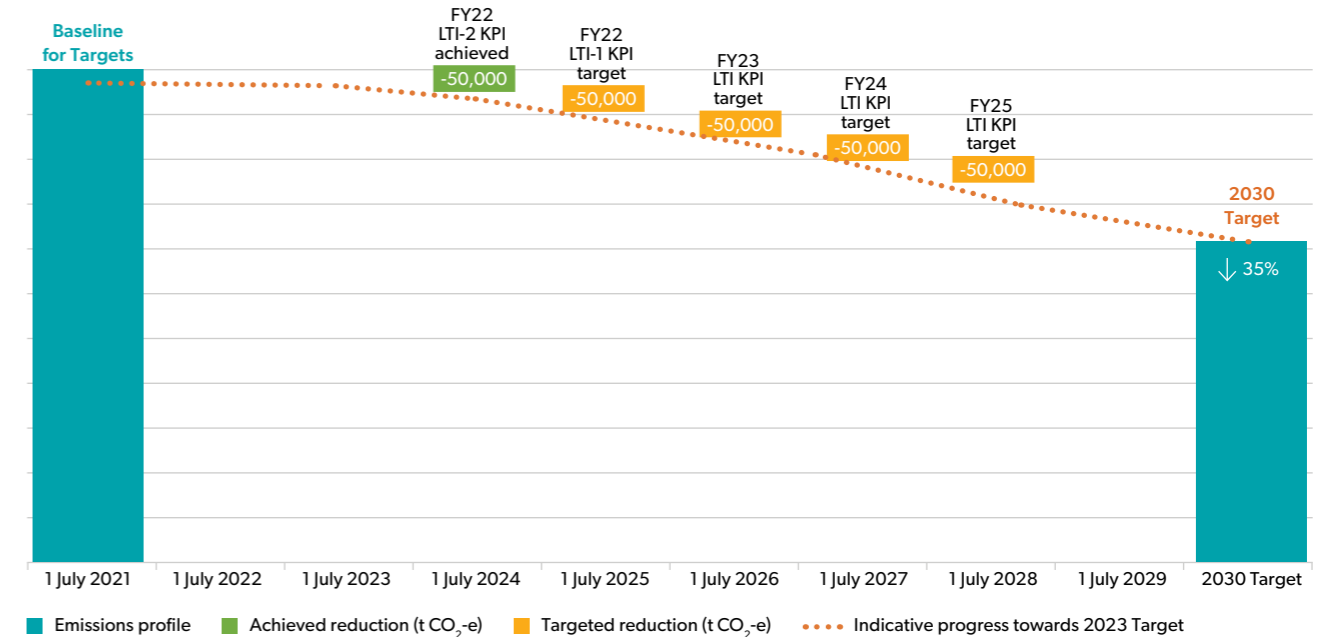


Emissions Reductions Achieved So Far

Northern Star is pleased to report that our FY22 key performance indicator of demonstrating tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of 50kt CO₂-e between 1 July 2021 and 30 June 2024 (where 1 July 2021 represents business as usual baseline levels) was measured as at 30 June 2024 and achieved.

Note that our remuneration-related key performance indicators are measured relative to a 1 July 2021 business as usual baseline. In contrast, our commitment to achieve a 35% reduction in Scope 1 and 2 Emissions is measured relative to our 1 July 2020 baseline of 931kt CO₂-e for Scope 1 and 2 Emissions.

Figure 7 Scope 1 & 2 Emissions Reduction Remuneration-Related Key Performance Indicators



This KPI has been achieved through the delivery of the following projects and their anticipated impact:

- The KCGM Operations purchases power from the South West Interconnected System (SWIS) electricity grid, for the purposes of operating the Fimiston processing facility⁵. Emissions from these activities are classed as Scope 2 emissions under the NGER Act. Northern Star acquired the KCGM Operations from Newmont in 2020, and the Newmont power business from Newmont in 2021. Northern Star was a party to a power supply agreement whereby excess power supplies contracted by Boddington Gold Mine from the Bluewater coal fired power generators, were supplied to KCGM Operations. In January 2022 Northern Star gave notice to Newmont Boddington Gold to exit the agreement with effect on 25th July 2022 and instead received supply at the lower CO₂-e rate per unit of electricity provided by the SWIS average.
- The connection of our South Kalgoorlie Operations underground operations to the SWIS grid;
- The operation of our Carosue Dam solar array (Stages 1, 2A and 2B) providing renewable energy to offset the use of power generated through our onsite liquid natural gas/diesel power station.
- The construction and commissioning of our Jundee Solar Stage 1 array providing renewable energy to offset the use of power generated through our onsite natural gas power station.

Table 1 Projects at 30 June 2024 and Their Anticipated Impact on Scope 1 and 2 Carbon Emissions Reductions

Production Centre	Operation	Project	Abatement (t CO ₂ -e/annum)
Kalgoorlie Production Centre	Carosue Dam Operations	CDO Solar Stage 1	872
		CDO Solar Stage 2A	3,216
		CDO Solar Stage 2B	1,879
	South Kalgoorlie Operations	UG to SWIS Grid	385
	KCGM Operations	SWIS Greening FY23	38,782
Yandal Production Centre	Jundee Operations	Jundee Solar Stage 1	13,952
TOTAL			59,086

⁵ Electricity imported from the grid is generated by third parties, and Northern Star has no control over the emissions profile of the generation of that electricity but can accept the SWIS supply (with the associated average emissions intensity) or enter contracts with specific suppliers (with specific emissions intensities representative of the source of generation)

Climate Change Related Disclosures - IFRS & ASRS Alignment

Northern Star’s alignment with SASB, TCFD, and GRI Standards has positioned us well to report against the International Sustainability Standards Board’s IFRS S1 and S2 Standards. Key areas of focus across our disclosures include: materiality, governance, strategy, risks and opportunities, consideration of our value chain, risk management, metrics and targets, and continuous improvement.

We have implemented external assurance processes on our data and disclosures since FY22. We commenced with Limited Assurance on selected metrics. Since that time, we

have also commenced increasing the level of assurance being applied, such as our step up to Reasonable Assurance on our Scope 1 and Scope 2 emissions in FY24.

Northern Star is also preparing for the implementation of the Australian Sustainability Reporting Standards (ASRS), as they become a feature of the Australian reporting landscape. Our ESR disclosure suite for FY24 and beyond will support our future ASRS Sustainability Reporting as part of our annual reporting processes, including an audited climate change related mandatory report within our future Annual Reports.

TCFD Alignment

Northern Star is committed to understanding how both the physical impacts of climate change and the transition to low carbon operations might continue to affect our business. We understand the importance of continuing our alignment

with the TCFD recommendations, and the need for Northern Star to progress its commitment to a low-carbon economy in advancing our Emissions Reduction projects.

Figure 8 Our Phased Alignment with TCFD Recommendations

Metrics and Targets	Risk Management	Strategy	Governance
<p>The metrics and targets are used to assess and manage relevant climate-related risks and opportunities where such information is material</p> <p>FY24 Commitments Satisfied: Ongoing disclosure of progress against targets. Demonstrating a tangible and sustainable reduction in our Scope 1 and 2 greenhouse gas emissions in line with our FY22 remuneration key performance indicator</p> <p>Planned Action (1-5 years): Ongoing disclosure of progress against targets, and consideration of future metrics and targets</p>	<p>How the organisation identifies, assesses, and manages climate-related risks</p> <p>FY24 Commitments Satisfied: Integration of climate related risks in our enterprise risk and assurance system CGR, and ongoing review of risks and controls in accordance with our Risk Management Standard</p> <p>Planned Action (1-5 years): Ongoing reviews of climate-related risks and controls</p>	<p>Actual and potential impacts of climate-related risks and opportunities on the organisation’s businesses, strategy, and financial planning where such information is material</p> <p>FY24 Commitments Satisfied: Development of more detailed forward looking emissions modelling scenarios, in conjunction with external resources to incorporate into long term planning</p> <p>Planned Action (1-5 years): Integrate implications of scenario analysis into long term strategic planning</p>	<p>The organisation’s governance around climate-related risks and opportunities</p> <p>FY24 Commitments Satisfied: Continued oversight of meeting TCFD recommendations</p> <p>Planned Action (1-5 years): Ongoing oversight of governance in relation to climate-related risks and opportunities</p>

We continue to utilise both inhouse and external capabilities to model our sites’ power and energy demand, wind efficiency and timing, and solar efficiency and timing.

Through this work, we continue to progress and optimise our renewables programs in line with our planned pathway in Figure 2.



Wind turbine in position at Jundee Operations
Photo Credit: Hayden Lindsay, Senior Environmental Advisor
 Jundee Operations, Yandal Production Centre, Western Australia

Climate Related Risks & Opportunities

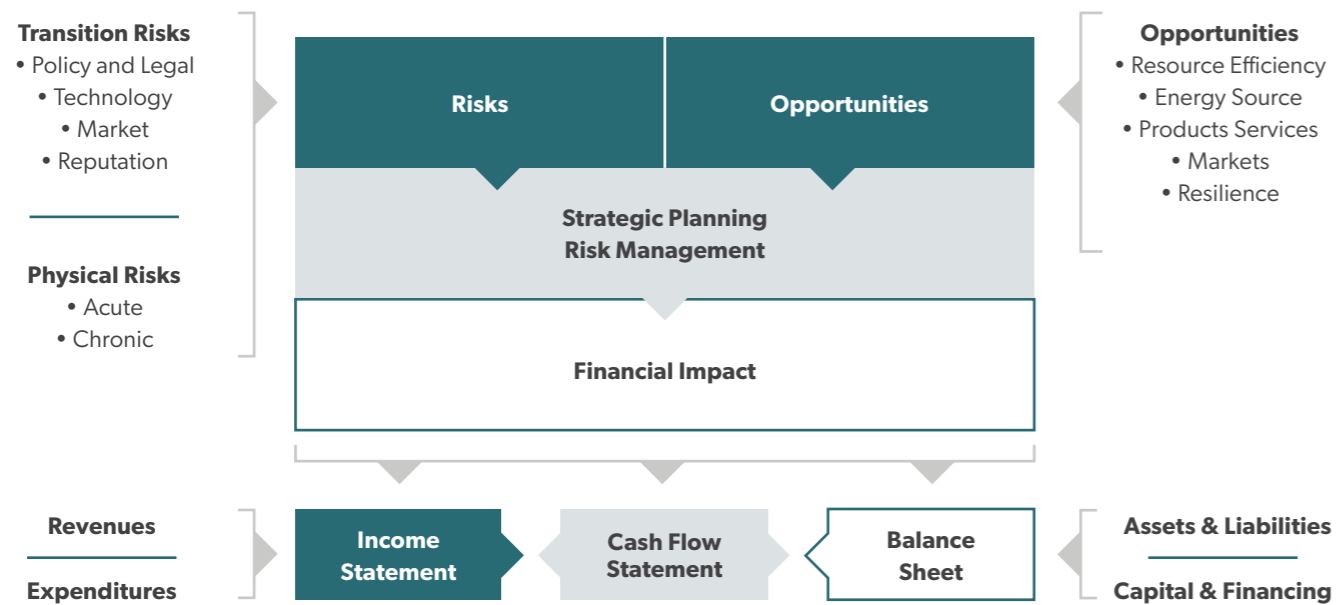
Climate related risks and opportunities are discussed regularly as part of the standing agenda of the ESS Committee meetings. During the year the ESS Committee and Audit and Risk Committee reviewed ESS and climate related risks and opportunities as part of the standard corporate risk review processes.

The ESS Committee also completes an annual ESS strategy review and an annual ESS benchmarking review, both

include the consideration of Northern Star's responses to climate related risks and opportunities. The Corporate Risk Review processes ensure consideration of climate related risks and controls at site, regional, functional and Company-wide levels

Figure 9 below, demonstrates the relationships within Northern Star's business between climate change related risks and opportunities.

Figure 9 Climate Change Related Risks, Opportunities and Financial Impact



Pogo Operations in winter
 Photo Credit: Arkadiusz Turołski, Geologist - Exploration,
 Pogo Operations, Pogo Production Centre, Alaska

Table 2 Northern Star's Highest Residual Climate Change Related Risks

High Residual Climate Change Related Risks	How We Manage the Risk
Hotter average conditions and/or increased frequency of extreme temperature (hot or cold) days or heatwaves	<ul style="list-style-type: none"> • Extreme temperatures and hot working conditions are captured in our critical risk standards, site-based management plans and critical risk assessments. • Working in adverse temperature guidelines includes regular hydration testing of workforce. • Onsite buildings, mobile plant and vehicles fitted with enclosed cabins for heating and air conditioning provisions.
Flooding caused by more frequent and higher intensity storm events ⁶	<ul style="list-style-type: none"> • Flooding is captured in our critical risk standards, site-based management plans and critical risk assessments. • Risk assessments for new developments and potential mergers or acquisitions considered current and future flooding risks. • Surface water management infrastructure, water pond and weather monitoring.
Tailings dam failure caused by more frequent and higher intensity storm events.	<ul style="list-style-type: none"> • Tailings management standard, independent expert design and Engineer of Record for each facility ensures appropriate design and management. • Annual third-party audits of active facilities. • Risk assessments for new developments, expansions, and potential mergers or acquisitions consider failure analysis and/or high rainfall events.
Increased frequency and severity of storms, including cyclonic events	<ul style="list-style-type: none"> • Severe storm events are captured in our critical risk standards, site-based management plans and critical risk assessments.
Stakeholder activism (divestment, corporate litigation) from lack of climate action	<ul style="list-style-type: none"> • Net zero ambition with clear 2030 targets and decarbonisation pathway. Progress is reported annually through our GRI aligned ESR disclosures. • Continued engagement with stakeholders through Investor Relations function.

Table 3 Key examples of Northern Star's Climate Related Opportunities

Climate Change Related Opportunities (Key Relevant Examples)	
Products & Services	<ul style="list-style-type: none"> • Low emissions mining
Energy Sources	<ul style="list-style-type: none"> • Diversification of energy sources • Energy price volatility resilience
Resource Efficiency	<ul style="list-style-type: none"> • Electrification of selected operations • Increased operating efficiency
Resilience	<ul style="list-style-type: none"> • Improved social licence to operate • Reinforcing assets to increase resilience to physical impacts
Markets	<ul style="list-style-type: none"> • Action and disclosure to increase stakeholder confidence • Incorporating climate change criteria in decision making

⁶ Refer to the scenario findings in Appendix B: Financial Quantification Modelling.

Energy Production, Consumption & Efficiency

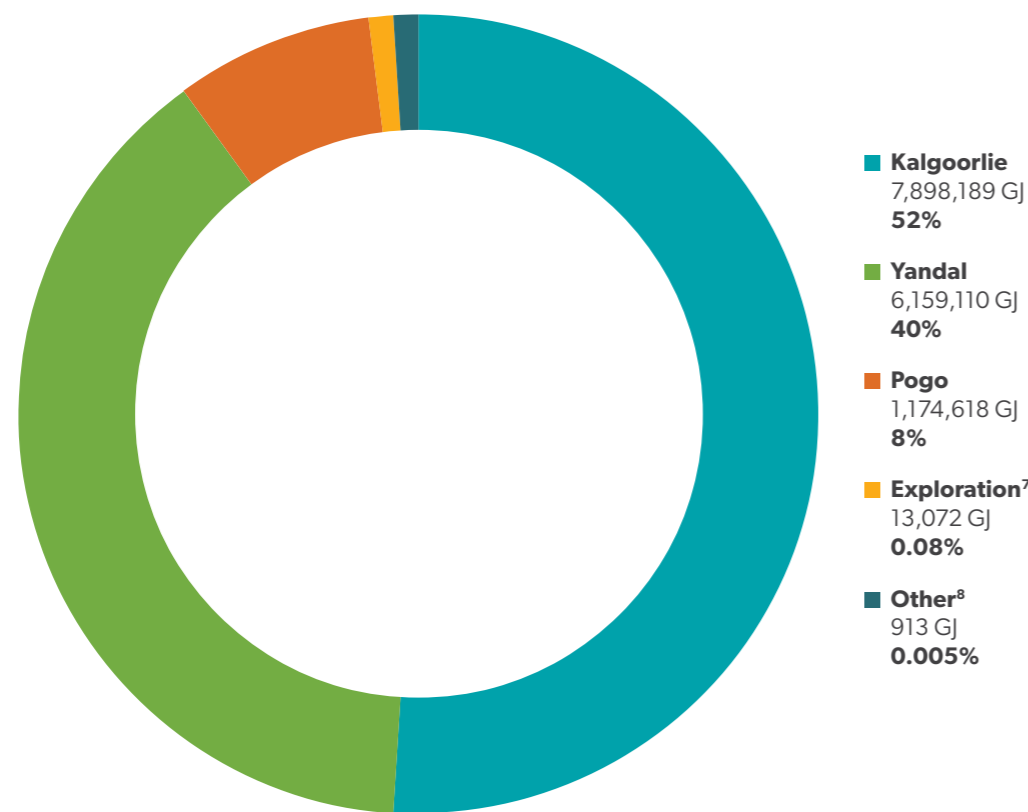
Energy production at our Operations comprises electricity physically produced on our sites, in accordance with the definition set out in the NGER Act.

Power stations located at our Carosue Dam, Jundee and Thunderbox sites use a combination of gas and diesel to generate power through turbines and generator sets.

In FY24 our net energy consumption remained relatively steady, only increasing slightly from 15.11 M GJ in FY23 to 15.24 M GJ.

Net energy consumed on our Operations comprises all energy consumed by our facilities, including site produced, grid purchased electricity and fuels burnt, less any power generated.

Figure 10 Energy Consumption by Production Centre , Exploration and Other



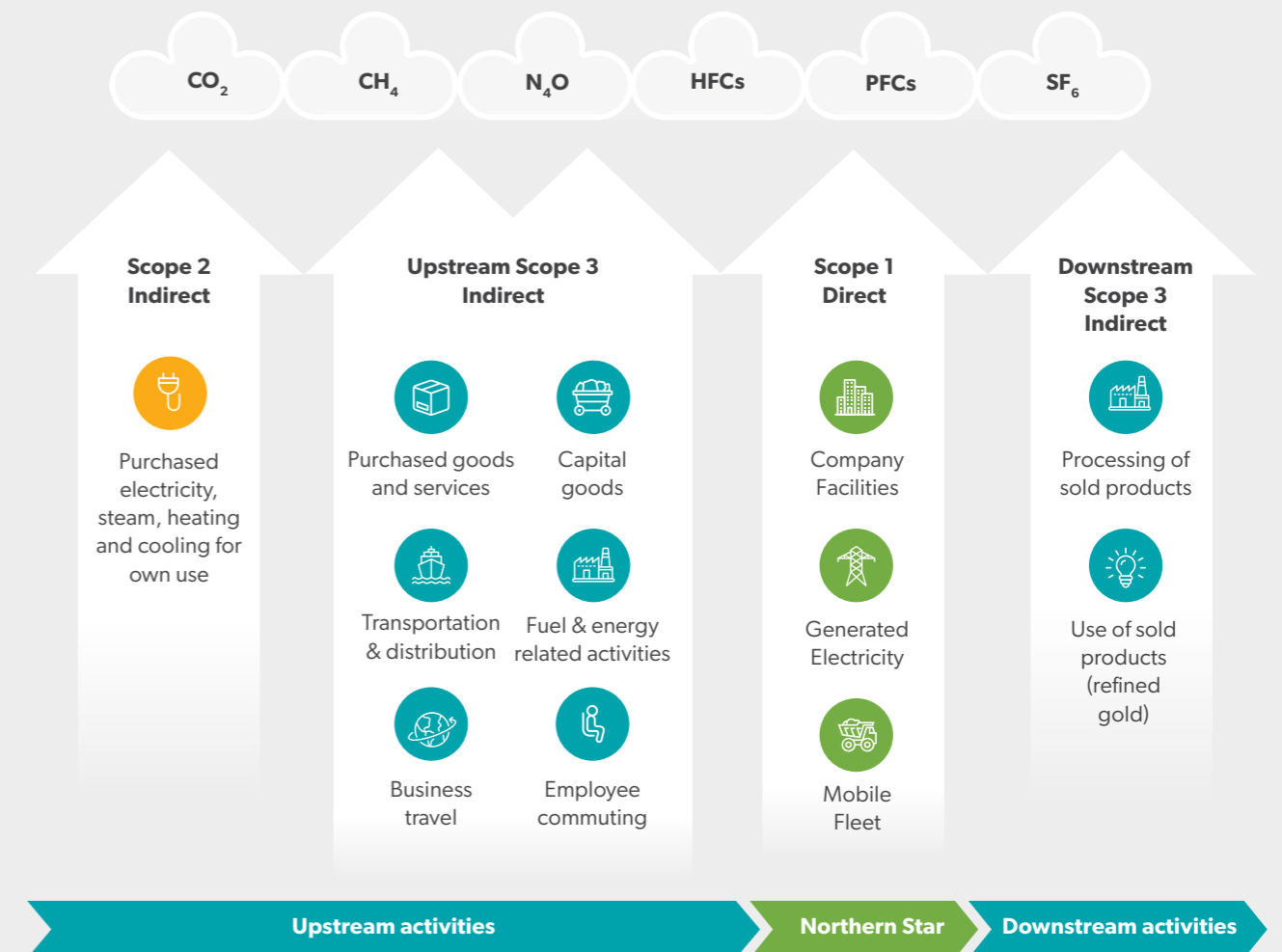
⁷ Exploration in this instance refers to Tanami.
⁸ Other in this instance refers to Corporate Office.

Carbon Footprint

Northern Star's carbon footprint for FY24 combines our Scope 1, Scope 2 and Scope 3 Emissions totalling 1.9 Mt CO₂-e as depicted in Figure 12 on page 17, overleaf.

The proportional contribution of emissions from our three Production Centres to our total emissions is provided in our Climate Change Performance Metrics on page 20.

Figure 11 Overview of Northern Star's GHG Emissions Footprint (Refer to the Climate Change Performance Metrics on page 20 and Appendix C for Northern Star's FY24 Scope 3 methodologies)



Scope 1 Emissions

In FY24, our total Scope 1 GHG Emissions remained relatively steady, but did reduce from 789,320 t CO₂-e in FY23 to 788,136 t CO₂-e.

Scope 1 GHG Emissions are calculated in accordance with the Australian Government methodology required by the NGER Act.

Emissions associated with our Pogo Operations in Alaska are calculated using the same method to ensure consistency in our emissions reporting.

Scope 2 Emissions

In FY24, our total Scope 2 GHG Emissions increased from 413,081 t CO₂-e in FY23 to 445,594 t CO₂-e.

Scope 2 GHG Emissions are calculated in accordance with the Australian Government methodology required by the NGER Act.

Emissions associated with our Pogo Operations in Alaska are calculated using the same method to ensure consistency in our emissions reporting.

Scope 3 Emissions

Northern Star has continued to evolve our measurement and analysis of our Scope 3 Emissions in line with the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and supported by Greenbase's environmental accounting team.

In FY24 we elected to assess all of our suppliers based on a supplier spend methodology. We also continued to calculate the Scope 3 emissions from our directly chartered

flights and buses to and from our operations, and utilising our business travel reports. More information on our Scope 3 methodology is provided in Appendix C.

As in previous years, the highest areas of contribution to our Scope 3 emissions are from purchased goods and services, fuel and energy related activities, capital goods and upstream transportation and distribution.

Figure 12 Northern Star's FY24 GHG Emissions Profile (Scope 1, 2 and 3)

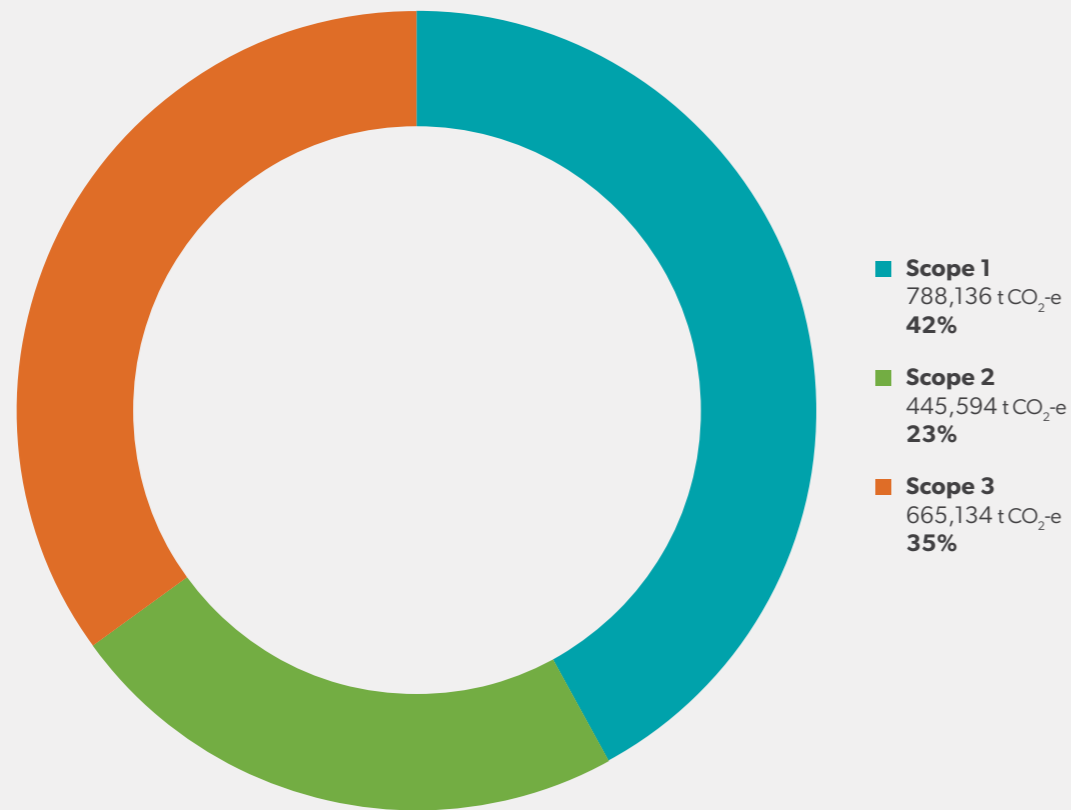
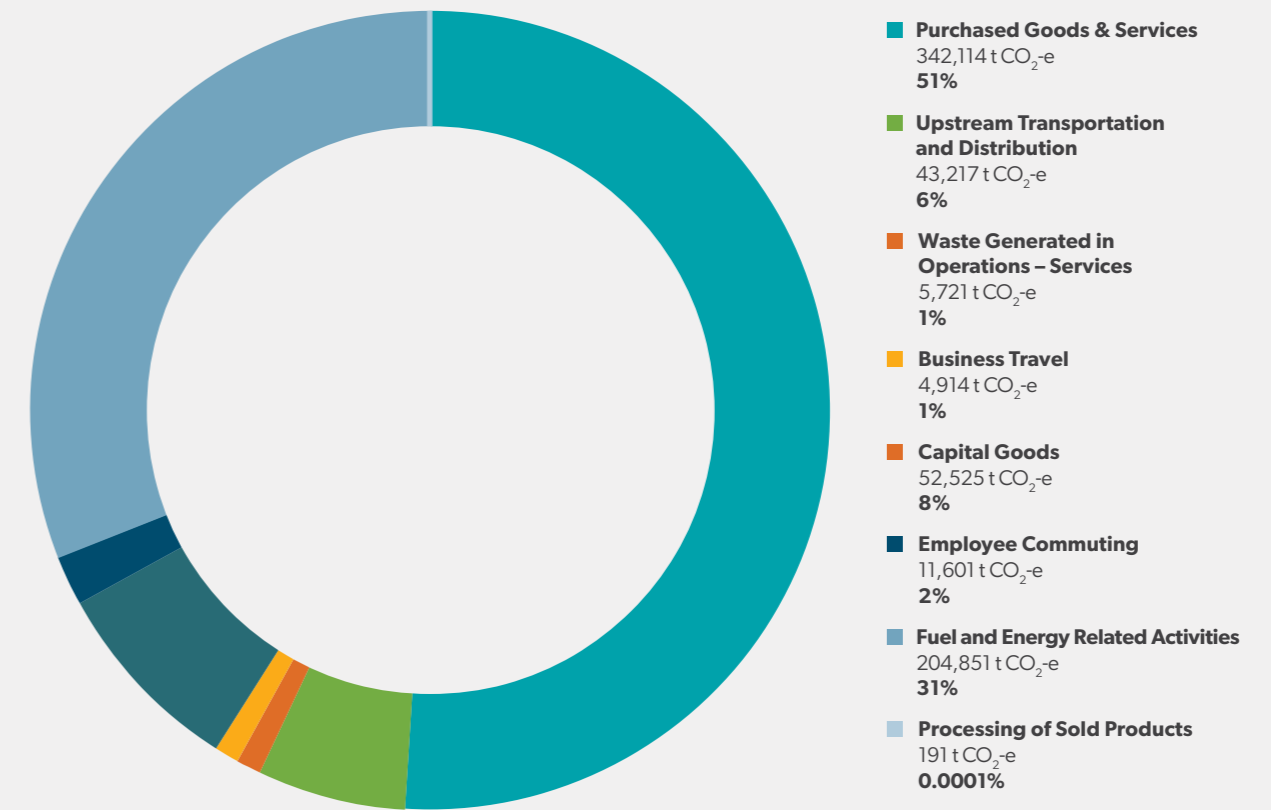


Figure 13 Northern Star's FY24 Scope 3 GHG Emissions by Source



Scope 1 and 2 Emissions Intensity

During FY24, emissions intensity (total emissions generated per tonne of ore processed) decreased slightly from 0.0453 t CO₂-e to 0.0449 t CO₂-e

Safeguard Mechanism

On 1 July 2023, the Safeguard Mechanism Rule (Rule) came into effect which aims to reduce emissions at Australia's largest industrial facilities.

Four of Northern Star's Operations fall under the Safeguard Mechanism:

- KCGM Operations (Kalgoorlie Production Centre)
- Jundee Operations (Yandal Production Centre)
- Thunderbox Operations (Yandal Production Centre)
- Carosue Dam Operations (Kalgoorlie Production Centre)

Under the Rule, all facilities which were subject to the Safeguard Mechanism (Safeguard facilities) were required to submit Emissions Intensity Determinations (EID) to the Clean Energy Regulator (CER).

Northern Star's EID applications were accompanied by external auditor reports. The CER assessed the applications

and determined emission intensities (EI) for each of our Safeguard facilities.

Carosue Dam Operations has come to the conclusion of a three-year multi-year monitoring period in an excess emissions scenario of Scope 1 Emissions. Carosue Dam Operations is obligated under the Safeguard Mechanism rule to surrender ACCU's, equivalent to its excess emissions scenario to the Clean Energy Regulator by Q1 2025.

The four Safeguard facilities reported Scope 1 emissions during FY24 as shown in the Climate Change Performance Metrics overleaf.

Climate Change Performance Metrics

		FY24	FY23	FY22*
Energy Produced				
Kalgoorlie Production Centre	Carosue Dam Operations (GJ)	517,689	579,882	580,933
	Kalgoorlie Operations (GJ)	-	49,664	73,745
	KCGM Operations (GJ)	-	-	-
Yandal Production Centre	Jundee Operations (GJ)	698,047	707,178	679,315
	Bronzewing Operations (GJ)	-	-	-
	Thunderbox Operations (GJ)	735,863	629,598	418,078
Pogo Production Centre	Pogo Operations (GJ)	-	-	-
	Total (GJ)	1,951,599	1,966,322	1,785,953*
Net Energy Consumed				
Kalgoorlie Production Centre	Carosue Dam Operations (GJ)	2,249,147	2,479,457	2,425,475
	Kalgoorlie Operations (GJ)	876,320	972,856	1,156,809
	KCGM Operations (GJ)	4,772,721	4,791,641	4,259,143
Yandal Production Centre	Jundee Operations (GJ)	2,577,416	2,651,864	2,533,097
	Bronzewing Operations (GJ)	583,784	401,102	39,365
	Thunderbox Operations (GJ)	2,997,911	2,745,340	1,816,520
Pogo Production Centre	Pogo Operations (GJ)	1,174,618	1,168,708	1,111,746
Exploration	Tanami (GJ)	13,072	13,165	8,849
Other	Corporate (GJ)	913	728	643
	Total (GJ)	15,245,902	15,224,862	13,381,207*
Scope 1 Emissions				
Kalgoorlie Production Centre	Carosue Dam Operations (t CO ₂ -e)	137,263	151,888	151,520
	Kalgoorlie Operations (t CO ₂ -e)	23,412	32,869	40,300
	KCGM Operations (t CO ₂ -e)	229,822	228,801	192,368
Yandal Production Centre	Jundee Operations (t CO ₂ -e)	144,622	148,143	141,252
	Bronzewing Operations (t CO ₂ -e)	40,173	27,305	2,784
	Thunderbox Operations (t CO ₂ -e)	174,100	160,147	108,459
Pogo Production Centre	Pogo Operations (t CO ₂ -e)	37,826	39,243	37,865
Exploration	Tanami (t CO ₂ -e)	918	924	621
Other	Corporate (t CO ₂ -e)	-	-	-
	Total (t CO₂-e)	788,136	789,320	677,225*
Scope 2 Emissions				
Kalgoorlie Production Centre	Kalgoorlie Operations (t CO ₂ -e)	69,836	62,280	95,043
	KCGM Operations (t CO ₂ -e)	219,274	211,889	261,171
Pogo Production Centre	Pogo Operations (t CO ₂ -e)	156,350	138,808	130,074
Other	Corporate (t CO ₂ -e)	134	103	121
	Total (t CO₂-e)	445,594	413,081	486,410*
Scope 3 Emissions				
Upstream (refer to Figure 11)	Purchased Goods & Services (t CO ₂ -e)	342,114	345,235	232,952
	Capital Goods (t CO ₂ -e)	52,525	22,659	27,896
	Fuel & Energy Related activities (t CO ₂ -e)	204,851	207,639	55,254
	Upstream Transportation & Distribution (t CO ₂ -e)	43,217	37,180	35,521
	Waste Generated in Operations (t CO ₂ -e)	5,721	4,783	-
	Business Travel (t CO ₂ -e)	4,914	1,460	840
	Employee Commuting (t CO ₂ -e)	11,601	10,677	25,529
Downstream	Processing of Sold Products (t CO ₂ -e)	191	183	210
	Total (t CO₂-e)	665,134	629,816	378,203
Emissions Intensity				
	Total Scope 1 & 2 Emissions Intensity (t CO₂-e / t ore processed)	0.045	0.045	0.044

* data includes sites no longer owned or operated by Northern Star Resources, but disclosed for continuity of reporting

Appendix A: Scenario Analysis Process⁹

Climate-related scenario analysis

Northern Star’s business may be affected by both the physical impacts of climate change and the transition to a low carbon economy with the most significant effects likely to play out over the medium to long term.

Both physical and transitional risk are affected by a wide range of factors – including public policy, technology, and market change - that are hard to forecast accurately. Scenarios help Northern Star consider how these variables may plausibly impact the company’s operations over time.

During CY2020, to build our capacity in relation to climate-related strategy, we conducted scenario workshops together with our external consultants, requiring and enabling critical strategic thinking and the testing of business-as-usual assumptions underpinning Northern Star’s business strategy. Since that time, we have continued to progress our TCFD journey.

This is evidenced by the disclosure of scenario analysis information and disclosing plausible ways in which climate-related factors could affect our operations on a geographical basis.

Scenario Selection

In line with the Paris Agreement to reduce greenhouse gas emissions and accelerate the transition to a lower carbon economy (“holding the increase in the global average temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels”), consistent with the TCFD Recommendations and in order to provide comparable information, Northern Star has used a 2°C scenario (a pathway and an emissions trajectory consistent with limiting the average global temperature increase to a temperature range around 2°C above pre-industrial levels with a certain probability). The 2°C scenario

We disclosed the potential high-level impacts on our operations, and we confirmed our aspirations to consider the benefits of quantitative modelling of key climate risks to estimate financial impacts on our operations. We have continued to develop our planned pathways to 2030, completed financial quantification modelling, commenced construction of new renewables projects, and integrated our climate-related risks and opportunities into our operational and strategic risk registers.

Scenario analysis is a strategic planning and risk management tool which allowed Northern Star to:

- assess the potential financial effect of climate-related change on Northern Star’s Operations;
- test whether our business strategy is flexible and adequately accommodates these climate-related risks and opportunities; and
- test how resilient that strategy is, and where necessary identify options for increasing our strategic and business resiliency to plausible climate-related risks

was selected as it has greater data availability than the 1.5°C scenario.

Two other scenarios most relevant to Northern Star have also been used; a 2-3°C scenario and a >4°C scenario. These scenarios were selected to be included as they were commonly used by our peers, which increases the comparability of results for our external Stakeholders. These two scenarios illuminate our future exposure to climate-related physical and transitional risks and opportunities in relation to gold production and demand for gold up to 2050.

The temperature scenarios were rounded out with the inclusion of Shared Socio-Economic Pathways

and opportunities, by adjusting strategic and financial plans, under a given set of assumptions, according to a range of plausible but challenging hypothetical future constructs.

Key for Northern Star was to use the scenario analysis to improve our critical strategic thinking – to test whether current business as usual assumptions are the correct assumptions on which to base a business strategy which is resilient to climate-related change. By resilient, we mean whether our business strategy can tolerate disruptions or adapt to changes or uncertainties in the business environment that might affect Northern Star’s performance, and to remain effective under most situations and conditions.

Commencing this scenario analysis work in CY2020 allowed us time to develop and improve on that capability, to ensure Northern Star may better identify and disclose how its strategy may need to change and develop to accommodate potential climate-related risks and opportunities.

(SSP) to develop three robust scenarios of the future that could be used to understand the resilience of our operations and business strategy, to 2030 and 2050. The 2°C scenario was combined with SSP1 as it has a narrative that aligns most closely to a low emissions trajectory. The >4°C scenario was combined with SSP5 as it is the only possible option for this temperature scenario. Finally, the 2-3°C scenario was combined with SSP3 as it provided divergence in economic growth and ensured we were testing our business with three distinct scenarios.

Scenarios and their impacts

Northern Star drew on TCFD recommendations as well as internal priorities established through workshops to define criteria for the development of three scenarios concerning future likely global emissions levels and socioeconomic conditions (Figure 14).

Executives including the CEO, CFO and COO and other senior management who were previously involved in the multi-disciplinary workshops in CY2019 to validate physical and transitional risks, reconvened twice during CY2020 in workshops facilitated by our external consultants.

The outcomes of the workshops and follow up meetings were consensus on the quantity and choice of scenarios, and an agreed prediction of how Northern Star’s operations

would be likely to respond to each scenario. There was discussion of how our strategy could adapt in response to each scenario. Options were grouped into ‘no regret’ options (which could be beneficial under all three scenarios) and ‘watch and wait’ options (that would be more relevant to some but not all three scenarios).

In addition, throughout CY2020 the ESS Committee of the Board discussed climate risk outlook in Australia and trends in regulator, investor, and financier expectations, following direct engagement with our investors and proxy advisors.

Updates and progress in relation to climate related risks, opportunities and strategy remain a feature of our ESS Committee and Board discussions.

Figure 14 Key Scenario Parameters

TCFD Criteria	Northern Star’s Criteria
<ul style="list-style-type: none"> • Provide diversity of potential future climate states • Explore relevant transition and physical climate-related risks and opportunities • Represent plausible outcomes • Include challenging futures that significantly diverge from business as usual • Include a low emissions scenario (2°C or less) 	<ul style="list-style-type: none"> • Include a scenario that tests resilience to international trade challenges • Be relevant to Northern Star operations and the gold sector • Data underpinning scenarios to come from credible sources • Align with industry best practice • Demonstrate leadership

The selected scenarios focused particularly on transition risk, to complement the results of Northern Star’s initial physical climate risk assessment conducted in CY2019. Multiple factors influencing gold mining

and demand for gold were considered within each scenario. All scenarios present significant challenges and opportunities, but the sources of these differ considerably across each scenario.

⁹ This information was previously disclosed in our CY2020 Sustainability Report

Figure 15 Northern Star’s Alternative Climate Change Scenario Narratives

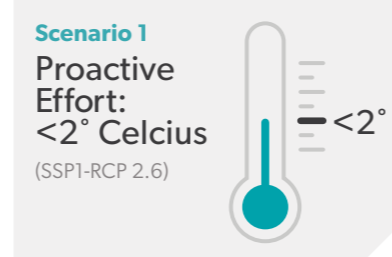
Scenario 1

Environmental degradation and accumulating impacts from climate-related events lead to increased environmental awareness and concern. An increased focus on managing climate change risk and capturing opportunity influences investors, business, governments, and public opinion. This drives more sustainable policy, practices, and investments, both in terms of environmental and social outcomes.

As the world embraces the scale of the transformation required, large investments are made into research and development, facilitating innovation, and helping to commercialise low

emissions technology more rapidly. Consumption patterns shift as the population becomes less materialistic and may impact the retail demand for gold. Gold’s role as a portfolio diversifier and hedge in times of uncertainty remains, with limited potential for growth. However, there would be increased opportunities for sustainable gold for environmental and medical technologies.

There is a strong focus on reducing emissions, minimising environmental footprints, and improving rehabilitation practices in the mining sector. Investors become increasingly selective, backing companies with clear and transparent pathways



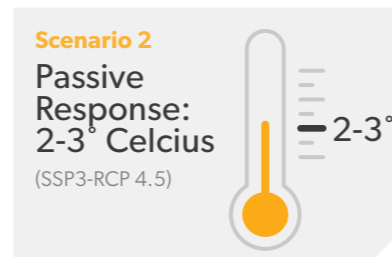
towards decarbonisation and increasing engagement with the outliers. There may be consolidation of mining sector companies in these conditions, as newer and smaller entrants find it more difficult to compete in the face of relatively stable gold demand and high public and investor expectations.

Scenario 2

Financial crises in major economies reinforce and spread distrust in globalisation. Protectionist and national security issues slowly take priority over environmental protection. Demand for local goods increases, putting upward pressure on inflation. In the longer term, more stringent regulation comes into play, including climate policy, to safeguard national resources. The mining sector becomes affected by decreased globalisation and policy which aims to protect upstream supply chains and retain a greater share of returns in Australia.

In this anaemic economic environment, there may be greater turnover of existing gold assets as holders liquidate their investment to cash as economic conditions

become more challenging. Stunted per capita wealth may reduce retail demand for newly produced gold and, as technology investment is reduced, the potential and breadth of gold applications may be lower in this scenario. However, global population growth is high (particularly in Asia), becoming the main driver of jewellery and technology demand. Additionally, in an environment of greater uncertainty and with inflationary pressures, gold is likely to be increasingly sought for hedging purposes. Central banks may diversify their monetary reserves, accumulating gold. Overall, these diverging pressures may contribute to a larger range of gold prices as volatility increases.



In addition to growing regulatory red tape and climate impacts, there is a widespread push for producers to lower costs and hedge output. Lower tendency to extend life of mine to minimise the risk exposure due to gold price volatility. Increased geopolitical tensions may increase international shipping costs. Companies are evaluated on their contribution to local GDP and their compliance with regulation.

Scenario 3

Connections across a greater portion of the population in developed and emerging economies through the digital revolution increasingly facilitate access to education and enable discourse and collaboration. In this highly globalised society, investments in health and education are favoured to support human capital and drive innovation and economic growth. With equality and comfort pursued at all costs and no environmental focus, there is a global exploitation of fossil fuel resources and a widespread adoption of resource and energy intensive lifestyles. Regulation is minimised so as not to shackle progress.

The retail market and technology applications become increasing sources of gold demand, particularly as the global population and

economic growth thrive. With increases in wealth and with inflationary pressures present in the economy, there may be an increase in demand for gold as a store of value. While the gold price may be relatively lower in this scenario, it may be more stable due to global integration and focus on growth.

In this free-for-all world, large companies take over and maximise new developments. The burden of adaptation and safety measures is increasing, with implications for existing mining companies’ reputation, while also presenting barriers to entry for new market entrants. A focus is placed on automation and digitisation to enhance safety and convenience and compete with peers.



Native vegetation at Thunderbox Operations Yandal Production Centre, Western Australia

Table 4 Summary of impacts on key supply and demand factors for gold as a commodity, by scenario

		Scenario 1 Proactive effort	Scenario 2 Passive response	Scenario 3 Regressive action
Mining	Energy mix and use	Rapid electrification of energy systems, including in the transport sector.	Fossil fuel dependency persists, although Australia increasingly focuses on harnessing local sources of energy, including renewables.	Exploitation of fossil fuel resources continues, and growth enables widespread adoption of resource and energy-intensive lifestyles.
	Technology	Innovation focuses on renewable energy and environmental technologies. Digitalisation of mining enables process optimisation.	Investment constraints hinder advancements. Innovation focuses on short-term cost minimisation.	Innovation and automation prioritise production, convenience, and safety.
	Environmental protection	Stakeholder pressure drives a gradual shift toward improving environmental conditions, beyond impact mitigation.	Resources are extracted at lowest cost, resulting in environmental degradation. Climate policy is limited or delayed.	Environmental problems are managed rather than mitigated. Control measures become more extreme over time and may include geo-engineering.
	Policy	Policy mandates deep decarbonisation, impacting asset values and operational costs. New developments need to be designed for net zero emissions.	Countries become increasingly nationalistic, and policy prioritises domestic interests and concerns ahead of the global commons.	Policy supports human capital development and economic growth. Institutional barriers are gradually removed, and regulation minimised.
	Mining company characteristics	Successful companies invest in sustainability innovation and resource efficiency to meet ambitious emission reduction targets.	Volatile conditions keep average life of mine shorter. Physical climate impacts impose greater production costs.	Leading companies capitalise on innovation. Costs of adaptation and high safety standards gradually rise, leading to industry consolidation.
Gold	Demand profile	Applications for gold in medicine and environmental technologies grow. There may be emerging demand from retail buyers of gold products for sustainably mined gold with reduced demand for gold per capita, due in part to repair and reuse of electronic products.	Gold is sought for hedging purposes. As physical climate impacts increase and livelihoods are affected, gold demand in Asia may begin to stall.	High demand for gold as a store of value and status signifier, and for use in hi-tech consumer applications.
	Recycled gold	Electronic waste is increasingly repurposed as part of circular economy practices. This does not noticeably impact key gold producers.	There may be greater turnover of existing gold assets as holders liquidate their investment to cash as economic conditions become more challenging.	Recycled gold is only likely to grow in demand if technology improvements do not deliver enough newly mined gold.
	Price volatility	Moderate	High	Moderate
	Labour retention	Companies with sustainable reputations can attract motivated and high-quality staff.	Teams may be trimmed to reduce costs, but job security concerns minimise staff turnover.	Increased practices in poaching of key staff by larger competitors.
	Investors	Investors prefer companies with credible pathways towards decarbonisation.	Investors prefer blue chip gold producers, limiting investments in gold explorers/juniors.	Investors back companies with the largest gold reserves.

What the scenarios each mean for Northern Star and its business strategy

In Scenario 1, the Proactive Effort scenario, Northern Star's underground mining expertise may be more valued, due to its lower environmental impacts. Our Tier 1 assets and continued work on transparent climate-related disclosure and action may enhance our reputation as a sustainable gold miner.

The Proactive Effort scenario would involve the most challenging transition period compared to the other two scenarios. However, it is the scenario which is most aligned with Northern Star and is likely to be most advantageous for our business.

In Scenario 2, the Passive Response scenario, our existing focus on increasing and maintaining performance of the existing fleet and machinery positions us well for cost minimisation, while our gold processing plant expansions place us at an advantageous position to capitalise on periods of higher gold demand and prices. However, cost and regulatory pressures could become more challenging over time and highly price volatility could make new expansions less compelling.

In Scenario 3, the Regressive Action scenario, there is potential for higher consolidation in the mining sector as demand grows, expansion is easier, and globalisation is high. Northern Star has increasing opportunity to capitalise on our distinctive expertise in underground mining.

The physical impacts of climate change are of higher concern under scenarios 2 and 3, either due to our potentially limited ability to adapt due to higher overall costs (Passive Response) or through increasing uncertainty linked with global ability to manage growing impacts and safety concerns related to operating at higher temperatures (Regressive Action).

All scenarios would require some adaptation to the physical impacts of climate change. However, the burden and cost of adaptation would be greatest in Scenario 3, the Regressive Action scenario, to 2050, and beyond.

Opportunities to enhance Northern Star's resilience were identified, including "no regrets options", representing actions that are beneficial across all scenarios, and "watch and wait options", which are actions that are advantageous under only one or two scenarios.



Opportunities out of the scenario analyses

Understanding the potential effects climate change may have on our business allows Northern Star to identify opportunities as well as potential risks.

We are taking actions to address the risks and leverage potential opportunities in three key focus areas.

- Understanding our energy mix and altering this mix where available. Implementation of renewable energy opportunities like modular, transportable power hybrids for short-life operations.
- Leveraging energy efficiencies across our business such as the existing practice of regularly changing out operational fleet.
- Water usage and recycling opportunities for our Australian assets, including the installation of thickeners.

Development of the Scenarios: methodological approach and data sources

The three scenarios used by Northern Star were anchored by global greenhouse gas emissions levels (Representative Concentration Pathways (RCPs)), which provide emissions constraints and physical outcomes, and Shared Socio-Economic Pathways (SSPs), which provide social and economic context for climate related actions. The use and choice of RCP-SSP combinations drew on international

research undertaken for the IPCC 6th Assessment Report. Additional data was drawn from sector-specific research and expertise, and from Northern Star’s internal operations and insights. Figure 16 summarises the contribution made by each of these inputs and Table 5 outlines some key parameters stemming from the chosen IPCC pathways.

Figure 16 Information sources used to construct Northern Star’s climate-driven scenarios

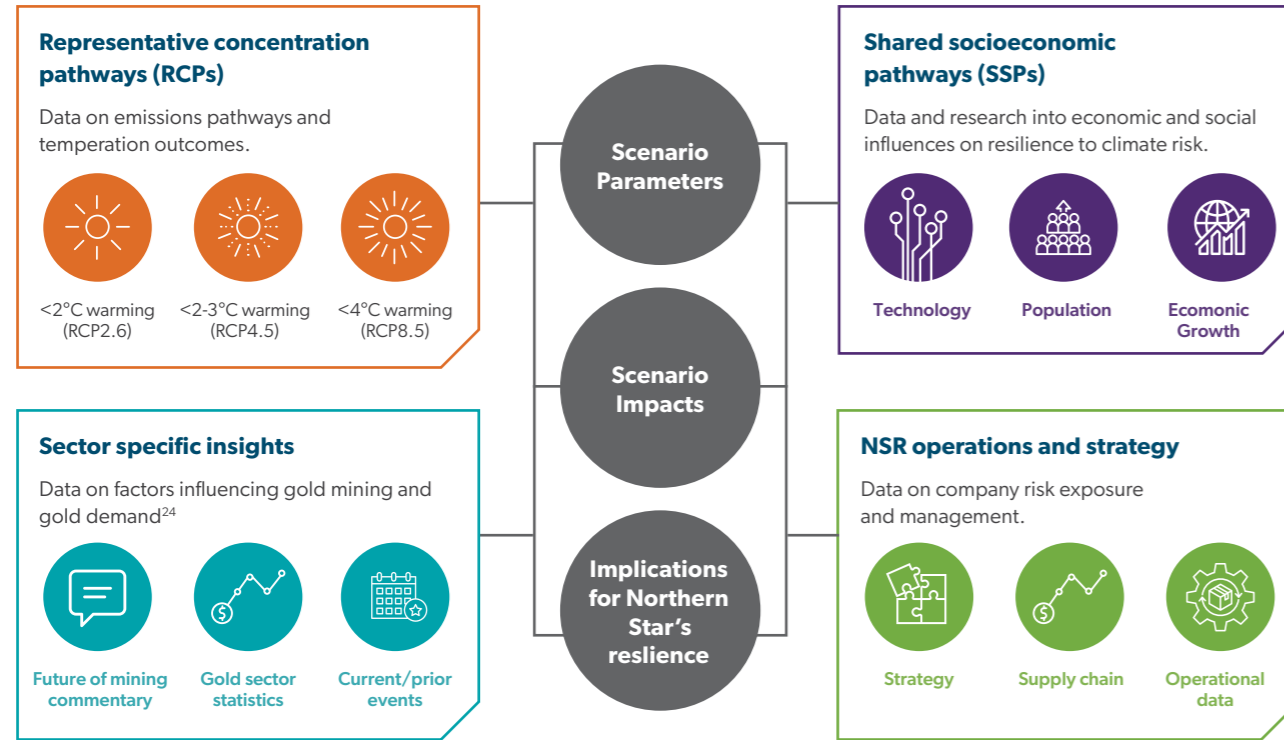


Table 5 Key scenario parameters

		Scenario 1 Proactive effort	Scenario 2 Passive response	Scenario 3 Regressive action
Reference Point	Representative concentration pathway	RCP 2.6	RCP 4.5	RCP 8.5
	Socio-economic path-way	SSP1	SSP3	SSP5
	Basis for use	Investigates a <math><2^{\circ}\text{C}</math> pathway aligned with the Paris Agreement goal and TCFD requirements.	Explores mid-range emissions and warming broadly aligned with countries' current emission pledges, in context of depressed GDP growth and geopolitical challenges	Investigates a pathway consistent with worst-case climate change outcomes
Key Parameters	Global temperature increase (2100)	<math><2^{\circ}\text{C}</math>	$2\text{-}3^{\circ}\text{C}$	>4°C
	Australian temperature increase (2050)	~1°C	~1.5°C	~2°C
	Projected Australian GDP (2050)	~5 trillion	~2.8 trillion	~8.8 trillion
	Projected global population (2050)	8.5 billion	9.9 billion	8.6 billion
	Projected Australian population (2050)	36.6 million	28.5 million	44.2 million



View across the Mt Charlotte headframe to the City of Kalgoorlie-Boulder. KCGM Operations, Kalgoorlie Production Centre, Western Australia

Appendix B: Financial Quantification Modelling¹⁰

In FY23 Northern Star engaged Foresight Consulting Group (FCG) to assist with the development of a climate risk financial quantification model, designed to assist the business to better understand potential financial impacts that climate change related risks could have on the Company's operational effectiveness and financial position.

FCG indicated that Northern Star's quantitative climate risk model represented a step forward within the mining industry in FY23 for assessing the potential financial impacts of climate change, with approaches until then being mostly limited to qualitative scenario-based climate risk and opportunity assessments.

With increasing expectations from stakeholders for more detailed disclosures, and as Northern Star seeks ways to better understand and manage climate-change related risks, the quantitative climate risk model provides a valuable tool for understanding and providing greater transparency on potential climate change related financial impacts on Northern Star.

More importantly, it also provides our leadership and management teams with useful climate risk intelligence to help guide our response to the challenges of transitioning to a Net Zero economy and our changing climate. The quantitative climate risk model was developed over four stages:

- The model logic was developed including the causal and mathematical relationships between risks and opportunities and their potential financial impacts.
- Climate scenarios were selected that represent the range of potential future climate states.
- Data was collected for Northern Star's assets and the climate scenarios including climate parameter and carbon price projections.
- The quantitative climate risk model was developed, and the financial impact modelled using the data collected.

The modelling work was undertaken on four priority climate-related risks that were identified as part of Northern Star's ongoing climate-related risk and opportunity assessment processes. These four risks comprised:

- Physical Risk: Water Security
- Physical Risk: Extreme Temperature
- Physical Risk: Extreme Rainfall and Flooding
- Transitional Risk: Emission Management

The development of the model was an extensive process involving engagement of key personnel throughout Northern Star, data gathering and validation both internally and externally, development of mining value chain mapping applicable to all Operations, development and testing of the model logic, and integration of business, financial and climate scenario processes.



Figure 17 Scenarios modelled in the Northern Star Climate-Related Risk Financial Quantification

High emissions RCP & 5	Moderate emissions below 2°C & RCP 4.5	Low emissions divergent Net Zero
<ul style="list-style-type: none"> • Used to assess the potential impacts of unmitigated climate change • High atmospheric concentration of GHGs aligned to global warming of between 3°C and 5.4°C by 2100 	<ul style="list-style-type: none"> • Used to assess the impacts of moderate transition to a low carbon economy and moderate degree of climate change • Policies are introduced immediately and become more stringent with time with net zero emissions achieved by 2070. Aligned to a 50% chance of keeping global warming below 2°C 	<ul style="list-style-type: none"> • Used to assess the impacts of rapid transition to a low carbon economy • Divergent policies introduced across sectors with a quick phase-out of fossil fuels and net zero achieved by 2050 at high costs. Aligned to a global warming of 1.5°C

¹⁰ This information was previously disclosed in our FY23 Sustainability Report

Scenario Alignment

The quantitative model assessed risks for two transition scenarios and two physical scenarios. These were the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCPs) and the Network for Greening the Financial System (NGFS) scenarios.

For the purpose of modelling financial impacts in totality (physical and transition combined) NGFS and IPCC RCP scenario were aligned.

- Divergent Net Zero is a transition scenario developed by the NGFS. The scenario reaches Net Zero by 2050 but with higher costs due to divergent policies introduced across sectors and a quicker phase out of fossil fuels. The modelling indicates that this scenario would have a negative financial impact on the business by 2050 due to the scenario requiring sudden and early cessation of diesel use, significant and very high carbon price imposition, and

the difficulty of being able to source technologies and equipment in the short term. This scenario has a low probability and was used to stress test a theoretical worst case for Northern Star.

- Below 2°C and RCP 4.5 are the scenarios most closely aligned to Northern Star's ambition for Net Zero by 2050, our decarbonisation pathway and our alignment with the intent of the Paris Agreement. These scenarios both had an overall positive impact on our financial models.
- RCP 8.5 is the least desirable climate scenario where global temperatures increase significantly due to ineffective or delayed actions to combat greenhouse gas emissions reductions and sequestration of carbon. This scenario only had a very minor negative impact on the business by 2050 due largely to the existing resilience built into our Operations.

The model demonstrated that with the implementation of Northern Star's planned pathways targeting 35% Emissions Reduction in Scope 1 and 2 Emissions by 2030, the financial risk is not only mitigated but is estimated to potentially have a considerable positive financial benefit through costs savings made from decarbonisation intervention measures.

¹¹ Refer to Table 2 for more information on climate-change related risks

Scenario Findings

Emissions management was found to have the most material financial impact across Northern Star's assets.

Physical risks¹¹ were estimated to have a relatively lesser financial impact across Northern Star's assets, with potential impact being most prominent when ore processing is disrupted, as opposed to interruptions to physical mining activities. This is predominately due to the existing mine planning and engineering controls that Northern Star already has in place, which mitigate the potential financial impact.

Extreme rainfall and flooding were found to be the most financially significant physical risk, with potential financial impacts arising due to disruptions to the supply of critical reagents and ore to the processing plants. While these interruptions would typically be acute in nature (and may or may not occur within the life of an asset), they could result in deferred revenue under certain conditions. Northern Star will continue to work through the recommendations arising from the financial quantification modelling, with the model now being integrated into our business processes for ongoing financial climate-risk related strategy and planning.

Appendix C: Scope 3 Methodology

Northern Star has continued to evolve our measurement and analysis of our Scope 3 Emissions in line with the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and supported by Greenbase's¹² environmental accounting team.

In FY23 we completed a review of our supply chain and increased the number and type of suppliers surveyed. All suppliers to Northern Star during FY23 were assessed for materiality by spend and supplier categories. Supplier activities that were already being captured under our existing Scope 1 and 2 processes were excluded from the Scope 3 assessment to avoid duplication.

In FY24 we elected to assess all of our suppliers based on a supplier spend methodology. We also continued to calculate the Scope 3 emissions from our directly chartered flights and buses to and from our operations, and our business travel reports.

Of the fifteen Scope 3 categories listed in the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard, the following were considered applicable to Northern Star and included in our FY24 assessment:

- Purchased goods and services
- Capital goods
- Fuel and energy related activities
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Processing of sold products

The following categories were assessed as not applicable to Northern Star's current Operations during FY24:

- Upstream leased assets – no currently leased upstream assets not already considered in Scope 1 or 2 Emissions
- Downstream transport – elected reporting boundary is the safe in the gold room. We aspire in the future to capture Scope 3 Emissions involved from the collection of the doré from each gold room and secure transportation to the refinery then the refining process up until point of sale of the metal.
- Use of Sold Products – the majority of gold sold globally is retained as gold bars. It is not possible to quantify how much of Northern Star's gold sold is retained as gold bars or converted into alternate uses such as jewellery, medical devices, technology and so forth.
- End of life treatment of sold products – gold requires no end-of-life treatment as it does not have an expiration date, and requires no special treatment being inert and non-allergenic.
- Downstream leased assets – no currently leased downstream assets not already considered in Scope 1 or 2 Emissions
- Franchises – no franchises.
- Investments – no investments not already considered in Scope 1 or 2 Emissions

Emission Calculation Methodology

In FY24 Northern Star has elected to apply spend data calculation to our suppliers as a result of ongoing low levels of data submissions over previous years from a large proportion of our suppliers.

We also continued to calculate the Scope 3 Emissions from our directly chartered flights and buses to and from our operations, and our business travel reports.

Scope 3 Emissions Reduction Targets

While Northern Star does not have a Scope 3 Emissions Reduction target, we continue to be focused on being able to assess and understand our Scope 3 Emissions sources so that we may be in a position to develop a baseline and target in the future.

We anticipate that our suppliers will also be pursuing their own decarbonisation plans and may collaborate with Northern Star on targets that align with our own commitments to reducing our emissions. These supplier specific targets should also assist in contributing to a reduction in our overall Scope 3 Emissions and allow us to consider additional opportunities.

Table 6 Scope 3 Supplier Methodologies

Scope 3 Category ¹³	Calculation methodology options in accordance with the GHG Protocol	Our approach in preference order and factors utilised
Category 1: Purchased Goods and Services	Supplier specific method	Not utilised
	Hybrid Method	Not utilised
Category 2: Capital Goods	Average Data Method	Not utilised
	Spend Based Method	1. Spend data – total spend and generic emission factor (US EPA Factors)
Category 3: Fuel and Energy Related Activities	Supplier specific method	1. NGER data – actual fuel consumed by Northern Star (NGA Factors)
	Average Data Method	Not utilised
Category 4: Upstream Transportation and Distribution	Fuel based method	Not utilised
	Distance based method	Not utilised
	Spend based method	1. Spend data – total spend and generic emission factor (US EPA Factors)
Category 5: Waste Generated in Operations	Supplier specific method	Not utilised
	Waste type specific method	1. ESG data – total waste generated by Northern Star (NGA Factors & UK Factors)
	Average data method	Not utilised
Category 6: Business Travel	Fuel based method	Not utilised
	Distance based method	1. AMEX & InFlight extracts – passenger flights and emissions factors (US EPA factors included in the generated reports)
Category 7: Employee Commuting	Spend based method	Not utilised
Category 8: Processing of Sold Products	Site specific method	Not utilised
	Average data method	Not utilised
	Spend based method	Spend data – total spend and generic emission factor (US EPA Factors)

¹² Greenbase are a reporting and consulting service that provides sustainability reporting and environmental accounting services. They are also a licensed software and tools partner with GRI.

¹³ Excludes the following categories as referenced on page 31: 8, 9, 11, 12, 13, 14 and 15.

Appendix D: Assumptions Used to Support Net Zero Ambition and Scope 1 and 2 Emissions Reduction

- Renewable energy technology cost assumptions utilise:
 - reports commissioned by the Australian Energy Market Operator (Aurecon – 2024) and CSIRO (GenCost 2023-24);
 - specialist industry advisors; and
 - commercial offerings from technology providers.
- Renewable energy projects installed on Northern Star sites are to be registered for the purpose of generating green products, for the benefit of or use by Northern Star.
- Grid emission intensity factors published by the Australian Clean Energy Regulator for grid supplied sites.
- Northern Star's wholly owned subsidiary GKL Properties Pty Ltd has been assessed for eligibility for Human Induced Regeneration projects.
- Renewable energy resources modelling uses a combination of publicly available data (weather satellites) and site-specific measurements.
- Scope 1 Emissions reductions based on modelled reduction in fossil fuel requirements from renewable energy projects (Wind, Solar and Battery Energy Storage Systems) installed at Northern Star Operations using original equipment manufacturer (OEM) performance curves.
- Scope 2 Emissions will be reduced through a combination of grid greening and contracting for electricity from renewable generators.



Using solar energy for portable lighting towers at Thunderbox Operations, Yandal Production Centre, Western Australia



About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Refer to Appendix D.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Au

The chemical symbol for gold

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

B or bn

Billion

BESS

Battery Energy Storage System

Board

Board of Directors

CMP

Contract Management Plan

CO₂

Carbon dioxide

CO₂-e

Carbon dioxide equivalent

Company

Northern Star Resources Ltd
ABN 43 092 832 892

contractors

Externally employed contracted workers engaged by the Company to support operations

Corporations Act

Corporations Act 2001 (Cth)

Decarbonisation Pathway

Refer to figure 2 for our current planned pathway targeting 35% Emissions Reduction by 2030

Director

A director of the Company duly appointed under the Corporations Act

Emissions Reduction

The mitigation or abatement of greenhouse gas or airborne contaminant emissions

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESR

Environment and Social Responsibility

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GHG

Greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, and nitrogen trifluoride)

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

IPCC

Intergovernmental Panel on Climate Change

K or k

Thousand

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant

Kg or kg

Kilogram

kl

kilolitre; one thousand litres

KMP

Key Management Personnel

KPI

Key Performance Indicator

Limited Assurance

Audit and assurance undertaken by an external auditor on whether the data or statements made in this report have been prepared in accordance with GRI

M or m

Million

MW

megawatt; one million watts

Net Zero

Net Zero refers to achieving a balance between the amount of operational Scope 1 and Scope 2 greenhouse gas Emissions produced and those removed

Net Zero Ambition

Net Zero Ambition is our ambition to achieve Net Zero by 2050, as expressed in our Climate Change Policy

NGA Factors

Australian National Greenhouse Accounts Factors

NGER

National Greenhouse and Energy Reporting Act 2007

NGFS

Network for Greening the Financial System

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

Oz

Ounce

Paris Agreement

Paris Agreement refers to the legally binding international treaty on climate change which was adopted by 196 Parties at the 21st session of the United Nations Conference of the Parties, in Paris on 12 December 2015, and entered into force on 4 November 2016

PPA

Power Purchase Agreement

RCP Representative Concentration Pathway

Greenhouse gas concentration trajectories which provide Emissions constraints and physical outcomes in Climate Change Scenario Analysis

RE

renewable energy

SASB

Sustainability Accounting Standards Board

Scope 1 Emissions

Emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level

Scope 2 Emissions

Emissions released to the atmosphere from the indirect consumption of an energy commodity

Scope 3 Emissions

Indirect greenhouse gas Emissions other than Scope 2 Emissions that are generated in the wider economy. They occur as a consequence of the activities of a facility, but from sources not owned or controlled by that facility's business

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

STARR Core Values

Northern Star's Core Values of Safety, Teamwork, Accountability, Respect and Results

T or t

Tonnes; one thousand kilograms

TCFD

The Financial Stability Board's Task Force on Climate-related Financial Disclosures

TNFD

The Taskforce on Nature-related Financial Disclosures

UN SDGs

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Contact Information

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General Enquiries	info@nsr ltd.com
Media Officer	mediaofficer@nsr ltd.com
Compliance	compliance@nsr ltd.com
ASX Code	NST
Share Registry	MUFG Corporate Markets (formerly known as Link Market Services)

Additional Website ESR Disclosures:

- Environment & Social Responsibility Approach
- People & Culture at Northern Star
- Safety & Critical Risk Control at Northern Star
- Community Engagement & Support at Northern Star
- Supply Chain Management at Northern Star
- Environmental Management at Northern Star
- Climate Change at Northern Star
- Water Security at Northern Star
- Waste & Tailings Management at Northern Star
- FY24 Performance Data Tables
- FY24 GRI, SASB and UN SDG Alignment Index
- FY24 Tailings Disclosure Report
- FY24 Biodiversity Values



Rhino in the portal

Photo Credit: Frank Norman, Graduate Geotechnical Engineer
South Kalgoorlie Operations, Kalgoorlie Production Centre, Western Australia

Cover Image: Steffi Milling, Geologist and James Thomas, Project Geologist
Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia



Our Approach	3
Water Security Governance	4
Restatements of Information	4
Water Security Risks and Opportunities	5
Water Management	7
Water Monitoring & Control	8
Water Conservation & Recycling	10
Water Stress	11
Water Performance Metrics	12
Glossary	15
Contact Information	18

Water Security



1,679
FY24 Total Fresh Water Consumption (ML)

20,272
FY24 Total Other Water Consumption (ML)

12,252
FY24 Total Water Recycled or Reused (ML)

0.0008
Total Water Consumption Efficiency ML/t ore processed

Our Approach

Northern Star acknowledges its responsibility to manage and minimise consumption of all natural resources, including water. There are significant requirements for water management across all Northern Star Operations.

We enter into agreements with stakeholders, including our regulators, to ensure that water is available for the operation of all sites while maintaining awareness of its use as a shared resource.

Our sites in the Goldfields of Western Australia primarily use saline or hypersaline water, with some limited freshwater use by exception. These sites are typically operated as nil discharge sites.

Our Pogo Operations in Alaska primarily access freshwater, however their overall net water consumption is maintained at a lower level due to their managed treatment and discharge of high quality water back to the environment.

Where freshwater is available to an Operation we aim to minimise our consumption.

In accordance with our Water Management Global Standard (Standard), we have an obligation to ensure that we meet all our legislative requirements, minimise our freshwater consumption, and minimise potential impacts on our stakeholders.

0%
Percentage of Operations with High or Extremely High Baseline Annual Water Stress¹

67%
Percentage of Operations With Baseline Annual Water Stress Defined as Arid & Low Water Use¹

0
Number of Unauthorised Offsite Discharges

100%
Percentage of Sites with Water Management Plans

¹ [Aquaduct 4.0](#)

Water Security Governance

Northern Star's Board has oversight of water security risks and opportunities within the organisation assisted by the Environmental, Social & Safety (ESS) Committee's oversight of operational risks and the Audit & Risk Committee's oversight of the Company-wide risk management framework.

The Company's water security governance structure is shown in Figure 1. Water related matters are considered quarterly by the Board through its ESS Committee meetings.

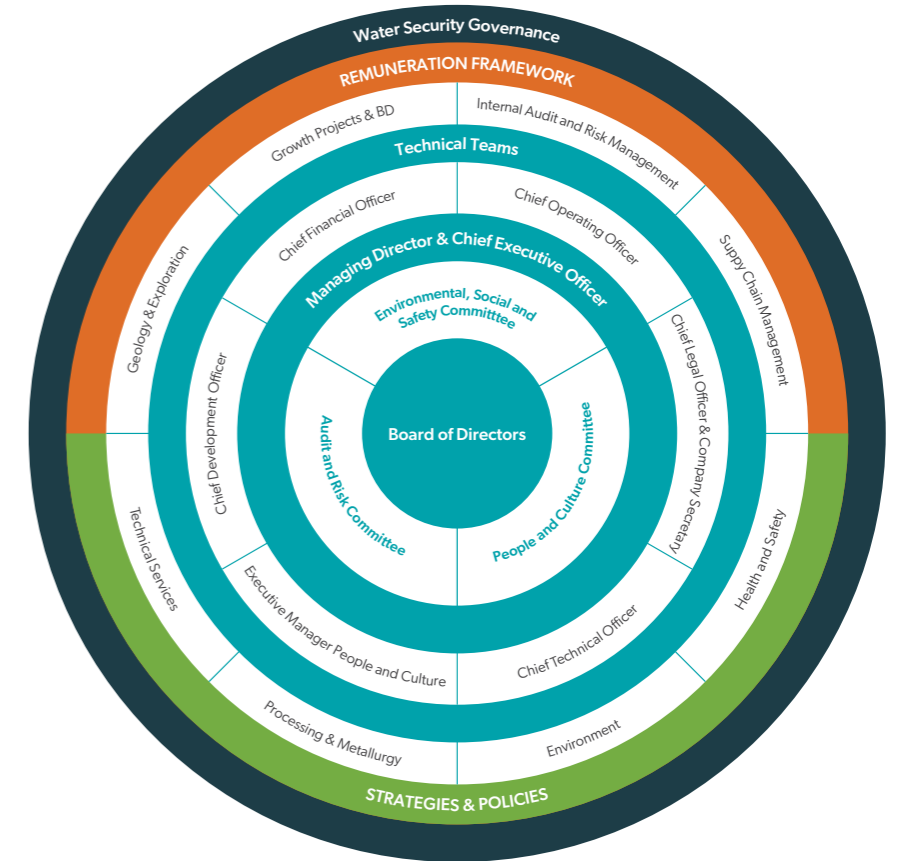
The function of the Committee is to assist the Board in implementing the Company's, environmental, social and safety strategies and ensuring responsible and sustainable business practices. In particular, the Committee will assist the Board in its oversight, monitoring and review of the Company's practices in the following key areas:

- environmental management
- sound business ethics and fair and ethical dealings with stakeholders, and
- long term environmental, social and safety strategic goals.

In addition, the Committee will refer any material environmental, social and safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

Development and delivery of Northern Star's water security function is overseen by the ESS Committee and the Chief Operating Officer (reporting to the Managing Director and to the Board), supported by the technical services, operational, environmental and legal teams in the corporate office and on our sites.

Figure 1 Water Security Governance



Restatements of Information

Nil restatements from our FY23 Sustainability Report.

Water Security Risks and Opportunities

As part of our ongoing organisation risk identification and mitigation processes, Northern Star monitors and reviews water security risks and opportunities in our mining and mineral processing operations.

Risks

Water security risks can occur from:

- A decrease in rainfall potentially resulting in less water available either through abstraction or surface water catchments, and potentially contributing to further decline in water quality. This can lead to an increase in demand on third-party supplies include fresh water. Technologies such as reverse osmosis can counteract this as poor-quality groundwater can be treated for use in the process plant; and
- Management of extreme weather events. These are risk assessed and mitigation controls implemented, including ponds, diversion structures, pumping systems and weather monitoring.

To ensure we are mitigating risks, and meeting our obligations for water security, each site must meet our Standard² through:

- A risk assessment must be undertaken every time a new water source is identified;
- All water discharges and water harvesting are managed in accordance with licence requirements, environmental management plans and in consultation with stakeholders;
- Water abstraction and consumption rates are designed to maximise the sustainable use of water resources and to recycle as much as practical;
- Baseline surface and groundwater hydrology and geochemical characterisation are conducted for new projects or project expansions as relevant;
- Potential water security impacts and controls are captured in the Operation and Strategic Risk registers and regularly reviewed;
- Ponds for water impoundment must be designed in consideration of the characteristic of the water being contained and in accordance with regulatory requirements;

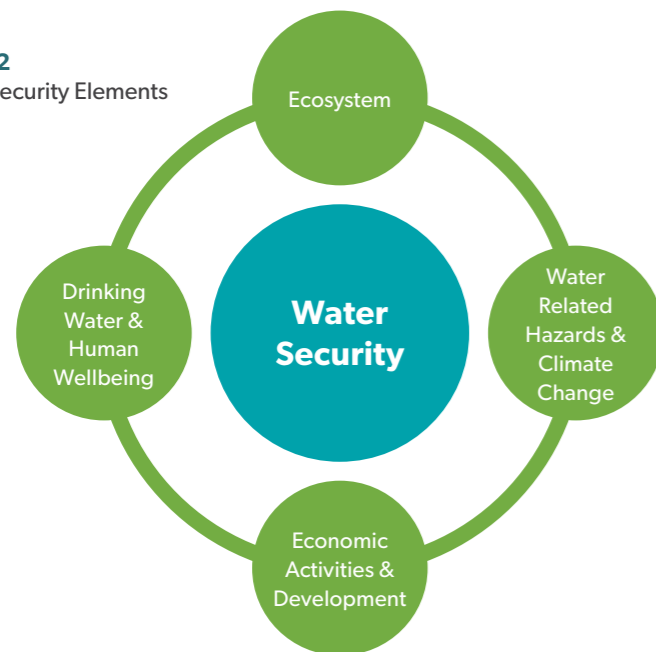
- Monitoring programmes implemented in alignment with the risk assessment, operational needs and licence requirements;
- Sites undertaking water treatment maintain monitoring and control systems, and have in place mitigation plans in case of deviations from approved limits;
- Third party audits may be undertaken to verify ongoing compliance with site, Company and regulatory requirements; and
- All sites use water that is either purchased from a vendor or is pumped to the sites under strict licence conditions.

Opportunities

We continue to explore and utilise water security opportunities that can optimise consumption while decreasing the demand on external fresh water supplies. Some of these opportunities include:

- Utilising technology to improve the control of dewatering thickeners to recycle more water across the Australian Operations for FY25. This will reduce the volume of water discharged to tailings dams from process plants resulting in more efficient water practises;
- Using lower quality water in the process as opposed to good quality water where it is possible;
- Application of an underground grouting program at our Pogo Operations to control and minimise underground seepage;
- Investigating green energy driven Reverse Osmosis (RO) plants to create useable water from hypersaline water sources in FY25. This is an improvement in the water security as the quantity of hypersaline water in the Goldfields is significantly more than the quantity of good quality water.

Figure 2
Water Security Elements



² Water Management Global Standard (NSR-ENV-008-STA)

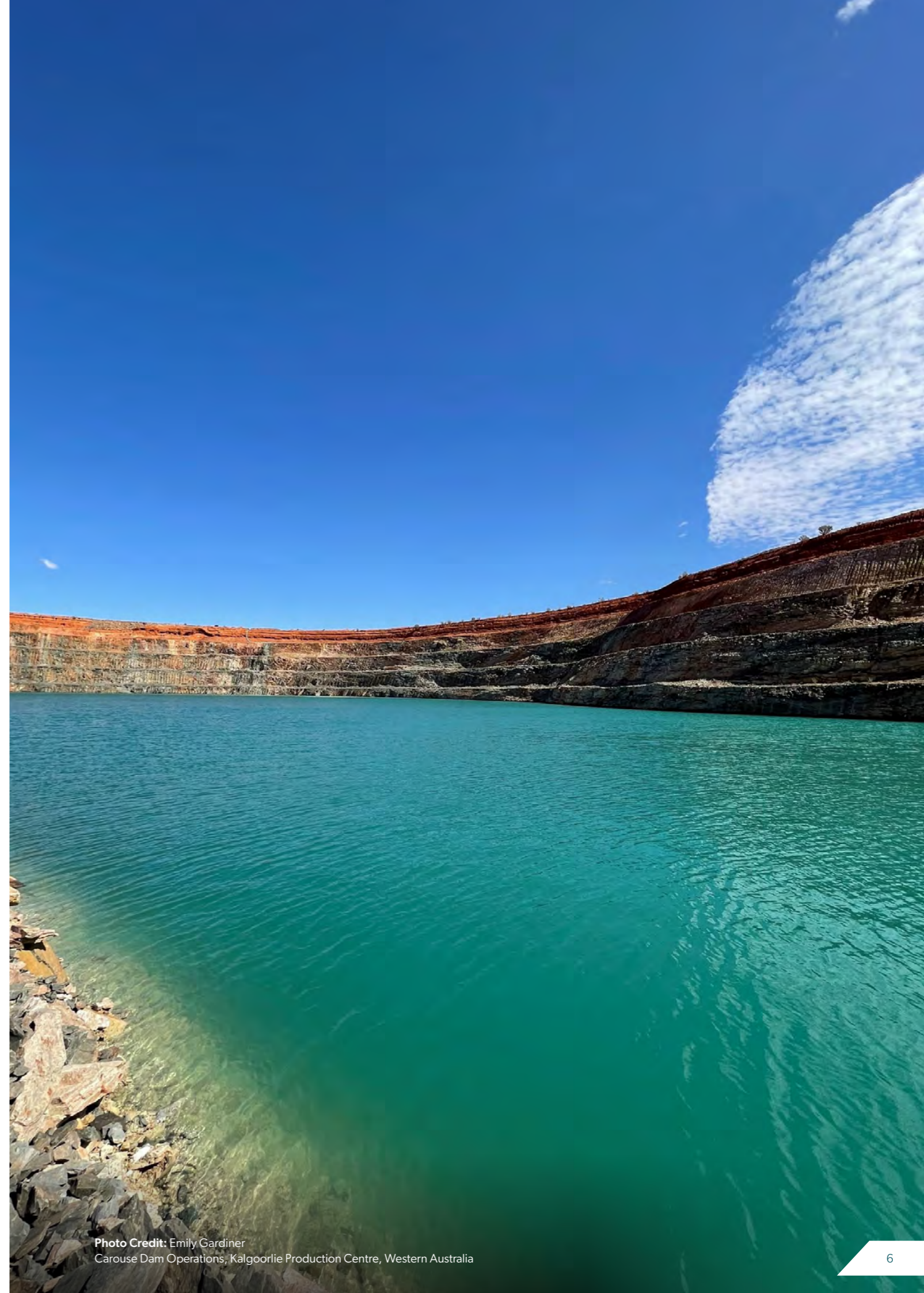




Photo Credit: Brendan Upton, Senior Geology Technician
Carouse Dam Operations, Kalgoorlie Production Centre, Western Australia

Water Management

Northern Star's Water Management Plans aim to:

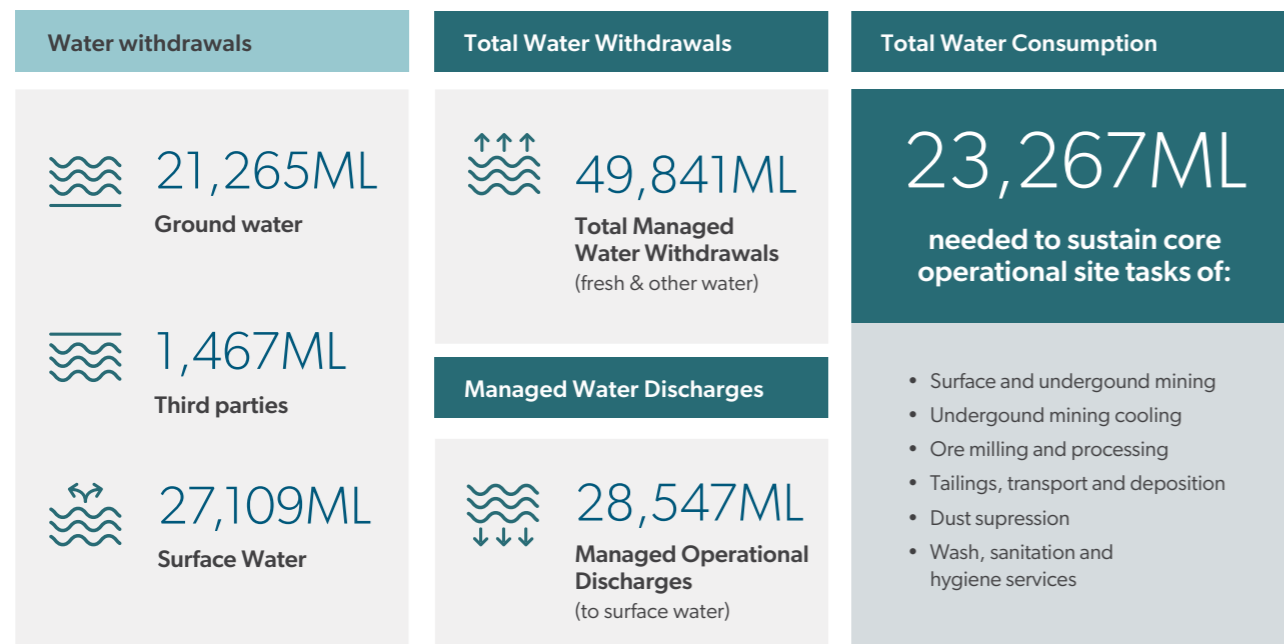
- Minimise excess groundwater drawdown and protect the quality and flows of water in the aquifers that supply water to our Operations;
- Minimise the impact to vegetation and groundwater through preventing spills and managing tailings/process water, saline water and effluent responsibly;
- Minimise required abstraction through water efficiency measures;
- Monitor and record water quality, abstraction volumes and water levels of groundwater bores and surface water storage facilities; and

- Ensure that other groundwater users are not adversely affected by groundwater abstraction.

Most aquifers in the Goldfields are of poor quality with total dissolved solids (TDS) ranging from 50,000-300,000mg/L (sea water is about 35,000mg/L; Freshwater TDS is <1,000mg/L).

As a result, we use a mix of fresh and saline/hypersaline groundwater where possible, as using large quantities of fresh water for gold processing is not appropriate nor efficient.

Figure 3 Group Operational Water Schematic FY24



Water Monitoring & Control

Northern Star sites have in place detailed management and control systems, which include but are not limited to:

- conducting groundwater and surface water quality monitoring. This may include analyses such as pH, TDS, elemental analysis, chlorine, WAD CN and organic matter depending on the water origin;
- Monitoring aims to verify that Northern Star has remained compliant with environmental and regulatory compliance requirements, as well as providing valuable insights into efficiency opportunities and detection of potential issues with water sources;
- Flow meters and water mass balancing to measure and manage site water transfers. Flow meters are installed at drawpoints as well as discharge points to monitor both abstraction and discharge volumes³;
- Control systems for automation of water transfers (leak detections systems, density control etc); and
- Sites may have specific emergency preparedness and response procedures to address uncontrolled releases of saline/hypersaline water and tailings/process water.



Brendon McGillivray, Senior ESR Advisor
Kalgoorlie Operations, Kalgoorlie Production Centre, Western Australia

³ Flow meters are typically read on a monthly basis, either via remote telemetry systems or manually. Where a flow meter is inaccessible (ie. due to weather issues) or where a flow meter has become unserviceable (ie. due to mechanical or electrical failure) the flow volumes in our site water balances for that period and water source are estimated to reduce the risk of under reporting water withdrawals/consumption.



Moose and calf, Goodpaster River, Alaska
Photo Credit: Zach Lambe, Geologist - Mine
 Pogo Production Centre, Alaska

Water Conservation & Recycling

Pumping water long distances is inefficient and costly and it is important to limit this as much as possible. Wherever practicable, Northern Star prioritises the recycling of water to minimise fresh and bore water withdrawals and consumption.

Our sites have water storage dams or water tanks which receive and store water from various inputs, including: freshwater and borefield supplies, washdown returns, runoff from buildings and hardstands, tailings storage facility decant returns, and mine dewatering. The water is then transferred to required sections of the mine for use.

Processing Plants

- Water is fed into process water tanks and potable water tanks for storage and distribution within the plant. Water of different quality will be sent to different sections of the plant depending on the process requirement. For example, fresh water will be used in areas that require a high quality of water compared to hypersaline water
- At the back end of the gold recovery process, some sites will utilise a thickener for water recovery prior to tailings disposal. This is a good example of recycling water back into the process before sending to tailings where not all of the water is recovered via decant. In the case where a plant does not have a final tailings thickener, the density at the back end of the circuit is controlled to recover as much water prior to tailings disposal
- Where thickeners are utilised for water recovery, control systems are in place to monitor and change the density to a target setpoint which is chosen to optimise water recovery. The control systems are being reviewed across some Northern Star sites to more tightly manage the water recovery
- Tailings that are discharged settle in the tailings dam and the water that decants is recovered and used back in the process. On some sites the return water is treated to remove residual cyanide. Unlike the Australian operations, Pogo filter their tailings slurry with large mechanical filters which capture the water before the tailings trucked to a dry stack facility
- Tailings lines have leak detection sensors to detect any release of slurry (and hence water) to the environment which mitigates any uncontrolled water losses

Mining

Water is used in both surface and underground mining mainly for dust control. Roads are consistently wetted down and all drilling is done with water to prevent dust being created. The water drains to the bottom of the mine. It is then pumped back to the surface and then re-used.



Water cart undertaking dust suppression at KCGM Operations
 KCGM Operations, Kalgoorlie Production Centre, Western Australia.

Water Stress

Access to water is a fundamental human right. Water is also critical to our operations. We are committed to using and managing this valuable resource sustainably to ensure shared users and the environment are not adversely impacted. Northern Star has assessed each of its sites to

determine their current and potential future “Water Stress” classifications in accordance with Aqueduct 4.0 Water Risk Atlas⁴, the latest iteration of the Water Risk Atlas. This water risk framework is designed to translate complex hydrological data into intuitive indicators of water-related risk.



Jundee Operations

- Baseline Annual Water Stress: Arid and Low Water Use
- Predicted Future Water Stress (2050)
 - Business as Usual: Arid and Low Water Use
 - Pessimistic: Arid and Low Water Use



Thunderbox Operations

- Baseline Annual Water Stress: Arid and Low Water Use
- Predicted Future Water Stress (2050)
 - Business as Usual: Arid and Low Water Use
 - Pessimistic: Arid and Low Water Use



Carosue Dam Operations

- Baseline Annual Water Stress: Low (<10%)
- Predicted Future Water Stress (2050)
 - Business as Usual: Low (<10%)
 - Pessimistic: Low (<10%)



Kalgoorlie Operations

- Baseline Annual Water Stress: Arid and Low Water Use
- Predicted Future Water Stress (2050)
 - Business as Usual: Arid and Low Water Use
 - Pessimistic: Arid and Low Water Use



KCGM Operations

- Baseline Annual Water Stress: Arid and Low Water Use
- Predicted Future Water Stress (2050)
 - Business as Usual: Arid and Low Water Use
 - Pessimistic: Arid and Low Water Use



Pogo Operations

- Baseline Annual Water Stress: Low (<10%)
- Predicted Future Water Stress (2050)
 - Business as Usual: Low (<10%)
 - Pessimistic: Low (<10%)

⁴ Aqueduct 4.0 Water Risk Atlas

Water Performance Metrics

		FY24	FY23	FY22
Freshwater Withdrawal (≤1,000 mg/L Total Dissolved Solids)				
Kalgoorlie Production Centre	Kalgoorlie Operations (ML)	107	179	177
	KCGM Operations (ML)	1,221	1,147	1,401
Yandal Production Centre	Jundee Operations (ML)	239	234	215
	Bronzewing Operations (ML)	112	99	37
Pogo Production Centre	Pogo Operations (ML)	26,574	28,402	27,168
Total (ML)		28,253	30,061	29,008
Other Water Withdrawal (>1,000 mg/L Total Dissolved Solids)				
Kalgoorlie Production Centre	Carosue Dam Operations (ML)	6,486	6,304	3,192
	Kalgoorlie Operations (ML)	2,052	2,184	2,717*
	KCGM Operations (ML)	6,128	5,272	4,394
Yandal Production Centre	Jundee Operations (ML)	1,816	1,803	1,783
	Bronzewing Operations (ML)	82	151	48
	Thunderbox Operations (ML)	3,702	5,509	4,466
Pogo Production Centre	Pogo Operations (ML)	1,316	1,240	901
Exploration	Central Tanami (ML)	6	7	65*
Total (ML)		21,588	22,470	17,566*
Total Water Withdrawal				
Kalgoorlie Production Centre	Carosue Dam Operations (ML)	6,486	6,304	3,192
	Kalgoorlie Operations (ML)	2,159	2,363	2,894*
	KCGM Operations (ML)	7,349	6,419	5,795
Yandal Production Centre	Jundee Operations (ML)	2,054	2,037	1,998
	Bronzewing Operations (ML)	194	250	85
	Thunderbox Operations (ML)	3,702	5,509	4,466
Pogo Production Centre	Pogo Operations (ML)	27,890	29,642	28,068
Exploration	Central Tanami (ML)	6	7	65*
Total (ML)		49,841	52,531	46,574*
Water Recycled or Reused				
Kalgoorlie Production Centre	Carosue Dam Operations (ML)	520	692	447
	Kalgoorlie Operations (ML)	1,884	1,822	3,799*
	KCGM Operations (ML)	7,310	8,698	9,218
Yandal Production Centre	Jundee Operations (ML)	1,352	1,297	1,280
	Thunderbox Operations (ML)	728	1,037	605
Pogo Production Centre	Pogo Operations (ML)	459	493	621
Total (ML)		12,252	14,039	15,970*
Water Discharged				
Pogo Production Centre	Pogo Operations (ML)	28,547	27,717	27,254
Total (ML)		28,547	27,717	27,535*
Net Total Water Consumption				
Kalgoorlie Production Centre	Carosue Dam Operations (ML)	6,486	6,304	3,192
	Kalgoorlie Operations (ML)	2,159	2,363	2,613*
	KCGM Operations (ML)	7,349	6,419	5,795
Yandal Production Centre	Jundee Operations (ML)	2,054	2,037	1,998
	Bronzewing Operations (ML)	194	250	85
	Thunderbox Operations (ML)	3,702	5,509	4,466
Pogo Production Centre	Pogo Operations (ML)	1,316	1,926	901
Exploration	Central Tanami (ML)	6	7	75*
Total (ML)		23,267	24,814	19,125*

⁵ Totalised data includes Operations that are no longer part of Northern Star’s assets and therefore not listed separately in the table



Photo credit: Douglas Ball, Mine Superintendent
Pogo Operations, Pogo Production Centre, Alaska

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nsr ltd.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ADEC

Alaskan Department of Environmental Conservation

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Aquifer

underground layer of water-bearing material, consisting of permeable or fractured rock, or of unconsolidated materials (gravel, sand, or silt)

Au

The chemical symbol for gold

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

B or bn

Billion

Board

Board of Directors

Company

Northern Star Resources Ltd
ABN 43 092 832 892

contractors

Externally employed contracted workers engaged by the Company to support operations

Corporations Act

Corporations Act 2001 (Cth)

Director

A director of the Company duly appointed under the Corporations Act

DWER

Department of Water and Environmental Regulation

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

ESG

Environment, Social & Governance

ESS

Environmental, Social & Safety

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

Flocculant

substance which promotes the clumping of particles, especially one used in treating waste water

FY

Financial Year ending 30 June

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

Hydrology

Study of the distribution and movement of water both on and below the Earth's surface, as well as the impact of human activity on water availability and conditions

K or k

Thousand

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant

Kg or kg

Kilogram

kl

kilolitre; one thousand litres

KMP

Key Management Personnel

KPI

Key Performance Indicator

Limited Assurance

Audit and assurance undertaken by an external auditor on whether the data or statements made in this report have been prepared in accordance with GRI

M or m

Million

ML

Mega-litre; one million litres

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

Oz

Ounce

pH

a figure expressing the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline

Reverse Osmosis

A water purification process that uses a semi-permeable membrane to separate water molecules from other substances

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

T or t

Tonnes; one thousand kilograms

TDS

Total dissolved solids

UN

United Nations

UN SDGs

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

WAD CN

Weak acid dissociable cyanide

Water Stress

Baseline water stress measures the ratio of total water demand to available renewable surface and groundwater supplies. Water demand include domestic, industrial, irrigation, and livestock uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Contact Information

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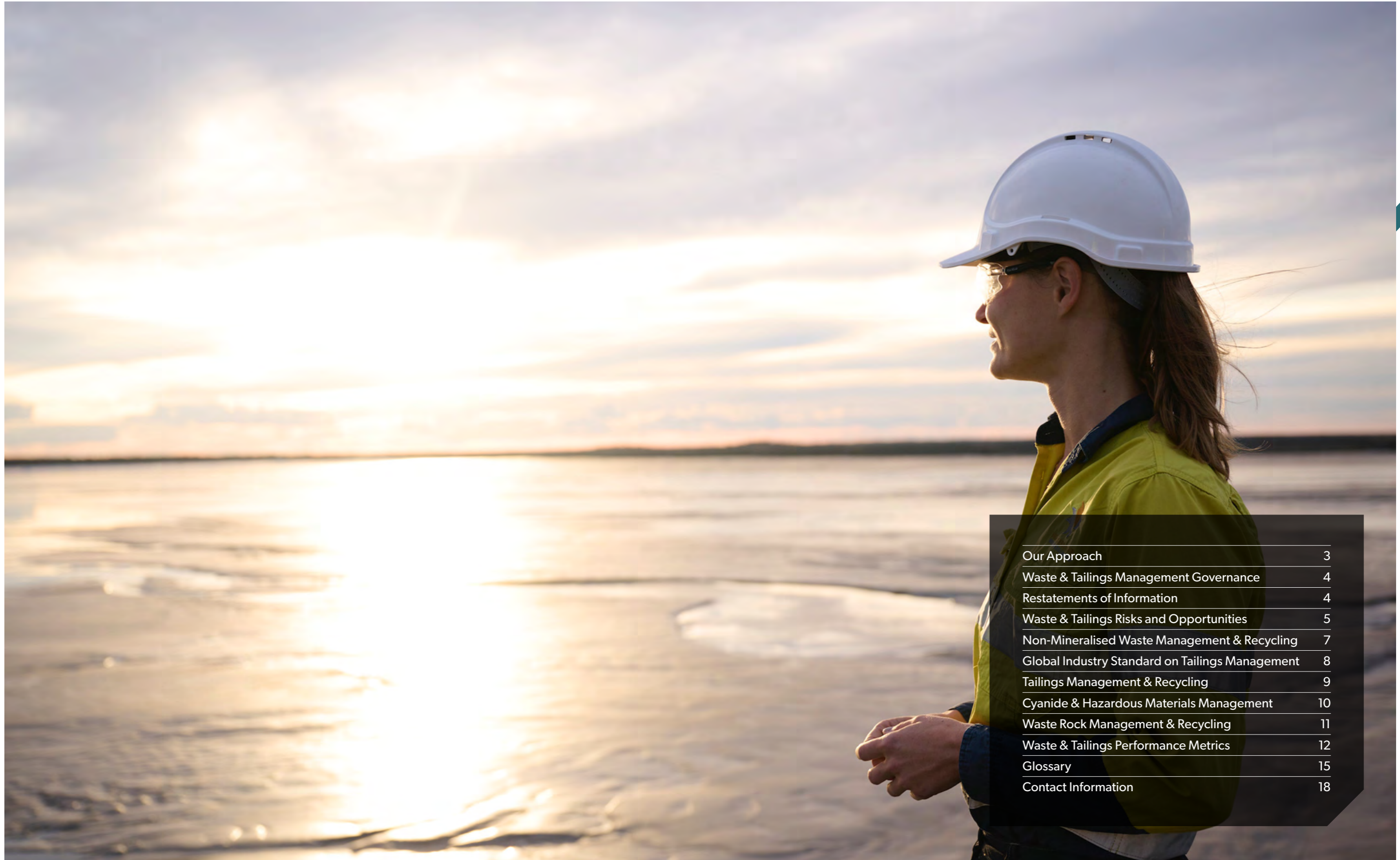
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General Enquiries	info@nsr ltd.com
Media Officer	mediaofficer@nsr ltd.com
Compliance	compliance@nsr ltd.com
ASX Code	NST
Share Registry	MUFG Corporate Markets (formerly known as Link Market Services)

Additional Website ESR Disclosures:

- Environment & Social Responsibility Approach
- People & Culture at Northern Star
- Safety & Critical Risk Control at Northern Star
- Community Engagement & Support at Northern Star
- Supply Chain Management at Northern Star
- Environmental Management at Northern Star
- Climate Change at Northern Star
- Water Security at Northern Star
- Waste & Tailings Management at Northern Star
- FY24 Performance Data Tables
- FY24 GRI, SASB and UN SDG Alignment Index
- FY24 Tailings Disclosure Report
- FY24 Biodiversity Values





Our Approach	3
Waste & Tailings Management Governance	4
Restatements of Information	4
Waste & Tailings Risks and Opportunities	5
Non-Mineralised Waste Management & Recycling	7
Global Industry Standard on Tailings Management	8
Tailings Management & Recycling	9
Cyanide & Hazardous Materials Management	10
Waste Rock Management & Recycling	11
Waste & Tailings Performance Metrics	12
Glossary	15
Contact Information	18

Waste & Tailings Management



Our Approach

Northern Star has aligned the management of tailings storage facilities (TSF) with international requirements and complying with regulatory requirements. Our Tailings Management Standard sets out the minimum requirements that all Operational sites must maintain in relation to the design, construction, operation and decommissioning of any TSF's.

Each Operation site has a nominated person responsible for the management of tailings, and each site manages their

individual facilities. Northern Star's corporate team provide the necessary governance and oversight to monitor that all tailings management processes and practices are meeting the Company standards. This oversight also includes regular third-party audits.

Where possible Northern Star recycles tailings into underground pastefill, with all remaining tailings being deposited into designated storage structures.

10.4^K
FY24 Total Non-Mineralised Waste Recycled (T)

22.7^K
FY24 Non-Mineralised Waste Generated (T)

4.2^M
FY24 Total Mineralised Waste Recycled (T)

130^M
FY24 Total Mineralised Waste Generated (T)

1.7^M
Waste Rock Recycled (T) in FY24

2.6^M
Tailings Recycled for Pastefill (T) in FY24

0
Number of Material Tailings Loss or TSF Incidents in FY24

71
FY24 Total Hazardous Waste Generated (T)

In order to maintain transparency and openness in disclosures, Northern Star publishes a list of all of its TSF structures, both operational and decommissioned, in a detailed report on the Company's website. Information is provided in relation to its location, design and construction (where known for legacy structures), operating status, and other pertinent information.

Waste & Tailings Management Governance

Northern Star's Board has oversight of waste and tailings management risks and opportunities within Northern Star, assisted by the Environmental, Social & Safety (ESS) Committee's oversight of operational risks and the Audit & Risk Committee's oversight of the Company-wide risk management framework.

In addition, the Committee will refer any material environmental, social and safety related risk exposures or potential risks identified to the Audit & Risk Committee, for review and perform such other functions as assigned by the Board.

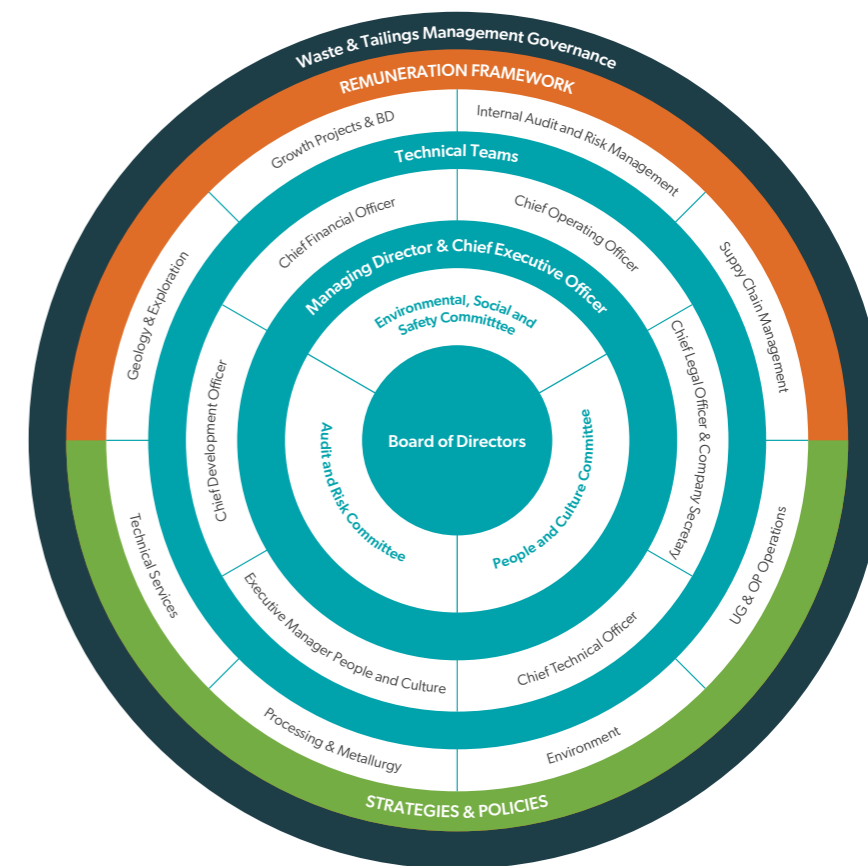
Development and delivery of Northern Star's waste and tailings management function is overseen by the ESS Committee and the Chief Operating Officer (reporting to the Managing Director and to the Board), supported by the technical services, operational, environmental and legal teams in the corporate office and on our sites.

The Company's waste and tailings management governance structure is shown in Figure 1. Waste and tailings related matters are considered quarterly by the Board through its ESS Committee meetings.

The function of the Committee is to assist the Board in implementing the Company's, environmental, social and safety strategies and ensuring responsible and sustainable business practices. In particular, the Committee will assist the Board in its oversight, monitoring and review of the Company's practices in the following key areas:

- environmental management
- long term environmental, social and safety strategic goals.

Figure 1 Waste & Tailings Management Governance



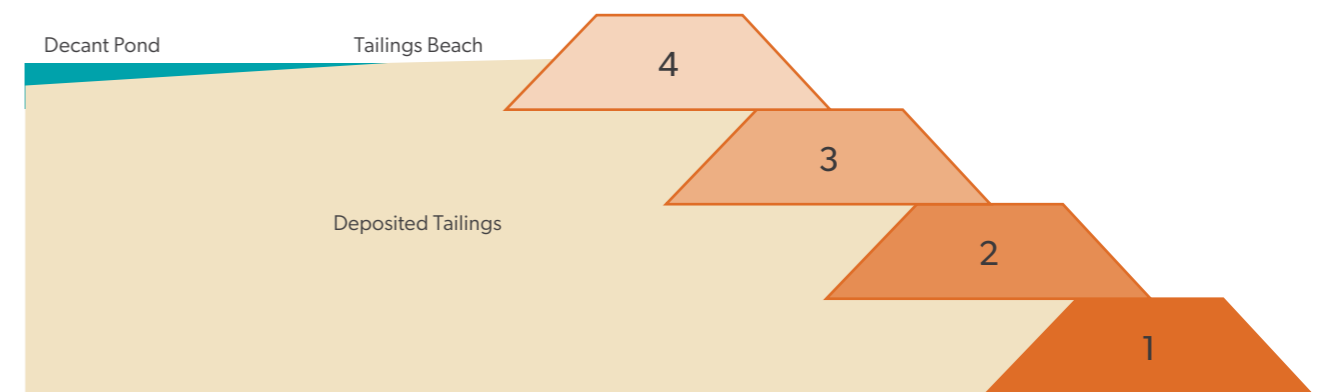
Restatements of Information

Nil restatements from our FY23 Sustainability Report.



Tailings Surface, Kalgoorlie Operations, Kalgoorlie Production Centre, Western Australia

Figure 2 Typical Upstream TSF Construction (Cross Section)



The majority of the TSF's at the Australian assets are upstream turkey's nest construction as shown in Figure 2 above. The Pogo TSF is a Dry Stack Tailing Facility (DSTF). The DSTF is

constructed with filtered tailings and waste rock from underground. Both materials are truck dumped, then reshaped and compacted and forms a "dry stack".

Water is limited in the DSTF by directing runoff around the DSTF. This ensures that the phreatic surface is minimised. This makes the DSTF very stable.

Waste & Tailings Risks and Opportunities

The focus on tailings management and storage has increased significantly over the last 15 years with a number of dam failures outside Australia and Alaska USA. Understanding the hazards of each TSF enables Northern Star to implement appropriate management strategies to minimise the risks.

A key part of our management strategy is to have an Engineer of Record (EOR) who is responsible for the design and construction of the TSF. The EOR ensures that the site operational management plans align with the design and construction to ensure that the TSF is maintained in accordance with the design.

When designing a TSF, the EOR takes into account the required size, location, climate, weather and seismology of the area. Location considerations also take into account people downstream of potential flow paths in the event of a dam failure.

Dam break studies are undertaken to determine the most likely failure mechanism and the location in the TSF that would cause the most damage if a failure occurred. This determines the risk of a particular TSF and then management strategies are implemented depending on the risk.

In the Eastern Goldfields in general risk to people is relatively low due to the low population density, however this does not preclude Northern Star from consulting with local stakeholders to ensure they understand the risk and management strategies.

The management strategies also include monitoring. This is to ensure that the site is maintaining the TSF in accordance with the EOR requirements and that the TSF is performing to designed expectations. Vibrating wire piezometer, water monitoring bores, radar, and prisms are all used depending on the TSF Risk. Cone Penetration

Testing units (CPTu) are utilised to understand whether the water levels in the operational TSF are at an acceptable level.

High water levels in TSF (phreatic levels) have contributed to some significant tailings failures. Vibrating wire piezometers and CPTu are an important method of checking the levels. Results from monitoring devices are gathered monthly with some sites using remote telemetry systems to allow online real time results. Northern Star is progressing to have all active TSFs with online real time monitoring in the future. This will enable the sites to use Trigger Action Response Plans (TARPs) to respond to online monitoring that shows movement outside of control limits.



Dry Stack Tailings Facility, Photo Credit: Kiera Mews, Principal Environmental Advisor, Pogo Operations, Pogo Production Centre, Alaska

Global Industry Standard on Tailings Management

Northern Star intends to align with the Global Industry Standard on Tailings Management (GISTM) over time, ensuring that all new tailings storage facilities align to GISTM on a risk-based approach, and use the principles moving forward. GISTM was developed by a collaborative group of industry experts, including academics, consultants and mining companies.

Governance is important to ensure that all stakeholders understand the TSF and risks surrounding the TSF and its operation and this is provided through topic areas of GISTM.

Northern Star considers that its current performance-based risk-informed approach is consistent with best practice standards and is appropriate for Northern Star’s operations.

Figure 3 GISTM Topic Areas



In May 2024 we commenced an audit process whereby at the end of Q1 FY25 all sites will have had their operational TSFs and TSFs under construction assessed as part of a GISTM audit. The aim of this audit is to develop a detailed base line, where gaps could be identified and quantified against the 77 specific requirements of GISTM, with the intent of developing formalised action plans as needed.

During FY25 Northern Star anticipates that the action plans will be fully considered, and all sites will have completed documentation reviews and updates. An area of high priority focus for Northern Star will be KCGM due to the scale of the tailings dam structures and their proximity to the populated Kalgoorlie-Boulder township.

Tailings Management & Recycling

Tailings are a combination of the fine-grained (typically silt-sized) solid materials remaining after the recoverable gold has been extracted from mined ore, together with the water used in the recovery process. Northern Star deposits tailings material into four different types of tailings facilities across its operations.

- Paddock – style facilities: Most utilised in arid environments and consist of dams with walls constructed from compacted earthen material, slurry waste and water.
- In-pit facilities: These are used where open pit mining voids have been successfully mined of all ore and are then used for deposition and filling with tailings.
- Dry stack facilities: These facilities require water to be removed from the tailings before it is transported to the tailing’s facility.
- Underground tailings backfill (or paste fill): Tailings material can be utilised on some sites as a component of cemented hydraulic backfill underground. Most of the fines and liquid are removed from the tailings at onsite paste backfill plants and the remaining paste is delivered underground for use in controlled conditions.

Facility Design & Operation

Northern Star has aligned the management of tailings storage facilities (TSF) with international requirements and complying with regulatory requirements. Our Tailings Management Standard¹ sets out the minimum requirements that all Operational sites must maintain in relation to the design, construction, operation and decommissioning of any TSFs.

The objectives of the Standard are to:

- Ensure that Northern Star effectively manages its TSFs through all phases of their life cycle in compliance with all applicable laws and regulations and in alignment with accepted industry practice.
- Establish the minimum geotechnical, hydrological, geochemical and environmental design and performance criteria for all facilities.
- Mandate the development, compliance and routine updating of key tailings management procedures and documents.
- Define the minimum resource requirements for effective management and critical review of all facilities.
- Promote transparent, fair and consistent tailings management approaches and practices across all sites and regions.
- Define readiness to respond to emergency events including necessary recovery action.

Each Operation site has a nominated person responsible for the management of tailings, and each site manages their individual facilities. Northern Star’s corporate team provide the necessary governance and oversight to monitor that all tailings management processes and practices are meeting the Company standards. This oversight also includes regular third-party audits.

Tailings Recycling

Northern Star will continue to utilise tailings as backfill for underground. Tailings are neutralised to ensure cyanide is at a safe level and then we combine this material with cement. This mixture is then pumped underground and called backfill paste.

The paste is pumped into open voids and when it consolidates it provides support for the rest of the mine. This material can be driven on, ground support can be installed and can be mined against.

This is utilised at most of the Northern Star underground mines and is a great way of reducing the amount of material stored in the site’s TSF.

At Pogo, paste fill is also utilised, however as part of the DSTF Potentially Acid Forming (PAF) waste rock is encapsulated with the filtered tailings. The waste rock is dumped at the DSTF and then it is covered with filtered tailings and compacted. This prevents water and air coming in contact with the PAF material. This prevents any chemical run off from the PAF material.

¹ Tailings Management Standard (NSR-TS-006-StA)

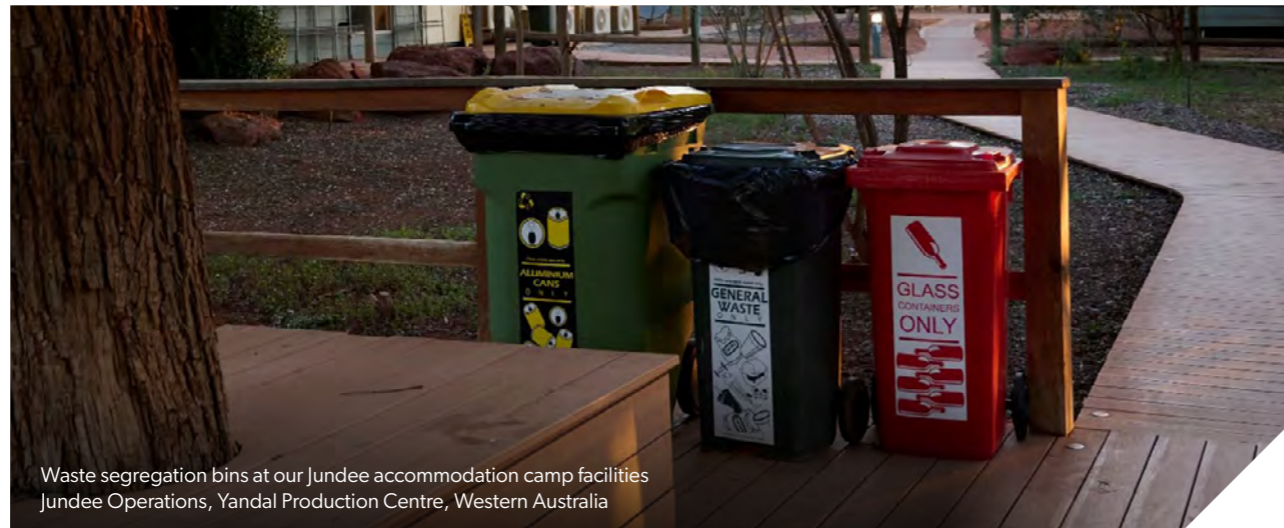
Non-Mineralised Waste Management & Recycling

Northern Star adopts the Reduce-Reuse-Recycle approach to waste management and reviews opportunities to reduce waste volumes and recycle spent materials at our operating facilities. Our Waste Management Global Standard² outlines our planning, management and monitoring of waste material. The various waste streams are identified at each site and reviewed annually to ensure all wastes are identified and managed appropriately and in line with relevant legislation, regulations,

licences and permits. When new waste streams are identified, they are risk-assessed to identify the most appropriate disposal option.

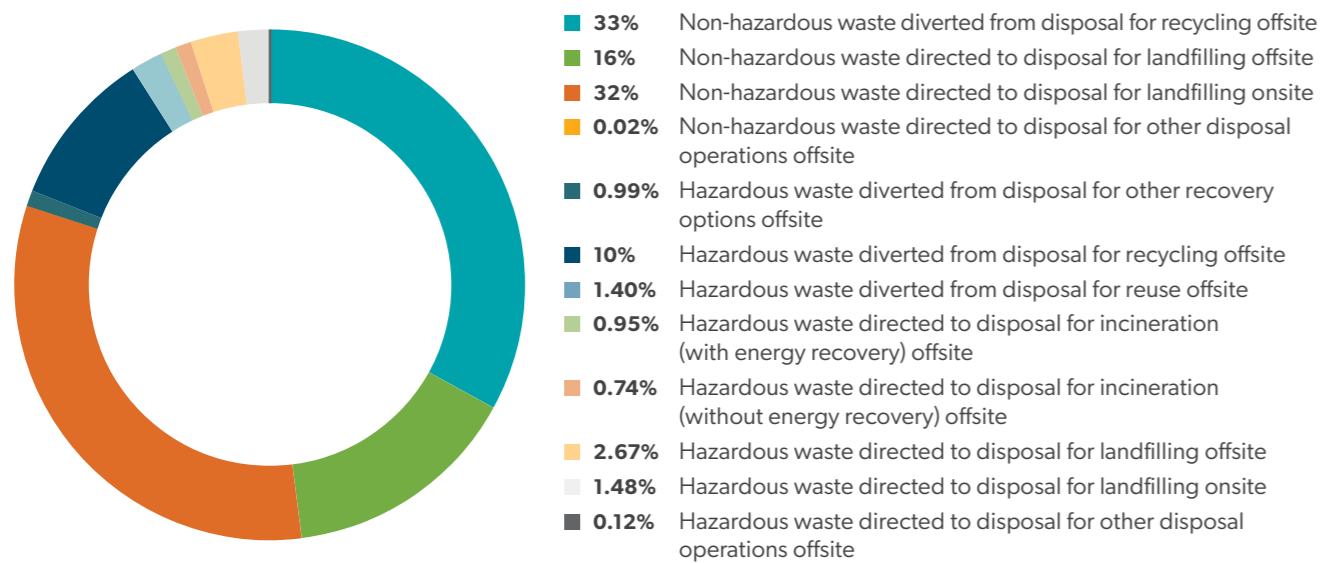
All on-site disposal, be it in a purpose-built landfill facility, within waste rock dumps or tailings facilities, is conducted in accordance with the relevant permits and approvals. Conditions associated with these permits and approvals are followed to ensure disposal is safe and without environmental impact.

Hazardous wastes and hydrocarbons are segregated, stored, treated and disposed of in accordance with its hazardous properties and legal requirements³. Medical wastes are collected, stored and disposed of in a manner that complies with regulations and mitigates risk to human health. Cyanide wastes are treated, transported and disposed of in accordance with legal requirements and the Northern Star Cyanide Management Standard⁴.



Waste segregation bins at our Jundee accommodation camp facilities
Jundee Operations, Yandal Production Centre, Western Australia

Figure 4 Distribution of Waste in FY24 (Excluding Waste Rock & Tailings)



² NSR-ENV-007-STA – Waste Management Global Standard. Refer to page 10 for more information.

³ Offsite waste oil and DIBK disposal data from NST Thunderbox stores has been estimated for a portion of FY24, due to waste contractor reports being unavailable for that period (does not include offsite waste disposal or recycling from contractors or other categories where records were available)

⁴ NSR-TS-001-STA – Cyanide Management Standard

Cyanide & Hazardous Materials Management

Northern Star uses sodium cyanide in gold processing to dissolve gold and silver from the ore, enabling them to be extracted and recovered. Focused on protecting our workforce, surrounding communities and the environment from potential impacts associated with our use of sodium cyanide, Northern Star's Cyanide Management Standard provides guidance for our sites on how to manage the risks associated with the supply, handling, transport and storage of sodium cyanide.

The standard aims to ensure that both safety and environmental aspects are considered, and legislation is complied with. Each year a third-party audit is undertaken on each site against the Cyanide Management Standard. Any gaps discovered are assigned to a responsible person with a required action date and monitored through our reporting and action

systems. Any actions of significance are reported to the Board via the ESS Committee.

Due to its proximity to the City of Kalgoorlie- Boulder, Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) became a signatory to the International Cyanide Management Code (Cyanide Code) in 2008. The Cyanide Code is a voluntary industry program focused on the safe and environmentally responsible management of cyanide. KCGM has since recertified its compliance with the Cyanide Code in 2012, 2015, 2019 and 2022. As a signatory to the Cyanide Code, KCGM demonstrates that all activities associated with the use of sodium cyanide comply with the Cyanide Code and are managed in accordance with industry best practice.

As part of KCGM's signatory status, the site completes a Cyanide Code audit every three years. In between

a gap analysis is conducted against the Cyanide Code to ensure they are remedied as soon as practicable. The Cyanide Code has a high level of governance requirements and with the proximity of KCGM to Kalgoorlie-Boulder, Northern Star recognises the importance of stakeholder consultation within its governance structure.

Our other sites are not signatories to the Cyanide Code but are regularly assessed to ensure they are compliant with the Northern Star Cyanide Management Standard and are aligned with the principles and standards of the Cyanide Code.

Northern Star requires all suppliers and transporters of sodium cyanide to our operations to be signatories to the Cyanide Code, providing confidence that they are adequately managing the risks associated with their activities relevant to communities and the environment.



Sun setting over our Thunderbox Operations TSF
Thunderbox Operations, Yandal Production Centre, Western Australia

Waste Rock Management & Recycling

Waste rock is material mined from our Operations that does not contain gold at economic levels. This material must be disposed of to waste rock landforms or backfilled into open pits or underground voids. Northern Star undertakes waste optimisation and reduction programs continuously for our existing mining Operations as well as any proposed new mines. While the tonnes of waste rock produced per annum may appear to be large, they are significantly reduced by our waste optimisation programs.

Volumes of waste generated and placed in waste dumps is reduced through a number of different ways including application of optimal mining methodologies, underground versus open pit mining, waste rock recycling and in-pit waste rehandling. Where generation of waste rock is unavoidable, backfilling is Northern Star's first preference as

it eliminates the need to create permanent landforms in the environment, while decreasing safety risks associated with open voids. However, backfilling relies on availability and distance to barren voids and is not always practical.

Alternative uses may also include:

- utilisation for roadbase, stemming and backfilling at some sites (KCGM's Mt Charlotte underground mine backfill via a conveyor)
- Run of Mine (ROM) pad management - used for demarcation, barriers and managing wet surface conditions
- Traffic management – used for windrows, barriers, demarcation areas

Waste & Tailings Performance Metrics

		FY24	FY23	FY22
Non-Mineralised Waste Recycled				
Batteries (T)		96	37	37
Co-Mingled Waste (T)		146	256	266
General Waste (T)		2	65	49
Scrap Metal (T)		7,317	3,856	2,949
Toner Cartridges (T)		-	-	-
Tyres (T)		336	-	160
Waste Oil (T)		2,472	1,724	1,670
Total (T)		10,369	5,938	5,130
Non-Mineralised Waste Disposed				
Co-Mingled Waste (T)		653	682	612
General Waste (T)		10,809	8,991	12,413
Tyres (T)		487	1,694	1,623
Waste Oil (T)		381	265	311
Total (T)		12,330	11,631	14,959
Hazardous Waste				
Directed to disposal (T)		71	20	356
Directed to recycling (T)		-	-	-
Mineralised Waste				
Waste Rock sent to Waste Dumps	Kalgoorlie Production Centre (T)	70,449,509	86,553,507	70,816,917
	Yandal Production Centre (T)	30,273,413	30,613,636	19,803,016
	Pogo Production Centre (T)	855,002	763,561	769,686
	Total (T)	101,577,924	117,930,704	91,389,619
Waste Rock Recycled for Backfill	Kalgoorlie Production Centre (T)	1,497,547	1,422,218	3,895,509
	Yandal Production Centre (T)	169,678	210,343	881,295
	Pogo Production Centre (T)	-	-	-
	Total (T)	1,667,225	1,632,561	4,776,804
Total Waste Rock Generated	Kalgoorlie Production Centre (T)	71,947,056	87,975,724	74,712,426
	Yandal Production Centre (T)	30,443,091	30,823,979	20,684,311
	Pogo Production Centre (T)	855,002	763,561	769,686
	Total (T)	103,245,149	119,563,264	96,166,423
Tailings Sent to Tailings Storage Facilities (TSFs)	Kalgoorlie Production Centre (T)	17,089,731	18,022,507	19,158,977
	Yandal Production Centre (T)	6,489,744	6,190,053	5,458,936
	Pogo Production Centre (T)	1,365,171	853,753	719,362
	Total (T)	24,944,647	25,066,312	25,337,275
Tailings Recycled for Pastefill	Kalgoorlie Production Centre (T)	959,180	939,774	634,544
	Yandal Production Centre (T)	1,599,362	833,096	311,818
	Pogo Production Centre (T)	-	375,040	314,640
	Total (T)	2,558,541	2,147,910	1,261,002
Total Tailings Generated	Kalgoorlie Production Centre (T)	18,048,911	18,962,280	19,793,521
	Yandal Production Centre (T)	8,089,106	7,023,149	5,770,754
	Pogo Production Centre (T)	1,365,171	1,228,793	1,034,002
	Total (T)	27,503,188	27,214,222	26,598,277
Mineralised Waste (Waste Rock & Tailings)	Total Sent for Disposal (T)	126,522,571	142,997,016	116,726,894
	Total Recycled (T)	4,225,766	3,780,471	6,037,806
	Total (T)	130,748,337	146,777,487	122,764,700
Tailings Composition	Non-Cyanide Containing Tailings (T)	1,365,171	1,228,793	1,034,002
	Cyanide Containing Tailings (T)	26,138,017	25,985,430	25,564,275



Surface haulage at our KCGM Operations, KCGM Operations, Kalgoorlie Production Centre, Western Australia



Tailings storage facility inspections at Carosue Dam Operations, Kalgoorlie Production Centre, Western Australia

About This Disclosure

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2023 to 30 June 2024. This disclosure supports the Northern Star Annual Report FY24 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance received, or a topic not assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: [Environment & Social Responsibility \(ESR\) Reporting](#)

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 22 August 2024. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at esgperformance@nstrld.com

Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance.

There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Assumptions

Nil.

FY24 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY24 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd FY24 Annual Report, FY24 Modern Slavery Statement and FY24 Corporate Governance Statement.

Throughout this disclosure there are references to supporting information on our website which the reader is encouraged to read. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

Glossary

ABN

Australian Business Number

ADEC

Alaskan Department of Environmental Conservation

ASX

Australian Securities Exchange, trading as ASX

ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

Au

The chemical symbol for gold

Audit & Risk Committee (ARC)

Audit and Risk Sub-Committee of the Board

B or bn

Billion

Board

Board of Directors

Company

Northern Star Resources Ltd ABN 43 092 832 892

CPTu

Cone penetration test unit allows for the analysis of the geotechnical behaviour of fine granular tailings and soils

contractors

Externally employed contracted workers engaged by the Company to support operations

Corporations Act

Corporations Act 2001 (Cth)

Cyanide

A chemical compound that consists of a group of compounds that contain a carbon atom triple bonded to a nitrogen atom.

Director

A director of the Company duly appointed under the Corporations Act

DSTF

Dry stack tailings facility

employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

EOR

Engineer of Record. A professional engineer who is engaged to be responsible for the design and construction of tailings storage facilities.

ESG

Environment, Social & Governance

ESS

Environmental, Social & Safety

ESS Committee

Environmental, Social & Safety sub-Committee of the Board

FY

Financial Year ending 30 June

GISTM

Global Industry Standard on Tailings Management

GRI

Global Reporting Initiative

Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

K or k

Thousand

KCGM

KCGM means Kalgoorlie Consolidated Gold Mines Pty Ltd, a wholly owned subsidiary of the Company, which operates the Super Pit and Mt Charlotte Underground Mines and Fimiston Processing Plant.

Kg or kg

Kilogram

kl

kilolitre; one thousand litres

KMP

Key Management Personnel

KPI

Key Performance Indicator

Limited Assurance

Audit and assurance undertaken by an external auditor on whether the data or statements made in this report have been prepared in accordance with GRI

M or m

Million

ML

Mega-litre; one million litres

NSMS

Northern Star Mining Services

Officer

An officer of the Company defined under the Corporations Act

Oz

Ounce

PAF

A rock that the potential to form acid.

Phreatic surface

The position between the zone of saturation and the zone of aeration in the tailings dam

ROM

ROM or Run of Mine pad is an area where ore is stockpiled in preparation for feeding into the processing circuit, typically through a crushing and grinding circuit first.

SASB

Sustainability Accounting Standards Board

shareholder

A shareholder of Northern Star Resources Ltd

stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

T or t

Tonnes; one thousand kilograms

TSF

Tailings Storage Facility

UN

United Nations

UN SDGs

The United Nations Sustainable Development Goals

US or USA

United States of America

WA

Western Australia

\$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6556



Julius Drake-Brockman, Open Pit Manager,
Thunderbox Operations, Yandal Production Centre, Western Australia

Contact Information

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Media Officer mediaofficer@nsr ltd.com

Compliance compliance@nsr ltd.com

ASX Code NST

Share Registry MUFG Corporate Markets
(formerly known as Link Market Services)

Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

Environmental Management at Northern Star

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

FY24 Performance Data Tables

FY24 GRI, SASB and UN SDG Alignment Index

FY24 Tailings Disclosure Report

FY24 Biodiversity Values

