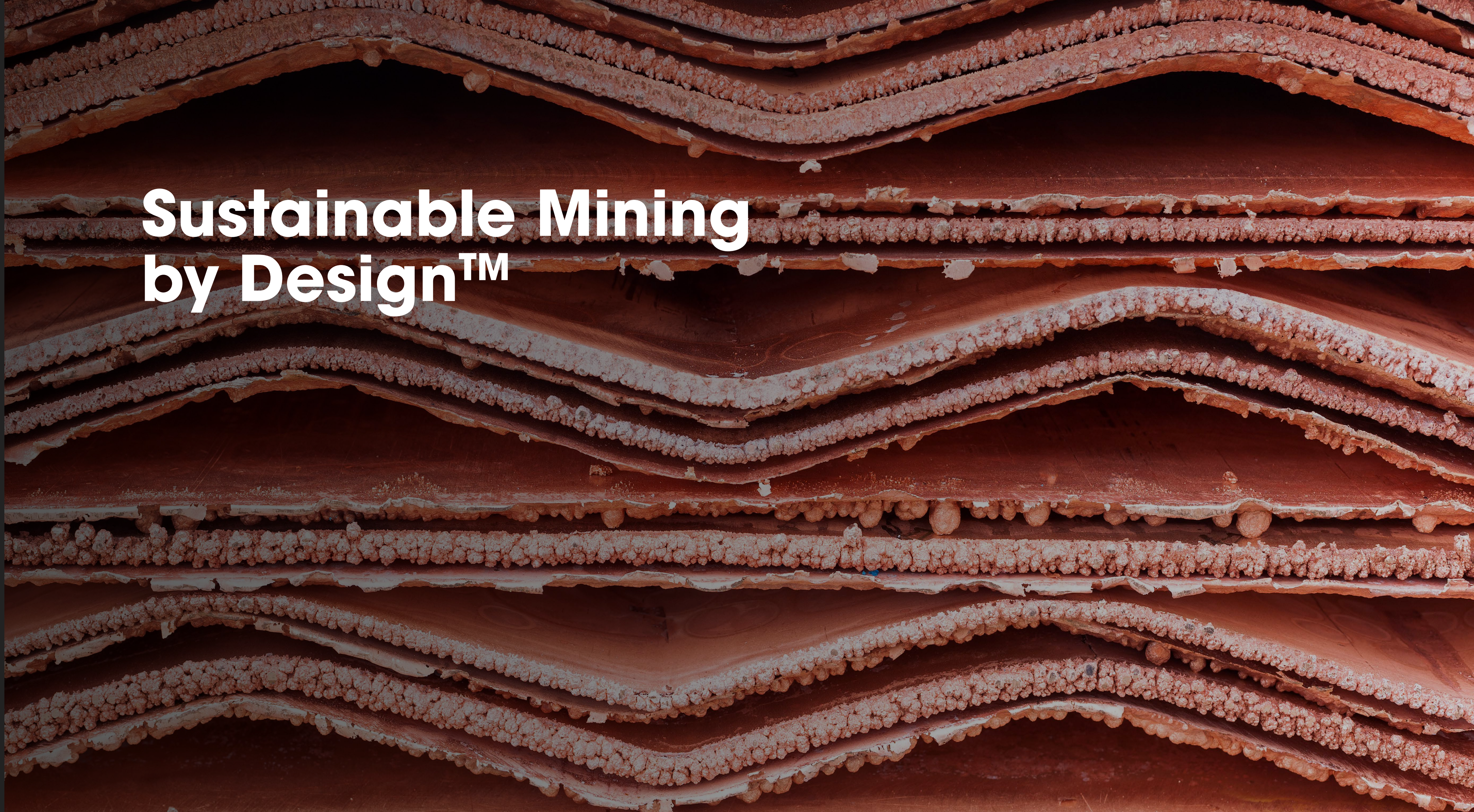


PRIORITISING YOUR ESG PERFORMANCE FOR THE FUTURE OF MINING

STANTEC'S SUSTAINABILITY SERVICES



Sustainable Mining by Design™





What is Sustainable Mining by Design™?

WE'RE FOCUSED ON MEETING THE NEEDS OF TODAY WITHOUT COMPROMISING THE NEEDS OF THE FUTURE FOR YOUR BUSINESS, COMMUNITIES, AND THE NATURAL ENVIRONMENT.

WHY IS IT IMPORTANT?

Encouraging equity and fairness

We lead with inclusion to promote diversity and achieve equity. Whether we're designing layouts and equipment that are accessible or incorporating Indigenous and local communities in the workforce and supply chain, we prioritise equitable designs.

Realising connections between the economy, society, and environment

Our focus on sustainability is built on the premise that positive economic results are possible when we effectively manage our environmental, social, and governance affairs.

Understanding the limits of the world's ecosystems

We see the big picture in the context of the world's carrying capacity, shifting demographic trends, and evolving economic realities. Planetary boundaries and decreasing ore grades require efficient operations to reduce waste and protect the environment.

Having a long-term and multi-generational view

We're always thinking about community. Decisions we make today can benefit future generations.

[Learn more](#) about shifting your organisation toward a culture of Sustainable Mining by Design™.

2,000+

Mining Professionals Worldwide

500+

Mining Professionals in Australia

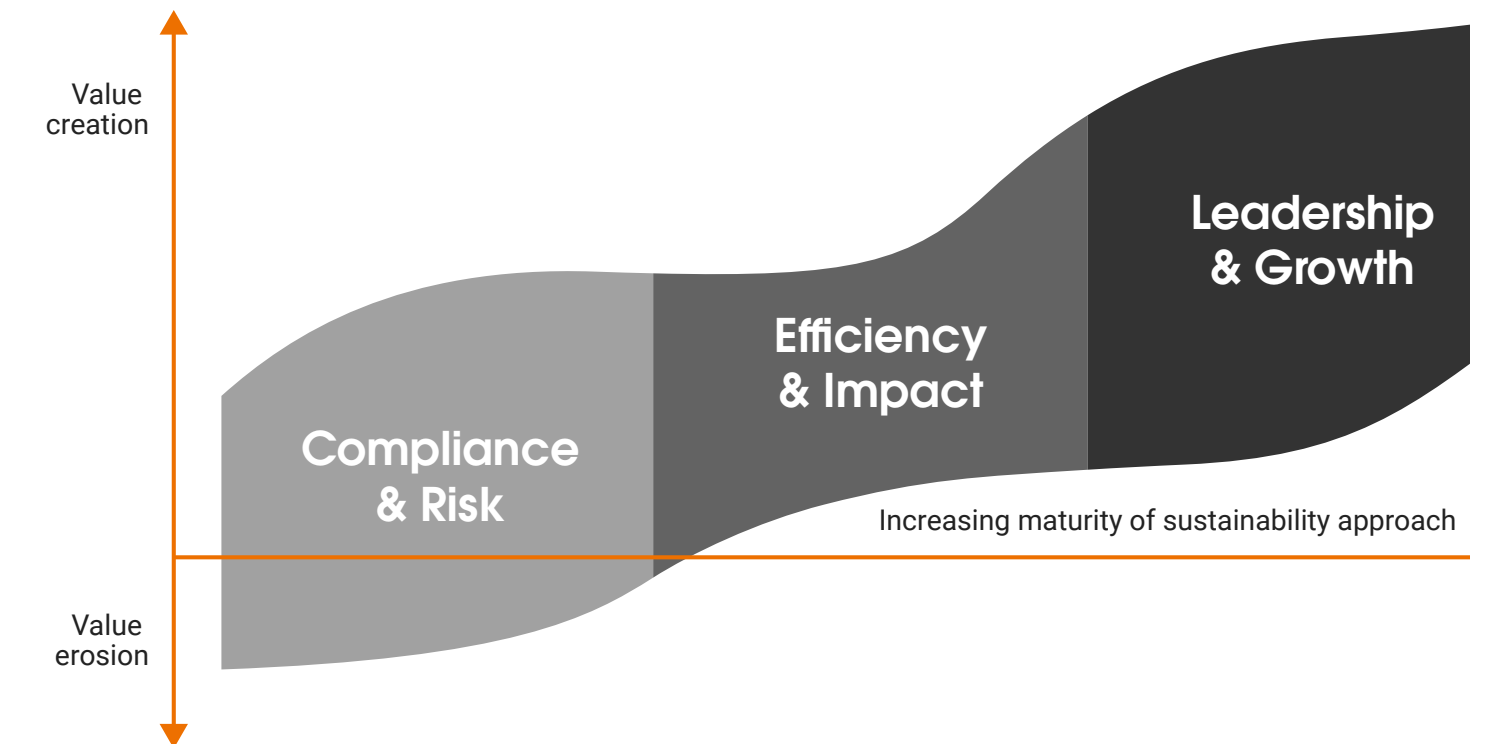


Sustainability for business growth

When done properly, sustainability isn't an added cost— it's a collection of practices and solutions that reduces waste and drives profitability.

Companies who adopt a sustainability-focused mindset can harness multiple benefits:

- Reduced waste and expenses
- Efficient use of limited resources like water and energy
- Increased employee productivity through inclusion and diversity
- Increased profitability, capital attraction, and lower cost of capital
- Competitive edge for hiring and reduced attrition rates
- Improved risk management
- Improved market position through innovation



A strategic imperative,
both morally and commercially



Sustainable Mining by Design™ for every project

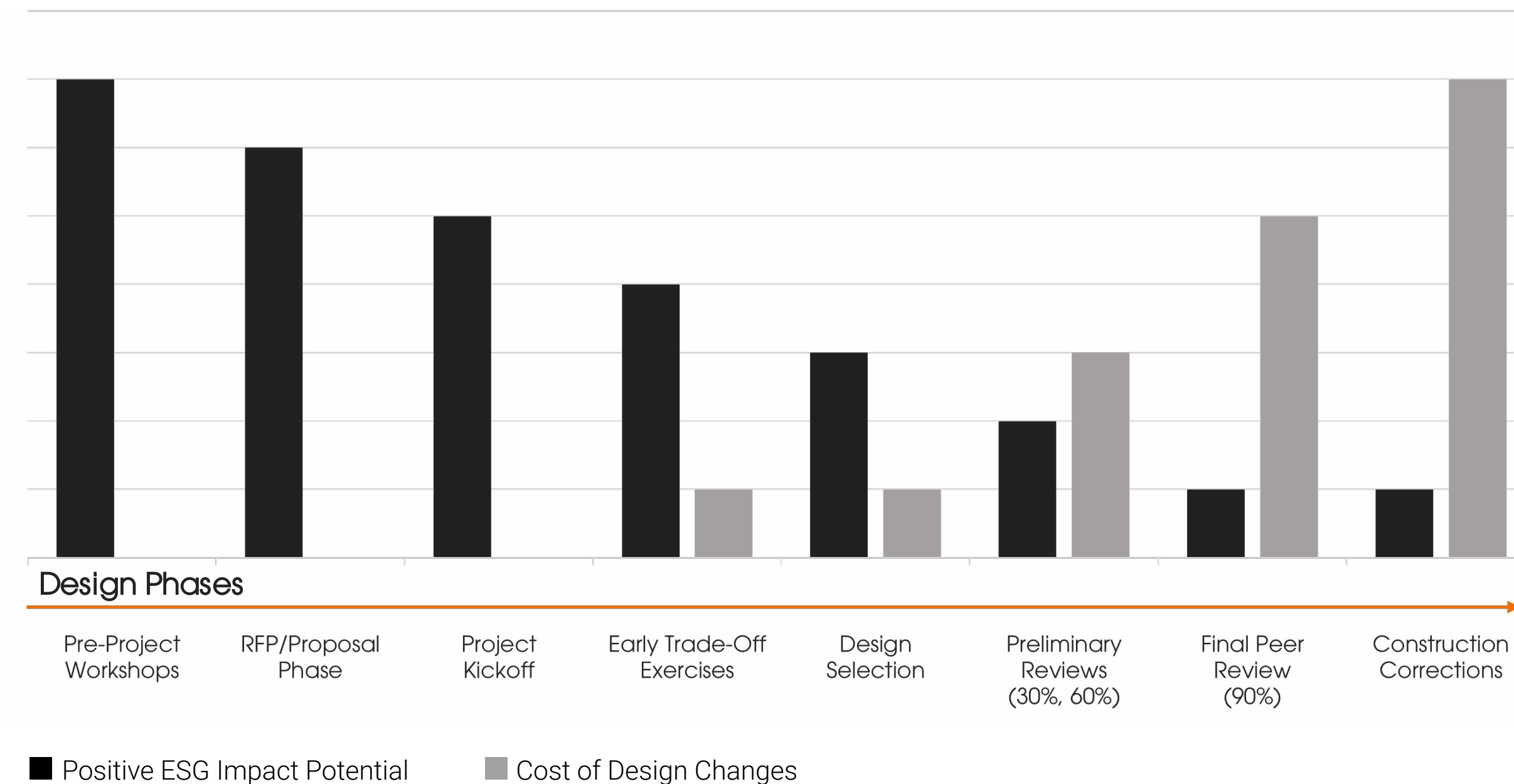
Whether you're building a new mine or optimising an existing operation, the best opportunities for positive ESG impacts occur early in the design process.

Project Kickoff. We'll work with your team to map out key site-specific ESG needs and opportunities. This establishes design criteria that guide the planning and design phases. We'll consider your specific stakeholders, regulatory bodies, economic factors, equity and fairness, community awareness, and environmental factors.

As part of the **Preliminary Review**, peers consider if the triple bottom line was implemented in the design.

The **Final Peer Review** is a last check by project management to confirm the design addresses your ESG needs.

Opportunities for ESG Impact



Evaluating your ESG potential early and often helps maximise positive impact.



Your trusted partner in sustainability

WE LEAD BY EXAMPLE.
WE PLEDGE TO BE CARBON NEUTRAL BY 2022, THEN NET ZERO BY 2030.

Ranked amongst the most sustainable corporations in the world

2022 Corporate Knights Global 100

[Learn more.](#)

Recognised among the world's best employers

2020 Forbes

[Learn more.](#)

#6
Ranked sixth of five hundred in most green design firms

2021 Engineering News Record

[Learn more.](#)

One of the worlds top female-friendly companies

2021 Forbes

[Learn more.](#)

#4
Ranked fourth of five hundred in best mining firms

2021 Engineering News Record

[Learn more.](#)

Named on Bloomberg's gender-equality index

2022 Bloomberg

[Learn more.](#)

ESG FRAMEWORKS

Our experts are well-versed in global sustainability frameworks.

Global Industry Standard on Tailings Management (GISTM)

Leadership in Energy and Environmental Design (LEED)

Towards Sustainable Mining (TSM)

United Nations Sustainable Development Goals

WELL



Transforming your mining ESG risks into opportunities

RESPONSIBLE CONSUMPTION AND PRODUCTION

We know earth's resources are limited. Maximising efficiency and leveraging supply chain opportunities are ways we can keep mining activity within the world's carrying capacity.

- Efficient Mineral Processing Design
- Debottlenecking Studies
- Supply Chain Strategy Development
- Procurement and Logistics Management
- Circular Economy Solution Development

ENVIRONMENTAL AND BIODIVERSITY COMPLIANCE

From obtaining permits to rehabilitating closed sites, we're here to help. We have specialised environmental services teams who are versed in the requirements for Australia.

- Ecological Impact Studies
- Environmental Planning and Permitting
- Progressive Rehabilitation and Closure (PRAC™)
- Asset Transformation
- Ecosystem Restoration
- Air Quality Monitoring
- Fishery and Aquatics Programs

TAILINGS AND WASTE MANAGEMENT

Reducing and safely storing mine tailings is critical, as waste remains long after the mine has closed.

- Alternative Tailings Disposal (ATD) Strategy and Design
- Tailings Storage Facility (TSF) Construction and Monitoring
- Legacy Tailings Dam Closure and Remediation
- Tailings Dam Safety Review
- Minimised Waste Rock Strategy and Design



We're with you every step of the way.

WATER STEWARDSHIP

As one of the most important components of a mine site, our water management services run deep.

- Water Supply, Storage, Management, and Discharge Strategy
- Water Audits
- Water Balance and Groundwater Modeling
- Wastewater Treatment Plant Design

HEALTH AND SAFETY

We'll help you mitigate risks to keep your mine staff and the surrounding community safe. Whether we're implementing autonomous solutions or writing a safety manual—we incorporate safety into all stages of the mine life-cycle.

- Prevention through Design Application, Review, and Training
- Constructability Review
- Remote Sensing Design
- Remote and Autonomous Equipment Strategy and Implementation
- MSHA Training
- Health and Safety Program Development

STAKEHOLDER ENGAGEMENT

Mining impacts many groups. Whether it's workers, investors, consumers, or the nearby community, thinking about stakeholders throughout the mine's life is crucial to maintaining a social license to operate.

- Indigenous and Community Engagement Services
- Materiality Assessment Development
- Capacity Building Program Development
- Community Utilities Strategy and Design
- Inclusive On-site Facility Design

NET ZERO EMISSIONS

Whether we are improving energy efficiency or implementing renewable and clean energy alternatives, we're here to guide your energy transition journey toward Net Zero.

- GHG Inventories, Audits, and Accounting
- Large-Scale Renewable Energy Infrastructure Design
- Energy Efficiency Value Engineering
- GHG Reduction Road Map Development
- Electric and Alternative Power Mobile Equipment Fleet Transition
- Autonomous Transport Design
- Ventilation Efficiency and Heat Recovery
- Hydraulic Hoisting
- Climate Risk and Resiliency Assessments





Putting people first

Create Jobs in Remote Communities

Eucla Basin, Western Australia, Australia

Located in remote Western Australia, the Eucla Basin is rich in mineral sands. We worked to help the client gain the approvals required to begin construction. We created the environmental management plan, the conceptual mine closure plan, a carbon emission offset strategy, an environmental risk assessment, and the environmental scoping study that contributed to the project's approval.

When it opens, this new mining site will create employment opportunities for the surrounding communities and will go on to fund conservation work within the Great Victoria Nature Reserve.

[Learn more.](#)

Support Local Agriculture

Pilbara, Western Australia, Australia

By concentrating seawater through solar and wind evaporation, BCI Minerals can sustainably produce high purity sodium chloride salt and sulphate potash fertilizer, supplying our growing agricultural and chemical industries. Currently, in the construction phase, we're working with BCI Minerals and other engineering contractors to deliver a range of packages, including a salt wash plant and stockyard, a sulphate of potash process plant, non-process infrastructure, a seawater station, pump stations, overland pipelines, jetty construction, evaporative ponds, crystallisers, and power and communications.

[Learn more.](#)

Reduce Risk, Reuse Water

Pilbara, Western Australia, Australia

We were brought in to manage the detailed design of a pipeline to transport dewatered saline water from the remote Pilbara region mine to an aquifer approximately 45 kilometres (28 miles) away. When complete, this transportation pipeline will protect the natural environment around Roy Hill's Pilbara mine from saline water pollution. The saline water will be stored and used at a later date for things like dust mitigation. [Learn more.](#)



Rendering of a debottlenecking study and Detailed Design.





Helping you do right by the environment

Create Renewable Energy Solutions

Leinster & Mount Keith, Western Australia, Australia

We're currently working as the project management consultant for TransAlta on the development and execution of two solar farms and a battery energy storage system that will serve this goal. reduce BHP's scope 2 electricity greenhouse gas emissions by 540,000 tonnes of CO2e (carbon dioxide equivalent) over the first 10 years of operation. This renewable energy project is the first solar photovoltaic build in Australia for TransAlta, the first large-scale onsite solar farm and battery that BHP has commissioned, and supports BHP's emissions reduction targets—delivering lower-carbon, sustainable nickel to its customers.

[Learn more.](#)

Protect Wildlife

Barrow Island, Western Australia, Australia

About 50 kilometres off the northwest coast of Australia is Barrow Island. The 202 square kilometre island is a unique combination of one of the most important conservation sites in Western Australia and Australia's richest oil fields. We've been working with Chevron to conduct flora and fauna assessments and plan for rehabilitation and protection. Our team trialed using remote sensing techniques - particularly aerial imagery and object-based image analysis (OBIA) – to collect data via aircraft flyover, completing assessments almost without needing to land on the island. [Learn more.](#)

Plan for Safe and Strategic Closure

Kalgoorlie, Western Australia, Australia

We worked with The St. Ives Gold Mine (SIGM) to revise the current mine closure plan so that it adhered to new guidelines. It incorporates regulatory compliance, data gap analysis, mine rehabilitation audit and monitoring, environmental assessments, conceptual landform design and infrastructure demolition processes. Once completed, the plan was submitted to the Western Australia Department of Mines, Industry Regulation and Safety (DMIRS) and now acts as an example for mine closure compliance in the region. [Learn more.](#)

Save Regionally Unique Species

Confidential Client

Stygofauna—aquatic invertebrates found all over the world in suitable aquifers—are typically regionally unique. In Western Australia (WA), they can be an important consideration in the regulatory process for environmental approvals of mining and energy projects. We collaborated with an energy client, operating in a sensitive environment in northern WA, to enhance sampling methods for stygofauna as part of the client's overall environmental management program, particularly their efforts to protect these diverse and important subterranean ecosystems. [Learn more.](#)





FEATURED PROJECTS

Cyclone Mineral Sands Project

Eucla Basin, Western Australia, Australia

Remote Manage Aquifer Recharge North Project

Pilbara, Western Australia, Australia

Mardie Salt and Potash Production Project

Pilbara, Western Australia, Australia

The Northern Goldfields Solar Project

Leinster & Mount Keith, Western Australia, Australia

St. Ives Gold Mine Closure and Remediation Plan

Kalgoorlie, Western Australia, Australia

Barrow Island Vegetation Recognition

Barrow Island, Western Australia, Australia

Detecting Stygofauna in Groundwater Using eDNA

Western Australia, Australia



DESIGN WITH COMMUNITY IN MIND

At Stantec, we help mining companies in accordance with applicable professional standards access natural resources and conduct business in an environmentally sustainable way. From front-end studies to mine closure and reclamation, we keep clients at the forefront of a rapidly changing industry.

With decades of creative solutions for clients and communities around the world, our approach is defined by a commitment to communities, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

CONNECT WITH US



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