

ESG and Sustainability

WITH ALPHINITY INVESTMENT MANAGEMENT



September 2026

Thematic	ESG topics	Sector
Sustainability	Energy transition, water, biodiversity, First Nations & Indigenous Peoples	Materials

From the ground up: How we assess miners within our sustainable investing approach

The mined commodities that underpin modern life and the low-carbon transition, from copper in wind turbines to iron ore in steel and lithium in batteries, must first be extracted from the ground. That reality creates an inherent sustainability tension: the same commodities that enable electrification, infrastructure and energy storage can also generate carbon emissions, disturb land, draw on water resources and affect the communities living alongside mining assets. Within the mining industry, these sustainability outcomes can vary widely. In our view, this nuance is best assessed through a bottom-up framework that links each mined commodity to its real-world end use and evaluates how well each company manages the impacts of its operations.

Context

Our sustainable funds, the **Alphinity Sustainable Share Fund** and the **Global Sustainable Equity Fund – Active ETF**, aim to invest in companies that we assess to have a net positive alignment with the United Nations Sustainable Development Goals (SDGs), meet our minimum ESG criteria, and are also identified as undervalued and within an earnings upgrade cycle.

We believe that mining, done responsibly and directed to the right commodities, contributes meaningfully to the achievement of the SDGs, and represents a compelling investment opportunity for our clients. The commodities a company mines, the end-markets those commodities serve, and the way in which operations are managed all determine whether its net contribution to sustainable development is positive or negative.

Why mined commodities matter

Economic contribution

Mined commodities are central to energy security, industrial policy and economic competitiveness, and remain one of Australia's largest sources of export income.

A\$372bn

Aus resource exports, 2024–25

3x by 2040

projected lithium demand

+65% by 2040

projected nickel demand

+50% by 2040

projected rare earth demand

Workforce and regional development

A major employer and source of govt. revenue. Strong Traditional Owner relationships underpin land access and benefit sharing.

312,200

people directly employed in mining in 2024–25

A\$432bn in company tax and royalties over the past decade.

Low-carbon transition enablers

Decarbonisation is mineral intensive: grids, storage and electric transport need a step-change in supply.

3bn+ t

minerals and metals needed globally for the clean energy build-out

Graphite, lithium and cobalt output may need to rise ~500% by 2050.

Sources: IEA; World Bank; Minerals Council of Australia; Jobs and Skills Australia; Australian resources and energy export data, 2024–25.

Building a balanced view of sustainable mining

Mining plays an important role in the modern economy, but assessing whether it is “sustainable” is not straightforward. Many mined commodities are essential to infrastructure and the low-carbon transition, but extraction and processing also carries significant environmental and social impacts.

Most available research focuses either on the broad importance of critical minerals in the net zero transition or on these negative impacts of mining. It does not provide a holistic picture to assess how mined commodities contribute to sustainable development, based on both their actual end uses and how responsibly companies manage the risks associated with producing them.

To address this, in 2024 we developed a framework, building on our existing approach to SDG alignment, that looks at both sides of the sustainability story. It seeks to recognise the positive role that mined commodities can play in supporting the SDGs, while also considering the impacts of mining operations. For our Sustainable Funds, this deeper assessment helps build conviction around the selected mining companies in our portfolios by giving us a clearer basis to analyse their positive sustainability contribution, monitor key ESG risks, and exercise our voice as active owners to encourage better risk management over time.

How our SDG Alignment Framework works for mined commodities

A company’s alignment with the SDGs is assessed using Alphinity’s proprietary methodology. The framework considers both the positive and negative alignment of a company’s products and services against the 169 targets that underpin the 17 goals. Each revenue item is assessed for its contribution to sustainable development and assigned a materiality weighting of low, medium or high, depending on how significant and direct that contribution is.

The Sustainable Compliance Committee is responsible for approving companies for inclusion in our sustainable investment universe and oversees the SDG and ESG analysis that supports those decisions. Comprising two Portfolio Managers and two external sustainability experts, the committees ensure our internal SDG Alignment Framework is being applied consistently and brings perspectives to help assess the sustainability case of a company.

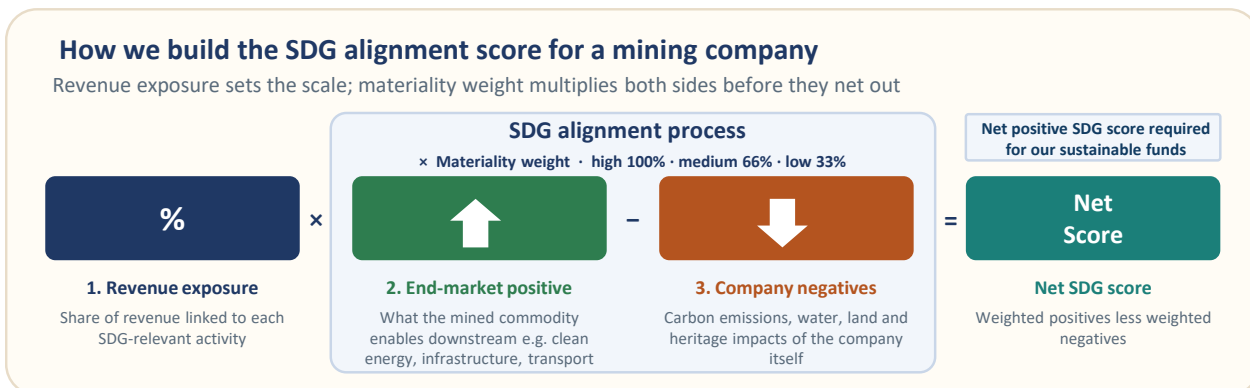
A company’s net SDG score must be positive for a company to be approved by the Committee. Following committee approval, stock selection for inclusion in the portfolio is made by the portfolio management team applying the Alphinity investment process. Refer to our [Sustainable Investing Fact Sheet](#) for further detail on our approach.

Defining positive and negative SDG alignment

We do not apply a blanket exclusion to mining; instead, we assess whether the overall SDG contribution is net positive after taking both sides of the equation into account.

- **Positive SDG alignment:** We start by assessing the positive SDG contribution of each mined commodity. This means looking at what the commodity is used for, and whether those uses are likely to support sustainable development outcomes. This gives us a consistent starting point that can be applied across mining companies with similar commodity exposure.

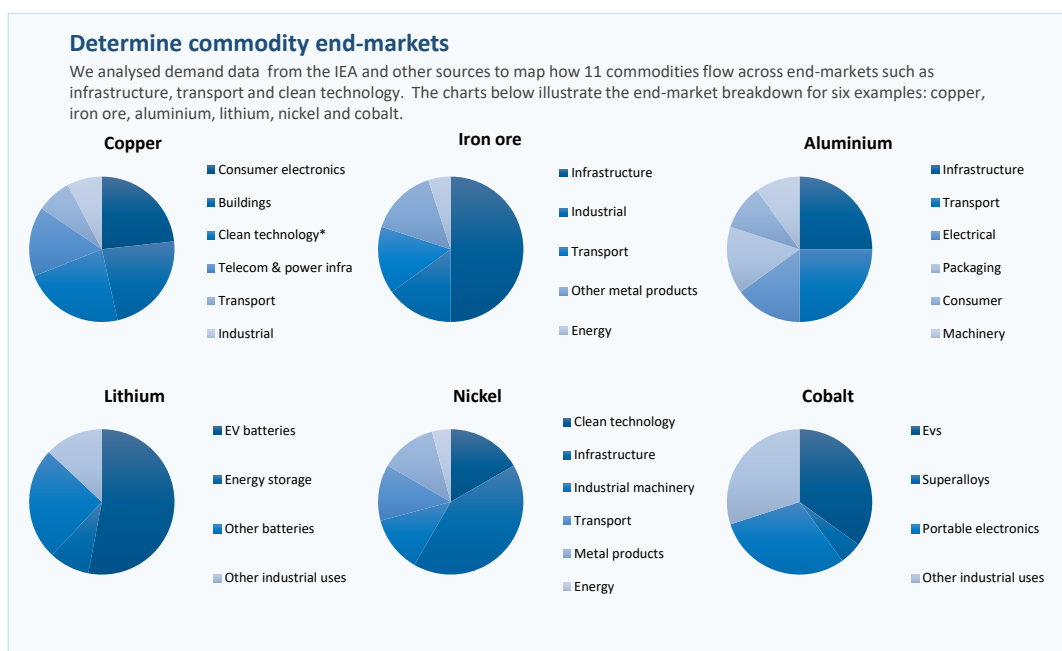
- **Negative SDG alignment:** We then weigh this positive contribution against the impacts of extraction and processing, including water use, land disturbance, biodiversity loss, carbon emissions, and effects on communities, First Nations and Indigenous Peoples.



There are two important exceptions. Thermal coal and gold are excluded above a 5% revenue threshold for the Alphinity Global Sustainable Equity Fund – Active ETF, and 10% for the Alphinity Sustainable Share Fund. Thermal coal is excluded given the availability of cleaner energy alternatives and its large emissions impact; gold is excluded because its end-use is mostly jewellery and wealth storage, which lacks clear alignment to the SDGs.

Step 1. Map mined commodities to their end-markets

We have compiled a range of research sources to understand the key end-markets for mined commodities, and update this data annually. This allows us to map where global demand is coming from and assess which end uses most clearly support sustainable development outcomes. For example, copper has a diversified demand profile across consumer electronics, infrastructure and clean technology each representing around 30% of demand. Lithium has a different demand profile, with around a quarter linked to infrastructure and a further quarter to transport, while the remainder is split across electrical applications, packaging and machinery. Iron ore is more concentrated, with around half of global demand directly tied to infrastructure and construction.



Sources: Alphinity, *Clean technology end-market data reported by the *International Energy Agency Critical Mineral Outlook (2025)*.

Step 2. Weight end-markets towards the SDGs

Each end-market for a mined commodity is assigned a materiality weighting of low (33%), medium (66%) or high (100%), based on the SDG targets it most directly supports. For example, lithium used in battery storage, electric vehicles or grid infrastructure receives a higher weighting because it directly supports SDG 7 (Clean Energy) and SDG 11 (Sustainable Cities). Lithium used in consumer electronics can still support SDG 8 (Decent Work) through its contribution to digital technology, but the SDG link is less direct, so it receives a lower weighting.

Once these materiality levels are documented in our SDG Alignment Framework methodology, we apply them consistently across mining companies based on their revenue. The chart below shows the resulting positive alignment for a sample of mined commodities. It illustrates how end-market exposure can strengthen or moderate a company's SDG alignment.

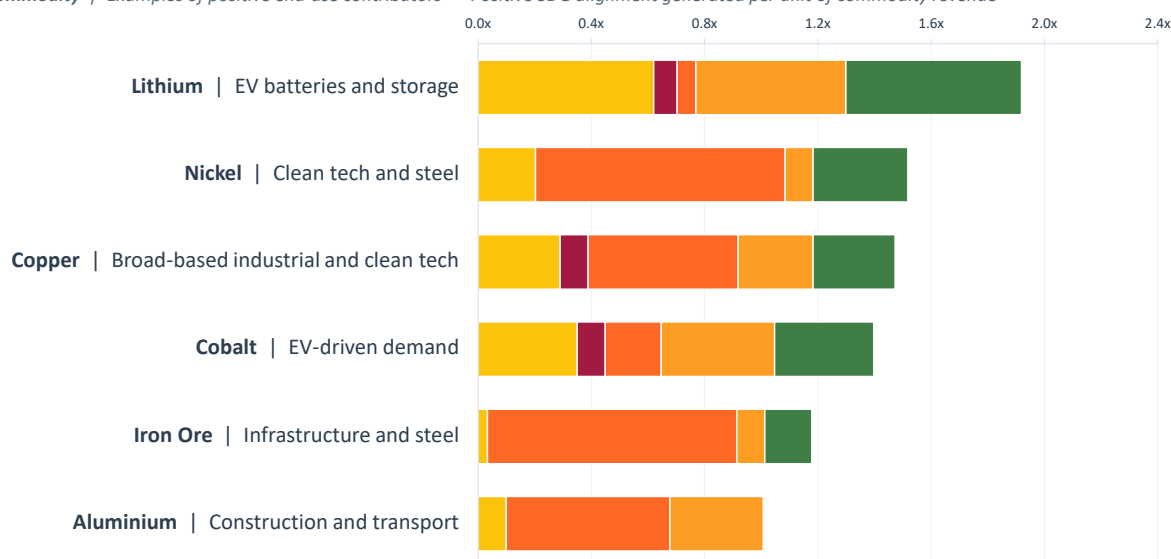
Lithium and nickel score most strongly because a high proportion of demand is linked to clean-technology applications, including battery storage, electric vehicles and grid infrastructure. By contrast, iron ore records a more modest positive alignment. This does not mean iron ore lacks economic or developmental importance; rather, its main end-market — general construction and infrastructure — does not receive the same additional weighting for clean-technology uses.

Because positive alignment is tied to real end-market demand, these commodity scores can change as clean-technology demand grows. For example, in our January 2026 review, updated demand data lifted the clean-technology end-use shares for lithium, nickel and copper, increasing their positive SDG contribution.

SDG alignment ratio by mined commodity

Commodity | Examples of positive end-use contributors

Positive SDG alignment generated per unit of commodity revenue



SDG 7 Clean energy

SDG 8 Decent work

SDG 9 Industry & infrastructure

SDG 11 Sustainable cities

SDG 13 Climate action

Step 3. Assess negative alignment, company by company

This is where the framework becomes more company-specific. Two miners producing the same commodity can receive different SDG scores depending on where they operate, the nature of their assets and how well they manage material risks.

We start with standardised negative alignments for common mining impacts, including water use, cultural heritage, carbon emissions, biodiversity loss, land disturbance and rehabilitation risk. These are then adjusted to reflect company-specific factors, such as operating region, asset characteristics and the management quality.

This means a company's negative alignment can also change over time, but only where there is evidence that asset-level management has improved. We also consider the continuing impact of legacy controversies and stakeholder concerns. For example, even where relationships with Traditional Owners are improving, a history of poor cultural heritage management may still support negative alignment to SDG 11 until there is clear evidence of remediation, stronger controls and sustained trust. These judgements link directly to our ESG risk management and stewardship priorities in Steps 4 and 5 below.

This table shows how we apply these company-level adjustments in practice, starting with a baseline view of mining impacts and then refining the assessment using company-specific evidence on asset exposure, management quality, stakeholder outcomes and whether the land-use impact is improving or deteriorating over time.

NEGATIVE FACTOR	BASE ASSUMPTION	WHAT DECREASES THE SCORE FURTHER	WHAT CAN IMPROVE THE SCORE
SDG 6 Water impacts	Low materiality for nickel, hard-rock lithium, copper and manganese, reflecting the water intensity inherent to their processing routes	Water intensity above commodity peers, heavy groundwater reliance in stressed catchments, low recycling rates, or community disputes over withdrawals	Desalination or seawater supply, disclosed recycling and reuse rates, and asset-level intensity targets with progress shown against them
SDG 11 Cultural heritage	Low materiality where systemic heritage risk sits across a whole region, currently applied to Pilbara iron ore	Heritage incidents or loss of significant sites, agreements struck without free, prior and informed consent, or terms that limit Traditional Owner voice	Co-management arrangements, a genuine partnership model and renegotiated agreements with Traditional Owners
SDG 13 Carbon emissions	Low materiality across all mining for embodied emissions, rising to high for thermal coal given its value chain impact	An asset with a large emissions footprint, intensity above industry average for that commodity, or no credible decarbonisation plan	Meeting all seven NZIF criteria, with asset-level net-zero pathways and interim targets tested below group level
SDG 15 Biodiversity	Low materiality for open-cut bauxite, copper and iron ore, reflecting surface disturbance and proximity to sensitive areas	Operations within or adjacent to protected areas, a high share of revenue from open-cut mines, or rehabilitation lagging well behind land disturbed	Outcome-based rehabilitation evidence such as verified species return, disclosed biodiversity sensitivity scoring, and siting away from sensitive areas

Step 4. Assess minimum ESG criteria

In addition to achieving net positive SDG alignment, each mining company must meet Alphinity's minimum ESG criteria. This is assessed through our in-house ESG Framework, which separates two related questions: **how material is the issue for the company**, and **how well is the company managing it**. Materiality is assessed across more than 40 ESG topics, considering the size, likelihood and time horizon of the financial, operational, reputational or strategic risk or opportunity.

For miners, this typically means issues such as climate transition and physical climate risk, water, biodiversity, cultural heritage, workforce safety, community relations, rehabilitation and governance are likely to be highly material because they can affect approvals, operating continuity, costs, social licence and long-term asset value.

We then assess management quality for each material issue, looking at the strength of governance, policies, controls, disclosure, incident history, remediation and evidence of improvement. This distinction is important: a company can have high inherent ESG exposure but still meet our minimum ESG criteria if the risks are well understood, actively managed and subject to strong accountability.

Conversely, weak management of a material issue, unresolved controversy, poor disclosure or inadequate remediation can lift the residual ESG risk level and may make a company unsuitable for inclusion, even where its commodity exposure supports a positive SDG outcome. The combined view of materiality and management informs the company's ESG risk level from 1 (low) to 4 (avoid), with Level 4 companies not investible. For miners that pass the threshold, the remaining material issues become ongoing monitoring and active ownership priorities. Refer to our [ESG Policy](#) for further detail on our approach.

Step 5. Active ownership

Active ownership is the mechanism that connects our sustainability analysis with our minimum ESG criteria.

For miners, a positive SDG contribution from commodities is only investable for our sustainable funds if the company also demonstrates that material ESG risks are being appropriately managed. The overlap is deliberate: the same issues that can reduce a miner's SDG score, such as water impacts, cultural heritage, emissions and biodiversity, are also the issues that inform our ESG risk level, and monitoring and stewardship priorities.

We aim to steward responsible mining by testing company claims against evidence and encouraging improvement where material risks remain. This is done through direct company engagement, site visits, external stakeholder discussions, collaborative initiatives, escalation and proxy voting. The sections below show how we use site-level research, thematic engagement and formal engagement objectives to inform our company-level view of the ESG and sustainability performance of the stock, which we review on an ongoing basis in conjunction with the investment team.

On-the-ground insights

Site visits are an important part of our role as responsible investors. Seeing mining operations on the ground helps us test company disclosures against operational reality, understand site-level sustainability impacts and ESG risks, and hear directly from local stakeholders.

These insights strengthen our assessment of how companies manage material risks and whether group-level commitments are translating into practice. Over the past 5 years, we have engaged with companies, Traditional Owner groups, community representatives, industry experts and operational teams across eight mining-related research trips. These visits have highlighted three recurring stewardship themes for mining companies

8 mining-related

research trips over the past 5 years

3 stewardship themes

identified across these trips

First Nations, Indigenous Peoples and water

Site visits have deepened our understanding of cultural heritage, water impacts and Traditional Owner perspectives. In 2024, we met with five Traditional Owner groups in the Karratha and wider Pilbara region and participated in a two-day cultural immersion with Robe River Kuruma (RRK) Aboriginal Corporation, including discussion of tangible and intangible cultural heritage and concerns about impacts on the Bungaroo Aquifer. We met again with RRK and Yinhawangka Aboriginal Corporations in 2025, spoke with Kariyarra and Yindjibarndi representatives in Western Australia in 2026, and continue dialogue where Traditional Owner groups have consented. These insights also complement our pilot partner role in the **Dhawura Ngilan Business and Investor Initiative** (see note [here](#)).

Nature, rehabilitation and tailings

Site visits improve our assessment of how companies manage environmental liabilities and rehabilitation. At Brumadinho in Brazil, Vale directors and senior management discussed changes to tailings safety management following the 2019 tailings dam collapse, reinforcing the environmental and social harm caused by catastrophic failures. In Western Australia, South32's Boddington bauxite mine rehabilitation tour helped us understand its vegetation program and the basis for ongoing community concern around deforestation impacts.

Energy transition and mine electrification

Decarbonisation remains a major priority across mining, requiring substantial investment in electrification infrastructure, renewable energy, battery storage and lower-emission fuels. Remote sites face practical constraints in scaling reliable low-emissions power and securing suitable vehicles and equipment. IGO's Nova operation showed an underground mine trialling solar, battery storage and electric vehicles to reduce Scope 1 and 2 emissions, while Pilbara Minerals' Pilgangoora lithium mine demonstrated a mixed-energy approach using gas, batteries, solar and wind. Fortescue's Hive operations centre also illustrated how automation and remote dispatch can support productivity, safety and future decarbonisation pathways.

Measuring progress: Engagement objectives

We use engagement objectives to focus our stewardship on the ESG and sustainability issues that matter most. Each objective sets out the asks, priority level and pathway to progress. These objectives are informed by our ESG Framework, which identifies the most material risks and opportunities for each company. This helps ensure our engagement is targeted, consistent and linked to the issues that are potentially relevant to company performance and operations.

Progress is tracked through the milestone stages below, from the point of issue identification through to mitigation. These stages help us connect our ESG materiality assessment, thematic research, stewardship priorities and SDG alignment work into a practical process for monitoring company improvement over time. The Rio Tinto case study below shows how this active ownership approach has been applied in practice.

Engagement progress: Defining progress through milestones

M0 Identified	M1 Acknowledged	M2 Committed	M3 Implemented	M4 Disclosed	M5 Mitigated
Issue identified and objective established.	Company recognises the issue or concern.	Company commits to addressing the issue.	Strategy, process or action implemented.	Approach and progress disclosed.	Risk reduced or objective substantially achieved.

Rio Tinto — stewardship case study

34 company meetings FY21–26 | 5 active engagement objectives | 3 objectives progressed by milestone

Why do we engage with Rio Tinto?

Rio Tinto has been one of our most sustained stewardship priorities since its role in the destruction of Juukan Gorge, a cultural heritage site, in 2020. As a long-term holding in our portfolio, we chose to use active ownership to advocate for better outcomes rather than simply divest. Between FY21 and FY26, we held 34 meetings with the company and supported this through PRI Advance investor collaboration, expert and community discussions, and time on the ground with Traditional Owner and NGO groups across the Pilbara and Canada.

What are we trying to achieve?

We currently have five active engagement objectives for Rio Tinto: water rights, social licence measurement, workplace culture and psychosocial safety, remuneration structure, and fatality prevention. The objectives most directly linked to the sustainability case are water rights (SDG 6) and social licence and cultural heritage (SDG 11). The remaining objectives support broader ESG risk management and accountability. Three objectives have progressed by milestone, indicating improvement in risk management systems, disclosure or implementation.

How have we pursued escalation?

Proxy voting has been an important escalation tool where progress or accountability has been insufficient. Following Juukan Gorge and ongoing accountability concerns, we voted against selected remuneration and director items, including the 2024 Remuneration Report and the re-election of the Chair of the Remuneration Committee. These votes reflected concerns about remuneration structures, the use of discretion and accountability for material ESG controversies, which remain ongoing discussions with the company.

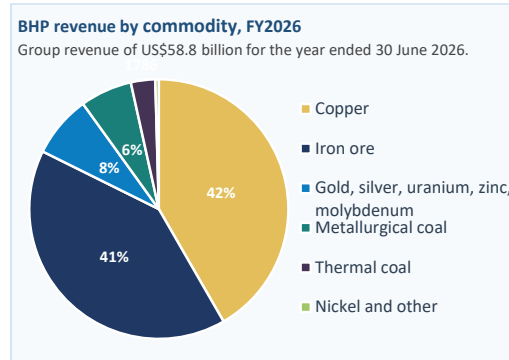
What have we seen so far?

Our continued company dialogue and site-based research indicate progress in some areas, including agreement modernisation, better integration of cultural heritage into mine planning, and examples of Traditional Owner participation in benefit sharing. We have also seen progress across workforce safety, senior executive accountability for ESG risk management, and consideration of water and land impacts. However, these remain ongoing engagement areas. For example, feedback from Traditional Owner groups remains important in assessing whether stronger practices are being applied consistently across Rio Tinto's Pilbara assets, particularly where water, land access, cultural heritage and approvals intersect.

Applying the framework: BHP as a worked example

Step 1. BHP commodity exposure

BHP is a global diversified resources company with operations across Australia, Chile, Canada, Brazil and other regions. The company produces iron ore, copper, metallurgical coal, potash, nickel and a small amount of thermal coal. Its portfolio is materially exposed to commodities needed for electrification, infrastructure, steelmaking and the low-carbon transition. BHP's thermal coal exposure is small, at 3.2% of FY25 revenue, and the company intends to responsibly close this asset in 2030 as it reaches the end of its economic life.

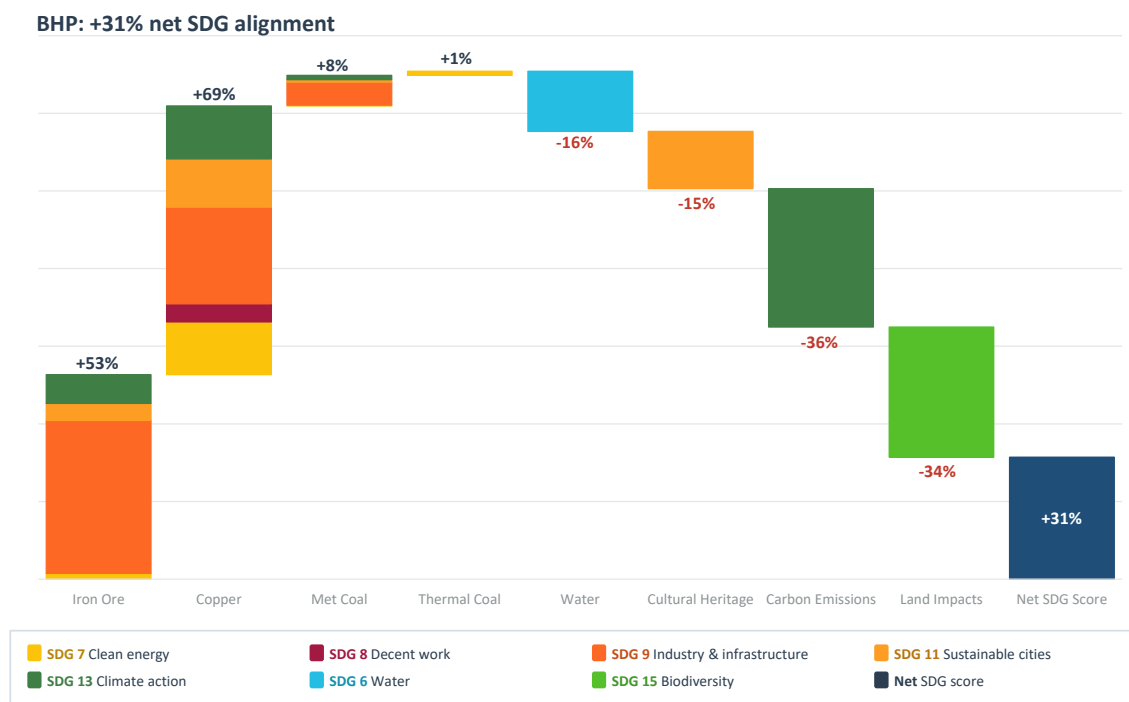


Step 2. Positive SDG alignment

BHP's positive SDG alignment is driven primarily by copper, iron ore and metallurgical coal. Copper has the clearest link to the low-carbon transition, supporting electrification, electricity grid systems, renewable energy and electric transport. Iron ore and metallurgical coal support steel production, which remains foundational to infrastructure, transport systems and climate adaptation infrastructure. On this basis, BHP positively aligns to SDG 7, SDG 8, SDG 9, SDG 11 and SDG 13.

Step 3. Negative SDG alignment

The negative assessment reflects the breadth and location of BHP's operating footprint. We recognise negative alignment to SDG 6 due to water use, particularly in water-stressed regions; SDG 11 due to cultural heritage exposure in the Pilbara (Western Australia); SDG 13 due to operational emissions; and SDG 15 due to land disturbance and biodiversity impacts. These impacts moderate, but do not outweigh, the positive contribution from BHP's commodity mix.



Step 4 and 5. Minimum ESG criteria and active ownership

BHP meets our minimum ESG criteria and is approved for inclusion in the Alphinity Sustainable Share Fund, but remains subject to close monitoring and active stewardship given the scale and complexity of its operating footprint.

In assessing diversified miners, we recognise the importance of addressing historic controversies; however, our view is focused on whether management practice is directionally improving, whether remediation is credible, and whether executive oversight and accountability are sufficiently strong to support ongoing risk management.

For BHP, we view the maturity of its governance, disclosure and management systems as sufficient to meet our ESG criteria, with active ownership used to test progress over time and escalate where risks, controversies or delivery gaps remain material. The graphic below summarises our ESG risk assessment for BHP, showing the key issues we monitor, how we assess management quality, and how these issues translate into stewardship priorities and engagement milestones.

BHP: ESG risk profile and engagement summary

ESG risk rating Level 3 Suitable Scale 1 (Low) to 4 (Avoid)	Active ownership (FY21-FY26) 37 7 3 engagements objectives progressed	Key Materiality Management Milestones M0 identified M3 implemented M4 disclosed
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Environment

Climate change: transition and physical risk High
SDG 13 High priority Moderate

Issue: Credible 30% Scope 1 and 2 target, but the post-2030 fleet pathway is unclear. Physical risk exposure for critical infrastructure.

Obj: Net zero alignment M3 Seeking evidence of the post-2030 fleet pathway.

Waste: tailings safety and compliance High
High priority Leading

Issue: Strong tailings governance, but Samarco remains a live legal issue.

Obj: Samarco remediation M3 Tracking community outcomes and legal resolution.

Water: use and stakeholder interests Medium
SDG 6 Medium priority Leading

Issue: Managed at asset level, with water-stressed exposure and data available.

Monitor only, no objective set.

Responsible closure and just transition Medium
SDG 15 Medium priority Leading

Issue: Closure planning is well developed and Mt Arthur transition is now in implementation.

Obj: Just transition M3 Worker and community planning to 2030 closure for Mt Arthur.

Social

Workforce: health, safety and labour High
High priority Moderate

Issue: Better reporting and site controls, but incidents and harassment persist alongside labour relations activity.

Workplace culture M4 Stronger prevention, good programs and data.

First Nations heritage and engagement High
SDG 11 High priority Leading

Issue: Strong Pilbara practice on FPIC; global consistency is the gap.

Traditional Owner risk M3 FPIC and agreement-making across all assets.

Governance

Board oversight and accountability High
Low priority Leading

Board oversight, ESG accountability, and executive pay linked to material risks including safety and decarbonisation.

No objective set Comfortable with structures and performance

Overall assessment

Level 3 ESG risk, approved for the Sustainable Share Fund. Strong management of the issues above, supported further by governance and accountability structures. Meets our minimum ESG criteria under close monitoring and active stewardship.

Assessment outcome

We ultimately view BHP as a responsible miner because it brings together exposure to strategically important commodities with the governance, operating systems and accountability needed to manage the material ESG risks that come with large-scale mining. The company's position in the Alphinity Sustainable Share Fund is therefore supported by both the net positive SDG assessment and our view of BHP's ESG risk management maturity, with active ownership used to monitor progress, test implementation and escalate where required.

BHP as a responsible miner: our framework in practice

FIVE-STEP SUSTAINABILITY ASSESSMENT



Conclusion

Mined commodities sit at the centre of one of the more complex cases in sustainable investing. A blanket exclusion would overlook mining's essential role in the modern economy and low-carbon transition, while automatic inclusion would understate the material water, land, climate, biodiversity, cultural heritage and community impacts that can arise.

Our bottom-up framework helps us navigate this by assessing what a company mines, the end-markets those commodities support, the asset-level impacts associated with production, and the quality of the company's management response and performance. This allows us to make a more credible assessment of whether a miner's overall contribution to sustainable development is positive. Ultimately, this gives us a more disciplined and thorough approach to view mining companies within our Sustainable Funds.

Importantly, sustainability is not static. A miner's contribution to sustainable development can strengthen or weaken as end-markets evolve, assets change, controversies emerge or are resolved, and management practices improve or deteriorate. By reassessing companies over time and updating our stewardship priorities, the framework helps ensure our view remains responsive to change.

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