

Independent Review Services (IRS)

Capability Statement

LOCATIONS

Melbourne, Australia
Perth, Australia
London, UK
Santiago, Chile
Toronto, Canada

www.enthalpy.com.au



Independent Reviews

Steering successful global capital investment projects across the resource, energy, infrastructure, and finance sectors.

Enthalpy stands at the forefront of empowering capital investment projects, bringing clarity, depth, and precision to the decision-making process.

With a proven record of conducting over 250 Independent Reviews, we deeply understand the significant weight that well-informed decisions play on project success. Our reviews help clients navigate through a maze of information, empowering them to make pivotal decisions with confidence.

When engaged with Enthalpy, owners can:

- Utilise highly experienced hybrid and self-contained teams.
- Receive precise, relevant, and reliable guidance.
- Review transparent and detailed reports.
- Understand business case value proposition and risk profile.
- Have oversight across process, progress, performance, and critical milestones.

Our Independent Review goes beyond a mere tick-box exercise. We conduct comprehensive evaluations, thorough investigations, and expert technical reports tailored specifically to the needs of unique project owners.

To fully grasp each study's unique nature and identify key risks and opportunities, our process involves:

1

People: Engaging experts with direct and recent experience in their specialty areas, bringing a high level of relevant and detailed knowledge to the evaluation process.

2

Processes: Using prescriptive ranking system to pinpoint areas where operations may fall short of optimal performance.

3

Products: Assessing investment proposals and project technical and commercial aspects thoroughly against the established Minimum Standards and proven methods to align with the industry's best practices.

Enthalpy brings standards and systems with a proven track record based on 35+ years of experience.

Why choose Enthalpy



People, Processes & Products

Expertly aligned, from concept to execution, to secure the value-driven outcomes for owners.

Tailored Guidance

Enthalpy is laser-focused on owners', investors', and lenders' strategic objectives, perfectly aligning with unique goals and requirements.

Expert Team

Our team consists of highly experienced professionals who are experts in their respective fields, ensuring the project's success from start to finish.

Value-Driven Results

Our commitment is to deliver results that enhance your bottom line and leave a legacy that benefits your organisation long-term.

End-to-End Solution

We provide a comprehensive suite of services and products to streamline your project and eliminate the hassle of coordinating with multiple providers.

Knowledge Transfer

Enthalpy integrates seamlessly with your team, imparting valuable know-how to strengthen your capability.

Credible & Objective

We bring credibility and objectivity to every project. Your stakeholders can be confident they are dealing with a reputable and reliable partner.

Proven Excellence

With a wealth of experience under our belt, we've weathered the challenges and are well-prepared with industry-proven processes to guide you through any project with confidence and skill.

Innovative Solutions

Leverage our continually evolving proprietary systems to ensure your investment stays aligned with the latest market trends.

Ethical Partners

Trust and ethics are the foundations of our work. You can rely on us to uphold the highest professional conduct and integrity standards.

Building Lasting Bonds

Enthalpy isn't just about the project at hand; we're in it for the long haul, highly invested in building solid and lasting partnerships.



Enthalpy is not just a partner; we are your catalyst for project excellence and lasting success.

Our People



Expert Team

Central to Enthalpy's success are distinguished teams of experts, led by key personnel and backed by a broad global network of over 200 associates.



Key Personnel

Whether you require short-term service deliverables or full-team support, we have reliable expertise and solutions to assist your projects effectively at every stage.

Paul Harper

CEO - Pioneering Strategic Vision

With over five decades of experience, Paul has emerged as a strategic force in the mining sector.

Spearheading Enthalpy's Independent Peer Review Services, he draws his expertise from various facets of the industry, including operational leadership, due diligence, and project evaluation.

Paul has a knack for identifying, developing, and implementing enhanced business strategies and influencing key stakeholders to meet corporate commercial objectives at the Board and Senior Management levels.

He is committed to ensuring the robustness and success of mining ventures, conducting comprehensive reviews of operational and business strategies that focus on maximising potential commercial value.

Involved in numerous high-level operational and technical reviews across various major capital projects and mines, he maintains objectivity, providing unbiased assessments, even in situations where difficult decisions are required.

His key achievements include recruiting and establishing world-class technical mining teams, implementing successful alliance contracts, and actively acquiring various mining assets.

He is a go-to leader for conceptual study updates, feasibility and pre-feasibility studies, contract reviews, and benchmarking projects.

Stephen Williams

GM - Strategic Innovator and Seasoned Advisor

With a career spanning over 30 years, Stephen Williams has a profound grasp of technical, financial, and organisational intricacies in the resources sector, deeply understanding the concerns of company boards and financiers, particularly regarding major capital projects and company transactions.

Stephen has led post-investment reviews on major capital projects, including mining, refining, and smelting operations. He played a pivotal role as a Chief Technical Advisor in evaluating over seventy (70) investment submissions for the Board (Rio Tinto), including notice to proceed assessments for the sale of North Parkes Mines, construction of West Angelas Deposit B mine, autonomous truck, and rail projects.

With extensive international experience in resource project development, mergers, acquisitions and divestments, he significantly enhances Enthalpy's capabilities to review operations. His adeptness extends to overseeing project FS, project management, due diligence, governance reviews, management consulting, and risk analysis in open pits, underground, mineral sands, and downstream processing across diverse commodities like copper, coal, gold, and iron ore.

Affiliated with esteemed industry bodies, Stephen is an influential figure with multidisciplinary experience, strategic insights, and a commitment to innovation that drives impactful changes across the global mining landscape.



Peter Fairfield

Associate - Operational Excellence and Diligent Oversight

Peter is a process-driven, strategically minded mining engineer with 35 years of experience in operations management and consulting, providing technical and operational service and support.

He has demonstrated an exceptional ability to build and manage cross-functional teams to deliver successful project outcomes. Having spent over 17 years in site-based operational and technical roles, and 20 years in multi-discipline due diligence projects, he conducts expert independent technical reviews and consults across all levels of the project pipeline.

Peter leads Independent Peer Review teams, contributing significantly to the review of technical studies and managing and preparing independent reports for internal and public reporting and disclosure.

He is dedicated to implementing risk management programs, enhancing production scheduling, streamlining operational processes, boosting cost efficiency, and improving productivity.

His key strengths include undertaking strategic analysis to identify and evaluate opportunities to deliver business growth, leading multi-discipline project evaluation and technical reviews, proactively engaging and communicating critical issues across all levels of the business, developing systems and processes to support delivery, and fostering cross-functional relationships to achieve business objectives.

■ Project Owners ▾

230+

■ Projects ▾

900+

Detailed CVs can be readily provided upon request for a deeper insight into our team's experience and qualifications.

Excellence & Experience



Processes

Objective and credible insights that make a difference to the bottom line.

Our approach involves comprehensive management advice tailored to support clients throughout the entire lifecycle of their projects, from discovery through to closure.

We delve deep into the questions of whether our clients are embarking on the right projects from the outset and ascertain:

- Is the economic analysis thorough and realistic?
- Does the project meet strategic corporate goals?
- What are the potential opportunities and risks, and how are they managed?
- Is there a contingency plan for unforeseen events or challenges?
- Does it comply with relevant regulations and standards?
- What is the environmental impact?
- Does it adhere to sustainability principles?
- What are the social implications?
- Is it scalable and adaptable to future needs?
- Has there been adequate stakeholder engagement?
- How does it align with long-term goals?

The owners are guided across all crucial project stages, conducting due diligence and comprehensive appraisals at times of construction, expansions, organisational restructuring, reclamations, remediations, closures, mergers and acquisitions and upgrades.

Our People are drawn from a wide array of disciplines, bringing their instrumental expertise to solve the project's unique challenges.

Capabilities include, but are not limited to:

- Caving Operations
- Environmental Assessments
- Geo-metallurgical Studies
- Infrastructure Planning
- Mechanical Engineering
- Mining (underground/open-pit)
- Social Impact Assessments
- Tailings Management

This multidisciplinary approach ensures that we offer not just advice but solutions that are holistic, sustainable, and, most importantly, strategically sound.

Our services are sought
in times of change
across the entire project
lifecycles.

Core Competencies



Products

Pioneering proprietary products proven to elevate performance:



Capital Investment System (CIS)

Methods that guarantee successful investment outcomes and guide your projects from concept to execution.



Project Controls System (PCS)

Maintaining precise control over studies and projects, whilst overseeing and motivating management teams.



Contracts and Procurement System (CPS)

Mandating optimal contracting strategies to ensure seamless implementation and enhanced project efficiency.

Enthalpy's solutions safeguard financial stability and prevent project abandonment.

Services

Our distinctive approach includes a comprehensive suite of services:



Independent Reviews

Conducting rigorous evaluation and providing actionable insights to enhance project performance, manage risks and capitalise on opportunities.



Project Management & Delivery

Orchestrating seamless project execution from inception to realisation, ensuring efficient operations and on-time delivery.



Management Consulting

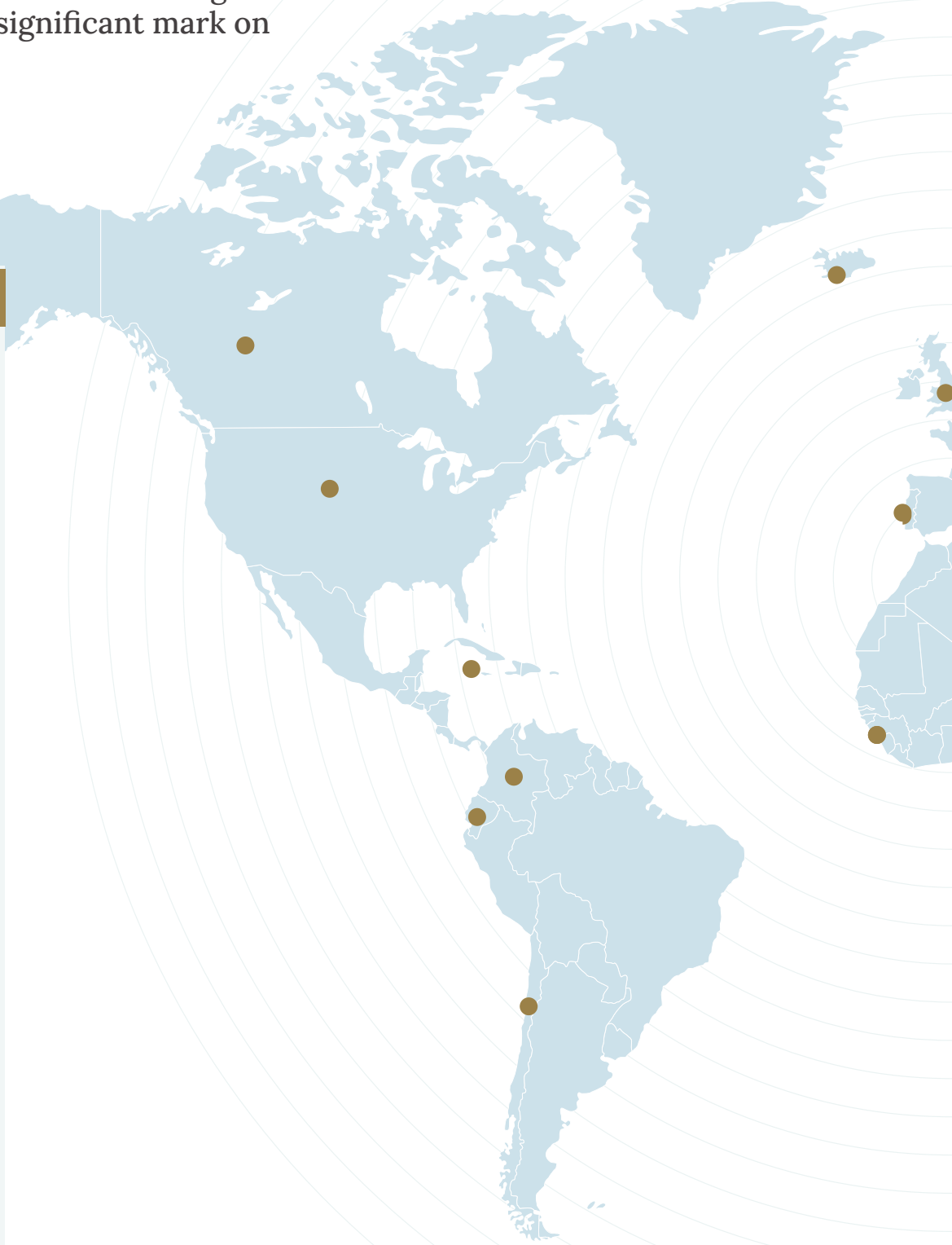
Offering strategic guidance and innovative solutions that fuel sustained growth, drive project success and operational excellence.

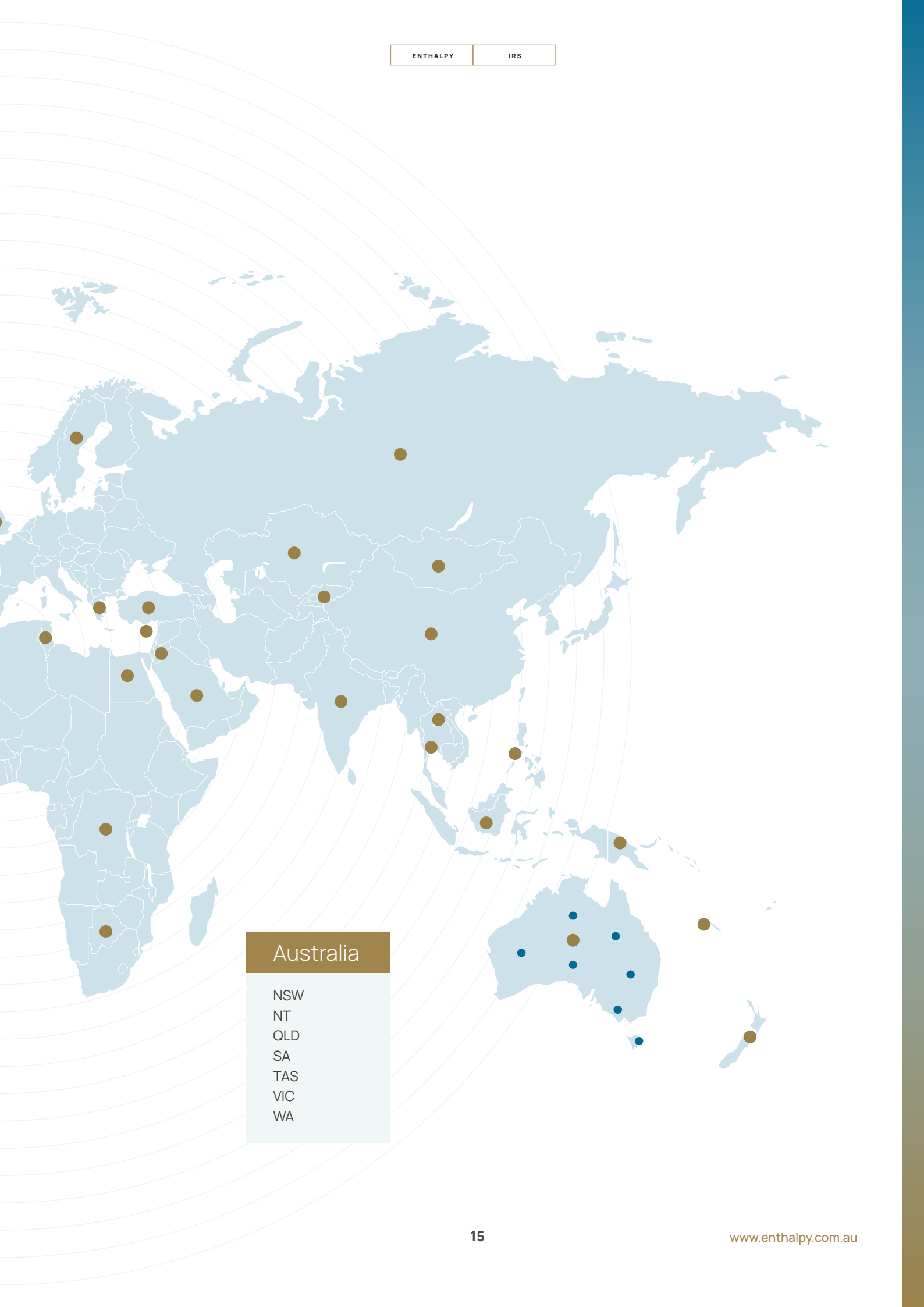
Global Experience

Enthalpy thrives in the intricate global terrain, leaving a significant mark on complex projects.

Countries

Australia
Botswana
Canada
Chile
China
Colombia
Congo
Cyprus
Ecuador
Egypt
Greece
Guinea
Iceland
India
Indonesia
Jamaica
Jordan
Kazakhstan
Kyrgyz Republic
Laos
Mongolia
New Caledonia
New Zealand
Philippines
PNG
Portugal
Russia
Saudi Arabia
Sweden
Thailand
Tunisia
Turkey
United Kingdom
United Stated





Australia

- NSW
- NT
- QLD
- SA
- TAS
- VIC
- WA

Scope of Experience



Market Leader

Our proficiency and insight extend across diverse sectors, attesting to the depth of our expertise.

Alumina									
Chromite	Energy								
Coal	Gas (CBM or LNG)								Chemical
Diamonds	Oil								Fertilisers
Iron Ore	Peat	C Carbon	Cu Copper	Au Gold	Pb Lead	Li Lithium	Mg Magnesium		Sugar
Mineral Sands	Sustainability	Mn Manganese	Mo Molybdenum	Ni Nickel	PO₄³⁻ Phosphate	Ag Silver	Ta Tantalum		Explosives
Bauxite	Uranium	Zn Zinc	Port	Rail	Water	Cement	Steel		+ Others

 Minerals	 Industrial Materials
 Energy Resources	 Miscellaneous
 Elements	 Agricultural/Chemical
 Infrastructure & Construction	

Our Valued Clients

Adaptable and scalable, our products and services address the needs, foster growth, and mitigate risks for businesses of every size.



ALBEMARLE

Allkem

AusIMM



BARRICK



- Abbott Point Bulk Coal Pty Ltd
- Abigroup
- Adelaide Brighton Cement Ltd
- Advantage Lithium
- AECOM
- AGL Energy
- Alcan Engineering Pty Ltd
- Alcoa Ltd
- Albemarle
- Allkem
- Allied Gold Limited
- Altona
- American Mineral Fields Inc
- Anaconda Nickel Limited
- Anglo American
- Antofagasta Minerals South America
- API Management Pty Ltd
- Armour Energy Limited
- Arrow Energy
- Ashburton Minerals
- Asia Iron
- Asset iQ Pty Ltd
- Atlas Iron Limited
- Aurizon
- AusIMM
- Australand Property Group
- Australian Coal Association
- Australian Gas Light
- Australian Magnesium Corporation Pty Ltd
- Australian Magnesium Diecasting
- Australian Strategic Materials
- Barrick Gold Corporation
- Batstone Technology and Shedden Pacific
- Bayan Airag
- BBIG
- Bengalla Coal

- BHP Billiton
- BHP Billiton Mitsubishi Alliance (BMA)
- Billiton Plc
- Black Range Minerals
- Blair Athol Coal
- Bootu Creek Resources
- BP
- Brattle Group
- Bucyrus Australia
- Buka Minerals Limited
- Carbon Energy Ltd
- Celamin
- Central Queensland Ports Authority
- Chevron
- Clayton Utz
- Cliffs Natural Resources
- Coal & Allied Industries Limited
- Coal India Limited
- Coal Operations Australia Limited
- Codelco
- Colegio de Ingenieros del Peru
- Compass Resources NL
- Conoco
- Consolidated Rutile Limited
- Coode Island Review Panel
- Copper Co
- Corrs Chambers Westgarth
- Crosslands Resources Ltd
- Crown Irrigation
- CSIRO
- Cyprus Gold Australia Corporation
- DAVIES WARD PHILLIPS & VINEBERG
- Davies Ward Phillips & Vinebert
- Davies-Paul Weiss
- Debevoise & Plimpton
- Debswana

- Delta Energy
- Department of Infrastructure and Planning
- Diavik Diamond Mines Inc
- Dyno Nobel
- DLA Piper
- Eastern Minerals
- Ebony Coal
- El Boleo Project
- Eldorado Gold
- Energy Resources Australia (ERA)
- Ensham Resources
- Equinox
- Ergon Energy
- Falconbridge Australia Pty Ltd
- FI Joint Venture
- Flamemag Australia Pty Ltd
- GEMCO
- Gladstone Area Water Board
- Gladstone Ports Corporation Ltd
- Gordonstone Coal Management
- Grange Resources
- Greystar Resources
- Hail Creek Coal
- Hancock Prospecting
- HC Developments Pty Ltd (Pacific Coal)
- Hinds Blunden / CAML Resources Pty Ltd
- Hogan Lovells
- Hope Downs Management Services
- IGO
- Inco
- Independent Engineers Australia
- ION Limited
- IPC Limited
- Ivanplats Syerston
- Jacobs Australia
- Jupiter Mines



GLENCORE



LKAB



Newmont



RioTinto

sherritt



- Kazakhmys Plc
- KBL Mining
- Kentor Gold Ltd
- Kerry Gold
- Kestrel Coal
- Kinross Gold Corporation
- Lambent Solar Power
- Leighton
- LG Chemicals
- LKAB
- Lumina Copper
- Lundin Mining
- Ma'aden
- Marsh Pty Ltd
- MetroCoal
- Midwest / Sino Steel JV
- Midwest Corporation
- Mike Westlund
- MIM Limited
- Mineco Ltd
- Minera Alumbra
- Mitsubishi
- MMG (Minerals and Metal Group)
- MMO Pty Ltd
- Monto Minerals
- Mount Isa Mines
- Mt Arthur Coal
- Murchison Metals
- MWH
- N M Rothschild & Sons (Australia) Limited
- Nautilus Minerals
- Navarre Minerals
- Neometals
- New Gold Inc - Peak Gold Mines
- New Hope Group
- Newcastle Port Corporation

- Newcrest
- Newmont
- Nord Australer Nominees Pty Ltd
- Nord Pacific
- Norilsk Nickel Australia Pty Ltd
- Normandy Mining Limited
- North Atlantic Resources
- Northparkes
- Oil Search
- Ok Tedi Mining Limited
- Orange, Blayney & Cabonne NSW Councils
- Oresome Australia
- OZ Minerals
- Pacific Agriculture
- Pacific Coal Pty Ltd
- Pacific Hydro
- Pan Australian Resources
- Pasminco Century
- Pavement Technology Ltd
- Peabody Energy
- Peak Gold Mines
- Pilbara Minerals
- Port Waratah Coal Services
- Portman Management
- PT Bumi Suksesindo
- Pt Dairi Prima Mineral
- QGC
- QKR Corporation
- QNI Pty Ltd
- QR National
- Quadra Mining
- Queensland Alumina Ltd (QAL)
- Queensland Energy Resources
- Queensland Government
- Queensland Magnesia Pty Ltd
- Queensland Metals Corp Limited

- Queensland Nickel Industries Ltd
- Queensland Sugar Limited
- Rio Tinto
- Roy Hill
- RungePincockMinarco
- Samsung C&T
- Santos Ltd
- Sherritt International Corporation
- Simberi Gold
- Sino Mining International
- SNC Lavalin and Dyno Nobel
- Solid Energy
- South 32
- St Barbara
- Stanwell Corporation Limited
- Stanwell Griffin
- Steel Cement Limited
- Stork Electrical/QCL
- Sullivan & Cromwell
- Sun Engineering
- Taurus Gold
- TD Securities
- Tenke Fungurume Mining
- Turquoise Hill Resources
- Vale (PT Sumbawa Timur Mining - STM)
- Victorian Government
- Wafi-Golpu Joint Venture
- Weda Bay Minerals Inc.
- Wesfarmers CSBP - Anaconda Nickel Limited
- WMC Fertilizers
- Worsley Alumina Pty Ltd
- Xanadu Mines
- Xstrata
- Yancoal
- Zerogen Pty Ltd

Key Value Proposition



Trusted Partners

We stand firm in our commitment to customer success by relentlessly pursuing quality and excellence.

Ethalpy stands as your premier partner for operational excellence. Our reviews go beyond industry standards, serving as a critical safeguard against potential pitfalls in the project lifecycle.

Our adept team of experts, well-versed in opportunities and risks, meticulously assess and address challenges, offering effective control and mitigation strategies, including:

Project Evaluation:

Conducting expert assessments that ensure technical aspects, such as geological models and extraction plans, are based on sound scientific principles.

Risk Management:

Identifying potential opportunities and risks, and developing strategies to mitigate challenges and enhancing project success.

Compliance and Best Practices:

Adhering to standards that align with industry and statutory regulations and best practices.

Investor Confidence:

Delivering sound messaging required for informed decision-making that enhance investor and stakeholder confidence.

Operational Efficiency:

Identifying opportunities for improving operational processes, leading to increased efficiency and cost-effectiveness.

Environmental and Social Impact:

Evaluating and ensuring project activities promote and positively impact sustainable and responsible practices.

Continuous Improvement:

Establishing a valuable feedback loop that enables companies to learn from external perspectives and encourages continuous improvement in operations.

Enthalpy takes pride in the depth and wealth of experience our teams bring to assignments, evident by the diverse portfolio of major clients, key projects, and industry sectors.



Choose Enthalpy for a seamless and
successful project journey.



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