



# ENVIRONMENTAL SOCIAL GOVERNANCE

## Disclosure Report QEM Limited - 1 Jul 2023 to 30 Sep 2023

Powered by  
**Socialsuite ESG**

<https://www.qldem.com.au>  
ASX:QEM



#### Directors:

Chair  
Tim Wall

Managing Director  
Gavin Loyden

Non-Executive Director  
Daniel Harris

Non-Executive Director  
Tony Pearson

Non-Executive Director  
David Fitch

#### Julia Creek Project:



#### QEM Limited:

Registered Office:  
Level 8  
216 St Georges Tce  
Perth WA 6000 Australia  
+61(0) 8 9481 0389

Head Office:  
Level 6  
50 Appel St  
Surfers Paradise Q 4217  
Australia  
+61(0) 7 5646 9553

#### Follow us:



qldem.com.au  
info@qldem.com.au

# ASX Announcement

26 October 2023

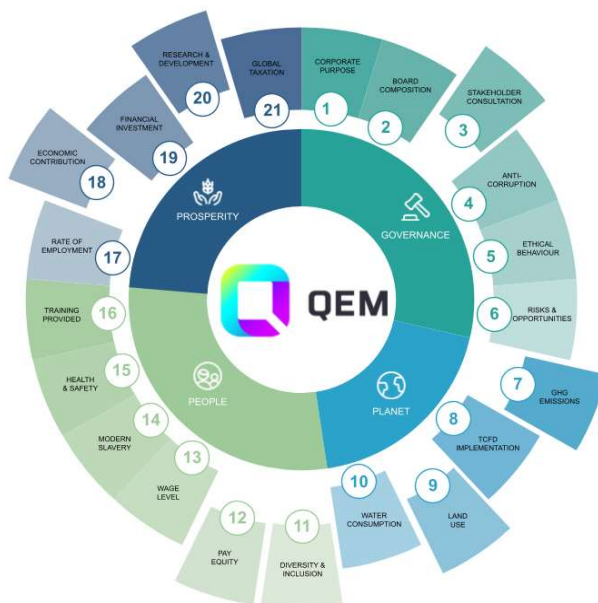
## QEM Quarterly ESG Report with GHG Emissions Inventory Assessment

### Highlights:

- QEM's FY23 Greenhouse Gas (GHG) emissions inventory assessment conducted by Carbonhalo revealed total GHG emissions reduced by 21% over 12 months to 116.15 tCO<sub>2</sub>e.
- Growth in stakeholder engagement, including commencement of inaugural Stakeholder Materiality Assessment.
- QEM progressed closer to employee wage equality.

Critical minerals explorer and developer QEM Limited (ASX: QEM) ("**QEM**" or "**Company**") is pleased to release its seventh consecutive Quarterly ESG Report using Socialsuite's ESG Go platform to monitor and disclose the Company's ESG progress and initiatives.

QEM's baseline ESG report was released to the market at the end of the March quarter 2022 (see ASX announcement dated 31 March 2022). Progress updates to QEM's ESG disclosures on the 21-core metrics set by the World Economic Forum (WEF) were delivered in each of QEM's Quarterly Activities Reports since then (see ASX announcements dated 26 July 2022, 27 October 2022, 30 January 2023, 31 March 2023 and 27 July 2023). The metrics QEM reports on form part of WEF's standardised and globally recognised Stakeholder Capitalism Metrics ESG framework, with the Company's current ESG focus highlighted below.







QEM Managing Director Gavin Loyden stated, “Our sustainability goals are on track, assisted by our quarterly ESG reporting. We have steadily progressed since early 2022 in our ability to report on each one of WEF’s 21 core metrics.”

“QEM was early to take this proactive approach to sustainability reporting, just as ESG became one of the core drivers in the global investor landscape.

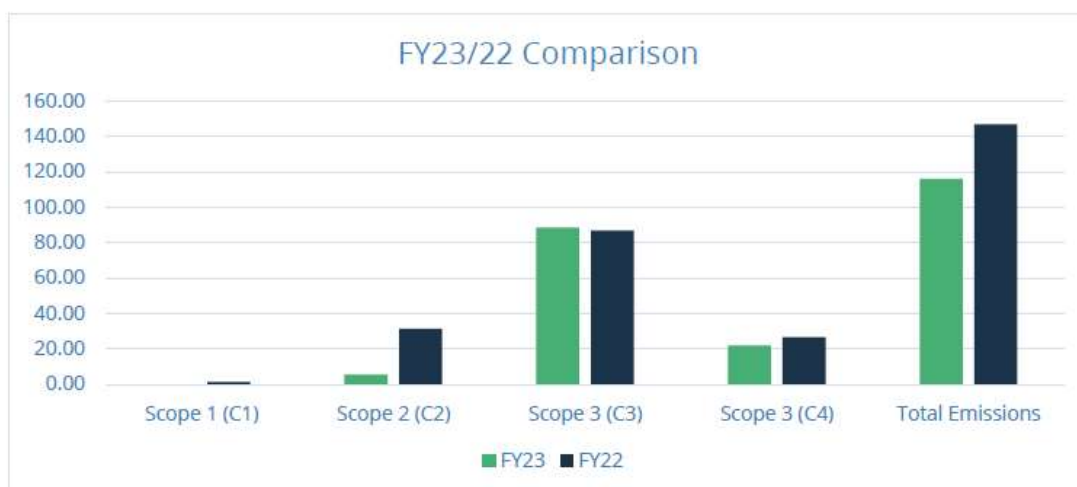
“Our transparency in this area allows our investors and other stakeholders to see how QEM’s ESG progress is aligned to the Company’s goal to help meet increasing global demand for Vanadium for safe, long duration energy storage systems,” said Mr Loyden.

QEM’s ESG highlights for this quarter may be found below, followed by a 12-month ESG metric status comparison and QEM’s full ESG Disclosure Report, both reviewed on completeness by Socialsuite.

## QUARTERLY HIGHLIGHTS

### PLANET - GHG EMISSIONS

QEM’s FY22 GHG Baseline Assessment conducted at a third party verified level by Carbonhalo, identified total GHG emissions of 146.80 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). For FY23, total annual emissions dropped to 116.15t.



The Company is committed to combining our activities in emission reduction with the use of certified offsets. QEM’s total emissions for FY23 of 116.15t will be offset each month and reassessed at the end of FY24 through Carbonhalo which provides verified carbon credits that focus on emissions reductions projects across the globe. These projects include renewable energy, technology-based emissions reduction, regeneration of natural habitat and capturing of waste.



## GOVERNANCE – STAKEHOLDER ENGAGEMENT

QEM is an active member of industry groups Vanitec (the global vanadium association), the Association of Mining and Exploration Companies (AMEC), Mount Isa to Townsville Economic Zone (MITEZ), Townsville Enterprise (TEL), and the Advanced Materials Battery Council (AMBC), in order to maximise the Project's community engagement strategy, and support and contribute to the regional development of the NWMP as an emerging vanadium operator.

QEM is committed to openly consulting with - and communicating our progress to - internal and external stakeholders, including potential investors. We understand the importance of maintaining transparency in the way the Company operates so our stakeholders and investors understand our goals and the progress we are making throughout the Company, and may be actively involved throughout the process.

In order to identify the most relevant sustainability issues for QEM, the Company has undertaken the first steps to conduct a Materiality Assessment. This process will weigh the impacts of ESG issues and their importance to QEM, as well as to our key stakeholders (double materiality). As such, engagement with our stakeholders is a core component of this process, and mapping and grouping of our stakeholders is currently underway.

## PEOPLE – PAY EQUALITY AND WAGE LEVEL

QEM is currently in the early stage of its development with few employees. However, from the outset, QEM wishes to measure and monitor its gender diversity and related metrics such as pay equality, with a view to bridging the diversity gap, attracting talent and driving long-term competitiveness. The average male's compensation to female's at QEM decreased from 162.3% to 137.7% over FY23, moving the company closer to wage equality. Over the same period, the CEO percentage of average compensation of all employees decreased from 165% to 157.6%.

ENDS

*This announcement was authorised for release on the ASX by the Board of QEM Limited.*

### For further information, please contact:

Gavin Loyden  
**Managing Director**  
P: +61 7 5646 9553  
E: [gavin@qldem.com.au](mailto:gavin@qldem.com.au)

Joanne Bergamin  
**Director, Communications & Sustainability**  
P: +61 7 5646 9553  
E: [jbergamin@qldem.com.au](mailto:jbergamin@qldem.com.au)

## ABOUT QEM

QEM Limited (ASX: QEM) is a publicly listed company which is focused on the exploration and development of its flagship Julia Creek Project, covering 250km<sup>2</sup> in the Julia Creek area of North West Queensland.

The Julia Creek vanadium and oil shale project is a unique world class resource with the potential to utilise sustainable energy solutions in the production of energy fuels and vanadium pentoxide. QEM strives to become a leading producer of liquid fuels and in response to a global vanadium deficit, also aims to become a global supplier of high-quality vanadium pentoxide, to both the nascent energy storage sector and the global steel industry.



**QEM**  
ASX : QEM

# ASX Announcement

---

26 October 2023

This globally significant JORC (2012) Mineral Resource of 2,850 Mt @ 0.31% V<sub>2</sub>O<sub>5</sub> is one of the single largest ASX listed vanadium resources and represents a significant opportunity for development. The resource is comprised of 360Mt @ 0.29% V<sub>2</sub>O<sub>5</sub> in the Indicated category and 2,490Mt @ 0.31% V<sub>2</sub>O<sub>5</sub> in the Inferred category, with the added benefit of a contingent (SPE-PRMS 2018) in-situ oil resource of 79MMBBLs of Oil equivalent in the 2C category, and 696MMBBLs in the 3C category, contained within the same ore body.

The tenements form part of the vast Toolebuc Formation, which is recognised as one of the largest deposits of vanadium and oil shale in the world and located less than 6km east of the township of Julia Creek. Near to all major infrastructure and services, the project is intersected by the main infrastructure corridor of the Flinders Highway and Great Northern Railway, connecting Mt Isa to Townsville.

\*The information in this announcement that relates to the mineral resource and contingent resource estimates for the Company's Julia Creek Project was first reported by the Company in its IPO prospectus dated 20 August 2018 and supplementary prospectus dated 12 September 2018 (together, the "Prospectus") and the subsequent resource upgrade announcements ("Resource Upgrade") dated 14 October 2019 and 7 April 2022. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus and Resource Upgrade, and in the case of estimates of Mineral Resources and Contingent Resources, that all material assumptions and technical parameters underpinning the estimates in the Prospectus and Resource Upgrade continue to apply and have not materially changed.

## Period Comparison (Period 2 vs 6)

		Period 2 (Jul to Sep 2022)		Period 6 (Jul to Sep 2023)	
Governance					
Code	Description	Status	Progress (A1-A5)	Status	Progress (A1-A5)
GOVERNING PURPOSE					
GO-01-C1	Setting purpose	VERIFIED	C C C C C	VERIFIED	C C C C C
QUALITY OF GOVERNING BODY					
GO-02-C1	Governance body composition	VERIFIED	C C P P C	VERIFIED	P P C C C
STAKEHOLDER ENGAGEMENT					
GO-03-C1	Material issues impacting stakeholders	VERIFIED	C C C C P	VERIFIED	C P C C C
ETHICAL BEHAVIOUR					
GO-04-C1	Anti-corruption practices	VERIFIED	C C C	VERIFIED	C C C
GO-04-C2	Mechanisms to protect ethical behaviour	VERIFIED	C C	VERIFIED	C C
RISK AND OPPORTUNITY OVERSIGHT					
GO-05-C1	Integrating risk and opportunity into business process	VERIFIED	C C C P C	VERIFIED	P C C C C
Planet		Period 2 (Jul to Sep 2022)		Period 6 (Jul to Sep 2023)	
Code	Description	Status	Progress (A1-A5)	Status	Progress (A1-A5)
CLIMATE CHANGE					
PL-01-C1	GHG emissions	VERIFIED	P C P	VERIFIED	C C C
PL-01-C2	TCFD implementation	VERIFIED	P P P	VERIFIED	P P P
NATURE LOSS					
PL-02-C1	Land use and key biodiversity areas	VERIFIED	N N N C N	VERIFIED	N C N N N
FRESHWATER AVAILABILITY					
PL-03-C1	Water consumption	VERIFIED	P P P P P	VERIFIED	P P P P P
People		Period 2 (Jul to Sep 2022)		Period 6 (Jul to Sep 2023)	
Code	Description	Status	Progress (A1-A5)	Status	Progress (A1-A5)
DIGNITY AND EQUALITY					
PE-01-C1	Diversity and inclusion	VERIFIED	P C C C C	VERIFIED	C C C C C
PE-01-C2	Pay equality	VERIFIED	P P P P	VERIFIED	P G C P
PE-01-C3	Wage level	VERIFIED	C P	VERIFIED	C G
PE-01-C4	Child, forced or compulsory labour	VERIFIED	P	VERIFIED	P
HEALTH AND WELL-BEING					
PE-02-C1	Health and safety	VERIFIED	C P	VERIFIED	P C
SKILLS FOR THE FUTURE					
PE-03-C1	Training provided	VERIFIED	P C	VERIFIED	C P
Prosperity		Period 2 (Jul to Sep 2022)		Period 6 (Jul to Sep 2023)	
Code	Description	Status	Progress (A1-A5)	Status	Progress (A1-A5)
EMPLOYMENT AND WEALTH GENERATION					
PR-01-C1	Rate of employment	VERIFIED	P P	VERIFIED	C C
PR-01-C2	Economic contribution	VERIFIED	C C	VERIFIED	C C
PR-01-C3	Financial investment contribution	VERIFIED	N C	VERIFIED	C N
INNOVATION OF BETTER PRODUCTS AND SERVICES					
PR-02-C1	Total R&D expenses	VERIFIED	C	VERIFIED	C
COMMUNITY AND SOCIAL VITALITY					
PR-03-C1	Total tax paid	VERIFIED	C	VERIFIED	C

\*N.B.: Metric Status 'Verified' is reviewed on completeness by Socialsuite, not a third-party auditor

[ESG Report Data Disclaimer](#)

QEM Limited | Period Comparison | Published on 24 Oct 2023

# Environmental, Social, and Governance (ESG)

QEM Limited ("QEM" or the "Company") is committed to the principles of ESG as the most effective means of creating long-term enterprise value and addressing the societal priorities enshrined in the United Nations' Sustainable Development Goals. In March 2022, we made a commitment to commence reporting on the Environmental, Social, and Governance (ESG) disclosures of the Stakeholder Capitalism Metrics (SCM) of the World Economic Forum (WEF).

We are in the process of making ESG disclosures in the form of a set of universal, comparable ESG metrics focused on people, planet, prosperity and principles of governance that organisations can report on regardless of industry or region. This table represents our reporting against the 21 core metrics, being reviewed quarterly and updated periodically.

We use this universal ESG framework to align our mainstream reporting on performance against ESG indicators. By integrating ESG metrics into our governance, business strategy, and performance management process, we diligently consider all pertinent risks and opportunities in running our business. We continue to look for opportunities for further transparency on the topics which are material to our business.

To track our disclosure progress and demonstrate our sustainability performance against the WEF SCM framework we utilise Socialsuite's ESG disclosure platform. Socialsuite ESG enables us to demonstrate our ongoing commitment to ESG by providing a dedicated solution to track, report, and share our ESG disclosures. With Socialsuite ESG we have started the journey of building robust ESG credentials.

Last updated: 24/10/2023

# Governance

## GOVERNING PURPOSE

### Setting purpose

CODE	TYPE	STATUS	LAST UPDATED
GO-01-C1	Full disclosure	Verified	23 Oct 2023

QEM Limited (ASX:QEM) is focused on the exploration and development of the Julia Creek Vanadium and Oil Shale Project, a unique world class critical minerals resource, with the added potential to utilise innovative and sustainable energy solutions.

QEM's objective with its Vanadium and Oil Resources seeks to help build Australia's sovereign capability:

- Vanadium to meet increasing global demand for Critical Minerals for safe, long duration energy storage systems via vanadium flow batteries, while also playing a key role in decarbonising the steel and construction industry
- Fuel production to assist in providing liquid fuels security and regional supply to local industries (agriculture, mining, transport and defence)

See Also: [About QEM](#)

## QUALITY OF GOVERNING BODY

### Governance body composition

CODE	TYPE	STATUS	LAST UPDATED
GO-02-C1	Full disclosure	Verified	12 Oct 2023

The QEM Limited Board of Directors has established a corporate governance framework, policies and charters, to support its commitment to the highest standards of corporate governance. To achieve this, QEM's Board has adopted a number of charters and policies which aim to ensure that value is created whilst accountability and controls are commensurate with the risks involved. These policies are in accordance with the recommendations set out in the ASX Corporate Governance Principles and Recommendations – 4th Edition.



Together with the Company's Constitution, a number of charters and policies have been adopted. These include a Diversity Policy which reflects QEM's commitment to building a diverse and skilled team, which the Board strongly believes will lead to continuous improvement in safety, innovation and productivity.

While the QEM Board strongly believes in the benefits of an independent, diverse, and socially inclusive Board, we recognise that we do not currently represent all of these inclusive indicators. We are committed to ensuring greater gender representation, a diverse mix of qualifications, experience and expertise (including ESG competencies), and independence among our Board in the future, and we will work diligently to effect change.

Our Board members' skills, competencies and experience are set out on the Company's website. During Q1 FY22/23, the directors' skills were reviewed, and an ESG-inclusive Board matrix was adopted and placed on the website. This matrix summary of the directors' skills was most recently updated and replaced on the QEM website during Q1 FY23/24.

See Also: [Our Team](#), [Corporate Governance Plan](#)

## STAKEHOLDER ENGAGEMENT

### Material issues impacting stakeholders

CODE	TYPE	STATUS	LAST UPDATED
<b>GO-03-C1</b>	<b>Full disclosure</b>	<b>Verified</b>	<b>12 Oct 2023</b>

QEM Limited operates in one of the world's richest mineral-producing regions, on Wunumara Aboriginal Lands, six km south-east of Julia Creek in the McKinlay Shire, NW Queensland. Exploration permits totalling 250 sq.km are all situated within the Eastern Resource Development Corridor, the MITEZ corridor and the North West Minerals Province.

Listed on the ASX in 2018, QEM's Board aims to ensure that shareholders are informed of all major developments affecting the Company's state of affairs. All disclosures and announcements made to the ASX are placed on the Company's website.

QEM's community and stakeholder engagement objectives with regards the Julia Creek Project (the Project) are to:

- Raise stakeholder awareness of the Project, and its potential impacts and timelines
- Initiate early engagement to ensure stakeholders have sufficient time to consider the Project's potential impacts and provide input into mitigation strategies
- Understand and address stakeholder concerns, issues, and interests
- Ensure disadvantaged and hard to reach stakeholders and groups are identified and included in community engagement activities
- Identify opportunities to work together with stakeholders to develop strategies that maximise Project benefits and minimise adverse impacts

Since listing, QEM has been very open and active in our local communities, both on the Gold Coast where the Board is based, and in Julia Creek and the surrounding region. A range of engagement and communications tools are currently in use, including but not limited to Face-to-face meetings, Councils' briefings, Government departmental briefings, Community roadshows and public information sessions, Business briefings, Project newsletter and fact sheets, Project email, Regular updates to the Project website, Media releases and Investor presentations and webinars.

The Project has actively engaged with key stakeholders including the local McKinlay Shire Council, the Queensland Departments of Energy, Resources, and State Development, Infrastructure, Local Government and Planning, and the Federal Critical Minerals Office, as well as numerous other Local, State and Commonwealth Government representatives.

QEM is an active member of industry groups Vanitec (the global vanadium association), the Association of Mining and Exploration Companies (AMEC), Mount Isa To Townsville Economic Zone (MITEZ), Townsville Enterprise (TEL), and the Advanced Materials Battery Council (AMBC), in order to maximise the Project's community engagement strategy, and support and contribute to the regional development of the NWMP as an emerging vanadium operator.

QEM is committed to openly consulting with - and communicating our progress to - internal and external stakeholders, including potential investors. We understand the importance of maintaining transparency in the way the Company operates so our stakeholders and investors understand our goals and the progress we are making throughout the Company, and may be actively involved throughout the process.

Q1 FY23/24 update: In order to identify the most relevant sustainability/ESG issues for QEM, the Company has undertaken the first steps to conduct a Materiality Assessment. This process will weigh the impacts of ESG issues and their importance to QEM, as well as to our key stakeholders (double materiality). As such, engagement with our stakeholders is a core component of this process, and mapping and grouping of our stakeholders is currently underway.

**See Also:** [Project Update Flyers](#)

## ETHICAL BEHAVIOUR

### Anti-corruption practices

CODE	TYPE	STATUS	LAST UPDATED
<b>GO-04-C1</b>	<b>Full disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

The Company is committed to conducting all of its business activities fairly, honestly with integrity, and in compliance with all applicable laws, rules and regulations. QEM's Board, management and employees are dedicated to high ethical standards and recognise and support the Company's commitment to compliance with these standards.

In particular, the Company is committed to preventing any form of Corruption and Bribery and to upholding all laws relevant to these issues, including the Anti-Corruption Legislation. In order to support this commitment, the Company has adopted this Anti-Bribery and Anti-Corruption Policy (ABC Policy) to ensure that it has effective procedures in place to prevent Corruption and Bribery.

**See Also:** [Anti-Bribery and Anti-Corruption Policy](#)

## RISK AND OPPORTUNITY OVERSIGHT

### Integrating risk and opportunity into business process

CODE	TYPE	STATUS	LAST UPDATED
<b>GO-05-C1</b>	<b>Full disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

The Board determines the Company's "risk profile" and is responsible for establishing, overseeing and approving the Company's risk management framework, strategy and policies, internal compliance and internal control.

The Board assists management to determine whether it has any material exposure to environmental or social risks, and if it does, how it manages, or intends to manage, those risks; and where appropriate, benchmark the Company's environmental or social risk profile against its peers.

The Board also considers whether the Company has a material exposure to climate change risk.

**See Also:** [Risk Management System](#)

## ETHICAL BEHAVIOUR

### Mechanisms to protect ethical behaviour

CODE	TYPE	STATUS	LAST UPDATED
<b>GO-04-C2</b>	<b>Full disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

Any personnel or stakeholder who believes that a violation of QEM's Anti-Bribery and Anti-Corruption Policy or any laws has been committed, is being committed, or is being planned, is encouraged to report the matter immediately to the Board or the Anti-Bribery Officer.

If anyone is unsure whether a particular act constitutes Bribery, a Facilitation Payment, Secret Commission, Money-laundering or an improper Item of Value, or has any other queries, they should ask the Board or the Anti-Bribery Officer.

The Company prohibits retaliation against anyone reporting such suspicions. Personnel who wish to raise a concern or report another's wrongdoing, or who have refused pressure to either accept or offer a bribe, should not be worried about possible repercussions. The Company encourages openness and will support any Personnel who raises genuine concerns in good faith under this Policy. Further, the Company has a Whistleblower Protection Policy which affords certain protections against reprisal, harassment or demotion for making the report.

**See Also:** [Whistleblower Protection Policy](#)



# Planet

## CLIMATE CHANGE

### GHG emissions

CODE	TYPE	STATUS	LAST UPDATED
PL-01-C1	Full disclosure	Verified	12 Oct 2023

QEM Limited has reviewed the GHG Protocol Reporting Standards and understands its implications for the planned Julia Creek Vanadium and Oil Shale Project. As the mining project has not yet commenced, we are not at this stage of mining disclosure.

However, as an interim step for a company committed to environmental, social, and governance practices, in Q1 2023 QEM engaged Carbonhalo to conduct an inaugural QEM Greenhouse Gas (GHG) emissions inventory assessment at a third party verified level, for the financial year of 2022 (FY 2022) being the 12 months ending 30 June 2022. A subsequent inventory assessment was undertaken at the end of FY 2023.

In undertaking our inaugural GHG Baseline Assessment, QEM can measure its progress towards our low carbon footprint goal. This step is crucial to quantify our efforts towards achieving the Company's sustainability objectives.

The GHG Baseline Assessment conducted by Carbonhalo identified total GHG emissions of 146.80 tonnes of carbon dioxide equivalent (tCO2e) for FY22. For FY23, total annual emissions dropped to 116.15t.

Purchased energy or electricity in FY22 was calculated as the second largest emissions component at 22%. The collection of actual electricity consumption has enabled a more accurate calculation bringing the total % of emissions down to 5%.

Going forward, QEM will focus its emissions reduction efforts on activities and areas with the highest emissions, in this case Scope 3 (C3) in which business travel was identified as the top emitter at 59% of QEM's total measurable emissions. QEM is currently engaged in intense stakeholder relations and marketing activities which often require the team's in-person presence. It is anticipated post current project phase, travel requirements will incrementally decline.

We are committed to combining our activities in emission reduction with the use of certified offsets. Our total emissions for FY23 of 116.15t will be offset each month (commencing Sept 2023) and reassessed at the end of FY24 through Carbonhalo which provides verified carbon credits that focus on emissions reductions projects across the globe. These projects include renewable energy, technology-based emissions reduction, regeneration of natural habitat and capturing of waste.

QEM is also committed to educating and engaging our employees, clients and stakeholders about the importance of sustainability and carbon reduction and encouraging them to support and participate in our efforts.

NATURE LOSS

Land use and key biodiversity areas

CODE	TYPE	STATUS	LAST UPDATED
PL-02-C1	Full disclosure	Verified	23 Oct 2023

In November 2022, Epic Environmental (Epic) issued the Julia Creek Project Ecological Assessment Report (EAR). The scope of the EAR includes a baseline assessment of the ecological values within QEM’s tenement. The EAR was developed with information from desktop assessments, and extensive a post wet season flora and fauna field survey and a dry season flora field survey. These surveys were conducted in March 2022 and November 2022 and including regional ecosystem flora surveys, habitat assessments, bird surveys, spotlighting surveys and fauna trapping. Following ecology and flood studies conducted in late 2022, groundwater and surface water quality monitoring has continued on a monthly basis. The monitoring program will continue for a minimum of 12 months to characterise environmental baseline conditions and inform the engineering design for tailings storage facilities.

The EAR is likely to support a future Environmental Impact Assessment under the State Development and Public works Organisation Act 1971 or similar process to support a future Environmental Authority. The EAR may also inform a future significant impact assessment to support a referral under the Environment Protection and Biodiversity Conservation Act 1999.

This ensures that following the removal of mining products, QEM is able to meet its goal to rehabilitate the Project area to the ecological quality and community that existed

onsite prior to disturbance or to a standard resembling adjacent ecological communities. Acceptable rehabilitation outcomes will be determined through community consultation, landowner consultation and discussions with local council.

A topographic aerial drone survey of the entire tenement area was conducted in June/July 2022 to baseline the environmental condition of QEM's tenements before any ground is broken on the project.

Cattle grazing currently occurs in the Project area. The agricultural features of the Project area include:

- A stock route reserve within EPM 27057
- No mapped cropping zones
- No mapped Priority Agricultural Areas
- Project area is not located within or adjacent to Strategic Cropping Land
- No mapped Strategic Environmental Areas
- The Project area is mapped as Pasture land – sown pastures, and native pastures on high fertility soils

There are no mapped World Heritage areas, Ramsar protected wetland sites, nationally important wetland sites, State Forests or Nature Refuges within or adjacent to the Project area.

On 27 June 2023, QEM announced it had entered into an agreement with Incitec Pivot Limited ("IPL" or "Incitec") to collect all the vanadium-bearing spent catalyst from IPL's Mount Isa Sulphuric Acid Plant and process this waste into high purity vanadium pentoxide (V2O5).

QEM entered into a similar agreement on 7 March 2023 on the supply of vanadium-bearing spent catalyst from Sun Metals Corporation Pty Ltd's ("SMC" or "Sun Metals") Townsville Zinc Refinery.

These collaborations with Sun Metals and IPL represent Circular Economy opportunities where industrial waste can be repurposed to a higher use. V2O5 is the critical component of the catalyst required to produce sulphuric acid and our aim is to recover and repurpose the V2O5 for use in VRFB batteries critical to achieving Australia's carbon reduction targets.

FRESHWATER AVAILABILITY

Water consumption

CODE	TYPE	STATUS	LAST UPDATED
PL-03-C1	Full disclosure	Verified	23 Oct 2023

As the Julia Creek Project is currently at planning stage, QEM Limited does not currently have any water consumption or withdrawal. As the Project progresses, appropriate assessments will take place before implementation.

The Julia Creek Project covers 250 km<sup>2</sup> and is located approximately 6 km southeast of the township of Julia Creek in northwest Queensland. The western portion of the Project area is within the Julia Creek catchment and the eastern portion is within the upper catchment of Spellary Creek and Alick Creek (tributaries of the Flinders River).

During operations, the Project is anticipated to need approximately 4,000-6,000 ML of raw water per year. This will be required for a range of purposes, such as ore processing, potable water, dust suppression, tailings management, etc. As the water demand will be largely driven by ore production rates and the tailings disposal method, this volume may change as the project design and production forecast is refined.

ATC Williams, an international consulting engineering company that specialises in design and management of tailing storage facilities and their associated tailings dewatering and water distribution infrastructure, has been engaged to provide a preliminary assessment of the feasibility of a range of potential water supply options for the Project. Since October 2022, QEM has worked with ATC Williams to conduct the monthly groundwater and surface water quality monitoring program. This monitoring program commenced in November 2022 and has continued at regular intervals. The monitoring program will continue for a minimum of 12 months to characterise environmental baseline conditions and inform the engineering design for tailings storage facilities.

CLIMATE CHANGE

TCFD implementation

CODE	TYPE	STATUS	LAST UPDATED
<b>PL-01-C2</b>	<b>Partial disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

While the Task Force on Climate-Related Financial Disclosures (TCFD) framework is voluntary in Australia, QEM Limited is investigating what the implementation of the TCFD framework will signify for its flagship and future projects.



# People

## DIGNITY AND EQUALITY

### Diversity and inclusion

CODE	TYPE	STATUS	LAST UPDATED
PE-01-C1	Full disclosure	Verified	12 Oct 2023

Together with the Company’s Constitution, a Diversity Policy has been developed which reflects QEM's commitment to building an inclusive, diverse and skilled team, which the Board strongly believes will lead to continuous improvement in safety, innovation and productivity.

Diversity may result from a range of factors including age, gender, ethnicity, cultural background or other personal factors. QEM Limited values the differences between its people and the contribution these differences make to the Company.

QEM is currently in the early stage of its development with relatively few employees but is absolutely committed to employee diversity. QEM's current female to male employee ratio is one to three. The Board of QEM aligns with the Queensland Resources Council's diversity target of 30 percent female participation across the sector by 2026 and is aiming for the same at all levels of the organisation as QEM grows. In terms of ethnicity, 50% of employees identify as Hispanic or Anglo-Indian. The average age of a QEM employee is 45 years.

QEM is committed to providing equal opportunities in respect to employment and employment conditions, including hiring, training and career advancement.

See Also:[Diversity Policy](#)

## HEALTH AND WELL-BEING

### Health and safety

CODE	TYPE	STATUS	LAST UPDATED
<b>PE-02-C1</b>	<b>Partial disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

QEM Limited is committed to maintaining strong standards of health, safety and labour rights in order to improve employee productivity and operational efficiency and enhance employee well-being.

QEM is currently in the early stage of its development and hence does not currently measure for this indicator.

QEM staff, consultants and contractors operate under the Company's Health and Safety policies and procedures which cover: site inductions, safety training, personal protective equipment, job hazard analysis, working in heat, incident report, emergency response, vehicle pre-start inspection, among others.

QEM policies and procedures are documented and all personnel entering site works within QEM Health and Safety system.

Whenever contractors are engaged to work for QEM, their HSE systems and policies are compared against QEM's to determine their HSE policies and procedures are at a minimum comparable to QEM's.

QEM is currently assessing proposals to audit QEM's HSE system to ensure it is fit for purpose as the Company enters the next project phase.

All relevant safety documentation and reports are archived in QEM's repository of information.

## SKILLS FOR THE FUTURE

### Training provided

CODE	TYPE	STATUS	LAST UPDATED
<b>PE-03-C1</b>	<b>Partial disclosure</b>	<b>Verified</b>	<b>30 Jun 2023</b>

QEM Limited's workforce diversity strategies include developing programs to develop a broader pool of skilled and experienced senior management and Board candidates,

including workplace development programs, mentoring programs and targeted training and development.

The Company is committed to developing its employees and equipping them with knowledge and skills relevant to the energy transition. In December 2022, a QEM employee completed a Graduate Certificate in Sustainable Energy, supported by the Company.

One employee is currently progressing a Remote Pilot License (RePL) through National Drones.

All QEM employees have commenced presentation and media training which will continue throughout 2023.

## DIGNITY AND EQUALITY

### Pay equality

CODE	TYPE	STATUS	LAST UPDATED
PE-01-C2	Full disclosure	Verified	12 Oct 2023

QEM is currently in the early stage of its development with very few employees. However, from the outset, QEM wishes to measure and monitor its gender diversity and related metrics such as pay equality, with a view to bridging the diversity gap, attracting talent and driving long-term competitiveness. The average male's compensation to female's at QEM decreased from 162.3% to 137.7% at the end of FY 22/23, moving the company closer to wage equality.

## DIGNITY AND EQUALITY

### Wage level

CODE	TYPE	STATUS	LAST UPDATED
PE-01-C3	Full disclosure	Verified	12 Oct 2023

QEM Limited is currently in the early stage of its development with too few employees to provide any meaningful wage level data by gender.

The employees at QEM are compensated higher than the Australian minimum wage and are not subject to minimum wage rules. The CEO percentage of average compensation of all employees decreased over FY 22/23 from 165% to 157.6%.

## DIGNITY AND EQUALITY

### Child, forced or compulsory labour

CODE	TYPE	STATUS	LAST UPDATED
PE-01-C4	Full disclosure	Verified	24 Oct 2023

QEM Limited aims to uphold the highest moral, ethical and legal standards in all we do, especially surrounding human rights and modern slavery.

QEM does not condone, support or contribute, either directly or indirectly, to Modern Slavery.

QEM has a simple supply chain that includes the purchase of products and services needed for the businesses day-to-day operations, however, we still have a zero tolerance approach to all forms of modern slavery and human trafficking within its business and within its supply chain. QEM is committed to acting ethically and with integrity in all its business dealings and relationships and to ensure modern slavery and human trafficking is not taking place in its own business or in any of its supply chains.

We have various policies place that support our day-to-day operations that are intended to promote ethical and legally compliant business conduct and to ensure all staff and suppliers meet our core values. Our policies contribute to our commitment to prevent violations of human rights such as modern forms of slavery in our business including our Code of Conduct, Anti-Bribery and Corruption, Equal Employment Opportunity & Discrimination Policy, Bullying & Harassment Policy and Grievance Handling Policy.

To underpin our policy commitments, the Company shall endeavour to:

- Where appropriate, engage directly with new suppliers in respect of our anti-slavery policy to gain a proper understanding of the measures they have in place to ensure that modern slavery is not occurring within their own businesses.
- We expect our contracted suppliers to hold their own suppliers to the same standards.

# Prosperity

## EMPLOYMENT AND WEALTH GENERATION

### Rate of employment

CODE	TYPE	STATUS	LAST UPDATED
PR-01-C1	Full disclosure	Verified	12 Oct 2023

This quarter there were no new hires. This year there were two new hires, both male, one of whom is Mexican and the other Anglo-Indian. No QEM employees left the Company in 2023.

## INNOVATION OF BETTER PRODUCTS AND SERVICES

### Total R&D expenses

CODE	TYPE	STATUS	LAST UPDATED
PR-02-C1	Full disclosure	Verified	24 Jul 2023

QEM Limited's Full Year Statutory Reports, Quarterly Activity Report & Appendix 5B disclosure of expenditure and activity reflect the level of R&D costs during the period. Continuous work goes towards the evaluation and development of our projects.

As part of its R&D efforts, QEM's vanadium and oil shale bench scale pilot plant testing continues, including additional petrology and vanadium pentoxide processing flow sheet optimisation. These works follow the successful second round of bench-scale pilot plant testing which delivered a significant improvement in vanadium extraction rates and oil yields. The pilot plant was designed and developed to validate the Company's proprietary extraction process, ahead of a commercial demonstration plant. This pilot plant will also provide feedstock for the multi-user vanadium processing facility in Townsville to be funded by the Queensland Government. QEM's R&D investment is a vital step in bringing Australian vanadium to market.

In December 2022, QEM announced that the University of Queensland's Sustainable Minerals Institute (UQ SMI) commenced mineral characterisation and beneficiation work for QEM Limited's critical minerals project. The QEM and UQ SMI collaboration is focused



on optimising Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>) grade via fine particle beneficiation. UQ SMI employs a multi-disciplinary approach to mineral processing to potentially reduce energy use and the environmental footprint of mining operations. The collaboration complements QEM's concurrent program with UK-based GSA Environmental (GSAe) to optimise vanadium recovery via lower carbon-intensive processes than traditional roasting and acid leaching.

There is rapidly growing demand globally for vanadium to create Vanadium Redox Flow Batteries (VRFBs) ideal for storing large renewable energy sources such as wind and solar. Due to their large-scale storage capacity, VRFBs could provoke higher usage of wind, solar, and other renewable intermittent power sources and are already employed globally for load-levelling functions within renewable energy systems. With the reusable potential of vanadium in VRFBs, this means that they are 100% recyclable and sustainable. New installs of VRFBs are expected to grow exponentially by 2030, driving the increase in demand for vanadium. The International Renewable Energy Agency forecasts utility scale batteries to capture 44% of battery energy storage market in the next decade. Global VRFB deployments are likely to grow at 34% as installation costs fall and efficiencies increase. The volume of vanadium demanded from VRFBs is forecasted to grow from 28kt to over 126kt by 2030.

Vanadium not only supports the energy transition but additionally the CO<sub>2</sub> savings by using vanadium in the construction and steel industry, already account for the carbon footprint of producing that vanadium.

Further information can be found on QEM's website.

**See Also:** [ASX Announcements](#), [Vanadium Batteries](#)

## COMMUNITY AND SOCIAL VITALITY

### Total tax paid

CODE	TYPE	STATUS	LAST UPDATED
PR-03-C1	Full disclosure	Verified	30 Jun 2023

QEM Limited understands how taxes are important sources of government revenue, fiscal policy and contributes to economic stability.

For disclosure of the total level of tax paid by QEM, please refer to the Full Year Statutory Accounts and Quarterly Activity Report & Appendix 5B Cash Flow Report.

**See Also:** [ASX Announcements](#)

## EMPLOYMENT AND WEALTH GENERATION

### Economic contribution

CODE	TYPE	STATUS	LAST UPDATED
PR-01-C2	Full disclosure	Verified	12 Oct 2023

QEM Limited's Economic Contribution during the Reporting Period correlates to the long-term financial performance of the Company, and wealth creation for its stakeholders.

Disclosures relating to revenues, operating costs, wages and benefits, payments to providers of capital, payments to government, and monetary support from government appear in QEM's Full Year Statutory Accounts, as well as in the Quarterly Activity Report & Appendix 5B.

Investment in our community is a high priority for QEM.

In 2022, QEM invested in a permanent presence in the town of Julia Creek, just 6km from our flagship vanadium project. QEM leased the property which was formerly the Suncorp Bank, for office space and executive accommodation.

In the first quarter of 2023, QEM employed local tradespeople to renovate the premises, ready for the official opening on 17 April 2023 by Mayor of McKinlay Shire Council Philip Curr during the MITEZ Vanadium Forum in Julia Creek.

The opening of QEM's Julia Creek Office was attended by 150 MITEZ (Mount Isa to Townsville Economic Development Zone Inc.) members, local government councillors, state and federal government representatives, including Senator Susan McDonald, as well as the company's vanadium resource optimisation partners from the University of Queensland's Sustainable Minerals Institute.

Throughout 2022, QEM contributed to the region with eleven work packages being assigned to local contractors in Julia Creek and the North West Minerals Province, for

work including fabrication, plant hire, civil site works, and building renovations. A dozen new work packages with local contractors have already been awarded to date in 2023, including two in preparation for QEM's 2023 drilling campaign and general property maintenance.

QEM also seeks to support the greater communities in which we operate, with a particular focus on youth and women's development, education and sport.

QEM proudly sponsors the Julia Creek Saints junior girls and boys and senior rugby league teams, as well as the annual Town vs Country Women's Netball, Juniors and Seniors' Rugby League.

In March 2023, QEM was pleased to sponsor and attend the McKinlay Shire Cultural Association and Julia Creek Lions Ladies Art Awards.

QEM is a major sponsor each year of the Julia Creek Dirt N Dust Festival held in April.

In June 2023, QEM was pleased to be a Bronze Sponsor of the Isolated Children's Parents' Association Queensland Inc. (ICPA) Conference. The ICPA Queensland Conference was held in Julia Creek, with the theme "Where the Wild Ones Thrive". The ICPA is a nationwide voluntary organisation dedicated to ensuring rural and remote students have equity of access to a continuing and appropriate education.

In June/July 2023, QEM was also a major sponsor for the Saxby Roundup weekend - campdraft, rodeo, kids events and entertainment. Via QEM and other supporters, Saxby contributes to:

- New toilet blocks to replace the old flood damaged buildings;
- Replacement of the flood damaged underground power;
- Replacement of the flood damaged cement in the bar;
- Installing shade over the grandstands; and
- Making improvements to the back yards for the safety of our volunteers and stock.

Charities regularly supported, include:

- Ronald McDonald House Charities North Australia;
- Royal Flying Doctors Service;
- Mount Isa School of the Air; and
- Individuals from our community who have experienced hardship.

This year, QEM was also a major sponsor of McKinlay Shire events, the Sedan Dip in August, and the Big Weekend in September/October.

The QEM Board is based on the Gold Coast, where the company's Managing Director Gavin Loyden raised \$5,300 for the homeless and slept out on 22 June for the Vinnies CEO Sleepout. Also on the Gold Coast, QEM sponsored a table at the "Investing in Women in Resources" event in June 2023, organised by Joanne Bergamin, QEM's Director of Communications & Sustainability, and President of Women in Mining and Resources (WIMARQ) Gold Coast. QEM also fully supports Ms Bergamin in her volunteering for St Vincent de Paul Society and participating regularly in resources industry STEM days at local girls' school, St Hilda's.

The Company will continue to support its peoples' participation in community-based events and review its level of economic contribution, commensurate with its activities.

See Also: [Statutory Accounts](#)

## EMPLOYMENT AND WEALTH GENERATION

### Financial investment contribution

CODE	TYPE	STATUS	LAST UPDATED
PR-01-C3	Full disclosure	Verified	30 Jun 2023

Investment is a key driver of economic growth and a company's capacity to expand its operations and create additional employment.

QEM discloses information on investment activities in the Full Year Statutory Accounts, as well as in the Quarterly Activity Report & Appendix 5B.

QEM does not currently pay dividends.

See Also: [ASX Announcements](#)