



**2025**  
Sustainability  
Report



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*Dismantled lithium-ion battery packs, ready for processing.*



# Message from our Managing Director and CEO

**Sustainability is central to our strategy, and FY25 marked a defining year for Livium as we strengthened our position within Australia's circular material recovery ecosystem.**

Through our recycling business, Envirostream, we strengthened our ability to recover critical materials essential for the clean energy transition and demonstrated the resilience and scalability of our operating model. During the year, Envirostream continued to lead Australia's lithium-ion battery recycling sector, processing increasing volumes of large format lithium-ion batteries and delivering improved commercial outcomes underpinned by operational efficiencies and higher value recovery streams.

Envirostream has built a reputation as a Tier 1 battery recycler, and we continue to support customers seeking ethical and safe battery recycling services. We operate in a developing industry where end-of-life batteries may be landfilled or exported. We continue to work with state and federal policymakers to strengthen governance in these areas, reduce environmental harm, and ensure adherence to the Basel Convention, a global treaty that controls the international movement of hazardous waste.

Building on our FY25 performance, Livium has expanded its recycling focus beyond batteries to address the recovery of other materials. We are now progressing PV-module recycling, rare earth element recovery, and black mass processing through collaborations with leading technology partners. These steps reinforce our commitment to responsible material recovery and our ambition to support domestic supply chain resilience.

We also made progress across our technology-development verticals. Livium's subsidiary, VSPC, is developing next generation lithium ferro phosphate (LFP) cathode materials and secured a grant of up to A\$30m from the Australian Renewable Energy Agency (ARENA). Lithium extraction technology, LieNA®, completed the majority of its development activities, and subsequent to FY25, a 50:50 joint venture with Mineral Resources was formed.

As we mature our ASRS-aligned climate and sustainability reporting, we remain committed to transparency, responsible electrification, and the safe, compliant and efficient recovery of critical materials for Australia's clean energy future.

I would like to thank our key stakeholders for their continued support. Together, we are building a company positioned to play a meaningful role in the energy transition - delivering both commercial value and positive environmental outcomes.



**Simon Linge**  
Managing Director & CEO



**“We are collaborating with our stakeholders to create a company that delivers both commercial value and positive environmental impact.”**



# About Livium

**Livium is building Australia's platform for circular material recovery - unlocking critical materials from batteries and clean energy infrastructure to strengthen domestic supply chains and support responsible electrification. Our strategy is centred on the recovery, refinement and return of essential materials into Australian and global value chains, supported by a portfolio of operating assets, advanced technologies and long term industry partnerships.**

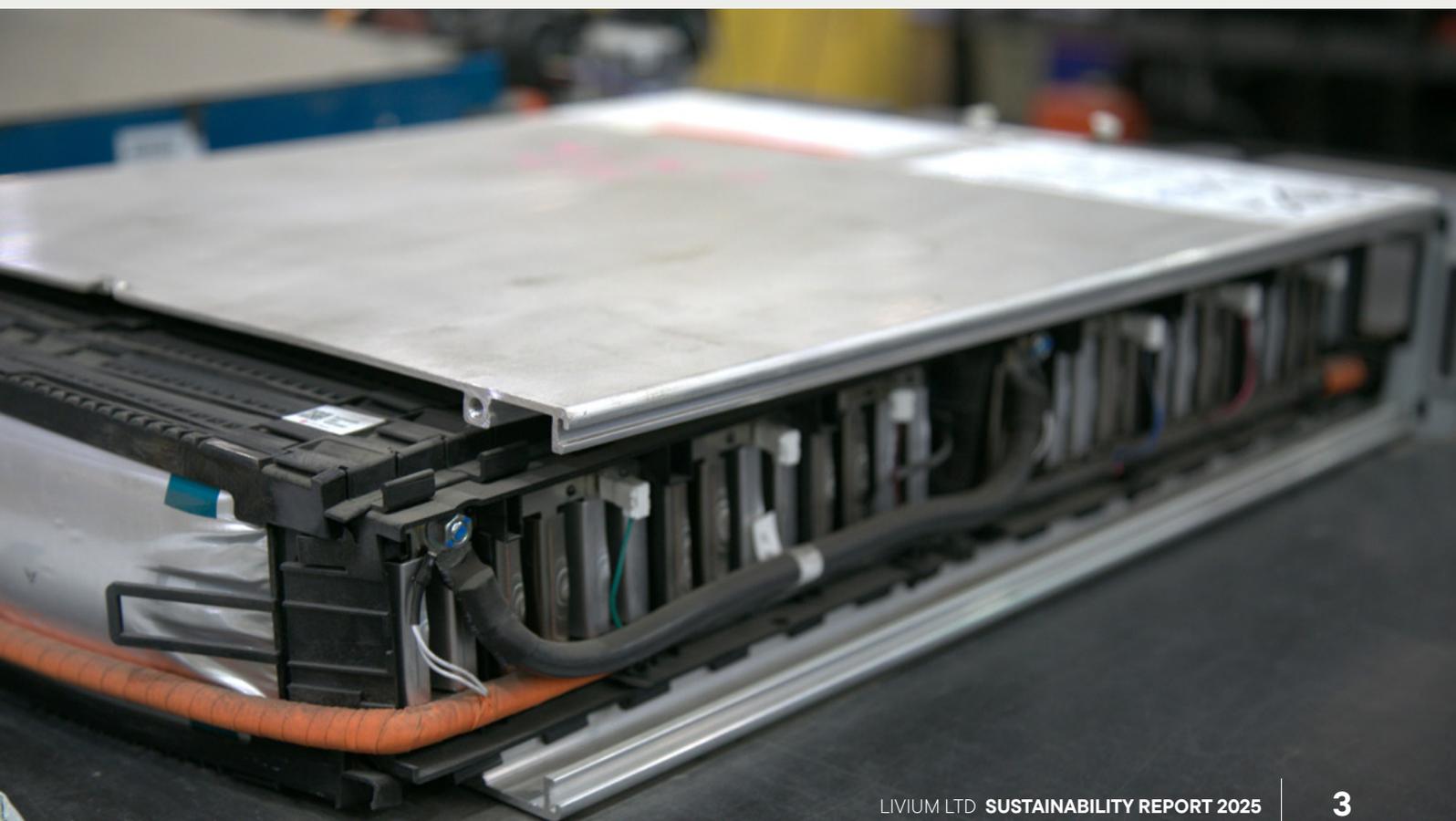
Envirostream, Livium's wholly owned subsidiary, is Australia's market leading lithium-ion battery (LIB) recycler and the operational foundation of our circular recovery platform. Envirostream collects, dismantles and pre-processes batteries from across Australia and continues to scale its capability to meet rising demand. In addition to LIB recycling, Envirostream is expanding into closely aligned recycling adjacencies, including black-mass processing, solar panel (PV) recycling and rare earth element (REE) recovery. These expansions are supported by strategic collaborations with Iondrive, the University of Melbourne and Won Kwang S&T, enabling Livium to extend its material-recovery expertise across multiple clean energy waste streams.

Livium also operates a portfolio of innovative technologies that enable greater material circularity across the clean energy value chain. Our patented lithium extraction technology, LieNA®, progressed to a 50:50 Joint Venture (JV) with Mineral Resources following successful completion of key piloting milestones. The JV wholly owns the LieNA® technology and is preparing for future commercial licensing to third parties. Livium's subsidiary, VSPC, has developed next generation lithium ferro phosphate (LFP) cathode material technology and continues to advance funding pathways for its Demonstration Plant.

Our operational footprint spans Australia, with Envirostream's established processing facilities in Victoria forming the backbone of Livium's national collections network. The Company is progressing the development of a centralised processing Hub designed to consolidate dismantling, pre-processing and future recycling verticals into a single, higher capacity site, while maintaining a distributed collection network across Australia's states and territories. This hub and spoke model consistent with the approach presented in the FY24 Sustainability Report enables efficient national feedstock capture, safe and compliant transport, and streamlined downstream processing, ensuring that materials recovered across Australia can be responsibly reintroduced into the circular economy.

Together, these capabilities position Livium as a leader in Australia's transition to a circular, resource efficient clean energy system delivering commercial value today while building the material recovery infrastructure needed for tomorrow.

*A partially dismantled lithium-ion battery pack with pouch style cells.*



# FY25 Highlights

**A\$4.2m Gross Profit**

a 91% increase over FY24



**A\$6.9m Revenue**

a 3% increase over FY24



**308.51t CO<sub>2</sub> Scope 1 & 2**

1% higher than FY24



**42% Female Workforce**

a 7% increase on FY24



**1 LTI Lost Time Injury**

consistent with FY24



**408MWh Electricity Consumed**

5% higher on FY24



**First Nations**

Training delivered at Laverton and Campbellfield, with in person sessions and facilitated discussions.



**Health Initiative**

All annual health screens have been conducted across the organisation.



**3,004kL Water Consumed**

a 65% decrease over FY24



**823t Lithium-Ion Batteries Collected**

a 1% decrease over FY24



**357t Recovered Anode & Cathode Material**

a 28% decrease over FY24



**Safety Culture**

Developed organisation wide Cardinal Rules, a set of 10 non-negotiable life critical/lifesaving rules.

**932t Batteries Diverted from Landfill**

a 40% decrease on FY24



**223kg LFP & LMFP Produced**

a 17% increase over FY24



**Employee Turnover**

12% voluntary turnover



**1,209m<sup>3</sup> Waste Disposal**

a 1% decrease over FY24



# Our Sustainability Approach

## Purpose, Values, and Responsible Business

At Livium, our purpose is to enable responsible electrification by building Australia's platform for circular material recovery. Across our businesses: Envirostream, VSPC, and our LieNA® joint venture we remain committed to operating in a way that upholds our values, strengthens trust with stakeholders, and ensures that sustainability is integrated into every decision we make. Our commitment is reflected in the way we govern our operations, engage with our people and communities, and implement the actions outlined in our ESG Roadmap.

### OUR PURPOSE AND SPARCS VALUES

Livium's SPARCS values were developed through extensive engagement with the Board, Executive Leadership Team, and employees. These values underpin how we operate and guide our approach to sustainability, safety, and organisational culture.

#### SAFETY

We choose safety first, every time.



#### PEOPLE

We take a people centred approach.



#### ACTIVE

We act in a purposeful way that involves positive action.



#### RESPECT

We respect and trust each other and all have a voice.



#### CREATIVE

We use technology to develop innovative solutions to accelerate global electrification.



#### SUSTAINABLE

We each play a role in making the world a better place.

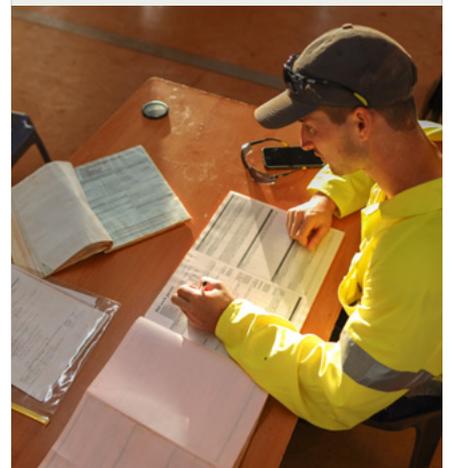


### DECISION MAKING PRINCIPLES

Livium's approach to decision making is rooted in responsible governance and supported by policies and frameworks across the Group. Our principles emphasise:

- Ethical and compliant operations, including adherence to all applicable laws and regulations, with oversight by the Audit and Risk Committee (ARC).
- Transparency, supported by policies for reporting bribery, corruption, and ethical concerns.
- Integration of risk management, ensuring that safety, environmental stewardship, social responsibility, and governance considerations are embedded into strategic planning and operational processes.
- Stakeholder informed perspectives, drawing on input from employees, customers, partners, local communities, and industry associations.
- Commitment to continuous improvement, reflected in the evolution of our internal systems, training programs, policies, and performance monitoring.

These principles ensure that decisions across the organisation reflect our SPARCS values and support sustainable outcomes for all stakeholders.



## Our ESG Roadmap

Livium's has developed an ESG Roadmap that sets out a phased plan to strengthen sustainability governance, data capability and operational controls across the Group. Key FY25 focus areas included:

### Enhancing safety and environmental compliance systems

including emergency response and fire control upgrades.



### Strengthening ESG governance

including Board ESG literacy, internal reporting through quarterly ESG reports and integration of ASRS-aligned disclosures.

### Improving data availability

for GHG, waste, recovery rates and operational performance.



### Progressing responsible material recovery

by expanding into PV recycling, REE extraction and black mass downstream processing.



Processing at our Campbellfield site produces black mass, which is then shipped to customers.



The Roadmap will continue to evolve across FY26 and FY27 to incorporate emerging regulatory requirements, scenario analysis processes, and medium term target setting.

## Stakeholder Engagement

**Livium drives circular material recovery through strong stakeholder engagement.**

Livium’s ability to deliver responsible material recovery depends on active, transparent and collaborative engagement with the stakeholders who shape our operating environment. Across recycling operations, technology development programs and joint ventures, Livium works with OEMs, utilities, regulators, research partners, employees and local communities to keep activities safe, compliant and aligned with industry needs. These engagement activities provide visibility of performance, strengthen long term partnerships and support the transition to a more circular and resilient clean energy system.

Stakeholder	Purpose for Engagement	Method for Engagement
Employees	Support and inform employees on safety, wellbeing, inclusion and workplace expectations.	Induction programs; role specific training; WHS briefings; diversity and inclusion initiatives; grievance and conduct policy communication.
Board of Directors	Monitor and oversee operational, ESG and governance performance.	Scheduled Board and committee meetings; quarterly ESG and operational reports; risk and compliance updates.
OEMs and Energy-Sector operators	Coordinate and collaborate on safe end-of-life battery collection, discharge and pre-processing.	Long term commercial agreements; operational working groups; regular performance and safety reviews.
Regulators and Government	Comply and consult to maintain licences, meet regulatory obligations, and progress approvals.	Compliance reporting; formal submissions; site inspections; project specific discussions.
Research and Technology Partners	Collaborate and co-develop advanced material recovery and processing technologies.	Technical workshops; pilot programs; joint engineering studies; R&D collaboration frameworks.
Investors, Customers and Partners	Inform and engage on performance, technology milestones, and future priorities.	Quarterly reporting; operational and ESG updates; site tours; formal feedback channels.
Local Communities	Consult and inform on safety, environmental impact, and local opportunities.	Community and council briefings; site visits; partner forums; feedback and enquiry channels including Fire Rescue Victoria.

## Voluntary Alignment with Reporting Standards

**Livium is in the process of transitioning its sustainability and climate related reporting to align with the Australian Sustainability Reporting Standards (ASRS). This year’s report serves as a transitional disclosure, reflecting our early adoption approach and our commitment to progressively enhancing the quality, completeness, and comparability of our sustainability information.**

As part of this transition, Livium is evolving its approach to materiality assessment to meet ASRS S1 and S2 requirements, including strengthening our processes for identifying and evaluating sustainability related risks and opportunities across our value chain.

While this report incorporates elements of the new standards including climate related governance, strategy, risks and opportunities, and metrics - we acknowledge that some disclosures remain in development and will be expanded in future reporting cycles.

In preparing this report, Livium has also considered the relationship between sustainability related disclosures and our broader corporate reporting suite, including the Annual Report and financial statements. The Audit & Risk Committee oversees sustainability related governance, emerging risks, and alignment between financial and non-financial reporting.

As our ASRS implementation progresses, we expect these disclosures to increasingly integrate with financial reporting processes to support consistent, accurate and decision useful information across all statutory reporting obligations.

# Governance, Ethics and Compliance

## Corporate Governance

### BOARD STRUCTURE

Livium's Board comprises an Executive Director (Managing Director/CEO) and independent Non-Executive Directors whose combined experience covers governance, finance, risk management and operational leadership. The Managing Director/CEO provides operational leadership, while the Non-Executive Directors contribute independent judgement and oversight of strategic matters, ensuring that Board deliberations reflect a balanced, diverse, and relevant mix of skills.

### AUDIT & RISK COMMITTEE (ARC)

The ARC oversees the effectiveness of Livium's risk management framework, financial reporting processes and internal controls. The Committee provides additional scrutiny of accounting policies, external audit findings and key assurance activities, supporting the Board's overall oversight of the Company's control environment.

### NOMINATION & REMUNERATION COMMITTEE (RNC)

The Nomination and Remuneration Committee oversees director and senior leadership appointments, succession planning and remuneration policies, while maintaining a focus on diversity, capability development and sound governance processes. Through this work, the Committee helps ensure Livium has the leadership capacity and incentives needed to deliver its strategy.

### DELEGATIONS & MANAGEMENT RESPONSIBILITIES

The Board retains responsibility for strategy, major transactions and overall financial governance, while delegating authority to the Managing Director/CEO and senior leadership team to manage day-to-day operations in line with Board approved policies and the Company's Risk Management Framework. Management is accountable for operational performance, compliance with regulatory obligations and the timely escalation of material matters to the Board and its committees.

### INDEPENDENCE

Livium is committed to a governance structure that supports independent oversight, including the appointment of independent Non-Executive Directors who chair and participate in both standing committees. Where temporary changes to Board composition occurred during FY25, these were disclosed in accordance with governance requirements, and committee membership was updated to restore full independence once director appointments were finalised.

## Sustainability and Climate Related Risk & Opportunity Governance

### BOARD OVERSIGHT

The Board is responsible for overseeing Livium's management of sustainability related matters. These responsibilities are exercised through standing agenda items at Board meetings and are supported by the ARC, which oversees the effectiveness of Livium's risk management framework, internal controls, and compliance approach.

The Board reviews sustainability and ESG matters on a regular basis, including quarterly sustainability reports that cover safety performance, environmental indicators, climate impacts, and progress against strategic projects. The Board receives updates on material incident investigations, environmental compliance, and emerging sustainability risks.

### MANAGEMENT'S ROLE

Management is responsible for identifying, assessing and managing climate related and other sustainability risks, and for implementing the strategies and controls approved by the Board. Key responsibilities include:

- MD/CEO – accountable for delivery of Livium's clean energy waste recycling strategy and its integration into business planning.
- CFO – responsible for incorporating sustainability risks into financial planning, budgeting and scenario considerations, and overseeing financial and non-financial reporting, including ESG disclosures.
- COO – responsible for safety performance, operational oversight, process controls, critical risk management, incident preparedness, environmental compliance and energy management.
- Responsibility for technology scale up and management of partner led commercialisation projects is shared between the three above roles.

### COMPETENCE AND SKILLS

Livium continues to strengthen Board and management capability in sustainability related governance. Progress to date includes ESG training sessions, use of external subject matter experts, and targeted skills development in climate transition, environmental regulation, and sustainability strategy.

Livium's ESG Roadmap includes further enhancements to Board ESG literacy, in line with medium term governance objectives.



Hon Ed Husic MP visited MD/CEO, Simon Linge, and the VSPC team in Wacol, Queensland, to understand how lithium ferro phosphate is produced.

## Compliance Framework

Livium’s compliance framework is built around a disciplined approach to safety, environmental management, licensing obligations and product stewardship across all operations. As the business expands into new recycling verticals and grows its national footprint, maintaining rigorous compliance systems remains central to how we protect people, communities and the environment. Our framework ensures that operational activities are carried out within the conditions of our regulatory approvals and that we meet the expectations of customers, regulators and industry partners.

### SAFETY

Safety is foundational to Livium’s operating model and compliance approach. The Company maintains formal health and safety policies supported by site specific induction programs, documented procedures, and operational controls. Regular risk assessments, incident reporting and critical-risk reviews help ensure that hazards are identified, managed and escalated where required. The Safety & Environment Council (S&EC) provides governance oversight of health, safety and environmental performance, ensuring policies remain up to date and aligned with operational needs.

### ENVIRONMENT

Livium’s environmental compliance obligations are managed through documented environmental policies and site level controls. Envirostream’s licensed operations in Victoria continue to operate under strict environmental requirements, supported by improvements such as stormwater management upgrades and systems designed to reduce environmental risks. Environmental aspects are incorporated into the Company’s corporate risk register and monitored through internal processes and Board oversight, with environmental compliance and incident status reported regularly.

### LICENSING

Operational licensing remains a key element of Livium’s compliance framework. Envirostream holds the necessary licences to collect, transport and process end-of-life batteries at its Victorian facilities and operates within the conditions set by relevant regulatory agencies. Ongoing compliance is supported through internal audits, regular reporting and continuous monitoring of licence conditions, ensuring operations remain fully aligned with statutory requirements.

### PERMITS

Livium's activities require a range of operational permits, including approvals for handling regulated waste materials, managing storage areas, operating recycling equipment and complying with state based environmental frameworks. The Company maintains a commitment to meeting all conditions attached to these permits and integrates them into operational procedures to ensure regulatory obligations are met as part of everyday site practice.

### PRODUCT STEWARDSHIP

Envirostream actively participates in B-cycle, Australia's ACCC accredited battery product stewardship scheme. As an accredited partner, Envirostream meets stringent requirements for the collection, transport and recycling of household and commercial batteries. Participation in B-cycle strengthens Livium's compliance position by providing traceability across battery flows, enhancing safety standards and supporting responsible recycling outcomes consistent with national product stewardship expectations.

*All types of batteries are received at our Laverton North site including power tools.*



### Data & Cyber Security

Livium recognises the importance of maintaining robust data and cyber security practices to protect the integrity of our systems, safeguard confidential information, and ensure operational continuity across the Group. As our operations expand and our digital systems mature, we continue to strengthen the governance structures, internal controls and risk-management processes that support effective oversight of data protection and cyber resilience.

### CONTROLS

Livium's data and cyber security controls operate within the Company's broader risk management and governance framework. The Board, through the ARC, oversees risks associated with information management and internal systems. Management is responsible for implementing appropriate controls consistent with Livium's Risk Management Framework, including policies that govern access, confidentiality and responsible handling of Company information.

### MONITORING

Monitoring of information system risks is incorporated into Livium's annual critical risk review, which includes IT-related risks alongside operational, environmental and compliance categories. These reviews help identify emerging threats and confirm the effectiveness of existing controls. Monitoring outcomes are reported to the ARC as part of regular compliance and risk governance updates.

### INCIDENT MANAGEMENT

Livium maintains internal processes for escalating and responding to incidents that may affect data integrity, system availability or information security. Incident management responsibilities sit with management, with material issues escalated to the ARC where required. Livium continues to mature its processes to ensure timely response, documentation and corrective actions in alignment with the Company's risk governance expectations.



Envirostream employees enjoy some team building activities at the Laverton North facility, Victoria.

# People & Culture

## Workforce

Livium’s workforce plays a central role in delivering our operational, technology development and sustainability objectives. As our national footprint expands, we continue to strengthen our people systems, training programs and diversity initiatives to ensure we attract, retain and develop a capable and engaged team.

### HEADCOUNT

Livium’s workforce comprises employees across operational, technical, engineering, and corporate functions supporting Envirostream, VSPC and the LieNA® joint venture. During the reporting period, the Company maintained a multi-skilled team operating across battery collection, recycling operations, engineering development and corporate support roles.

Total Group Employees at 30 June 2025		
Headcount	FY24	FY25
Total Group Employees	62	50
Envirostream Employees	36	29
VSPC Employees	6	7
Corporate (Livium) Employees	18	14

## DIVERSITY

Livium continues to strengthen diversity and inclusion across its workforce, consistent with commitments outlined in the Company’s governance and people frameworks. Diversity indicators including gender representation across management and operational roles, role types and employment categories are monitored to support more inclusive recruitment and development practices. Formal policies relating to diversity, equal opportunity, anti-harassment and grievance management guide Livium’s expectations for a respectful and safe workplace environment.

The Company has set measurable objectives for achieving gender diversity in the composition of its Board, senior executives and workforce generally.

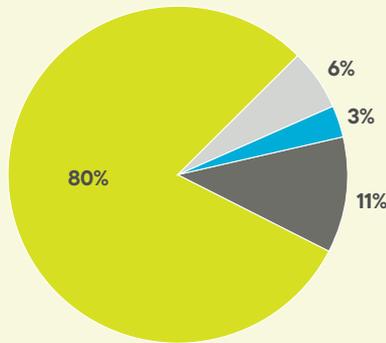
Level	FY25 Metric	FY25 Target
Board	25%	25%
Senior Management	33%	25%
Organisation	42%	25%

**TRAINING**

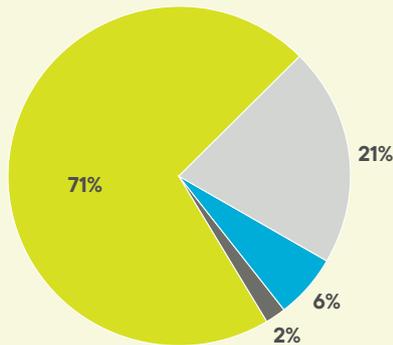
Training remains an important component of Livium’s people development framework. Site specific induction programs support safe and compliant operations across all Envirostream facilities, while role based training is provided for equipment use, dangerous goods handling, environmental compliance and safety protocols. Corporate employees participate in skills development aligned with Livium’s operational, ESG and governance needs, including training related to safety, risk management and internal policy requirements.

At Livium’s recycling operations of Laverton North and Campbellfield, the percentage of personnel who were either in training or had completed all their mandatory training was 91% and 73% respectively.

**Training Status: LAVERTON**



**Training Status: CAMPBELLFIELD**



**Safety Culture**

**SAFETY LEADERSHIP**

Livium’s approach to safety is supported by site level leadership, with managers and supervisors responsible for reinforcing safety expectations and ensuring that key messages are consistently communicated across operational teams. Leadership involvement helps maintain a shared understanding of safety requirements and supports a proactive safety culture across Livium’s sites.

**EMPLOYEE ENGAGEMENT**

Employee involvement is central to strengthening Livium’s safety culture. Regular engagement activities such as toolbox meetings, team briefings and informal safety discussions encourage open dialogue about risk awareness and continuous improvement. These interactions help embed shared responsibility for maintaining a safe workplace across the organisation.

**FIRST RESPONDERS**

Formal emergency management structures are in place, including Crisis Management, Emergency Management and Emergency Response Teams, supported by regular safety, first aid and emergency preparedness training across operational sites.

**ONBOARDING IMPROVEMENTS**

Onboarding processes were enhanced during the year to improve early understanding of safety expectations and site requirements. Updated induction materials and clearer guidance help new employees develop hazard awareness from the outset and support their integration into Livium’s safety culture.

**Community**

**LOCAL ENGAGEMENT**

Livium maintains ongoing engagement with the local communities surrounding its operational sites, with a particular focus on transparency, safety and responsible operations. Envirostream’s Victorian facilities continue to operate within established regulatory requirements, supported by communication with local stakeholders as part of environmental and safety obligations. Community considerations are integrated into operational planning, including site access, traffic management and waste handling activities.

**NEIGHBOURING BUSINESS COMMUNICATION**

Neighbouring businesses are engaged as part of day-to-day operational coordination, including communication on site activities, deliveries, material handling and relevant operational changes. These interactions support positive relationships with nearby commercial operators and help ensure safe and efficient site operations.

**PUBLIC SAFETY AND EMERGENCY COORDINATION**

Public safety remains a core focus for Livium’s operational sites, supported by documented emergency management processes and ongoing coordination with relevant emergency services. Envirostream’s licensed facilities maintain trained first responders and site procedures designed to manage fire risks and hazardous-material handling, which are aligned with regulatory expectations. Site improvements, such as enhanced battery storage controls and facility upgrades, contribute to safer operations and better alignment with external emergency response frameworks.

# Strategy

## LIVIUM'S BUSINESS MODEL

Entity Name	Livium Ltd	Envirostream Australia Pty Ltd	Resource Conservation and Recycling Corporation Pty Ltd	VSPC Pty Ltd	LieNA Pty Ltd	Trilithium Erzgebirge GmbH
<b>Purpose</b>	Listed holding company for the Group. Some lithium-chemical IP remains with Livium due to historic technology development activities prior to subsidiary incorporation.	Australia's leading lithium-ion battery recycler, operating national collection, dismantling and pre-processing services.	Holds IP related to wet shredding and other recycling technologies being commercialised within Envirostream. Holds a University of Melbourne licence related to REE extraction.	Developing and commercialising next generation lithium ferro phosphate (LFP) cathode materials.	Owns patented LieNA® lithium-extraction technology. Being jointly developed with Mineral Resources Ltd (ASX: MIN) under a 50:50 Joint Venture.	Entity relating to historic mining and processing technology activities.
<b>Livium Ownership %</b>	N/A - Listed	100%	100%	100%	50%	100%
<b>Recycling Verticals</b>						
<b>Batteries</b>	No	Yes	Yes	No	No	No
<b>REE</b>	No	Yes	Yes	No	No	No
<b>Solar</b>	No	Yes	No	No	No	No
<b>Black Mass Processing</b>	No	Yes	No	No	No	No
<b>Other Verticals</b>						
<b>Lithium Chemicals</b>	Yes	No	No	No	Yes	No
<b>Battery Materials</b>	No	No	No	Yes	No	No

Livium is building Australia's platform for circular material recovery, enabling the transition to clean energy by safely and efficiently recycling lithium-ion batteries and other clean energy waste streams. Livium operates out of Victoria with plans for a national hub and spoke collection and processing network to support original equipment manufacturers (OEMs), utilities and technology partners in meeting stewardship, sustainability and materials recovery goals.

Livium's operations focus on:

- Lithium-ion battery (LIB) recycling (core operation).
- Solar panel (Photovoltaic, or PV) recycling.
- Rare earth elements (REE) extraction.
- Black mass processing.
- Recycling technology development through exclusive IP partnerships.

Livium's purpose is to recover critical materials, reduce waste, and support responsible electrification.

Beyond recycling, Livium has developed other innovative technologies including:

- Lithium extraction technology, LieNA®, via a 50:50 joint venture with Mineral Resources (ASX: MIN).
- Next generation lithium ferro phosphate (LFP) cathode powders via wholly owned subsidiary, VSPC.

Livium's business model is inherently aligned to the clean energy transition. Demand for high purity critical materials and renewable energy components is rising, while stewardship obligations and circular economy regulation are strengthening. This creates both risks and opportunities for Livium's operations, technology strategy, supply chain and regulatory compliance.

**MATERIAL SUSTAINABILITY RELATED RISKS AND OPPORTUNITIES**

Livium's material sustainability related risks and opportunities have been categorised into 6 key focus areas. A full value chain assessment and a climate risk assessment, including scenario analysis, will inform a more robust and comprehensive materiality process in future reporting cycles.

**Material Risk and Opportunity (RO) Table <sup>1</sup>**

Topic	Risk / Opportunity (RO) Description 9a 10a	RO Driver	Type 10b	Timeframe 10c			Where the RO Sits in our Business Model and Value Chain 13b			Current Effects		Anticipated Financial Effects 9d, 15b	
				S	M	L	Upstream, External	Direct Operations	Down-Stream, External	Financial Effects of the RO 9d, 15a, 16a	On BM & VC 9b, 13a		Strategy / Response 9c, 14a
1. Workplace Health & Safety	Risk of injury or harm to personnel due to hazardous workplace conditions, including mobile plant interactions, slips/trips/falls, electrical hazards, rotating machinery, lacerations/amputations, unknown hazards, or insufficient workforce capability and training.	<ul style="list-style-type: none"> <li>Poor housekeeping and site layout.</li> <li>Damaged or uninspected electrical cables.</li> <li>Inadequate traffic management.</li> <li>Poor guarding over machinery.</li> <li>Ergonomic strains and manual handling.</li> <li>Insufficient training or recruitment gaps.</li> <li>Unidentified hazards in dynamic environments.</li> </ul>	Risk	High (daily exposure)	High (if controls degrade)	Medium	X	X		Not quantified	<ul style="list-style-type: none"> <li>Minor injuries, lost-time events, temporary operational disruptions, safety culture impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Safety leadership and training.</li> <li>Myosh reporting and hazard close-out.</li> <li>Improved guarding, site layout, and segregation.</li> <li>Traffic management plans.</li> <li>Electrical inspection programs.</li> <li>Workforce capability planning.</li> </ul>	<ul style="list-style-type: none"> <li>Increased workers compensation premiums, productivity loss, safety compliance costs.</li> </ul>
2. Operational Integrity / Critical Risk Management	Risk of major incidents including fire, thermal runaway, smoke impacts, explosion, hazardous events during storage or processing, equipment failure, emergency response failure, or regulatory actions affecting plant safety, continuity, or licence to operate.	<ul style="list-style-type: none"> <li>Incorrect or non-compliant storage of LFBs.</li> <li>Fire propagation due to pallet stacking or poor segregation.</li> <li>Thermal runaway during dismantling or shredding.</li> <li>Water supply failure during fire suppression.</li> <li>Flammable gases/substances present.</li> <li>Emergency response coordination failures.</li> <li>Changes in regulatory storage classifications.</li> <li>Loss of facility lease or operating licence.</li> <li>Inability to secure engineering resources.</li> </ul>	Risk	Medium	High	Medium	X (Supplier compliance)	X	X (Community impact)	Not quantified	<ul style="list-style-type: none"> <li>Near-miss incidents, emergency response call-outs, heightened insurance requirements, operational interruptions.</li> </ul>	<ul style="list-style-type: none"> <li>Battery storage segregation and palletisation controls.</li> <li>Improved fire detection and suppression systems.</li> <li>Emergency response plan updates.</li> <li>Training for high-risk tasks (dismantling, shredding).</li> <li>Engagement with regulators on storage classifications.</li> <li>Engineering resourcing plans.</li> </ul>	<ul style="list-style-type: none"> <li>Insurance premium increases, regulatory fines, potential business interruption, capital upgrades to meet compliance requirements.</li> </ul>
3. Water & Discharge Compliance	Risk of contaminated fire water, wastewater or stormwater entering drainage systems, causing environmental harm, non-compliance with EPA requirements, or operational disruption.	<ul style="list-style-type: none"> <li>Delayed activation of containment controls.</li> <li>Inadequate SOPs for fire water and spills.</li> <li>Poor contractor awareness</li> <li>Water usage or supply spikes/interruptions.</li> <li>Storage or drainage system limitations.</li> </ul>	Risk	Medium	Medium	Medium	X	X	X (Environment)	Not quantified	<ul style="list-style-type: none"> <li>Additional management time, environmental monitoring requirements, potential minor non-compliance risks.</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater and fire water SOPs</li> <li>EPA-aligned Environmental Management Plan</li> <li>Contractor and emergency coordinator training</li> <li>Regular inspections of drainage and containment</li> <li>Water supply redundancy planning</li> </ul>	<ul style="list-style-type: none"> <li>EPA penalties, water treatment costs, infrastructure upgrades.</li> </ul>

[1] Short term: Operational impacts expected within 1-3 years; Medium term: Risks and opportunities expected over a 3-7 year horizon linked to asset upgrades, technology development and regulatory change; Long term: Impacts beyond 7 years associated with scaling new recycling pathways.

Material Risk and Opportunity (RO) Table (continued) <sup>1</sup>

Topic	Risk / Opportunity (RO) Description 9a 10a	RO Driver	Type 10b	Timeframe 10c			Where the RO Sits in our Business Model and Value Chain 13b				Current Effects		Anticipated Financial Effects 9d, 15b
				S	M	L	Upstream, External	Direct Operations	Down-Stream, External	Financial Effects of the RO 9d, 15a, 16a	On BM & VC 9b, 13a	Strategy / Response 9c, 14a	
				Medium	High	Medium	X (Material design)	X	X (Waste processors)	Not quantified	Waste disposal costs, potential contamination risks, manual handling requirements.		
4. Circular Economy & Waste	Risk related to waste generation, hazardous waste storage, landfill dependency, packaging material performance, waste handling limits, and diversion from landfill.	<ul style="list-style-type: none"> <li>Poor pallet or packaging quality control.</li> <li>High waste volumes exceeding storage/handling limits.</li> <li>Inefficient sorting or material recovery.</li> <li>Contaminated or unsafe waste streams.</li> <li>Regulatory requirements for hazardous waste storage.</li> </ul>	Risk & Opportunity	Medium	High	Medium	X	X	X	Not quantified	<ul style="list-style-type: none"> <li>Pallet reuse programs.</li> <li>Packaging redesign and GC improvements.</li> <li>Recycling and waste diversion initiatives.</li> <li>Hazardous waste storage compliance.</li> <li>Recovery optimisation (sorting upgrades, AI assistance).</li> </ul>	Waste disposal costs, potential contamination risks, manual handling requirements.	<ul style="list-style-type: none"> <li>Increased landfill costs, potential storage upgrades, revenue upside from recovered materials.</li> </ul>
5. Sustainable Products & Markets	Risk that Luvium's commercialisation of technologies (LieNA <sup>®</sup> , REE recycling, black mass downstream processing, PV recycling) may be delayed, uncompetitive, or impacted by partners, IP protection, market demand, or raw material pricing. Includes opportunities in growing recycled materials markets.	<ul style="list-style-type: none"> <li>Loss of IP</li> <li>Poor partner alignment (MinRes, technology partners).</li> <li>Technology scale-up challenges.</li> <li>Raw material cost volatility.</li> <li>Packaging product performance.</li> <li>Changing customer specifications.</li> <li>Market demand for recycled materials.</li> <li>Downstream recovery economics.</li> </ul>	Risk & Opportunity	Medium	High	High	X (Partners)	X	X (Customers, markets)	Not quantified	<ul style="list-style-type: none"> <li>Partner governance (MinRes, Won Kwang, UoM, Iondrive).</li> <li>IP management and renewal controls.</li> <li>Piloting and de-risking of technology.</li> <li>Commercial feasibility studies</li> <li>Market engagement (OEMs, recyclers).</li> </ul>	Project delays, R&D rework, customer specification risk.	<ul style="list-style-type: none"> <li>Impact on commercial viability, partnership revenue, technology licensing opportunities.</li> </ul>
6. Climate & Energy	Risk of increased operational cost, emissions exposure, energy supply interruptions, or climate transition requirements due to electricity dependency, GHG emissions profile, grid reliability, and emerging Scope 3 expectations.	<ul style="list-style-type: none"> <li>Electricity price volatility.</li> <li>Grid interruptions.</li> <li>GHG emissions baseline.</li> <li>Energy intensity of processes.</li> <li>Transition policy requirements.</li> <li>Customer Scope 3 reporting.</li> <li>Emissions from upstream transport and downstream processing.</li> </ul>	Risk & Opportunity	Medium	High	High	X (Energy providers)	X	X (Customers, reporting requirements)	Not quantified	<ul style="list-style-type: none"> <li>Energy efficiency (microwave reduction technology).</li> <li>Monitoring of electricity intensity.</li> <li>Future Scope 3 roadmap.</li> <li>Climate scenario awareness and governance improvements.</li> <li>Exploring renewable energy procurement.</li> </ul>	Electricity cost variability.	<ul style="list-style-type: none"> <li>Higher operating costs, potential need for capital investment in energy-efficient equipment, carbon transition costs.</li> </ul>

[1] Short term: Operational impacts expected within 1-3 years; Medium term: Risks and opportunities expected over a 3-7 year horizon linked to asset upgrades, technology development and regulatory change; Long term: Impacts beyond 7 years associated with scaling new recycling verticals, technology commercialisation and climate transition pathways.

The following summarises climate related risks and opportunities assessed as material.

**RISKS**



- Operational Integrity**  
Fire and thermal runaway events during handling, dismantling or shredding of LIBs, amplified by physical climate factors such as heat.
- Energy Costs and Reliability**  
Exposure to electricity price volatility given process energy dependence.
- Regulatory Change**  
Evolving battery and solar panel stewardship schemes; EPA regulation; storage classifications; emissions legislation.
- Market & Technology**  
Delays in technology scale up or commercialisation of REE and black mass processing pathways.
- Waste & Water Compliance**  
Fire water discharge, wastewater contamination or stormwater non-compliance during extreme weather events.

**OPPORTUNITIES**



- Circular Economy Growth**  
Increasing volumes of end-of-life clean energy waste (LIBs, PV, magnets) and strengthened stewardship schemes.
- Low Emission Technology Pathways**  
Microwave extraction technology that can reduce energy intensity by up to ~85%, leading to lower emissions and potentially better economics.
- Strategic Partnerships**  
LGES contract extension, Won Kwang S&T PV agreement, UoM REE licence, Iondrive DES collaboration.
- New Revenue Streams**  
Downstream materials sales, technology licensing, and higher value recovery of critical materials.

**CURRENT AND ANTICIPATED FINANCIAL EFFECTS**

Livium currently experiences:

- Electricity cost variability.
- Compliance and environmental management costs.
- Capital requirements to maintain safety and regulatory compliance.
- Working capital impacts from storage inventory and processing cycles.

In the medium-long term:

- Lower emission processes may reduce energy costs.
- Higher recovered material values may improve margins.
- Climate related regulatory regimes may drive incremental compliance costs.
- Disruptions, if a major incident occurred, could cause material financial impacts, including insurance, downtime and remediation costs.

**TRANSITION PLAN AND RESPONSE STRATEGY**

Livium’s strategy to respond to sustainability related risks and opportunities includes:

- Accelerating growth in circular economy waste streams.
- Expanding capabilities in REE, PV and black mass processing.
- Reducing energy intensity through advanced processing technologies.
- Strengthening environmental and safety controls to reduce incident likelihood.
- Engaging in stewardship and regulatory developments.
- Enhancing data and reporting maturity (GHG, material flow data, waste).

This transition plan will continue to evolve as Livium scales its operations and technology platforms.

**SCENARIO ANALYSIS**

Livium is in an early stage of developing processes for incorporating climate related scenario analysis and resilience assessment into its business planning cycles. Livium intends to undertake a qualitative assessment of the resilience of its strategy under two or more climate related scenarios, including the required ‘1.5–2°C aligned transition’ scenario.

These scenarios will consider potential impacts on material flows, energy costs, regulatory requirements, partner availability, and technology deployment timelines.

**Workplace Health & Safety**

Workplace health and safety (WHS) is a critical priority for Livium given the inherent risks associated with handling, transporting and processing end-of-life lithium-ion batteries and other critical materials. Fire risk from end-of-life LIBs has been identified as a key hazard for employees and contractors, particularly within Envirostream’s recycling operations. The Group also has a duty of care to protect contractors, neighbours, visitors and members of the public who may be affected by its activities, reflecting the view that WHS is fundamental to the success of each business within the Group.

**HIGH LEVEL CONTROLS**

**Total Recordable Injury Frequency Rate (TRIFR)**

WHS system monitoring, root cause investigations, division level tracking.

**Lost Time Injury Frequency Rate (LTIFR)**

Investigation of lost time injuries, standardised calculation, senior oversight.

**Hazard Reports & Close Outs**

Myosh system, hazard logging, corrective action tracking, management review.

**Emergency Response Improvements**

Crisis and Emergency Framework, site emergency plans, fire control upgrades, FY25 emergency spray installation.

**Training**

Induction, competency matrix, WHS & technical training (manual handling, battery dismantling, fire safety, CPR).

*Safe operations at the Wacol facility, Queensland.*



## Operational Performance

### METRICS AND TARGETS

#### TRIFR

##### FY25 Metric

**FY25: 29.8** (FY24: 16.16)  
(Yearly average per million hours).

##### FY25 Target

No deterioration in lag indicators,  
no more than 5 LTI/MTI.

#### LTIFR

##### FY25 Metric

**FY25: 3.24** (FY24: 2.46)  
(Yearly average per million hours).

##### FY25 Target

No deterioration in lag indicators,  
no more than 5 LTI/MTI.

#### Hazard Reports and Close Outs

##### FY25 Metric

**819** reported hazards. **768** closed.  
**45** ALARP (As low as reasonably practicable).  
**5** remain opened.

##### FY25 Target

**750** hazards.

#### Emergency Response Improvements

##### FY25 Metric

**6** scenarios run over the EVS sites.  
**2** scenarios run at the VSPC site.

##### FY25 Target

**2** per site per year.

CASE STUDY



*Firewalls at Berwick Road Facility.*

### Safety Systems for Higher Risk Operations

In FY25, Livium completed a major fire risk review within its battery dismantling operations, led by a cross-functional safety team. The assessment identified 26 targeted actions to reduce the likelihood of fire events, including updates to high-risk SOPs, enhanced theoretical and practical battery safety training with competency checks, and improvements to workstation layouts and access to fire safety equipment.

This work was strengthened by related FY25 improvement projects across Envirostream’s facilities. At Laverton North, operators benefited from redesigned discharge tanks and a new gantry and conveyor system to reduce manual handling during dismantling. At Campbellfield, additional emergency fire sprays were installed to support response capability in the secondary shredder.

## Operational Integrity/ Critical Risk Management

Livium’s operational risks increased in FY25 due to increasing collection of higher risk, large format lithium-ion batteries (LIBs), which present elevated fire, thermal-runaway and handling hazards. Envirostream collected 667 tonnes of large format LIBs in FY25 – a 30% increase on FY24 – and accounted for 61% of all materials collected. Outside of large format LIBs, complex programs such as the NSW EPA mixed battery clean up further reinforced the importance of strong operational integrity, requiring disciplined controls to safely manage diverse chemistries and increasingly hazardous battery types.

### HIGH LEVEL CONTROLS

#### Facility & Process Improvements

Redesigned discharge tanks, new gantry and conveyor systems, and additional emergency fire sprays combined to strengthen safety, handling efficiency and fire response capability across Envirostream’s sites.

#### Operational Scaling Controls

Expanded large format battery handling capability and improved processing pathways supported safe, efficient management of increasing national collection volumes.

#### Program Specific Controls

The NSW EPA mixed battery program applied disciplined logistics, transport and processing controls to manage diverse battery chemistries in potentially high risk condition.

## Water & Discharge Compliance

Battery recycling operations involve the handling and processing of end-of-life lithium-ion batteries, which require strict water and discharge controls to prevent contamination of stormwater, wastewater and surrounding land. Envirostream’s processing facilities operate under EPA licences with defined requirements for containment, runoff prevention and safe liquid-waste management. With processing volumes expected to increase, robust water management systems remained essential to maintaining compliance and protecting the local environment.

### HIGH LEVEL CONTROLS

#### Containment & Firewater Management

Additional emergency fire sprays were installed at the Campbellfield secondary shredder to improve fire response capability and support controlled firewater pathways.

#### Process & Infrastructure Upgrades

Redesigned discharge tanks at Laverton North reduced spill and overflow risks during battery loading, and new gantry improved handling workflow while limiting exposure to liquid leakage hazards.

During FY25, Envirostream consumed 2,906 kL of water (FY24: 1,695 kL) for process activities, sanitation, and dust control. No annual targets have been established for water consumption.

## Circular Economy & Waste

Livium’s circular economy purpose makes this topic material, as the Company relies on safe, efficient recovery of end-of-life lithium-ion batteries to divert hazardous waste from landfill and return valuable materials to supply chains. In FY25, increasing collection volumes particularly large format batteries from ESS and commercial applications and the commencement of complex programs such as the NSW EPA mixed battery cleanup highlighted the need for strong controls across collection, transport, dismantling and processing. These activities reinforced the importance of disciplined waste management practices to maximise material recovery while managing safety and environmental risks.

### HIGH LEVEL CONTROLS

#### Waste Diversion

Livium diverts hazardous end-of-life lithium-ion batteries from landfill through collection networks, coupled with dismantling and shredding pathways that recover black mass, steel, aluminium, and other recyclable materials. Recycling of light plastics remains a challenge and a focus for the Company to improve overall recovery rates on a volumetric basis.

#### Battery Processing Throughput

Redesigned discharge tanks and new gantry and conveyor systems improved processing workflow at Laverton North, while additional emergency fire sprays at Campbellfield strengthened operational continuity for higher risk chemistries.

#### Packaging/Pallet Reuse

Packaging reuse practices including pallet repurposing, secure containment units and standardised transport packaging strengthened during FY25. Envirostream’s handling processes prioritise reuse of suitable packaging materials where safe and compliant, reducing waste generation and supporting circular economy outcomes.

#### Recovered Materials Streams

Controlled dismantling and shredding pathways continued to produce black mass and recover metals such as steel, copper, and aluminium for sale and reuse in the local markets.

## Operational Performance

### METRICS AND TARGETS

Waste Diversion			
Total volumes collected	Large format LIBs collected	Small format LIBs collected	Other volumes collected
<b>931 tonnes</b>	<b>667 tonnes</b>	<b>156 tonnes</b>	<b>109 tonnes</b>
FY24: 1,541 tonnes	FY24: 513 tonnes	FY24: 315 tonnes	FY24: 713 tonnes

Battery Processing Throughput		
LIBs dismantling input	LIBs shredding input	CAPS input
<b>703 tonnes</b>	<b>483 tonnes</b>	<b>192 tonnes</b>
FY24: 1,541 tonnes	FY24: 475 tonnes	FY24: 196 tonnes
LIBs dismantling output	LIBs shredding output	CAPS output
<b>548 tonnes</b>	<b>696 tonnes</b>	<b>142 tonnes</b>
FY24: 1,541 tonnes	FY24: 588 tonnes	FY24: 148 tonnes

Recovered Material Streams		
Shipment of recovered materials from LIBs dismantling	Shipment of recovered black mass from LIBs shredding	Shipment of other recovered materials from LIBs shredding
<b>200 tonnes</b>	<b>356 tonnes</b>	<b>180 tonnes</b>
FY24: 216 tonnes	FY24: 278 tonnes	FY24: 252 tonnes

Packaging and Pallet Reuse
Metrics not currently captured.

## Sustainable Products & Markets

Livium’s sustainable products and markets are material because they underpin the Company’s role in supporting Australia’s shift to a circular and low carbon economy.

Through Envirostream’s recycling operations, VSPC’s LFP technology development and the LieNA® Joint Venture with Mineral Resources, Livium produces material streams that contribute to critical minerals supply. Demand for these capabilities grew in FY25, as renewable energy deployment accelerated, a trend that is expected to continue. Livium’s ability to supply sustainable, circular materials remains central to both its commercial growth and its broader contribution to the energy transition.

### HIGH LEVEL CONTROLS

#### Stewardship Aligned Collection and Intake

Envirostream’s national collection network servicing OEMs, ESS providers, retailers and state based programs supports responsible recovery of end-of-life batteries and underpins the Company’s alignment with accredited stewardship schemes.

#### Controlled Processing Pathways for Recovered Material

Dismantling and shredding operations convert batteries into black mass and other material fractions through controlled processes, with FY25 facility upgrades improving handling safety, workflow efficiency and fire response capability.

#### Technology Development for Sustainable Materials

VSPC advanced next generation LFP cathode powder development, while the LieNA® joint venture progressed commercialisation planning, strengthening the Company’s pathway to lower impact, high efficiency battery material production.

#### Market Driven Operational Readiness:

Growing FY25 collection volumes particularly large format batteries required disciplined process control, supported by strengthened logistics, facility readiness and recovery capability across state and OEM programs.

Livium intends to develop forward looking sustainability metrics for recovered material yield, downstream processing maturity, and technology commercialisation milestones. As capabilities and the businesses mature, Livium aims to improve reporting of recovery rates and the contribution of sustainable products to circular supply chain outcomes.

## Climate & Energy

Climate and energy management are material due to the energy intensive nature of battery recycling and emerging materials processing technologies, which rely on electricity, fuels and environmental controls. These activities directly influence the Company’s operating costs, emissions profile and compliance requirements, while also shaping stakeholder expectations as Livium transitions toward ASRS-aligned climate reporting. As Australia expands renewable energy deployment and critical minerals capacity, responsible energy use and transparent climate disclosures remain essential to Livium’s strategic position and long term resilience.

### HIGH LEVEL CONTROLS

High level controls for climate and energy management during FY25 included electricity usage monitoring, facility level environmental compliance processes, stormwater and firewater containment controls, and engineering upgrades designed to reduce energy intensity in dismantling and processing workflows. Subsequent to FY25, Livium is progressing early development of low emission extraction technologies including microwave assisted processing and solvent based recovery routes that may reduce future energy use.

Battery Dismantling at the Laverton Facility.



## Operational Performance

### METRICS AND TARGETS

#### Water Usage by Division

Of the 3,004kL water consumed, 2,906kL was consumed during recycling operations (Envirostream) and 98kL consumed for battery materials (VSPC).

#### Firewater SOP Changes

54 SOP updated in FY25, 15 of which were new documents to closed gaps in operations.

#### Energy Efficiency Initiatives

Initiatives are not currently quantified, and no identified initiatives are considered material.

#### Emissions Profile (Scope 1 & 2)

Entity Name	Primary Variable	GHG Emission (tCO <sub>2</sub> -e)			Energy (GJ)	
		Scope 1	Scope 2	Scope 1 & 2	Consumed	Produced
Diesel Consumed	527.52 L	1.42	-	1.42	20.36	-
LPG Combusted	58.8 L	0.09	-	0.09	1.51	-
Electricity Purchased	408,202 kWh	-	307.00	307.00	1,469.53	-

#### Future Scope 3 Roadmap

The Scope 3 Roadmap will be developed across FY27.



Lithium-ion battery packs are safely lowered to be discharged of energy at the Laverton North facility, Victoria.

# Risk Management

## Processes for Identifying and Assessing Sustainability Related Risks

Livium identifies sustainability related risks through its Enterprise Risk Management (ERM) framework. This includes hazard identification, incident reviews, operational audits, ESG quarterly reporting, technology project risk assessments, and commercial partner evaluations.

Sustainability related risks are evaluated across:

- Likelihood
- Consequence
- Time horizon
- Impact on operations, environment, and financial outcomes.
- Regulatory and stakeholder expectations.

Sustainability risks are incorporated into Livium's broader risk framework alongside health and safety, environmental, operational, regulatory and financial risks.

## Processes for Managing Sustainability Related Risks

Livium manages sustainability related risks through:

- Fire and thermal runaway controls.
- Emergency response and containment improvements.
- Water and discharge compliance processes.
- Business continuity and incident management planning.
- Engineering design and technology de-risking.
- Energy monitoring and improvement.
- Active regulatory engagement.

Livium will review its ERM framework and processes to consider the role of scenario analysis in informing sustainability planning, emergency preparedness, capital planning, and project development. This review will occur across FY26 and FY27.

# Opportunities, Innovation, R&D and Technology Pathways

## SUSTAINABILITY RELATED OPPORTUNITIES IN FY25 ACROSS OUR VALUE CHAIN

SECTION		OPPORTUNITY CATEGORY				
Vertical/Entity	Value chain component	Resource efficiency	Products and services	Markets	Resilience	Energy source
Recycling/ Envirostream, RCARC	Collection and sorting	Sorting improvements (AI-assisted)	Provision of recovery/recycling services for REE and PV.	<ul style="list-style-type: none"> <li>Expand battery services into alternate industries (i.e. mining, heavy industry).</li> <li>Sale of LFP black mass.</li> </ul>	Continuous improvement of critical risks management for best practice battery handling.	Energy capture and reuse from battery discharging.
	Processing	Shredding improvement to enhance black mass quality.	<ul style="list-style-type: none"> <li>Black mass processing to capture Ni, Co, Mn.</li> <li>Processing of PV cells.</li> <li>Recovery of REE from magnets.</li> </ul>	<ul style="list-style-type: none"> <li>Application of technology to delaminate PV panels.</li> <li>Global application of microwave technology for REE extraction.</li> </ul>	Patent protection (wet shredding process to mitigate fire risk).	Application of microwave technology for REE extraction with potential for 85% energy reduction compared to other methods.
Lithium Chemicals/ LiNA®	Lithium extraction and conversion	~50% higher Li extraction efficiency, increasing mine life and reducing waste.	Allows miners to move downstream to produce lithium salt, rather than concentrate.	<ul style="list-style-type: none"> <li>Global application</li> <li>Ability to process waste materials.</li> </ul>	<ul style="list-style-type: none"> <li>Patent protection (Caustic process).</li> <li>Maintain JV in good standing.</li> </ul>	Technology operates as lower temperatures than traditional processes.
Battery Materials/VSPC	Lithium-ion battery manufacturing	LFP provides longer life cycles for batteries.	Development of next generation products such as generation 4 LFP (GEN4) and LMFP.	Offtake development with energy storage manufacturers.	<ul style="list-style-type: none"> <li>Patent protection (Lithium metal phosphate).</li> <li>Diversification of global supply to reduce concentration risk from China.</li> </ul>	

### Battery Recycling Innovation

Livium's battery recycling platform continues to advance through targeted innovation that strengthens safety, performance, and competitiveness. The Company's wet shredding patent represents a significant step forward in fire risk mitigation, providing a more stable processing environment and reducing operational disruptions associated with thermal runaway incidents. This technology positions Livium to operate with greater consistency and confidence when handling increasingly complex lithium-ion chemistries, enhancing business resilience and supporting higher value material recovery pathways in the long term.

AI-assisted sorting improvements are reshaping the productivity of front-end operations, providing faster, more accurate identification of chemistries and formats. These enhancements lay the foundation for more efficient processing flows, enabling safer prioritisation of high risk materials and improving yield quality at the early stages of the value chain. By elevating accuracy, these innovations also unlock the potential for expanded customer programs that require tailored processing pathways for diverse battery categories.

Engineering upgrades across dismantling and pre-processing infrastructure further improve throughput reliability and operational control. Stronger mechanical systems reduce bottlenecks, lower manual handling exposure and provide a scalable platform that can accommodate the rising volume of large format batteries in the domestic market. Collectively, these technologies support Livium's shift toward higher automation, safer workflows and long term operational efficiency, creating opportunities for strengthened margins and expanded market relevance.

### Black Mass & Downstream Processing

Livium's collaboration with Iondrive continued to progress during FY25, supporting the development of Direct Extraction System (DES) technology for refining lithium and other critical minerals from black mass. This partnership strengthens the Company's pathway into downstream processing by exploring chemical routes that could improve extraction efficiency while enabling higher value product streams. The collaboration also plays a strategic role in building future domestic capability, aligning with national interest in onshore critical minerals processing and the broader clean energy transition.

Commercial positioning remained a focus throughout FY25 as Livium engaged customers, partners, and technology stakeholders to advance black mass supply opportunities. Market interest in sustainable and traceable battery material inputs continues to grow, and Livium's combination of mechanical processing capability and emerging downstream technologies places the Company in a favourable position to participate in these markets. Ongoing engagement with OEMs, cathode-material developers and research institutions provides pathways to qualify black mass products and support future commercial agreements.

Pilot planning and next stage development activities progressed as Livium assessed processing requirements, technology configurations, and future scaling considerations. These preparatory steps are important for validating downstream processes and determining how emerging technologies integrate with existing mechanical processing infrastructure. By advancing pilot readiness, Livium is building a foundation for potential downstream expansion, including opportunities to create higher value material outputs and support evolving domestic supply chain needs.

*Lithium-ion battery packs are dismantled at the Laverton North facility, Victoria.*



### REE Extraction

Livium's partnership with the University of Melbourne (UoM) continued to advance research into rare earth element (REE) extraction from end-of-life clean energy materials. This collaboration plays a key role in exploring innovative pathways for recovering critical minerals that are essential to Australia's renewable energy and electrification ambitions. By aligning academic research with Livium's operational requirements, the partnership supports the development of viable downstream processing routes that could strengthen domestic REE supply chains in the long term.

Microwave assisted processing technology tested through UoM research demonstrated a potential 85% reduction in energy intensity, highlighting a meaningful opportunity to create lower-impact extraction pathways compared with traditional thermal processing. This innovation provides a foundation for more competitive and environmentally efficient processing of REE-bearing materials, reducing future production emissions and supporting market expectations for sustainable critical mineral supply. The technology also complements Livium's broader focus on circular material recovery by enabling resource efficient refinement of emerging waste streams.

Pilot stage planning and downstream requirements were further developed during FY25 to assess the scalability and integration of these technologies into future commercial operations. These pilot requirements help determine the technical readiness, chemical processing conditions and infrastructure needs associated with REE recovery at scale. Together with Livium's broader positioning within critical minerals markets, these developments support the Company's long term strategy to expand into higher value downstream products that reinforce Australia's sovereign capability in clean energy materials.

### Solar Panel Recycling

Livium's partnership with Won Kwang S&T continued to advance the development of safe and scalable processes for solar panel (PV) recycling. This collaboration supports Livium's entry into an emerging waste stream driven by the rapid expansion of solar infrastructure across Australia. By combining Won Kwang's technical experience with Livium's operational capabilities, the partnership lays the groundwork for future commercial processing pathways and positions the Company to respond to increasing volumes of end-of-life PV modules expected over the next decade.

Stewardship scheme readiness remained a priority throughout FY25 as national discussions progressed on PV product stewardship frameworks. Livium's involvement in these early readiness activities ensures that the Company's future capability aligns with potential regulatory obligations and enables a compliant pathway for the collection, transport, and processing of PV waste. Strengthening preparedness also supports customer expectations for safe, traceable, and responsible handling of solar materials as stewardship reforms evolve.

During FY25, Livium continued to assess the developmental pathway for PV processing, including required infrastructure, handling protocols, and technology options. These assessments support long term planning for mechanical dismantling and material-recovery processes, particularly as PV modules contain glass, metals, and semiconductor materials suitable for circular economy pathways. By advancing this development work, Livium is building a strategic foundation to enter the PV-recycling market when volumes and regulatory settings mature, enabling future integration into its broader clean energy waste platform.

### LieNA®

The LieNA® joint venture continued to progress through FY25, with governance structures guiding decision-making, milestone tracking and strategic alignment between Livium and Mineral Resources. The JV governance framework ensures that project development is managed in a disciplined and transparent manner, enabling both partners to advance technical readiness while responding to emerging industry needs for alternative lithium extraction pathways. This structure strengthens long term accountability, supports prioritisation of development stages, and positions the project to move efficiently toward commercial decision points as milestones are achieved.

Engineering risk controls remained a critical focus area as LieNA® progressed through technical evaluation and planning. Workstreams during FY25 concentrated on ensuring that core process elements are engineered to manage chemical handling risks and extraction process variables safely and effectively. These controls reinforce the project's overall risk management framework, supporting the development of a process that can operate reliably at scale. Strengthening engineering assurance also minimises potential operational and environmental risks, supporting the project's viability as it transitions from development into future demonstration phases.

Commercialisation progress continued as the JV advanced market understanding, assessed downstream value opportunities, and engaged with potential end users of lithium sulphate and precursor materials. These activities help to position LieNA® within Australia's emerging battery materials supply chain and clarify the commercial pathways available once technical milestones are reached. As global demand for lithium chemicals grows, the project's emphasis on commercial readiness supports the potential to generate new market opportunities aligned with domestic critical minerals objectives and the energy transition agenda.



VSPC's LFP Pilot Plant located at the Wacol facility, Queensland.

## VSPC

VSPC continued to advance its development milestones during FY25, progressing core elements of its next generation lithium ferro phosphate (LFP) cathode powder technology.

Development activities centred on validating process performance, optimising production parameters and refining intermediate outputs to support future qualification by downstream battery materials customers. These milestones contribute to establishing a scalable, more resource efficient production pathway aligned with growing demand for LFP chemistries in energy storage and electric mobility applications.

Engineering risk controls remained integral to VSPC's development work, with FY25 efforts focused on strengthening process stability, managing chemical handling risks and ensuring that pilot scale configurations adhere to robust safety and engineering standards. These controls support the integrity of VSPC's RC Process and underpin the reliability required for future scale up.

By embedding improved engineering assurance in early stage development, VSPC reduces downstream technical risks and supports a more resilient pathway toward future commercial operations.

Commercialisation progress advanced through ongoing engagement with potential customers, technology partners, and critical minerals stakeholders. Activities during FY25 centred on building market awareness of VSPC's LFP technology platform and supporting future qualification requirements for potential offtake opportunities.

These efforts help to position VSPC within the growing domestic and international markets for LFP cathode materials, reinforcing the longer term commercial relevance of its technology as demand for lower cost, lower risk and more sustainable battery chemistries continues to rise.

# Consolidated Metrics & Targets

Livium reports Scope 1 and Scope 2 emissions using the NGER Determination (2008) as the measurement framework.

Refer page 23 - Emissions Profile (Scope 1 & 2) for further metrics.

## FY25 GHG Inventory

- Scope 1: 1.51 tCO<sub>2</sub>-e
- Scope 2: 307 tCO<sub>2</sub>-e
- Total Scope 1+2: 308.51 tCO<sub>2</sub>-e

(Source: FY25 GHG Assessment)

## Reporting Boundary includes:

- Envirostream
- VSPC
- Livium Ltd corporate office

## Intensity Metrics

Electricity use and intensity per tonne processed.

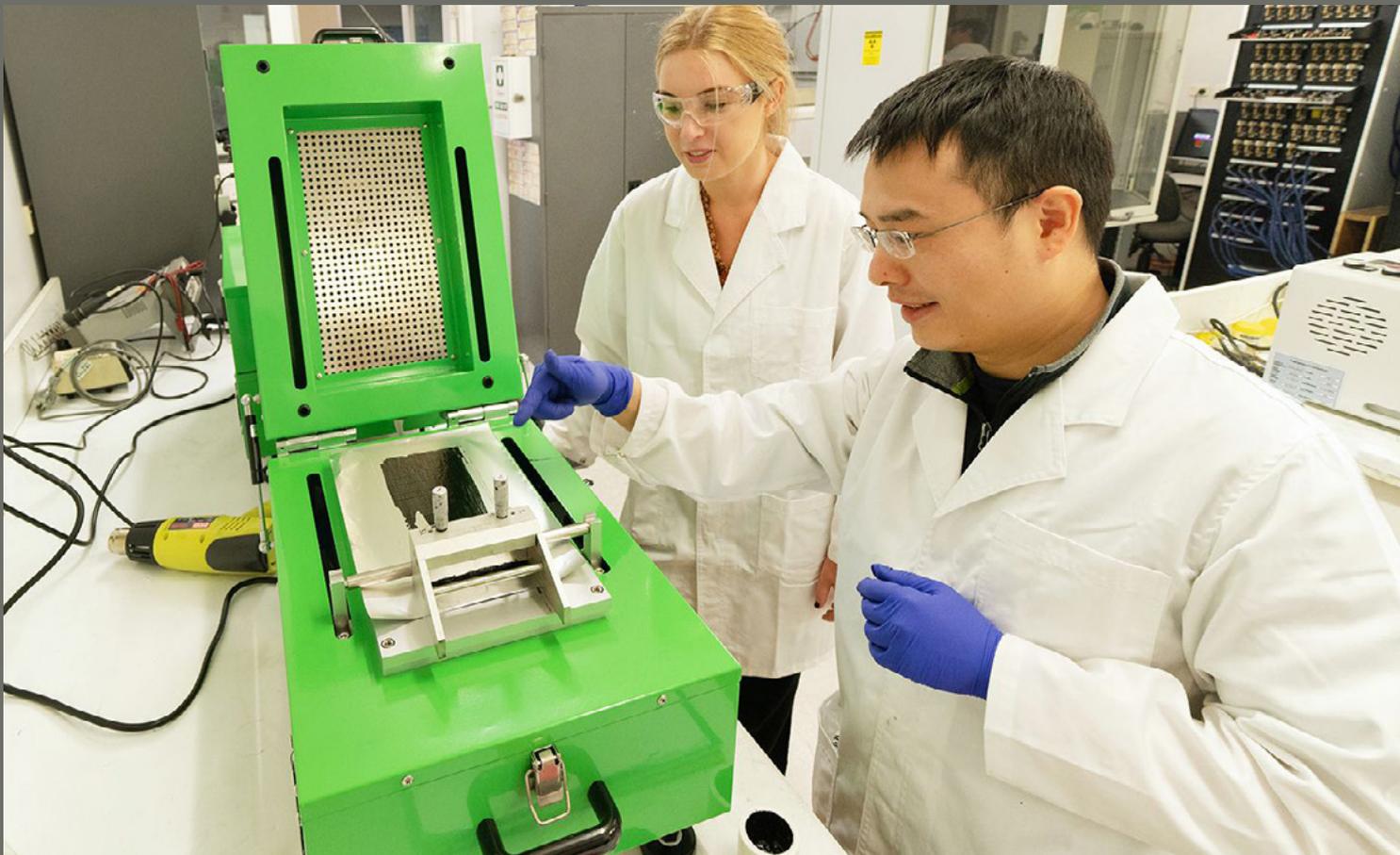
## Targets

Livium is in the process of establishing medium term sustainability targets consistent with its ESG Roadmap.

## Initial focus areas include:

- Energy intensity reduction
- Increased waste diversion
- Improved recovery rates for critical materials.
- Strengthened Scope 1 & 2 emissions performance.
- Development of a Scope 3 roadmap.

Targets will be refined as Livium's matures its technology mix and operational scale.



VSPC's LFP cathode powders are tested in the laboratory at the Wacol facility, Queensland.

# Disclosure Reference Table

Section in Report	Relevant IFRS S1 Reference	Relevant IFRS S2 Reference
<b>4.2 Sustainability and Climate Related Risk &amp; Opportunity Governance</b> <ul style="list-style-type: none"> <li>• Board Oversight</li> <li>• Management's Role</li> <li>• Competence and Skills</li> </ul>	Governance: 26, 27a Governance: 27b Governance: 27	Governance: 5, 6a Governance: 6b Governance: 6
<b>4.3 Compliance Framework</b>	Risk Management: 44	Risk Management: 25
<b>4.4 Data &amp; Cyber Security</b>	Risk Management: 44	Risk Management: 25
<b>5.2 Safety Culture</b>	Risk Management: 44	Risk Management: 25
<b>6.1 Livium's Business Model</b>	Strategy: 32	Strategy: 13
<b>6.2 Material Sustainability Related Risks and Opportunities</b> <ul style="list-style-type: none"> <li>• Material Risks and Opportunities</li> <li>• Current and Anticipated Financial Effects</li> <li>• Transition Plan and Response Strategy</li> <li>• Scenario analysis</li> </ul>	Strategy: 29, 30, 32, 33 Strategy: 34 Strategy: 32, 33 Strategy: 41	Strategy: 9, 10, 13, 14 Strategy: 15 Strategy: 13, 14 Strategy: 22
<b>6.3 Workplace Health &amp; Safety</b>	Risk Management: 44	
<b>6.4 Operational performance</b>	Metrics and Targets: 46	
<b>6.5 Operational Integrity/Critical Risk Management</b>	Risk Management: 44	
<b>6.6 Water &amp; Discharge Compliance</b>	Risk Management: 44	
<b>6.7 Circular Economy &amp; Waste</b>	Risk Management: 44	
<b>6.8 Operational Performance</b>	Risk Management: 44	
<b>7 Risk Management</b>	Risk Management: 44	Risk Management: 25
<b>8 Opportunities: Innovation, R&amp;D and Technology Pathways</b>	Strategy: 29, 30, 32, 33	Strategy: 9, 10, 13, 14,
<b>9.1 GHG Emissions (FY25)</b>	Metrics and Targets: 46	Metrics and Targets: 29

Selection of VSPC equipment at the Wacol facility, Queensland.



*VSPC's LFP cathode powders are being prepared for testing in the laboratory at the Wacol facility, Queensland.*





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