Se-cure Waste Management

2024/25

SUSTAINABILITY REPORT

For the period covering June 1, 2024 – May 31, 2025

Jointly generated by ESGpedia SWM Se-cure Waste Management

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ABOUT THIS REPORT

This report covers Se-cure Waste Management's sustainability performance from:

June 1, 2024 – May 31, 2025

Reporting framework

The report was meticulously crafted with reference to the Global Reporting Initiative (GRI) standard and the International Financial Reporting Standard S2, ensuring comprehensive coverage and alignment with internationally recognised sustainability reporting practices.

Our carbon accounting processes are aligned with the GHG Protocol methodology, ensuring a comprehensive, transparent, and standardised disclosure of our environmental impact. Carbon emissions were calculated on ESGpedia, an ESG software used for Environmental, Social, and Governance reporting.

External assurance

No external assurance was conducted for this sustainability report.

Contact Us

We welcome feedback from our stakeholders to help us further our sustainability journey. Or, if you would like to learn more about our ESG initiatives, please contact:

SWM Team

Contact: enquiry@se-curewaste.com
Address: 8 Neythal Rd, Singapore 628575
Website: www.se-curewaste.com

The Organization

Se-cure Waste Management (SWM) is a Singapore based organization specializing in the recycling, recovering and/ or repurposing of electronic scrap and waste (known as e-waste) with the use of innovative technology to yield the highest possible recycling rate with minimal environmental impact, contributing to resource sustainability.

Founded in 2019 with a focus in lithium-ion batteries and with a vision to "create and se-cure a greener environment for our future generations", SWM is strategically set to be an integrated e-waste solutions provider for resource re-cycling, re-covering, and re-purposing, creating sustainable resources for our environment. Without a proper evaluation of secondary use possibilities or proper disposal solutions, lithium-ion batteries will contribute to environmental pollution and adverse human health impacts due to its potentially hazardous materials contained.

The precious metals within these lithium-ion batteries would be permanently disposed when they could have been up-cycled for new/ secondary uses. SWM is one of the few local enterprises approved by the National Environmental Agency (NEA) to handle the recycling of e-waste into a form which is readily transformed into new raw materials through a mechanical transformation process Poised to lead the forefront for battery recycling innovation, SWM aims to offer to its diverse stakeholders environmentally friendly e-waste management solutions that meet the unique needs of businesses.

Waste today, precious resources tomorrow.

Location of Operations Reported

Headquarters: Singapore

CEO's Statement

"We are not just recycling batteries – we are part of a broader effort in securing critical materials, reducing climate impact and enabling energy transition through a safe, transparent and circular battery eco-system."

Vince GOH
Executive Director & Chief Executive Officer
Se-cure Waste Management

AWARDS & CERTIFICATIONS

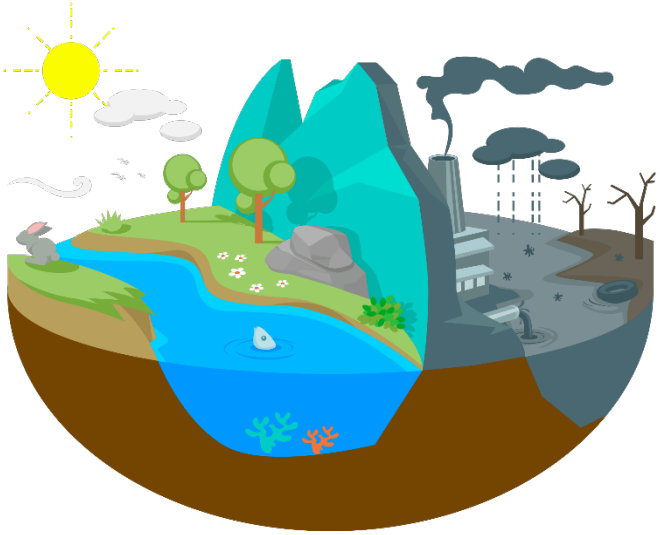
MATERIAL TOPICS

Material Topic Overview

Identifying material sustainability topics is essential to ensure our reporting addresses the most relevant issues for our business and stakeholders. For this round two sustainability report, Se-cure Waste Management determined its material topics through industry benchmarking and reference to sectoral best practices. Moving forward, we plan to enhance our materiality assessment by engaging both internal and external stakeholders to provide a more comprehensive and inclusive perspective.

Methodology and Standards

We aligned our materiality assessment with the Sustainability Accounting Standards Board (SASB) and Global Reporting Initiative (GRI) guidelines to identify the most material topics relevant to the industry. Additionally, we reviewed commonly disclosed topics in sustainability reports published by other companies within the construction sector to ensure alignment with industry best practices.



Material Topics
Energy (GRI 302)
Water consumption (GRI 303)
Emissions (GRI 305)
Waste generated (GRI 306)
Employment (GRI 401)
Occupational health & safety (GRI 403)
Training & education (GRI 404)
Diversity & equal opportunity (GRI 405)
Anti-corruption (GRI 205)

SUSTAINABILITY INITIATIVES (continued...)

Operations focused effort

Clean driving energy – electric van

Our 100% electric van produces zero tailpipe emissions, helping us meet environmental regulations and improve organizational sustainability. Additionally, instant torque makes stop-and-go driving (common in collections) more efficient and smoother.

Reusing packaging materials

Reusing packaging materials reduces waste sent to landfills and lowers pollution. This effort helps us conserve natural resources by decreasing the use of new raw materials, cuts energy use and carbon emissions associated with manufacturing. Overall, it helps promote a more sustainable and circular economy.

Reusable PPE over disposable ones

Permanent PPEs (like reusable gowns or face shields) can be cleaned and used multiple times, reducing waste, making it more environmentally friendly compared to single-use disposable PPE. Additionally, it helps ensure a more stable supply during shortages, as items don't need to be constantly replaced.

Marketing effort

Green marketing/ promotion approach

Using environmentally friendly marketing promotions (100% recycled ABS plastics as corporate souvenir), zero-tree paper for name cards and printed materials strengthens SWM's brand image with genuine commitment to sustainability. This aligns us to eco-conscious stakeholders, helps build trust and loyalty while differentiating our business from competition. Additionally, it reduces environmental impact, support corporate social responsibility goals, and position SWM as forward-thinking and responsible.

Organization-wide effort

Sustainable sips – encouraging BYOB/C

We encourage employees and visitors/ guests to bring their own cups and/ or water bottles to reduce single-use plastic and disposable cup waste, lowering the organization's environmental footprint, cutting down on procurement, waste management, and recycling costs while conserving resources used in manufacturing and transport. Promoting refill stations also supports a culture of sustainability, raising environmental awareness and reinforcing the organization's commitment to responsible, eco-friendly practices.

BATTERY RECYCLING PROCESS

Life Cycle Assessment

The Life Cycle Assessment (LCA) is a systematic method used to quantify and analyze the environmental impact associated with the product/ service/ process throughout its entire life time. In the context of battery recycling within SWM, the LCA serves as a key sustainability management tool to improve our processes inline with our broader environmental objectives and carbon minimization roadmap.

SWM plays a part in closing the loop within the lithium-ion battery value chain. Used batteries are collected from upstream vendors and processed through SWM's recycling and recovery operations to extract valuable materials. Through a series of controlled treatment steps, these batteries are carefully segregated, dismantled, broken down, and finally separated into ferrous, non-ferrous materials and black mass. These separated materials are then provided to the refineries for continued recovery, enabling these recovered materials ready to be used in the production of new batteries.

Through this material recovery from end-of-life batteries, the process supports resource efficiency and reduces the reliance on primary raw material extraction, preserving natural resources.

Global Warming Potential

SWM's battery recycling process results in an environmental impact of 1,135 $kgCO_2e$ per tonne of black mass produced.

1,135
$kgCO_2e$

Focus Areas for Improvement

Our mechanical recycling process is powered by LPG and electricity, making them major contributors to carbon emissions. A key area of focus to reduce emissions is energy consumption during thermal and mechanical operations. Mechanical recycling steps such as shredding, drying, and separation often require high heat and intensive electricity use. SWM aims to optimize equipment efficiency and implement energy monitoring systems to monitor electricity demand to manage overall greenhouse gas emissions while maintaining recycling performance.

Another possible action would be to reduce LPG dependence in the thermal stage by switching to electric heat systems powered by renewable electricity and improving heat recovery. This shall be reviewed for longer-term action planning.

CURRENT PROGRESS

FY 2024

Total Energy Consumption

631.518

GJ

Total absolute GHG emissions
(Scope 1, 2, and 3)

80.862 tCO_2e

Average Training Hours

2.9 hours

Number of Employees
(As of 31 December 2024)

24

24/7

Access to whistleblowing channel to every employee

CURRENT PROGRESS

FY 2024

Total Water Consumption

1,236.9 m^3

Total Waste Generated

67,180 kg

Gender ratio[1] of Male to Female

2 : 1

Age ratio[1] of Young to Older Employees[2]

1 : 4

ZERO

Incident relating to corruption and/or bribery

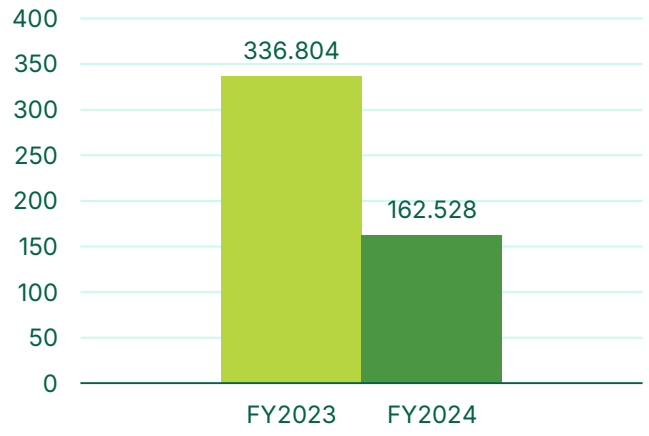
[1]The ratios presented are estimates.
[2]Younger employees refers to those aged 30 and below, while "older employees" refers to those above 30.

ENVIRONMENTAL METRICS

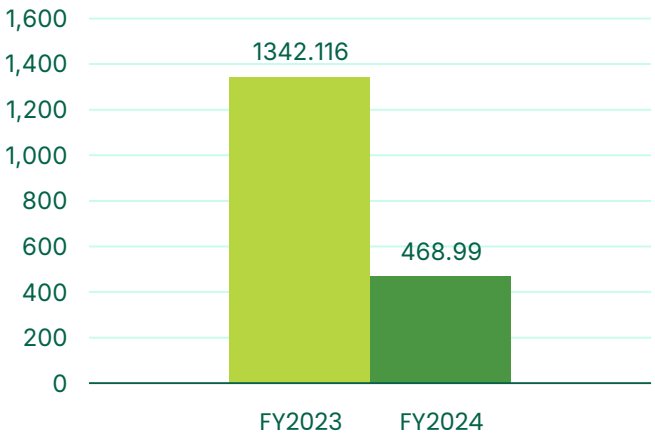
Energy Consumption

Total Energy Consumption (FY2024) **631.518** GJ

Total Energy Consumption - Diesel
(GJ)



Total Energy Consumption - Electricity
(GJ)

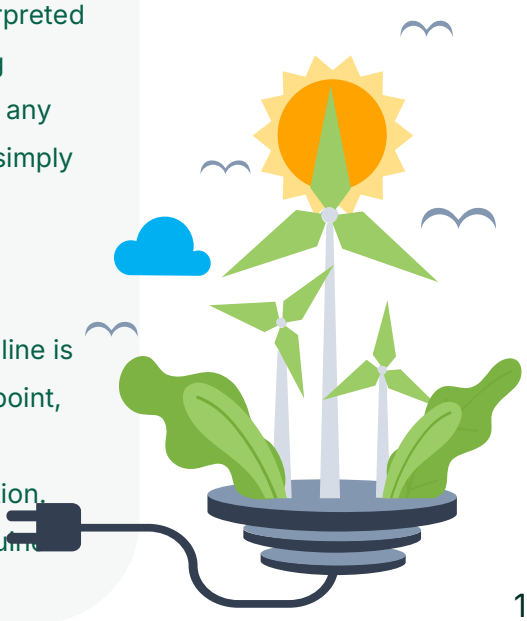


Total Diesel Consumption in Litres	
FY	Diesel (litres)
2023	8,859
2024	4,275

Total Electricity Consumption in kWh	
FY	Electricity (kWh)
2023	372,810
2024	130,275

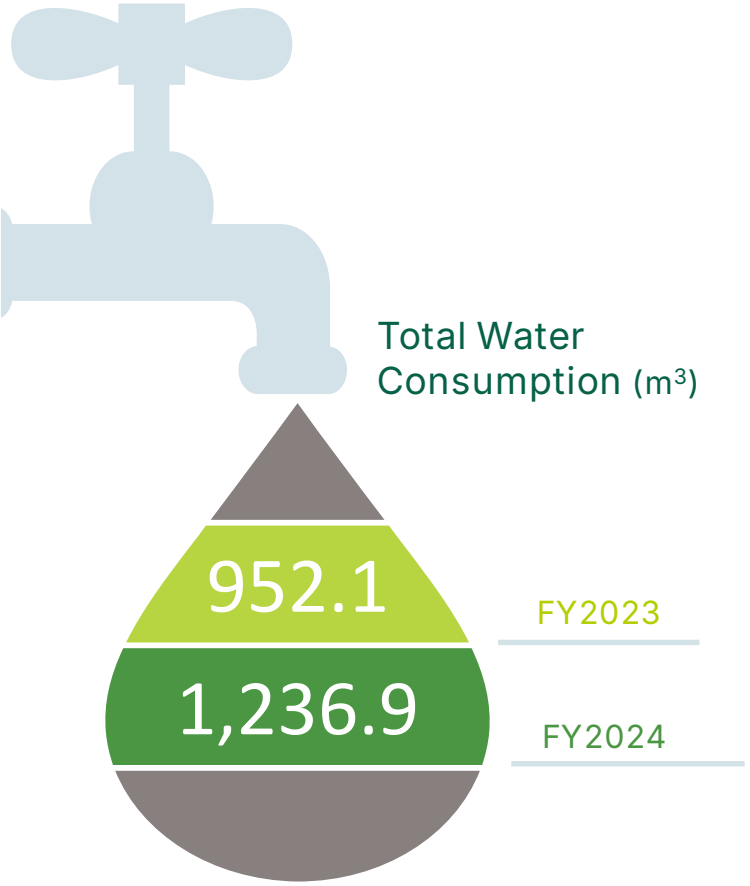
The apparent drop in diesel and electricity consumption should be interpreted with caution. It is largely driven by a roughly 50% reduction in recycling throughput during the equipment and line upgrading phase, rather than any intrinsic improvement in energy efficiency. In other words, the system simply processed less material, so it consumed less energy—this is not yet a meaningful indicator of environmental performance.

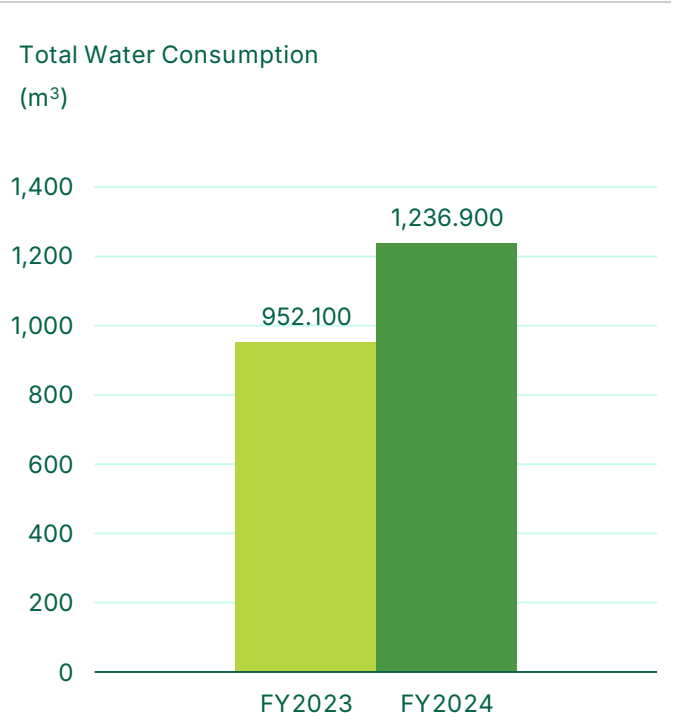
A more representative assessment should be conducted once the new line is fully installed and operating at stable, normal or peak capacity. At that point, energy use should be evaluated using intensity metrics such as energy consumed per ton of material processed, alongside absolute consumption. Only then can we determine whether the upgrades have delivered genuine efficiency gains and emissions reductions.



ENVIRONMENTAL METRICS

Water Consumption





From an environmental standpoint, this increase in water consumption—from 952 m³ to 1,236.9 m³—despite a 50% drop in recycling throughput is a clear signal of reduced operational efficiency rather than increased production demand.

Several factors likely explain this disconnect. During equipment and line upgrades, facilities often rely more heavily on cleaning, flushing, and commissioning activities, all of which are water-intensive but not directly tied to output. New or partially integrated systems may also lack optimized water recycling loops, leading to higher fresh water intake. In addition, intermittent or stop-start operations can increase water use per unit processed, as systems are repeatedly washed down or stabilized. There may also be leakages, suboptimal calibration, or temporary bypassing of water recovery systems during the transition phase.

Crucially, this means the current water consumption figures are not representative of steady-state operations. A more meaningful environmental assessment should be conducted once the upgraded line is fully operational, focusing on water intensity (m³ per ton of batteries processed), water recycling rates, and system losses. Only then can we determine whether the facility is progressing toward more sustainable water management or inadvertently increasing its resource footprint.

ENVIRONMENTAL METRICS

Waste Generated

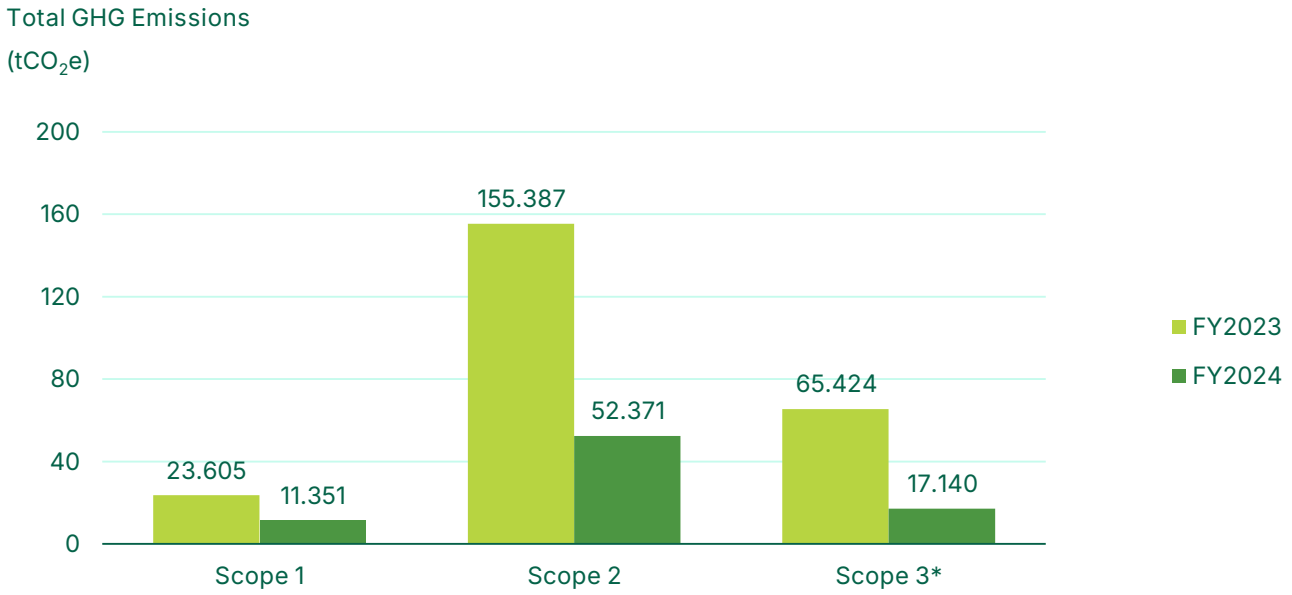
From an environmental perspective, the sharp reduction in waste generated—from 281,910 kg to 67,180 kg—during a period of processing line and equipment upgrades should not be immediately interpreted as a true improvement in waste performance.

The most likely driver is the significant drop in operational activity. With recycling throughput curtailed during the upgrade phase, fewer batteries are being processed, which naturally leads to lower volumes of process residues, slag, and other waste streams. In essence, less input has resulted in less output waste, rather than a fundamental change in how efficiently materials are recovered or minimized. Additionally, transitional conditions may distort the picture further. Waste streams could be temporarily stockpiled instead of being treated or disposed of, certain process steps may be bypassed, or incomplete separation processes could reduce the immediate generation of classified waste while deferring it downstream. Commissioning phases can also shift waste generation patterns in ways that are not representative of normal operations.

Therefore, this reduction should be viewed as operationally driven and not indicative of improved environmental performance. A more representative evaluation should be conducted once the upgraded facility is running at stable capacity, using metrics such as waste generated per ton of batteries processed, recovery efficiency rates, and the proportion of waste diverted from disposal. Only then can we determine whether the upgrades have genuinely reduced the facility's waste footprint.

ENVIRONMENTAL METRICS

GHG Emissions



Total GHG Emissions in FY2024

Scope 1
11.351 tCO_2e

Scope 2
52.371 tCO_2e

Scope 3*
17.140 tCO_2e

**Selected categories, please see next page for more details.*

In FY2024, our total GHG emissions amounted to 80.862 tCO_2e, a 67% decrease from our previous year's emissions of 244.416 tCO_2e.

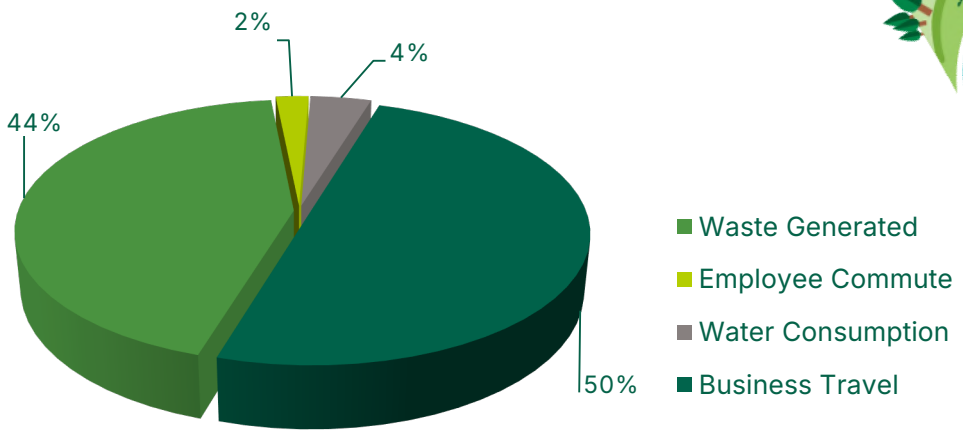
Our emissions are calculated using the emission factors from the newly launched Singapore Emission Factors Registry (SEFR) launched by the Singapore Business Federation.[1]

[1]https://sefr.netzerohub.sg/

ENVIRONMENTAL METRICS

GHG Emissions

Scope 3 Carbon Emissions in FY2024



Scope 3 Emissions Breakdown (tCO_2e)	2023	2024
Water Consumption	0.542	0.705
Waste Generated	31.433	7.491
Business Travel	2.203	8.565
Employee Commute	31.246	0.380
Total Scope 3 Emissions	65.424	17.140

In 2024, we initiated the tracking of our Scope 3 carbon emissions, focusing on the following categories:

- Water consumption
  (under Purchased Goods and Services)
- Waste generated
- Business travel
- Employee commuting

In future reporting years, we aim to expand our tracking efforts to include additional data points within our Scope 3 carbon emissions.

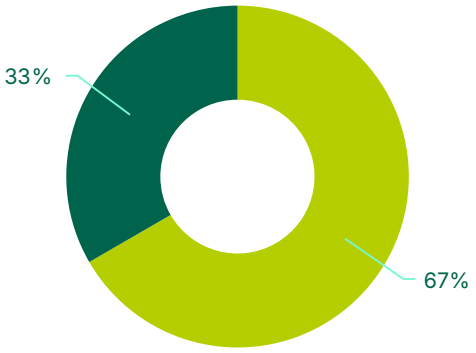
SOCIAL METRICS

Diversity and Equal Opportunity

Total Number of Current Employees[1]	24

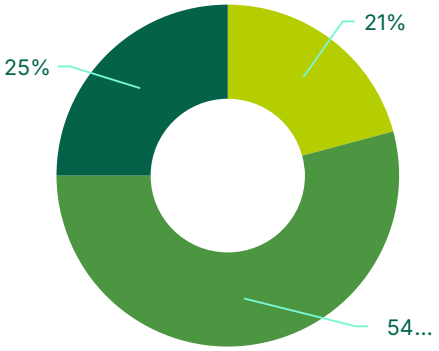
[1]As at 31 December 2024

Number of employees by Gender



Female	8
Male	16

Number of employees by Age Group



Under 30 years old	5
30-50 years old	13
Over 50 years old	6

Number of employees by Nationalities

Malaysia 14

China 1

Singapore 9

The recycling industry has historically been male-dominated, but this should not be accepted as inevitable. A workforce primarily composed of men suggests there may still be barriers: cultural perceptions or workplace design that discourage/ exclude women participating fully.

At the same time, the mix of workers from Singapore, Malaysia, and China highlights the transnational nature of industrial labor. SWM sees this diversity as a strength, and continues to focus on equity: worker regardless of nationality receive equal pay for equal work, fair access to advancement and consistent working conditions. At SWM, we go beyond acknowledging diversity to actively building equity. This includes targeted efforts to recruit and retain women, ensuring safe, inclusive working conditions, fair pathways for career development across all nationalities.

Ultimately, true diversity is not just about representation, but about dismantling structural imbalances so that all workers have equal opportunity, dignity, and voice within the workplace.

SOCIAL METRICS

Employment

New Employee Hires

Category	Items	Number	Rate
By Age Group	Below 30 years old	1	20%
	Between 30 to 50 years old	1	8%
	Above 50 years old	2	33%
By Gender Group	Male	4	25%
	Female	0	0%
By Region	Singapore	3	33%
	Malaysia	1	7%

Note: Rates are calculated by dividing the number of new hires by the current employee headcount for each respective category.

SWM organization is committed to fair and inclusive employment practices that provide equal opportunities regardless of age, gender, or regional background. We implement structured hiring processes, unbiased evaluation criteria, and equitable career development opportunities to ensure all employees are treated fairly.

We promote diversity through targeted initiatives such as inclusive recruitment a flexible work arrangements. Regular reviews of workforce data and policies help us identify gaps and strengthen our commitment to building a diverse, equitable, and inclusive workplace.

Employee Benefits

At SWM, we offer a well-rounded suite of employee benefits to support the well-being and long-term security of our people. These include healthcare coverage, parental leave, and a range of leave options to meet personal and family needs, alongside relevant allowances and long-term medical benefits that provide ongoing health support.

We also recognise employee loyalty through our long service award programme, acknowledging the contributions of those who have grown with the company over time and reinforcing our commitment to a supportive and rewarding workplace.

SOCIAL METRICS

Employment

Employee Turnover			
Category	Items	Number	Rate
By Age Group	Below 30 years old	3	14%
	Between 30 to 50 years old	25	14%
	Above 50 years old	9	9%
By Gender Group	Male	30	14%
	Female	7	9%
By Region	Singapore	10	50%
	Malaysia	7	900%
	China	9	111%
	Sri Lanka	1	100%

Note: Rates are calculated by dividing the number of new hires by the current employee headcount for each respective category.

At SWM, employee retention remains an important focus. Our organization is committed to fair and inclusive employment practices that provide equal opportunities regardless of age, gender, or regional background. We implement structured hiring processes, unbiased evaluation criteria, and equitable career development opportunities to ensure all employees are treated fairly. In addition, we promote diversity through targeted initiatives such as inclusive recruitment, learning & development programs, and flexible work arrangements. Regular reviews of workforce data and policies help us identify gaps and strengthen our commitment to building a diverse, equitable, and inclusive workplace.

Following a significant period of turnover, our focus is on rebuilding workforce stability by strengthening employee engagement, communication, and trust. We are prioritizing transparent leadership, meaningful career development opportunities, and supportive workplace practices to retain and motivate our people. By listening to employee feedback and investing in a positive work environment, we aim to foster a stable, resilient, and highly engaged workforce that can sustain long-term organizational success.

SOCIAL METRICS

Occupational Health and Safety

Number of fatalities as a result of work-related injury

0

Number of high-consequence work-related injuries

0

Number of recordable work- related injuries

1

Number of recordable work-related ill health cases

0

At SWM, occupational health and safety is a fundamental priority - every employee has the right to return home safe and healthy each day. Our commitment to zero work-related injuries reflects a proactive, prevention-first mindset embedded in all operations. Any workplace injury carries serious consequences, including harm to individuals, operational disruption, financial impact, and reputational risk. By enforcing strong safety standards, continuous training, and a culture of accountability, we strive to eliminate hazards and ensure a safe, resilient workplace for all.

Following one recordable fall-related injury on the shopfloor, we conducted a thorough root cause investigation and implemented immediate corrective actions. These included strengthening housekeeping standards, reinforcing safe work procedures, enhancing supervision, and retraining employees on hazard awareness. We have also increased safety audits and leadership walkabouts to ensure sustained compliance and to prevent recurrence, reaffirming our commitment to a safe and injury-free workplace.

SOCIAL METRICS

Training and Education

Average Hours of Trainings per year per employee

3.3 hours

Male

2.125 hours

Female

In FY2024, SWM continued to provide structured on-the-job training (OJT) to equip employees with the skills and knowledge required for their roles. Training programmes focused on quality and environmental, health and safety (EHS) requirements, as well as skills-based training tailored to each employee's work scope. These programmes support consistent standards across operations, ensuring employees are well-prepared to perform their duties safely and effectively.

Continuous learning and development is critical to building a resilient, future-ready workforce. Through ongoing training, SWM continues to strengthen technical capabilities while fostering a culture of continuous learning and improvement across the organization. Investing in our people through structured training, upskilling, and leadership development ensures they remain adaptable in a rapidly evolving business environment. By fostering a strong learning culture, we not only enhance individual performance and engagement but also strengthen organizational capability and long-term competitiveness.

Child & Forced Labour

We have no confirmed incident of child and forced labor within our own operations.

SWM upholds a strict zero-tolerance policy toward child and forced labor across all our operations and supply chains. We are committed to ethical employment practices by enforcing robust hiring standards, conducting due diligence on partners, and ensuring full compliance with applicable labor laws and international standards. Any violation is treated with utmost seriousness, triggering immediate corrective action, including termination of engagement where necessary, to safeguard human rights and uphold our organizational integrity.

GOVERNANCE METRICS

Board Composition

Number of Board of Directors

4

Number of Independent Board Directors

0

Number of Women on the Board of Directors

0

Anti-Corruption

The company currently does not have any incident of corruption. SWM maintains a strict zero-tolerance stance on corruption and bribery in all forms, recognizing that integrity is the foundation of sustainable business and stakeholder trust. We are committed to conducting our operations ethically, transparently, and in full compliance with all applicable laws and regulations across the jurisdictions in which we operate.

Our organization clearly prohibits any offering, giving, soliciting, or receiving of bribes or improper advantages, whether directly or through third parties. This includes facilitation payments, kickbacks, and any form of unethical inducement. We reinforce this commitment through regular employee training, clear business ethics, and strong internal controls designed to detect and prevent misconduct. Our due diligence processes and ongoing monitoring help ensure compliance throughout our value chain.

Any suspected breach is taken seriously and subject to thorough investigation, with appropriate disciplinary and legal actions taken where necessary. We provide secure and confidential reporting channels to encourage the reporting of concerns without fear of retaliation. By fostering a culture of accountability and ethical behavior, we aim to protect our organization's reputation, ensure fair business practices, and contribute positively to the communities in which we operate.

GRI CONTENT INDEX

Statement of Use	SWM has reported the information cited in this GRI content index for the period of 1 June 2024 to 31 May 2025 with reference to the GRI Standards.
GRI 1 Used	GRI 1: Foundation 2021

GRI Standard	Disclosure Requirements	Reference
GRI 2: General Disclosures 2021		
2-1	organization details	Pg. 4
2-2	Entities included in the organization's sustainability reporting	Pg. 4
2-3	Reporting period, frequency and contact point	Pg. 3
2-5	External assurance	Pg. 3
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GRI 3: Material Topics 2021		
3-1	Process to determine material topics	Pg. 6
3-2	List of material topics	Pg. 6
3-3	Management of material topics	Pg. 6
GRI 205: Anti-Corruption 2016		
205-1	Operations assessed for risks related to corruption	Pg. 21
205-2	Communication and training about anti-corruption policies and procedures	Pg. 21
205-3	Confirmed incidents of corruption and actions taken	Pg. 21

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GRI Standard	Disclosure Requirements	Reference
GRI 302: Energy 2016		
302-1	Energy Consumption within the organization	Pg. 11
302-4	Reduction of energy consumption	Pg. 11
GRI 303: Water and Effluents		
303-5	Water consumption	Pg. 12
GRI 305: Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Pg. 14
305-2	Energy indirect (Scope 2) GHG emissions	Pg. 14
305-3	Other indirect (Scope 3) GHG emissions	Pg. 14-15
GRI 306: Waste 2010		
306-3	Waste Generated	Pg. 13

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GRI Standard	Disclosure Requirements	Reference
GRI 401: Employment 2016		
401-1	New employee hires and employee turnover	Pg. 17-18
GRI 403: Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	Pg. 19
403-2	Hazard identification, risk assessment, and incident investigation	Pg. 19
403-4	Worker participation, consultation, and communication on occupational health and safety	Pg. 19
403-6	Promotion of worker health	Pg. 19
403-9	Work-related injuries	Pg. 19
403-10	Work-related ill health	Pg. 19
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	Pg. 20
404-2	Programs for upgrading employee skills and transition assistance programs	Pg. 20
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Pg. 16, 21
GRI 408: Child Labour 2016		
408-1	Operations and suppliers at significant risk for incidents of child labour	Pg. 20