APPENDIX **2E**

CLIMATE-RELATED DISCLOSURE

Sustainability Framework

01.
Environmental Stewardship: Decarbonizatio n and Energy Reset

02.
Resource Efficiency: Circular Economy and Water Management

03.
Safe Workplaces: Occupational Health, Safety, and Wellbeing

04.
Ethical Governance: Climate Risk Management and Integrity

1. About This Report

This report follows the Global Reporting Initiative (GRI) Standards 2021. It covers CHL Construction’s Singapore operations for FY2025 (April 2024 – March 2025).

2. Message from Leadership

CHL Construction Pte Ltd is a premier contractor in Singapore, specializing in building, civil engineering, and complex infrastructure projects. The organization’s mission, "Building a Safer and Sustainable Tomorrow," is executed through a focus on quality and environmental responsibility. As the industry moves toward "Sustainable Urban Renewal," CHL has positioned itself as an enabler of the Urban Redevelopment Authority’s vision for a resilient and vibrant city.

This report covers the operations of CHL in Singapore for the period of April 2024 to March 2025 (FY2025). The reporting methodology follows the Global Reporting Initiative (GRI) Standards 2021, ensuring that the disclosures are comparable, transparent, and balanced. Furthermore, CHL has integrated climate-related financial disclosures in accordance with the International Sustainability Standards Board (ISSB) IFRS S2 requirements, recognizing that climate risks are inherently financial risks.

The structure of this report has been refined to echo the "Pillar-based" approach.

Feature	CHL Sustainability Framework
Pillar 1	Environmental Stewardship: Decarbonization and Energy Reset
Pillar 2	Resource Efficiency: Circular Economy and Water Management
Pillar 3	Safe Workplaces: Occupational Health, Safety, and Wellbeing
Pillar 4	Ethical Governance: Climate Risk Management and Integrity

Leadership Commitment and Strategic Vision

By committing to the Singapore Green Plan 2030, CHL is not just complying with regulations but actively shaping the future of the industry. This includes preparing for the progressive increase in the carbon tax, which is scheduled to rise by 2030. Leadership's decision to apply an internal carbon price in capital budgeting demonstrates a forward-looking approach to managing transition risks.

Stakeholder Engagement and Materiality

Understanding the priorities of stakeholders is critical to ensuring that sustainability efforts are targeted where they have the most impact. CHL conducts a double materiality assessment annually, identifying topics that are significant from both an environmental impact perspective and a financial materiality perspective.

Identifying Material Concerns

Stakeholders including clients, employees, regulators, and suppliers have identified several high-priority areas. These concerns align with the material topics reported by peer organizations such as Singapore Land Group and UOL.

Stakeholder Group	Engagement Method	Primary Material Topics
Clients/Developers	Periodic meetings, tender requirements	Carbon footprint, Green Mark certification, site safety
Employees	Surveys, safety briefings, training	Workplace safety, career development, wellness
Government/Regulators	Consultations, compliance reporting	Green Plan 2030 alignment, waste management
Suppliers/Subcontractors	Audits, supplier code of conduct	Ethical sourcing, safety standards, payment terms
Investors/Banks	Financial reports, ESG assessments	Climate risk management, financial stability, ISSB/TCFD

Pillar 1: Environmental Stewardship and the Energy Reset

The construction sector is at the forefront of the global climate challenge. In Singapore, the built environment accounts for over 20% of carbon emissions, making the "Energy Reset" pillar of the Green Plan 2030 particularly relevant to CHL's operations. CHL's environmental strategy is built on reducing direct operational emissions, enhancing energy efficiency, and preparing for a low-carbon grid.

Operational Decarbonization and Scope 1 Emissions

Scope 1 emissions represent the direct GHG emissions from sources owned or controlled by CHL, primarily the diesel used in heavy machinery and construction vehicles. In FY2025, Scope 1 emissions were reported at 18,200 tCO_2e.

To address these emissions, CHL has initiated a multi-year transition of its fleet. By the end of FY2025, % of site equipment—including excavators and forklifts—had been transitioned to electric models. This transition is complex, as it requires the installation of temporary charging infrastructure at construction sites and a fundamental change in site logistics. However, the benefits are clear: reduced tailpipe emissions, lower noise levels for surrounding communities, and a reduction in the company's exposure to fossil fuel price volatility.

Pillar 1: Environmental Stewardship and the Energy Reset (Cont'd)

Scope 2 Emissions and Energy Efficiency

Scope 2 emissions, which arise from the generation of purchased electricity for site offices and operational facilities, total 4,700 tCO_2e in FY2025. The strategy to mitigate these emissions focuses on "Energy Excellence," a concept shared with the public sector's GreenGov.SG targets.

CHL has implemented several energy-saving measures:

1. **Site Office Optimization:** Installing LED lighting and high-efficiency HVAC (Heating, Ventilation, and Air Conditioning) systems in temporary site structures.
2. **Solar Pilot Projects:** Deploying mobile solar arrays to power site security systems and office equipment, contributing to the national goal of increasing solar deployment across all available spaces.
3. **Smart Monitoring:** Utilizing digital tools to track electricity consumption patterns, allowing for real-time adjustments and the identification of energy-intensive anomalies.

Pillar 1: Environmental Stewardship and the Energy Reset (Cont'd)

Performance Targets and Greenhouse Gas Management

CHL has set a firm target to reduce combined Scope 1 and 2 emissions by 30% by 2030, relative to a FY2023 baseline. This target is consistent with the decarbonization roadmaps of leading developers such as UOL, which aims for a 46% reduction in GHG emissions by 2030.

Emission Source	FY2025 Result (tCO2e)	Baseline (FY2023) (tCO2e)	Strategic Action
Scope	18,200	19,500	Fleet electrification and low-carbon fuel pilots
Scope	4,700	4,900	Energy audits and solar energy integration
Total Emissions	22,900	24,400	-

Pillar 2: Resource Resilience and the Circular Economy

Singapore's land constraints and the finite capacity of the landfill necessitate an aggressive move toward zero waste. For a construction company like CHL, resource efficiency is not just an environmental goal but a critical factor in managing project costs and logistics.

Construction Waste Management

Construction and demolition waste is one of the largest waste streams in Singapore. CHL’s waste strategy is anchored on the 3R framework: Reduce, Reuse, and Recycle. In FY2025, CHL achieved a 58% recycling rate across its construction waste streams.

This success is driven by:

- **On-site Segregation:** Implementing dedicated waste bins for concrete, metals, and wood, which allows for high-quality recycling by specialized vendors.
- **Digital Tracking:** Using a cloud-based platform to monitor waste disposals, ensuring that every tonne of waste is accounted for and diverted from the landfill where possible.
- **Adaptive Reuse:** Identifying opportunities to reuse materials like timber formwork and scrap steel within the same project or across different project sites, a practice championed by the Singapore Land Authority.

Pillar 2: Resource Resilience and the Circular Economy (Cont’d)

Sustainable Construction and Embodied Carbon

Beyond waste, CHL is addressing the "Embodied Carbon" in the materials it uses. This involves collaborating with suppliers to source low-carbon concrete and steel. For instance, the use of waste glass powder as a cement replacement—which can achieve a % reduction in embodied carbon—is an area of active exploration for CHL, following the leads of statutory boards like JTC.

The adoption of Prefabricated Prefinished Volumetric Construction (PPVC) technology is another key strategy. By manufacturing building modules in a controlled factory environment, CHL significantly reduces on-site waste, dust, and noise pollution, while also enhancing the speed and quality of construction.

Pillar 2: Resource Resilience and the Circular Economy (Cont'd)

Water Stewardship

While Singapore is a global leader in water management, industrial and construction activities remain significant users of water. CHL's water strategy focuses on reducing demand and increasing reuse on project sites.

Water Metric	FY2025 Performance	FY2030 Target
Water Consumption	340,000 m3	10% reduction per unit GFA
Recycled Water Use	22% of total water	40% of total water

Water conservation efforts at CHL include:

- **Rainwater Harvesting:** Capturing rainwater from site office roofs for dust suppression and wheel washing.
- **High-Efficiency Fixtures:** Installing water-saving devices in site restrooms and pantries, aligning with the Water Efficient Building (WEB) certifications promoted by PUB.
- **Process Optimization:** Implementing closed-loop systems for activities like concrete curing and cooling, minimizing the continuous draw from the municipal supply.

Pillar 3: Safe Workplaces and Social Responsibility

Construction is inherently high-risk. For CHL, maintaining a safe workplace is the most important "S" in ESG. This pillar focuses on occupational health and safety (OHS), employee development, and community impact.

Occupational Health and Safety (OHS) Excellence

In FY2025, CHL maintained a workplace injury rate of 0. per 100,000 man-hours. While this is a strong performance, the company remains committed to "Vision Zero"—the belief that all workplace accidents are preventable.

CHL's safety framework includes:

- **ISO 45001 Certification:** Ensuring that OHS management systems are aligned with international best practices.
- **Advanced Training:** Beyond mandatory certifications, CHL provides specialized training in heat stress management, work-at-height safety, and mental health awareness.
- **Technological Safeguards:** Utilizing AI cameras for real-time hazard detection on sites and wearable sensors that monitor worker vital signs in high-heat conditions.

Pillar 3: Safe Workplaces and Social Responsibility (Cont’d)

Nurturing Talent and Inclusion

CHL invests heavily in the upskilling of its workforce to meet the challenges of the green economy. Employee development is seen as a driver of long-term resilience.

Human Capital Metric	FY2025 Performance
Avg. Training Hours per Employee	42 hours
Sustainability Training Completion	100% of target staff
Workplace Injury Rate	0. per 100,000 man-hours

CHL is dedicated to the social upliftment of our workforce by fully adhering to the Progressive Wage Model (PWM) for the construction sector. We ensure that our eligible employees benefit from a clear roadmap of mandated wage increases linked to productivity and upskilling, fostering a resilient workforce where professional growth directly translates into improved livelihoods

Pillar 3: Safe Workplaces and Social Responsibility (Cont’d)

Community Engagement

CHL recognizes that its projects have a direct impact on the local communities in which it operates. Guided by the principles of "Cities for People," the organization takes proactive steps to minimize disruption and create social value. This includes:

- **Noise and Dust Mitigation:** Employing real-time monitoring and advanced barriers to ensure that construction activities do not negatively impact the quality of life for residents.
- **Local Philanthropy:** Supporting community initiatives and charitable organizations like the Community Chest, reflecting the "Building a Culture of Care" value seen in Singapore’s leading statutory boards.
- **Public Engagement:** Maintaining open communication channels with stakeholders near project sites, providing regular updates on progress and safety measures.

Pillar 4: Ethical Governance and Climate Disclosure

Sustainability Governance Structure

The Board of Directors provides strategic direction on ESG matters, while the Sustainability Committee ensures operational integration. This committee includes senior management from across the company, ensuring that sustainability is considered in procurement, project management, and finance.

CHL's commitment to ethics is reflected in its:

- **Anti-Corruption Policies:** Maintaining a zero-tolerance stance on bribery and unethical conduct, with clear whistleblowing mechanisms to protect those who report irregularities.
- **Sustainable Sourcing:** Implementing a Supplier Code of Conduct that mandates environmental and social standards for all vendors and subcontractors.
- **Internal Carbon Pricing:** Using a shadow price in investment appraisals to ensure that the long-term cost of carbon is reflected in business decisions today.

Pillar 4: Ethical Governance and Climate Disclosure (Cont'd)

Climate-Related Financial Disclosures (TCFD & IFRS S2)

To provide stakeholders with a clear view of how climate change affects its enterprise value, CHL has aligned its reporting with the IFRS S2 standard issued by the ISSB. This approach focuses on four thematic areas: Governance, Strategy, Risk Management, and Metrics/Targets.

Governance (IFRS S2-2, S2-3)

The Board oversees the assessment and management of climate-related risks and opportunities. The Sustainability Committee meets quarterly to review performance against GHG reduction targets and to evaluate the impact of new regulations, such as changes to the Singapore Building Control Act.

Strategy (IFRS S2-4, S2-5)

CHL has identified material climate risks that could impact its operations. These are categorized into Transition Risks (e.g., carbon tax increases, shifts in market demand for green buildings) and Physical Risks (e.g., project delays due to extreme heat or flooding). Strategic responses include investing in electric machinery and pursuing projects that meet high Green Mark standards.

Pillar 4: Ethical Governance and Climate Disclosure (Cont’d)

Risk Management (IFRS S2-6)

Climate risks are integrated into the organization’s overall Enterprise Risk Management (ERM) framework. This ensures that climate exposure is factored into insurance premiums, tendering decisions, and supply chain management.

Metrics and Targets (IFRS S2- 7to S2-15)

CHL uses specific metrics to track progress, most notably the Scope 1 and 2 GHG emissions and the percentage of CAPEX aligned with low-carbon technologies.

Pillar 4: Ethical Governance and Climate Disclosure (Cont'd)

IFRS S2 Disclosure	FY2025 Response
Governance	Board-level oversight; Sustainability Committee reporting
Strategy	Identified regulatory and physical risks; scenario analysis used
Risk Management	Integrated into ERM; climate risk register maintained
Metrics & Targets	30% reduction by 2030; Internal carbon price applied

Pillar 4: Ethical Governance and Climate Disclosure (Cont'd)

Detailed Performance Analysis (KPI Table)

The following table provides a high-level summary of CHL Construction's sustainability performance across key metrics, benchmarked against the commitments made in the FY2025 reporting period.

Focus Area	Metric	FY2025 Result	Target / Baseline
Emissions	Scope 1 GHG Emissions	18,200 tCO_2e	30% reduction by 2030
Emissions	Scope 1 GHG Emissions	4,700 tCO_2e	30% reduction by 2030
Energy	Electric Equipment Adoption	15% of fleet	Transitioning to 50% by 2030
Waste	Recycling Rate	58%	Target 75% by 2030
Safety	Workplace Injury Rate	0.9 / 100k hrs	Maintain <1.0
Finance	Low-Carbon CAPEX	22% of total	Minimum 20% per year
People	Avg. Training Hours	42 hours	Continuous improvement

Future Outlook: Reimagining the Future of Construction

As CHL looks beyond FY2025, the organization is committed to evolving from a traditional builder into a "Sustainable Infrastructure Provider." This transformation will be guided by several key emerging trends in the Singaporean landscape.

Advancing Toward Net Zero 2045

In alignment with the public sector's ambition to achieve net-zero emissions around 2045, CHL will accelerate its decarbonization efforts. This will involve moving beyond simple electrification to exploring the use of green hydrogen for heavy equipment and collaborating with developers to build the "greenest buildings in Singapore"

Strengthening Urban Resilience

With Singapore's vulnerability to climate change being an existential threat, CHL will deepen its expertise in resilient infrastructure. This includes integrating nature-based solutions into projects—such as therapeutic gardens and bio-swales—that help manage rising temperatures and extreme rainfall events.