Mainfreight Sustainability Report 2024

Contents

Our company is built on our Three Pillars – Culture, Family, and Philosophy, articulated over 20 years ago. These core values continue to shape our approach to people, planet, and the way we do business. Our Three Pillars are as relevant now as they have ever been and provide the lens and guidance through which to address the growing challenges of sustainability. It is inherent in our one-hundred-year philosophy.

CULTURE

- Under-promise, over deliver
- Keep reinventing with time and growth
- Education is optional, learning is compulsory
- Let the individuals decide
- Keep it simple
- Tear down the walls of bureaucracy, hierarchy and superiority
- Avoid mediocrity – maintain standards and beat them
- Look after our assets
- Immaculate image and presentation
- Promote from within
- Integrity – how it affects other people
- No job descriptions

FAMILY

- Eat together – use mealtimes as a discussion time
- Listen to each other
- Share the profits and the successes
- Openly discuss problems and openly solve them
- Don't beat up your brothers and sisters
- Have respect – see it from others and show it by actions

PHILOSOPHY

- One hundred year company
- Profit comes from hard work, not talk
- We are driven by margin, not revenue
- Train successors, so that you may advance
- An enduring company is built by many good people, not a few
- We "care" for our customers, environment and community
- Total quality management base
- Ready, Fire, Aim

CULTURE, FAMILY, PHILOSOPHY, THE MAINFREIGHT WAY

MESSAGE FROM DON

In 1978 Bruce Plested started this business with a small amount of capital and a passionate desire to be better for the transport customers of New Zealand.

Alongside the aspiration to do better, Bruce wanted the people of Mainfreight to be proud of what they achieved every day, which included the beginning of our bonus system that shares the profits of the business with those who earn them.

Included was his desire to recycle and to be as sustainable as we possibly could be. Wooden pallets were used for firewood; and plastic, glass and metal were recycled. A large, discarded, milk storage tank from the side of the road during Bruce's travels became our first attempt at recycling rainwater from the roof at our freight terminal – the beginning of rainwater collection to clean our vehicles.

Typical of our attitude, we did not shout from the roof tops about our recycling of waste or water. It was just what we did around here.

Fast forward to 2024, where global warming is a feature of all our lives, bringing with it droughts, floods and a huge environmental impact to the world around us. Our sustainability approach has never been more important.

Within this sustainability report, we document the progress we are making towards improving the environment where possible, and the ongoing initiatives we are committed to in finding the solutions required to lower our own carbon footprint and that of our customers.

Also detailed in this report, we provide commentary of our culture and efforts to help improve the lives of our people and our community.

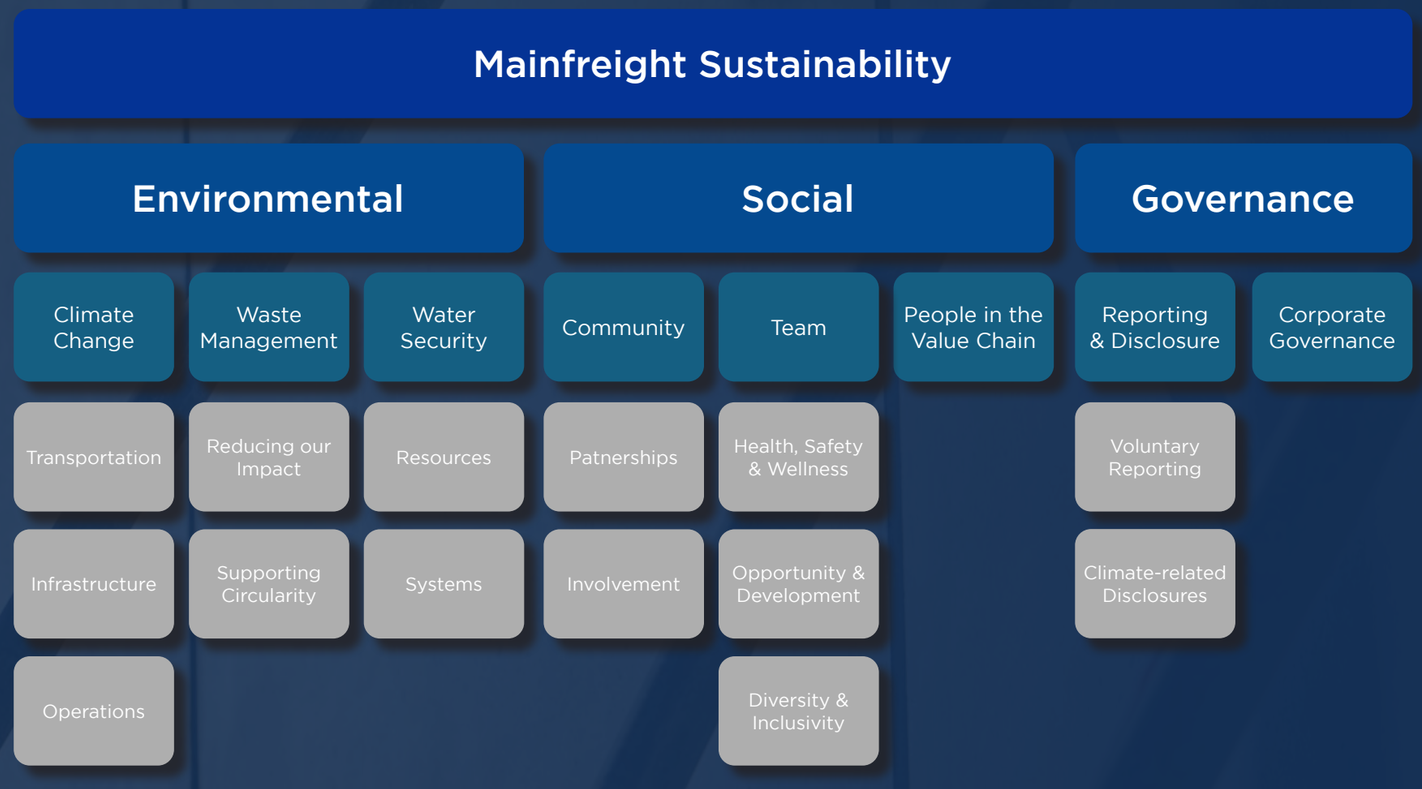
We believe that our commitment to sustainability, our communities, and our people, are key reasons why customers trust us with their supply chain solutions. This approach will play a crucial role in future supply chain decisions and activities.

Mainfreight Sustainability Value Cycle

Sustainability Framework

Our Sustainability Framework lays out our approach to the sustainability topics deemed material to the business and its major stakeholders. Under the pillars of Environmental, Social and Governance we have crafted responses broken down into operational elements to deliver on our sustainability goals.

We follow this structure throughout the report in documenting the various projects and initiatives we have underway throughout the Group.



ENVIRONMENTAL

Transportation Infrastructure Operations

Climate Change

Waste Management

Water Security

Climate Change

As of March 2024, the world obtained the unenviable distinction of 10 consecutive months of record global temperatures. Collectively, the 12 months to March show an average global temperature increase of 1.58°C above preindustrial levels - aleady exceeding (albeit temporarily) the Paris Agreement target of 1.5°C.

This lays bare that not only is the challenge here and now, but so too are the consequences of an already warmer planet. Ambitious efforts to decarbonise are no longer enough, we need to do so while developing the resilience to maintain operations and supply chains in the face of major natural hazards. We are also acutely aware that our responsibilities are not just to our direct stakeholders, but to the wider communities we serve, in maintaining the flow of essential goods especially in times of crisis.

However, we also see much cause for optimism; in scientific understanding and technology, but especially in collaboration with our partners and customers in finding novel solutions to existing challenges. The benefits of which often compound beyond the scope of their immediate concern.

- Shifts to electrification also benefit urban air quality, where current pollutants contribute to millions of deaths globally and trillions in healthcare costs.
- Use of low carbon modal shifts can reduce congestion.
- Sharing in the cost of lower emission fuels helps develop the production supply needed for the future.
- Greater private commercial energy infrastructure can build grid resilience rather than burden it.
- The development of water self-sufficiency provides climate resilience and frees up accessibility to local communities while reducing the waste water loads on local infrastructure.

Transportation

Our Fleet

Mainfreight's road fleet policy, agreed with owner drivers, requires vehicles in our fleet be no older than 10 years, with an average age closer to 6 years. This compares to national average fleet ages across New Zealand, Australia, Europe and the United States, of over 14 years. As a result, the majority of our fleet are the equivalent of Euro V or VI.

Modern vehicles are more fuel efficient with improvements estimated at approximately 1% per year. This may seem trivial, but over a large fleet and compounding year on year, the effect is significant. In addition, high Euro Class vehicles require strict limits on the emission of other types of harmful pollutants, including nitrogen oxides (NOx) and particulate matter (PM), which contribute to air pollution especially in urban areas.

Intermodal Connectivity

Amidst the excitement of cutting-edge technologies, traditional modes of transport like rail, coastal shipping and inland waterways offer immediate and significant emissions reductions, often in the range of 70%.

Mainfreight has invested heavily, not just in supporting these different transport modes, but in their seamless interconnectivity, to make them more accessible. Some examples include inbuilt rail sidings at many of our larger transport sites and inland waterway connections along major rivers in Europe.

By establishing our branches as intermodal nodes we can offer greater flexibility to the diverse needs of our customers.

Electric Vehicles

Low emission heavy vehicles are going to be critical in efforts to decarbonise road freight, which amongst the broader transport category, remains a growing source of global emissions.

The rate of innovation and development within battery technology is proving promising. New electric heavy vehicles are developing to a standard comparable with internal combustion (ICE) alternatives, especially in metro applications. In addition, our investments in solar and battery storage allow us to charge these vehicles using renewable energy sources. For now, up front costs remain a challenge along with supporting local infrastructure, however we continue to invest in these fleets of tomorrow, the details of which we outline below.

Although hydrogen fuel cell electric vehicles and hydrogen dual fuel vehicles remain of interest they do not currently feature in our fleet.

Fuso E-Canters

Over the past 18 months we have grown our fleet of Fuso E-Canters to eight vehicles operating throughout New Zealand. The Fuso E-Canter is a 100% electric-powered light truck. An 81kWh lithium ion battery allows approximately 100km in laden range and can be charged within an hour. The E-Canter has 135kW of power, an electric motor with two-stage regenerative braking, 3.5t payload and advanced safety features.

XCMG E700 Battery Swap

The XCMG E700 Battery Swap is our first heavy electric vehicle operating in New Zealand. With three 282kWh batteries, we are able to operate Auckland to Hamilton short haul as well as metro deliveries without long charging delays. The use of lithium ferrous phospate batteries rather than lithium ion are also safer, more stable and less environmentally harmful.

Alongside existing runs, we are also exploring use of the E700 to support zero emission port connections.

SEA/Isuzu Electric Conversion

Supporting our Fuso E-Canters in New Zealand are our two SEA electric Isuzu conversions. With a larger payload capable of carrying 12 and 14 pallets, and larger batteries (138kWh), these are more reflective of our wider PUD (pickup and delivery) fleet demands.

Foton Light Electric & SEA Conversions

In Australia we have 11 operational light electric trucks, comprising of two Hino 300 SEA 85s and nine Foton iBlues operating within our network. These trucks now service several of our customers across both the east and west coast of Australia.

BYD Electric Tractor Units

By Q3 2024, Mainfreight's Americas team will be in possession of our first two drayage/wharf based electric tractor units operating out of Long Beach. This is in support (although ahead of time) of the Port of Long Beach's Clean Air Action Plan to have zero emission trucks by 2035.

These BYD 8TT class 8 EVs will be some of our heaviest duty to date with 483 max horsepower and 422kWh lithium ferris phosphate batteries. Delivering an expected laden range of 150 miles and supported by 180kW DC charging at our nearby warehouse.

Crucially these electric trucks are also being readied to be taken on by owner drivers, an important milestone as we move towards greater fleet electrification.

HVO Diesel

Hydrotreated Vegetable Oil (HVO) is a second-generation low emission fuel. It differs from traditional biofuels in being a direct 'drop in' alternative to diesel, either completely (100%) or as a blend with existing stocks. Non blended HVO offers an 80%-90% reduction in emissions.

Mainfreight has been using HVO at our own fueling station in s'Heerenberg, The Netherlands, with over 25,000L to date and more on the way. We continue to explore the role of novel fuels for road freight in locations with available supply.

Zero Emissions Areas (ZEAs)

Zero Emissions Areas (ZEAs) are locations (typically urban centres) with restrictions on the type and class of vehicle that may operate there. These are often driven in part to incentivise lower greenhouse gas emissions, but also particulate emissions which are detrimental to air quality, especially in densely populated areas.

Increasingly, national and local governments are exploring the role of ZEAs in their cities. Several are now established near Mainfreight branches in the Netherlands and more are being explored in other countries and regions where Mainfreight operates.

ZEAs have proven a great springboard towards fleet electrification. In the Netherlands, we currently operate two MAN electric trucks with an additional two Volvo FM electric tractor units being built and more expected in early 2025 (one DAF EX and one MAN TGS).

Sustainable Maritime and Aviation Fuels

Of Mainfreight's total Greenhouse Gas (GHG) emissions, almost 60% is tied to air freight and a further 10% to international sea freight. Regardless of any success we have internally in reducing our emissions, we are beholden to the decarbonisation efforts of our partners who support these freight modes.

These sectors are relatively difficult to abate, particularly aviation. Both electrification and green hydrogen are poor alternatives over the medium term. Electrification has prohibitively high energy density demands and green hydrogen has large volumetric storage needs. These demands are consequential not just to cost but in reduced potential payloads. As a result, novel low emission fuels are likely the most viable technology over the near term. In shipping, this includes methanol, ammonia and methane often called Liquefied Natural Gas, LNG.

In aviation, Sustainable Aviation Fuel (SAF) is a collective term for a broad range of advanced fuels produced from different feedstocks. These offer varying degrees of emissions reductions in the range of 80%. However, in practice these are almost always injected as a blend with existing fuel supplies, offering much lower reductions on an individual flight basis.

Industry is still working to scale up the production of these fuel types. Importantly, financial feasibility will need to be balanced with prioritising feedstocks that do not contribute to further deforestation or food insecurity.

We continue to work with our partners in this arena and have trials underway with biomethane LNG (bio-LNG) in shipping. Early-stage discussions are also underway on the supply of SAF and how we may be able to share this and other solutions with our customers.

We see ongoing collaboration in sustainable maritime and aviation fuels as a core component of our climate strategy.

Mainfreight GHG Emissions

We are proud to have been reporting on our Group Greenhouse Gas Emissions to ISO 14064-1: 2018 since 2018 across all categories/scopes.

Intensity Factors for 2024 FY

CO2e per tonne kilometre domestic (road/rail) freight **0.084 kg** down from **0.094 kg** in 2022, YOY Change: -10.6%

CO2e per tonne kilometre of air freight **1.210 kg** down from **1.216 kg** in 2022, YOY Change: -0.5%

CO2e per TEU kilometre of sea freight **0.066 kg** down from **0.071 kg** in 2022, YOY Change: -7.0%

Mainfreight Emissions (Tonnes CO2e)

Category	Category Description	2024 FY	2022 CY
Category 1	Direct GHG emissions and removals in tonnes CO2e (including road freight: owner driver vehicles & owned / leased vehicles)	303,309	239,241
Category 2	Indirect GHG emissions from imported energy (electricity)	16,798	18,385
Category 3	Indirect GHG Emissions from Transportation (third party road, rail, air, sea transport)	1,082,068	1,170,369
Category 4	Indirect GHG emissions associated with the use of products by the organisation	88,581	68,501
Category 5	Indirect GHG emissions associated with the use of products from the organisation		-
Category 6	Other indirect GHG emissions sources		131
Total		**1,490,756**	**1,496,627**

Getting Closer to Customers

On a tonne-kilometre basis, smaller 'last-mile' vehicles are approximately 3x as emissions intensive as a large heavy vehicles. The challenge particularly in less densely populated countries like New Zealand, is that 'last-mile' vehicles might actually cover large geographic areas. Mainfreight aims to operate branches as close to our customers as possible.

This drives our constant network intensification to offer a better more local service to our customers while also reducing last mile transit in both time and emissions.

Customer Emissions Reporting

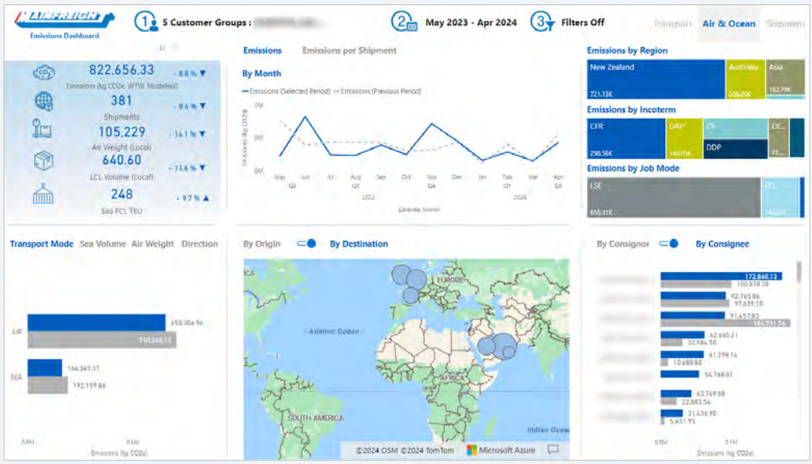
The supply chain will be the largest source of emissions for most organisations, often in the range of 75-80%. Yet historically, these 'value chain' emissions have been poorly understood and poorly accounted for.

We are aiming to change that. Mainfreight has developed its own suite of emissions reporting tools to add a whole new layer of transparency to emissions throughout the supply chain. Building on our advanced tracking software, we can dive deeper into each individual leg of a shipment, applying the most relevant emission factors to provide an accurate picture of generated emissions.

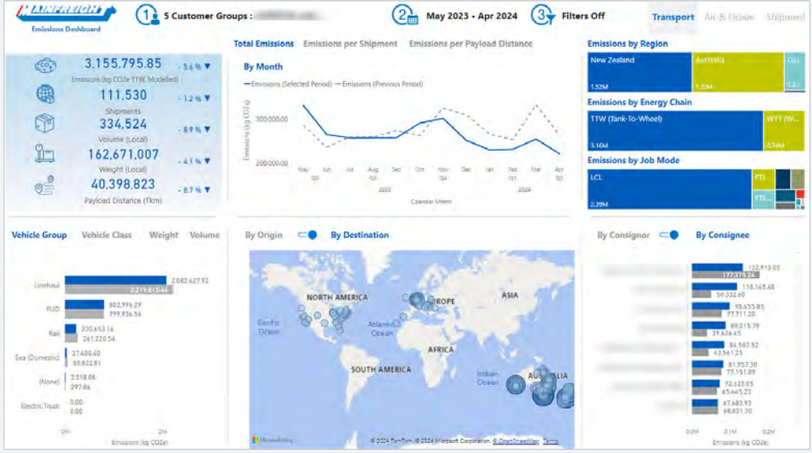
We currently offer international Air & Ocean and land Transport dashboards. Here customers can find a detailed profile of their emissions, drill down into particular trade lanes or areas of interest and test and validate potential decarbonisation strategies. We also have work underway for our Wharf, Warehousing and calculator/scenario builder tools.

While baseline understanding is a crucial starting point, we also work with customers to explore different opportunities for improvement. This includes leveraging Mainfreight's renewables and low emission fleets as well as intermodal options and support with supply chain planning functions.

If you haven't already, reach out to your local Mainfreight team today, and join over 500 customers using our emissions tools to advance their climate strategies.



Air & Ocean



Transport

Smart Freight Centre

Mainfreight are proud to be members of the Smart Freight Centre, who are leading efforts to decarbonise transport and logistics. In particular we support the following programmes:

- The Global Logistics Emissions Council (GLEC) Framework
- Clean Cargo (previously the Clean Cargo Working Group)
- Clean Air Transport

For those that are interested, you can find details about the work of the Smart Freight Centre here:

https://smartfreightcentre.org/en/

Infrastructure

Our New Builds

We take great pride in building state of the art facilities that not only support our ability to provide world class service to our customers, but also allow us to do so in a safe and sustainable way. This includes efficient lighting and appliances, double glazing throughout, battery charging for our electric forklift fleet, EV charging for our team EVs and hybrids and DC charging for electric trucks. HVAC (Heating, Ventilation, and Air Conditioning) and VRF (Variable Refrigerant Flow) with heat recovery and carbon monoxide monitoring are also standard features. We also operate advanced Building and Energy Management Systems (BMS and EMS) in order to constantly track and optimise the performance of our facilities.

In the face of a growing incidence of climate-related hazards, we are also shoring up the resilience and self-sufficiency of our branches. Solar, battery as well as water capture and storage allow us to maintain operations and supply chains in the face of disruption to local infrastructure and utilities.

And we're just getting started, with another $390 million in new land and building projects planned through to the end of 2026.

Battery Energy Storage System (BESS)

In order to make the most of our investment in solar energy, we are now supplementing these installations with BESS. BESS allows us to operate when the sun isn't shining by using stored surplus energy generated during the day, with some of our new sites able to operate more than 80% independent of the grid. Our BESS assets now total over 9,500kWh, and we expect this to grow considerably as battery technology improves, and our solar arrays further expand.

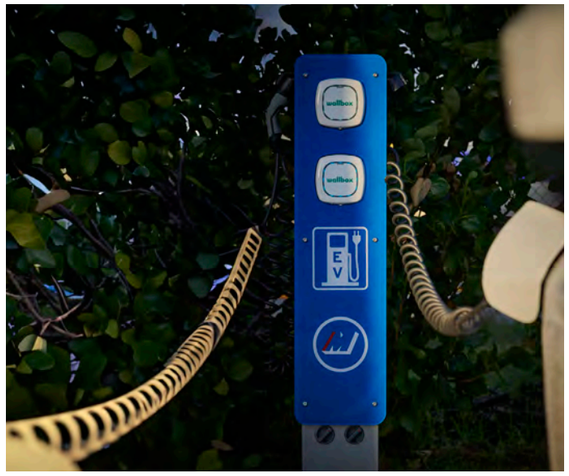
Solar

Rooftop solar arrays are now a standard feature on all new builds. Mainfreight operates over 20,000 solar panels, and some 8,400kW in generation capacity across our sites, enough to power around 2000 homes. Better yet, we expect ths to more than double over the next three years.

EV Chargers

EV chargers are now a common feature in both owned and leased facilities in order to support the electrification of our forklift fleet, small vehicle fleet and, increasingly, DC charging for our heavy fleet (up to 180kW).

Extensive smart charging infrastructure will be a centrepiece of our shift towards electrification, with integrated charging turning our branches into the 'fuelling' stations of the future.



Virtual Power Plants and Virtual Energy Networks

As we switch on more solar and battery assets, we are developing new ways to deploy these, taking better advantage of the energy generated and improving their rate of return at the same time. Through a traditional retail electricity agreement, solar power is used directly as it's produced, and battery power takes over when the sun isn't shining. During periods when both the battery is fully charged and solar panels are still producing excess energy, this power is typically fed back into the grid, for a low feed-in tariff.

To improve this further, Mainfreight is working to use solar sharing to match excess energy with demand from other Mainfreight sites in the same region. This allows us to claim a greater overall proportion of renewable energy and at a better net cost than traditional feed in tariffs.

Additionally, in Australia, Mainfreight aims to support the wider grid by participating in Frequency Control Ancillary Services (FCAS). We can lend our energy infrastructure to support the local grid, acting as part of a buffer to pump energy in when it is most needed and take it out when there is over supply. In practise this operates similar to a commodities market where our energy management system and algorithms use spot pricing to identify needs, and can prompt a course of action.

Sustainable Building Platform

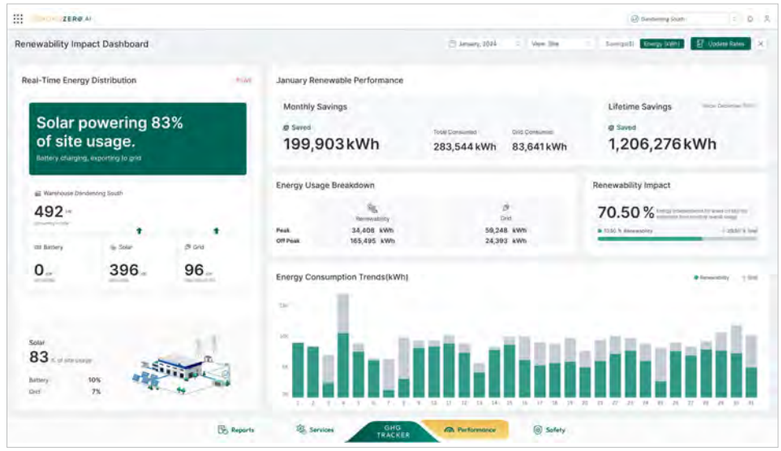
As you will have read to this point, Mainfreight is investing heavily in developing cuttingedge facilities with a range of features geared towards sustainability, efficiency, resilience, and self-sufficiency.

However, equally important, is that we are equipped to utilise these capabilities effectively. Which is where our Mainfreight Site Sustainability Platform (MSSP) comes in. Developed with our partners at Beyond Zero Technologies, and currently being trialled at several of our Australian facilities. MSSP digitises and integrates all elements of site management. Including energy use, grid connectivity, fault alerts, maintenance schedules, duress management, safety, IOT integration, trend analysis and more.

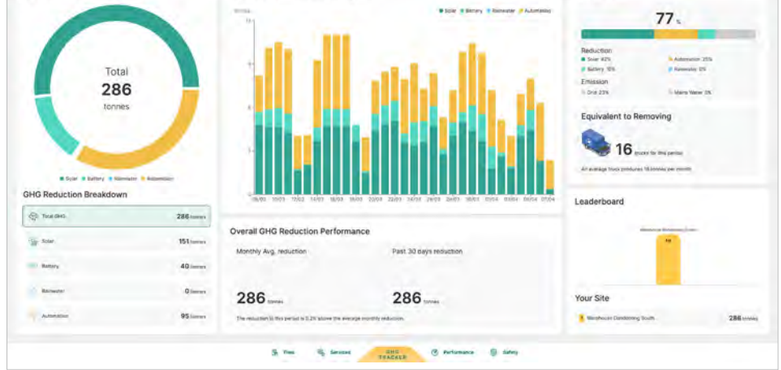
These are all integrated into an online portal, where branch teams can track their site's performance, identify areas of concern (or use the prediction models) and implement and test changes. Fault alerts are registered immediately, and maintenance prompts ensure we keep our sites in peak condition. Further, we can compare branch progress against prior periods or similar branches in the network, with learnings shared between teams.

At the national and group level, Mainfreight can validate whether sustainability assets are performing as expected and use learnings to evaluate the right configuration for new investments. Incidentally, we have realised other benefits including reconciling utilities billing and identifying grid disruptions before being notified by providers.

You can find further details on Beyond Zero Technologies and their platforms at: https://beyondzero.tech/

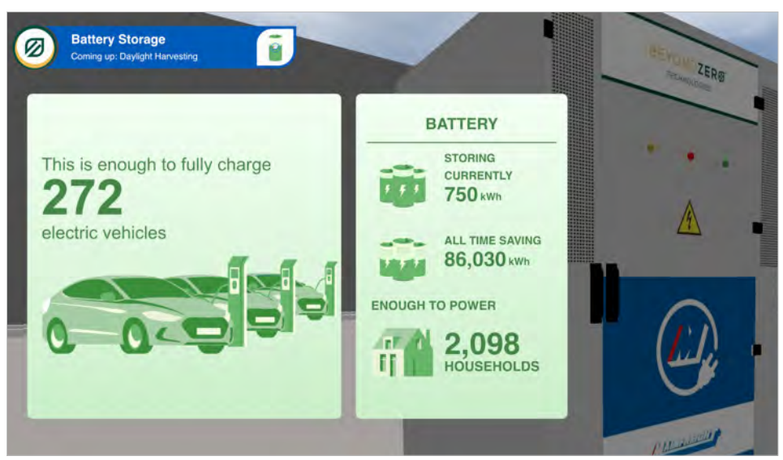


Energy Tracking



GHG Tracking

Interactive Platform



Energy Storage

Operations

Electric Material Handling Equipment

With improving technology we have been able to transition many of our new branch forklifts from diesel and LPG to electric. Minor changes in behaviour (like remembering to put on charge) have been quickly adopted to facilitate cleaner, more modern electric alternatives. Operations, like our warehousing sites, have been operating fully electric material handling equipment for years.

Electric Tugs

Two of our major Australian transport branches have been trialling the Terberg Electric Terminal Tractor to reduce the footprint of our depots. The 236 kWh tractor has seen our two branches reduce around 70 tonnes of CO2e when compared to our two outgoing diesel terminal tractors. We're now transitioning more branches on our east coast, with a commitment made to six EV tractors to replace our existing diesel fleet.

For more information see:
terbergspecialvehicles.com

Small Fleet Conversion

Mainfreight also operates a significant small vehicle fleet for our sales and support team, to work closely with our customers. Fleets in New Zealand and Australia have made major progress in shifting from fossil fuel to almost half hybrid and electric and we continue to do more.

ENVIRONMENTAL

Climate Change

Waste Management

Reducing our Impact

Supporting Circularity

Water Security

Waste Management

We live on a planet with finite resources and the evidence is clear that linear production and consumption models that generate waste throughout the supply chain through to disposal are not enduringly sustainable.

Our approach to Waste Management begins with identifying the waste streams we generate and finding novel solutions to mitigate our impact and avoid sending waste to landfill. This includes, prioritising the reduction of materials and practises that generate waste, replacing single use consumables with reusable alternatives, and finally, by recycling remaining waste streams to minimise our landfill footprint. We have focused our efforts under two sub streams: Reducing our Impact and Supporting Circular Solutions.

Reducing our Impact

Soft Plastic Recycling

Shrinkwrap is a crucial material in global logistics that ensures palletised freight is structurally sound for both transportation and storage. However, shrinkwrap is largely single use soft plastic that is typically disposed of. Mainfreight has now found partners in multiple regions who not only capture shrinkwrap waste, but repurpose it back into the production cycle to produce 30% recycled content wrap.

Although not a fully circular system, this provides a promising start and substantially reduces the amount of virgin plastic consumed. We continue to work with partners to mitigate the impact of this waste stream while retaining the important integrity characteristics of shrinkwrap that allows goods to move safely through the supply chain.

Composting and Team Gardens

Food waste and organics are a common waste source anywhere there are people. At Mainfreight, we operate our own branch canteens serving healthy and delicious food to our teams around the world. This provides a steady stream of food waste diverted from landfill, which, when paired with organic waste from our gardens, offers a great source of food for our onsite worm farms Castings and 'worm tea' then deliver a rich source of nutrients for our vegetable and herb gardens, growing food to be served back in our canteens.

Reusable Pallets and Stillages

We serve a range of interesting types of freight across our operations and are trusted to move those goods safely and damage free throughout the world. In support of this, our own workshop teams help fabricate custom equipment and stillages to safely load and carry goods and avoid the need for excessive and single use packaging. Among the reusable solutions that cycle through our network, are hanging garment racks, enclosed segregation boxes for dangerous goods, and collapsable cages and crates for loose freight. Much of this equipment can also be tracked in real-time using our IOT (Internet of Things) devices.

Every day we see the flow of tens of thousands of pallets across the supply chain. Although much of this travels on reusable equipment or hire pallets, there are also many 'one-way' pallets destined only for landfill. As a result, we are in a unique position to redirect waste pallets to second life uses. Pallets, including broken part pallets are separated, stored, and supplied to other causes and initiatives turning them into everything from garden boxes (some of which might appear in our branches) through to chairs and bookcases. Pallets that can't be upcycled are provided to partners who chip them into mulch for a range of different purposes.

Common Sense Recycling

Short of our more creative solutions, we have also been recycling cardboard, glass, plastic and aluminium in our branches for decades, and we continue to educate and work with our team to recover landfill waste where it is recyclable.

Plastic and Cardboard Bailing Machines

We have deployed bailing machines at a number of facilities to capture and compact plastic and cardboard waste. This provides a number of benefits, reducing the space occupied by waste on our sites as well as keeping them pristine. In addition, many categories of carboard and plastic neatly compacted can be sold for further use in manufacturing. This reduces the need for more raw materials and allows us to make a small financial premium rather than paying for disposal.

Supporting Circular Solutions

Polystyrene Compression

Our Mainfreight 2 Home division provides services for both the transportation as well as delivery and installation of homewares, furniture and appliances. Part of our installation service offering includes the removal of old appliances and packaging waste including cardboard and polystyrene. Polystyrene is a particularly light and voluminous waste product that can be awkward and expensive to dispose of. At our Mainfreight 2 Home Auckland and Christchurch branches, we operate our own polystyrene compacting machines. Compressing material to around 40:1 the density of general polystyrene. The resulting product is then able to be used as an input material in the production of other goods, reducing the need for virgin materials.

Reverse Logistics

Establishing an efficient reverse logistics system will be a critical component in the shift to greater circularity in supply chains. Facilitating the return, refurbishment and repurposing of end-of-life goods, not only reduces waste but also conserves resources and energy and avoids greater embodied emissions.

This shift will not be easy, most existing supply chains are designed to be one way and logistics is just one component. However, with growing interest and increasing scarcity of raw materials we expect this field to continue to grow.

At Mainfreight, we have been supporting reverse logistics solutions for years and always welcome the opportunity to explore new alternatives with our customers and suppliers alike.

Our aim, ultimately, is giving ‘end of life’, a new life.

ENVIRONMENTAL

Climate Change

Waste Management

Water Security

Resources Systems

Water Security

Globally, in the wake of climate-related events, we are seeing a growing frequency of water stress, droughts and, conversely, flooding contaminating water supplies. At the same time, population, industry and agriculture continue to grow and with it an ever-increasing demand for accessible water.

It's not difficult to see how these opposing dynamics will make a resource we all need, and largely take for granted in developed economies, increasingly constrained.

Although Mainfreight are not a major commercial water users, we have long been advocates for the responsible consumption of water, and the proactive role industry can play.

Our approach is centred around our large facility roof spans acting as water catchments, paired with storage, filtration, recycling and a considered approach to water use in all applications.

Water is first and foremost a public good, and we see it as our responsibility to minimise our footprint so that we don't impose on the needs of the local communities we serve.

Water Resources

Rainwater

Rainwater is a free lunch that all too often goes to waste, lost to evaporation or down storm water drains. Mainfreight have taken a different approach. Rainwater captured on our roof spaces is redirected to onsite storage tanks and repurposed for ablutions, gardens and more recently filtered and refined for drinkable water in our branches. The capture and retention of rainwater has a long rich history at Mainfreight and started with a second hand farm tank back in our early days. Now, rainwater storage is fitted as standard across our branches and is evident throughout our network from large branches to small, with millions of litres in water storage supporting our operations.

Greywater

Greywater is typically directed straight to wastewater drains (which generally form a significant part of the water utilities organisations are charged for). At Mainfreight, greywater has a second life and is instead repurposed for our truck wash and sprinkler systems.

Dandenong Case Study

The growing incidence of climate-related events including floods, bushfires and droughts have now more than ever shone the spotlight on the fragility of our water resources and infrastructure.

Our Dandenong South facility is built to leverage its large roof area to capture, store and filter all of the site's water needs - from irrigation and truck wash to ablutions and potable drinking water. The 1.6 million litre storage capacity is designed to provide for all of the site's water needs for 45 days. In addition, the 42,000 square metre catchment area is modelled to capture more than double the branch usage, even with the lowest average monthly rainfall.

Water Systems

Responsible Care

Mainfreight handle a variety of freight profiles including dangerous goods (DGs), especially under our specialist chemical handling arm, Chemcouriers. We are trusted to carry and care for these goods and mitigate any risks they could pose to life as well as to ecosystems, and water courses.

Our approach includes specially designed facilities, equipment, training and certification for our operations teams and drivers. This establishes the processes and tools for the team to handle these goods safely and respond effectively to spills or emergencies. Our Chemcouriers business is a member of Responsible Care NZ and is committed to best practice handling of all hazardous materials.

SOCIAL

Community

Patnerships

Involvement

Team

People in the Value Chain

Community

Our ties to local communities and community groups go back to our earliest days and the establishment of our Three Pillars (see page 1). Communities provide the team in our operations, the customers that procure our services and the investors that provide our capital. Without which, we could not continue to grow and serve new communities.

Books in Homes

Mainfreight has been part of the “Duffy Books in Homes” programme since its inception in 1994, and currently we support over 100 schools in New Zealand, Australia and and the United States. This means over 25,000 children every year are getting new books to read with our support. The philosophy behind the programme is simple – to break the cycle of ‘booklessness’. Kids who can’t read become adults who can’t communicate, and that’s a serious disadvantage in a world that operates on the written word.

In the USA, Books In Homes USA improves the trajectories of under-resourced children, with involvement in over 175 partnerships and initiatives focused on helping children in need. Thanks to Mainfreight USA and CaroTrans, two of the programme’s lead sponsors, Books In Homes USA has given away 1,062,638 books to 386,209 recipients since 2008.

In Australia, Books in Homes supports 12,500 children each term, across 140 schools, pre-schools and other community-based organisations throughout Australia. Mainfreight has been a major sponsor of Books in Homes Australia since its foundation in 2001, and is proud of the organisation’s distribution to-date of over 3 million books. Mainfreight continues to be a major sponsor of Books in Homes in Australia.

In 2024 in New Zealand, Duffy Books in Homes will reach 30 years since officially launching, and will reach their 15 million books milestone. There are now 570 primary and intermediate schools, as well as 270 early childhood centres (including Te Reo and Pasifika language nests), on the Duffy Books in Homes programme. Thanks to Mainfreight’s support, 46,865 books were gifted to children from their Duffy partner schools in New Zealand last year.

Even with this support, Duffy Books in Homes has an ongoing recruitment of schools every term. Currently over 139 schools are seeking a funding partner to share the cost of delivering and gifting more than 150,000 books to 25,435 children. We would urge more New Zealand companies to take our lead to support this very worthy educational initiative.

Life Education Trust

Life Education Trust and Harold the Giraffe have been part of New Zealand’s schools for 36 years, and Mainfreight has been a partner for the last 16 years.

Life Education’s vision is that all tamariki (children) and rangatahi (youths) have the life education they deserve. Growing up and navigating the complexity of life today sees increasing wellbeing challenges for young people. Each year, more than 280,000 school students across New Zealand participate in the Trust’s education programmes.

Recently, their work has grown further to include professional development programmes for teachers – a ‘coach the coaches’ approach. More than 2,000 teachers each year are taking part in programmes to upskill their professional teaching strategies, supported by Life Education Trust.

A child without education is like a bird without wings.

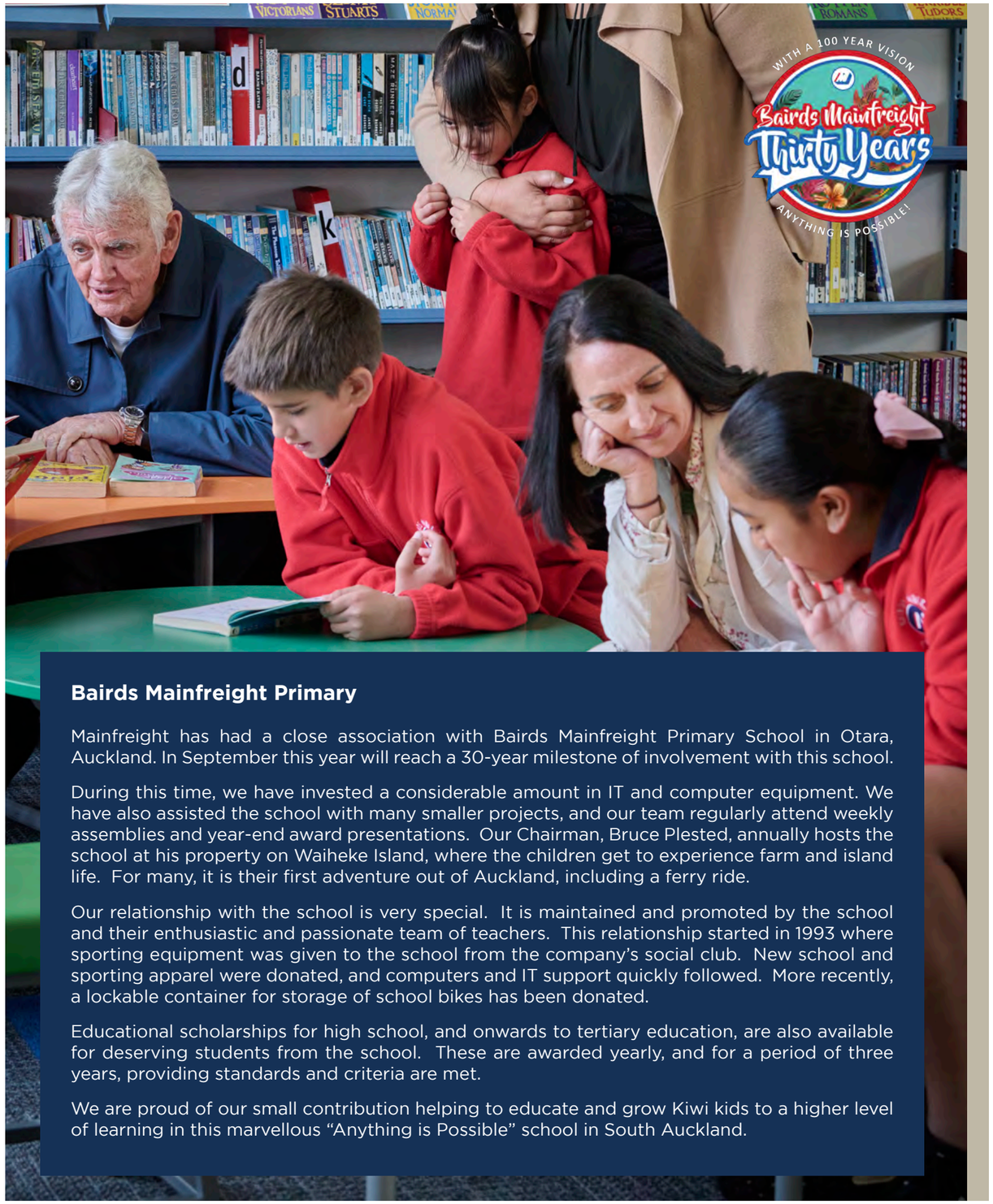
You can learn more about how you can help by visiting their websites:

www.booksinhomes.org.nz

www.booksinhomesaustralia.com.au

www.booksinhomesusa.org

www.lifeeducation.org.nz



Bairds Mainfreight Primary

Mainfreight has had a close association with Bairds Mainfreight Primary School in Otara, Auckland. In September this year will reach a 30-year milestone of involvement with this school.

During this time, we have invested a considerable amount in IT and computer equipment. We have also assisted the school with many smaller projects, and our team regularly attend weekly assemblies and year-end award presentations. Our Chairman, Bruce Plested, annually hosts the school at his property on Waiheke Island, where the children get to experience farm and island life. For many, it is their first adventure out of Auckland, including a ferry ride.

Our relationship with the school is very special. It is maintained and promoted by the school and their enthusiastic and passionate team of teachers. This relationship started in 1993 where sporting equipment was given to the school from the company’s social club. New school and sporting apparel were donated, and computers and IT support quickly followed. More recently, a lockable container for storage of school bikes has been donated.

Educational scholarships for high school, and onwards to tertiary education, are also available for deserving students from the school. These are awarded yearly, and for a period of three years, providing standards and criteria are met.

We are proud of our small contribution helping to educate and grow Kiwi kids to a higher level of learning in this marvellous “Anything is Possible” school in South Auckland.

Bee Hotels

We have bee hotels at a number of our European branches, including a whole new bee wall at our branch in Utrecht. Bees perform one of the ecosystem's most critical functions in pollination, from the wild flowers at our depots and nearby gardens to the agricultural crops in the surrounding farmlands. The honey produced in our bee hotels and hives is then sold in our canteens with proceeds going to the Dutch charity 'Kika'.

Other Volunteering

Our team of people all over the world also support community and charitable projects at a local level, with a wide variety of initiatives from fundraising events, to hosting groups at our facilities, and voluntary time commitments. It's part of who we are.

Child Watch Phuket Foundation & Children's Cancer Foundation Hong Kong

The Child Watch Phuket Foundation is a non-profit organisation based in Phuket, Thailand, with the purpose of combating child abuse and exploitation.

In September, 2023, our team in Thailand delivered food, medicine and sterilisation equipment as well as a donation to support this great organisation and the vulnerable children it aims to protect.

We are also proud to have supported the Hong Kong Children's Cancer Foundation (CCF), with a number of our team participating in the Standard Chartered Marathon.

Stichting Present Montferland

Stichting Present Montferland is a foundation in the Netherlands, aimed at bridging the gap between local businesses and individuals in need. Offering help to the elderly or those with disabilities through to renewing gardens or local green spaces. Our s'Heerenberg warehousing team recently helped out on a range of local projects as part of a 'Roll up your sleeves' management challenge.

You can read more about the projects and the work Stichting Present Montferland do here:

https://stichtingpresent.nl/montferland/verhalen/maatschappelijk-project-teamleiders-mainfreightsmaakt-naar-meer/

Note - you may need to have your browser translate from Dutch.

Mainfreight IDEA Days

Mainfreight's IDEA (Intellectual Disability Empowerment in Action) days are an annual event at a number of our New Zealand branches. Our special guests and their care givers are invited to our depots to enjoy a day of fun and entertainment with our team. Including truck and muscle car rides along with regular participation from New Zealand Police and Fire Service and of course the traditional Mainfreight BBQ. Many of our branches have long standing relationships with the local IHC spanning back as far as 20 years.

Run for Kids

Each year more and more Mainfreight Australia team members take part in the Melbourne Run for Kids event organised by the Royal Children's Hospital Good Friday Appeal. Giving on Good Friday is a Victorian tradition, and is all about helping those who are smallest and most vulnerable. Mainfreight has taken part since its inception in 2006 and it has become a favourite event for our team and their extended families.

SOCIAL

Community

Team

Health, Safety & Wellness

Opportunity & Development

Diversity & Inclusivity

People in the Value Chain

Team

At Mainfreight, it's no secret that our people are the driving force behind our success. Our most enduring slogan 'special people, special company' is testament to the fact that all of what we do and all of what we achieve starts with our team.

So, there is no more important area for us to invest, than in creating the conditions and opportunities that allow our team to thrive. This starts with health, safety and wellness, and attracting a diverse team to an inclusive wider family. Finally, we seek to provide a range of opportunities and avenues for development for the varied career objectives for all of our team.

Health, Safety & Wellness

The Health & Safety Lens

At Mainfreight, the responsibility for creating and maintaining a safe working environment rests with us all. This is illustrated by our commitment to quality facilities and equipment; to quality people and processes; and by our culture which facilitates input and ownership from every team member at every level. Our safety standards often surpass local legislative requirements.

Our stance on the health, safety and wellbeing of our team has been to educate and identify risks and to rely on each and every team member acting in a safe and responsible manner.

In our safety culture, all incidents and accidents are accurately recorded and reported. Our regular Positive Action Team meetings (P.A.T) help address health and safety concerns and allow for hazards to be identified and where possible mitigated.

Through organised safety weeks and safety challenges we stretch the team further in their creative approach to solving safety challenges.

Crown InfoLink

Crown equipment are an international partner for Mainfreight. From this year, we have been rolling out the Crown InfoLink monitoring system for our forklifts and material handling equipment (MHE).

InfoLink features a number of safety and fleet management minded initiatives:

- Pre-shift inspections are required as part of the login for the first operating team member. This is retriggered later in the day for shift change over.
- In the online platform, we can monitor trends by driver and follow speed, heavy braking, sharp turns and other characteristics. Performance and learnings can then be shared with the team.
- Speed limits and other settings can be updated remotely so that new features and policies can be implemented at the touch of a button.
- From an operational perspective, we are able to monitor various performance characteristics of our fleet including:
  - Busiest periods of the day or week
  - Utilisation and fleet right-sizing
  - Running time and down time for different categories of equipment to identify bottlenecks and equipment that may be under or over resourced

Our Health and Safety Initiatives

PREVENT

Initiatives to help prevent health and safety risks at our sites as well as when we deal with the community

TRAIN

How we train our teams to understand and behave in accordance with our health and safety standards

INVOLVE

How we engage all people to be a part of our health and safety initiatives

MAINTAIN

What we do to maintain engagement and standards for health and safety

SUPPORT

How we support our teams to ensure they stay healthy and get back to work quickly

Fatigue Protection Devices

Some of the biggest causes of accidents in the road transport industry are fatigue and distraction of drivers. If we're lucky, this could cause a minor inconvenience, but if we're unlucky, lives could be lost. Mainfreight is committed to keeping our team, owner drivers and the public safe through implementing the best available tools - including technology.

Autosense has created Guardian Technology which is a face and gaze tracking solution. In cab cameras monitor the driver's head position and eyes. If safety parameters are exceeded, an audio alarm and seat vibration are immediately activated. Guardian also features a forward-facing camera which captures critical information about road conditions at the time of the event. When a fatigue or distraction event is detected, data and footage are immediately relayed to the 24/7 Guardian Centre, which then alerts team in the relevant area, to allow them to respond in real-time to the developing situation in the cab.

In Australia and New Zealand, this allows real-time follow-up for fatigue and distraction events, while enabling branches to act quickly and recognise any trends occurring in their fleets. A different fatigue protection solution is also employed in Europe.

Electronic Logbooks

Another tool in our driver safety and fatigue management approach, is the use of electronic log books. These provide a transparent, real-time and unambiguous outline of driver work and rest hours so that these can be planned safely and efficiently.

Canteens

Our canteens are a big part of our branch family culture, an initiative that dates back all the way to our three pillars. We eat together each day, with hot, healthy, and delicious food served by our own chefs at heavily subsidised rates. Some of our sites have also adopted worm farms and vegetable gardens to recycle canteen food waste.

Duress Management System

Our Duress Management System is a new innovation and part of our broader Mainfreight Site Sustainability Platform being trialled in Australia. For those facilities equipped with DMS we have various alert stations throughout the site. Allowing immediate notification (including SMS) and response to a health and safety event as well as to Dangerous Goods (DG) spills.

Once triggered, the alert will send notifications to key team and log time and location data. Depending on the alert type, we can also automate branch responses such as opening roller doors so emergency services can gain access or for fumes to dissipate. Logged information along with response and outcome are recorded and fed into site health and safety data for our own reporting as well as for any emergency services or compliance.

Financial Literacy Workshops

A key focus at Mainfreight is fostering a learning culture, however not all learnings are directly related to moving freight around our network. One initiative is offering a learning series to help our team outside of the working day and provide them the necessary life skills in today's world. We have partnered with Westpac NZ to provide free workshops for managing personal finance. Sessions touch on spending, budgeting, the cost of debt, long-term saving and what superannuation actually does! The Westpac team are accessible in all of our NZ locations to come onsite, as well as offering virtual workshops periodically throughout the year.

Team Assistance Programme

A Team Assistance Programme provides free problem-solving and counselling services aimed at improving the emotional, mental and general health of team members, owner drivers and their families.

Across our regions, we have a series of local supplier networks that aim to provide confidential support with qualified professionals.

Our team, owner drivers and their families have access to resources and professionals to support them through personal issues including relationship, marital, financial, gambling, mental health, trauma, or substance and alcohol abuse problems.

Opportunity & Development

Dedicated Training & Development Team and Facilities

We have our own Training and Development team as well as purpose-built facilities to support our team's ongoing learning.

The team provide a range of internal training and support, from inductions through to technical guidance on new systems, adapting to change and internal audits to keep our operations constantly at their best.

They are also the guardians of our culture, the gatekeepers for who joins our team and the guides for a constantly evolving operations and regulatory landscape.

Promote from Within

Promotion from within is a key aspect of our Mainfreight philosophy, it ensures our leaders are responsible for developing their own successors and it provides opportunities for team members of any background to reach the highest office. Take a look at many of our leaders and you will see tenure not in years but decades.

Share in the Profits

While a disciplined approach to maximising earnings is a focus of any for-profit organisation, the way a company elects to split the rewards is a more discernible reflection of the organisational culture. In 2024 on the back of a challenging year, Mainfreight reported a profit before tax of $395.4 million and although this doesn't meet the performance of previous years, we continue to commit to sharing in the rewards with team that have contributed to our profitability. This year, $25 million will be paid out in team bonuses to those branches that have met their targets.

Living Wage

Mainfreight is committed to paying higher than the living wage, not just a minimum wage. This is true irrespective of the countries we operate in.

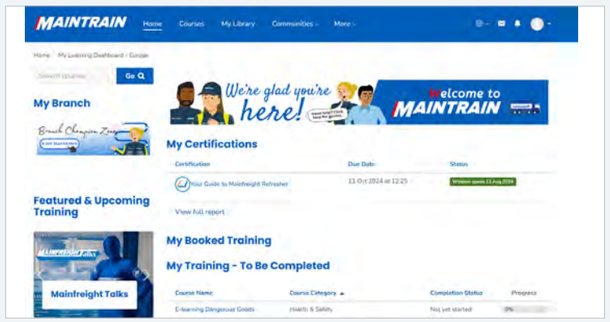
Team Family Scholarships

With education being at the forefront of Mainfreight's core values, we believe it is important that future generations are setup for success and make a positive difference in the countries we operate in. The Mainfreight Scholarship is for children of team members and owner drivers in New Zealand and Australia (with more regions to follow), to provide the opportunity to pursue higher education and turn their aspirations into a reality. The current scholarship is a three year long commitment of $4000 per year, resulting in a $12,000 individual investment for each successful applicant.

The Mainfreight Scholarship has been awarded for over 20 years and since records started in 2009, over 520 scholarships have been handed out!

Learning Management System (LMS)

Education is optional, learning is compulsory, and our online learning management system (LMS) helps us further foster Mainfreight's culture of continuous learning. Our LMS platform allows team members to access training materials at their fingertips, book themselves on training, and track their own progress. It also facilitates the management of training programmes and compliance with local regulations.



Parental Leave Policy

In 2023, Mainfreight introduced a paid parental leave initiative to further support Mainfreight families. The parental leave policy differs slightly based on country. However, all versions provide full salary and some form of childcare support to assist parents returning to work. We believe that there are many lasting benefits, for our team members, their spouses, and children, in creating a system that allows both their families, and the Mainfreight family to thrive.

Training Programmes

Mainfreight invests in training our teams, from on-the-job training through to formal programmes. With focus areas including, induction, operations, personal development, leadership development and systems. To highlight a few:

Mainfreight Induction Programme

Mainfreight's induction programme is a rite of passage for all full-time team members. It covers our history, our philosophies and the key principles and processes that help new team members hit the ground running.

Mainfreight Graduate Development Programme

We offer a graduate programme in every region we operate. However each has the same underpinning goal: to produce the leaders for Mainfreight's future. Graduates begin the programme on the floor in a branch, earning their stripes, learning the operation, and gaining experience that will be invaluable throughout their career. To support their learning, graduates are provided with the personal development tools, networking opportunities, and training to help grow them into the leaders of the future.

Team Leadership Services

Mainfreight has a long history of helping develop emerging and experienced leaders in our business through leadership programmes based on self-development, understanding leadership concepts, and team dynamics. We utilise both internal and external suppliers to support these programmes.

Outward Bound

Mainfreight worked with Outward Bound to devise a tailored week long team programme. Each year two groups of Mainfreighters from around the world are selected for a challenging week in the stunning Anakiwa, Marlborough Sounds in New Zealand. Mainfreight has been working with Outward bound for over 20 years and this experience is a (mostly) fond memory for many of our senior leaders.

Diversity & Inclusivity

Mainfreight is committed to diversity and inclusivity in all areas of its operations, and the Group's Diversity Policy is available on our website at the link below.

https://www.mainfreight.com/global/ennz/investor/corporate-governance/diversity-policy

Mainfreight recognises and values the differences in experience and perspective from all the groups that make up our team, or will make up our team in the future. This includes but is not limited to different ethnicities, cultural background, gender, age, abilities, family status, religious beliefs, sexual orientation and gender identities. As a large company operating in over 27 countries, we are proud of the diverse individuals that make up our wonderful team. However, we also acknowledge that at least in respect to gender there is more we can do in an industry that has been historically male dominated.

We are proud to see a continued increase in the number of female team members at the branch manager level, now at **73** (an increase of **16%**).

In 2024, we also welcome two new directors to the Board in Annie Steel and Hayley Buckley. We continue to focus on developing more women in senior leadership positions within the Group.

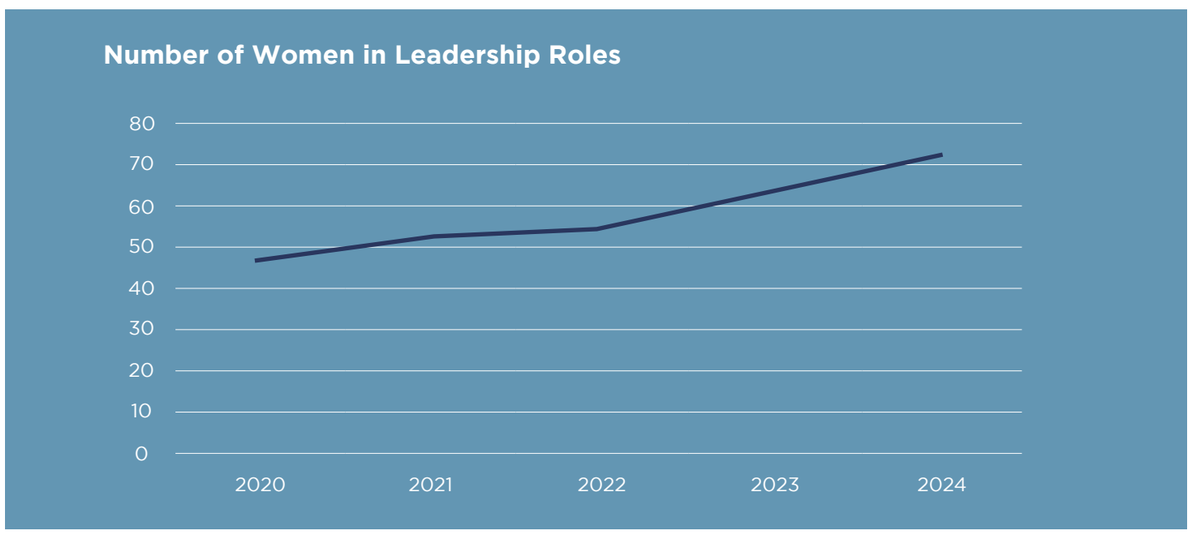
Distance from the Labour Force

Diversity and inclusivity can take shape in many forms. One key initiatives we have established in the Netherlands is to actively hire jobseekers who have a distance to the labour market. We understand that various barriers can prevent individuals from accessing employment opportunities, and we strive to create an environment where everyone has a fair chance to succeed.

In Europe, we have created new operations and value-added services roles that can be filled by those less generally suited to traditional operations work. By providing opportunities, we are not only helping the individuals gain valuable work experience but also enriching our team with diverse perspectives and talents. These new team members receive comprehensive training and ongoing support to ensure they have the tools and resources needed to succeed. By supporting these jobseekers, we contribute to both our team and the broader community, by reducing unemployment, stigma, and promoting social equity.

	This Year		Last Year	
	Male	Female	Male	Female
Directors	5	3	5	1
Officers	10	0	10	0

	This Year		Last Year	
	Male	Female	Male	Female
New Zealand	77%	23%	76%	24%
Australia	71%	29%	71%	29%
Europe	74%	26%	74%	26%
Americas	65%	35%	59%	41%
Asia	37%	63%	38%	62%
Total Group	**71%**	**29%**	**70%**	**30%**



People in the Value Chain

Mainfreight has long prided itself on transparency and an upfront warts and all approach to how we communicate with both our customers and the wider market. We have always sought to meet or exceed any reporting or regulatory obligations required of us and will continue to do so.

Mainfreight already exists under the purview of modern slavery legislation and publishes a modern slavery statement aligned to these obligations. However, recent legislative attention and growing public interest have developed further and extend beyond the reaches of internal operations, to the wider value chain.

As a service provider, we are not major procurers of upstream materials and have a more limited value chain when it comes to our partners and suppliers. However, we recognise that we can do more and exercise greater due diligence to ensure that no labour or human rights violations exist throughout our value chain.

Over the next 18 months we will be exploring this extensively, to ensure that we have no risk of exploitation throughout our international partnerships. We will also work on establishing due diligence mechanisms and controls to offer assurance to our customers and stakeholders.

Sustainable Procurement

Sustainable procurement is an important and established component in how we engage with partners and suppliers. By making informed and responsible purchasing decisions, we contribute to a healthier planet, a fairer society, and a more resilient economy.

We prioritise purchasing products that have a reduced environmental impact. This includes items made from recycled materials, products with minimal packaging, and goods that are energy-efficient. We assess and consider suppliers based on their environmental practices.

We expect that our partners adhere to appropriate labour practices, including fair wages, safe working conditions, and the prohibition of child labour. By building long-term relationships with suppliers who share our commitment to sustainability, we mitigate environmental and social value chain risks and build long and enduring partnerships.

GOVERNANCE

Reporting & Disclosure

Corporate Governance Resources

Reporting & Disclosure

Sustainability standards serve an important purpose in helping cut through the greenwash and ensuring a more consistent and comparable approach to presenting sustainability information across company and industry. Of course, the field of sustainability is developing rapidly and there are numerous different standards, frameworks and protocols available across the world. Some are preferred in different regions, some by different stakeholder groups and others through different industry perspectives. Here we have laid out details on two of our longstanding reporting and disclosure frameworks. In addition to this we also provide disclosures to a number of voluntary and investor lead sustainability initiatives.

We also welcome the opportunity to provide our first Aotearoa New Zealand Climate Standards aligned report below.

GRI – Global Reporting Initiative

The Global Reporting Initiative is likely the most widely recognised and followed standard for sustainability reporting. Mainfreight have reported with reference to GRI since 2020. Readers this year can find the details of our disclosures as well as our GRI Context Index at the end of this report.

You can read more about GRI here: https://www.globalreporting.org

ISO 14064-1: 2018 Organisation Greenhouse Gas Emissions Reporting

ISO 14064-1: 2018 is the most recent organisational reporting standard for Greenhouse Gas Emissions. In contrast to the earlier 2006 iteration, ISO 14064-1: 2018 has a greater focus on indirect value chain emissions accounting. You can find Mainfreight's Greenhouse Gas Inventory Reports independently verified by Toitu Envirocare available on our website.

https://www.mainfreight.com/global/en-nz/investor/reports-library/sustainability-information

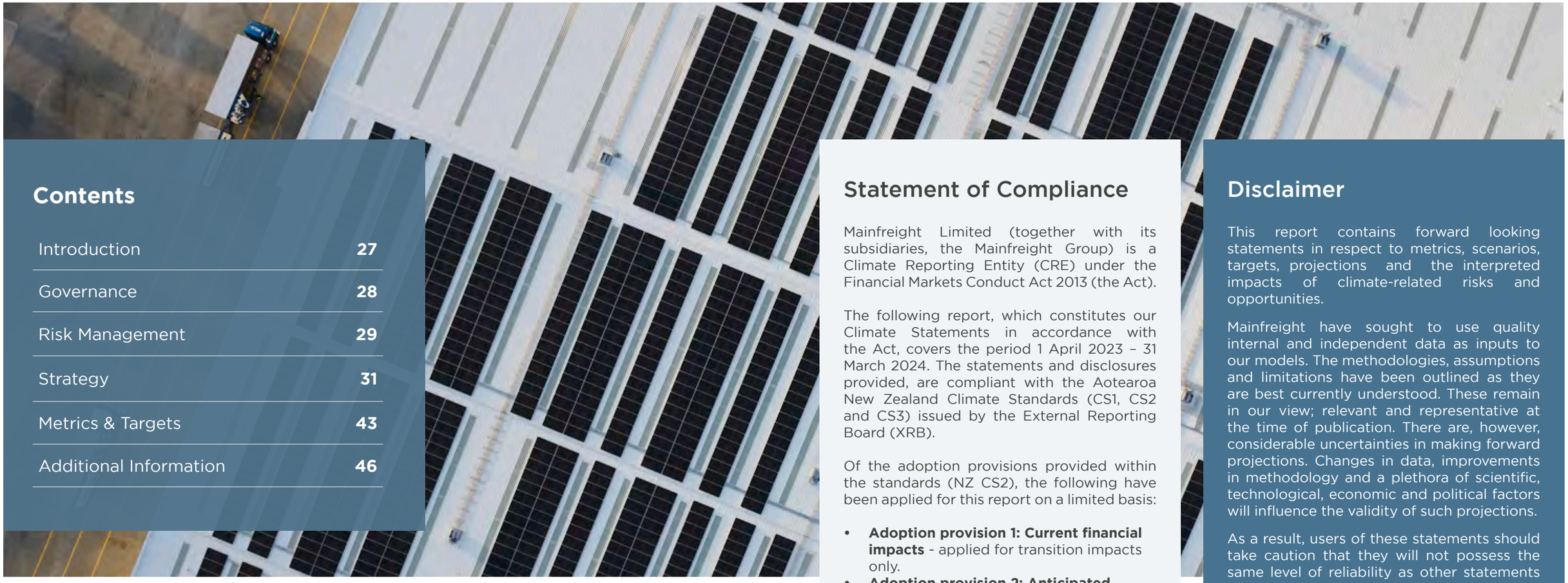
You can find further details on the International Standards Organisation or ISO 14064 here: https://www.iso.org/standard/66453.html

Corporate Governance Resources

Mainfreight Investor Reports
- here you can find our:
  - Mainfreight Annual Reports
  - Mainfreight GHG Inventory Reports
  - Mainfreight Team Newsletters and trading updates

Mainfreight Corporate Governance
– here you can find our:
  - Mainfreight Board and Committee Charters
  - Mainfreight Diversity Policy
  - Mainfreight Whistle Blower Policy
  - Mainfreight Guidelines for Anti-Corruption Practices
  - Other policies

Mainfreight Climate-related Disclosures Report 2024



Contents

Introduction

This Climate-related Disclosures Report represents the next step in our climate reporting journey, with a progression from the Taskforce on Climate-related Financial Disclosures (TCFD) framework to also meet the Aotearoa New Zealand Climate Standards.

Overall, the structure remains consistent with the four thematic areas of the TCFD, which significantly informed the New Zealand Standards. However, this year we delve deeper into the quantitative assessment of different risks and opportunities. Our scenarios now have a more developed narration and additional disclosure requirements have also been addressed.

We continue to report our Group Greenhouse Gas (GHG) emissions, independently verified to reasonable assurance across all scopes/categories, as we have since 2018.

Globally, climate risk reporting remains relatively novel despite a rapidly evolving regulatory and reporting landscape. Both reporters and primary users will need to further develop and improve their understanding so that climate reporting can effectively serve its intended purpose. For companies in better accounting for risks and for investors in better informing the allocation of capital. To that end we welcome feedback on where we have done well and where we could do better.

Statement of Compliance

Mainfreight Limited (together with its subsidiaries, the Mainfreight Group) is a Climate Reporting Entity (CRE) under the Financial Markets Conduct Act 2013 (the Act).

The following report, which constitutes our Climate Statements in accordance with the Act, covers the period 1 April 2023 – 31 March 2024. The statements and disclosures provided, are compliant with the Aotearoa New Zealand Climate Standards (CS1, CS2 and CS3) issued by the External Reporting Board (XRB).

Of the adoption provisions provided within the standards (NZ CS2), the following have been applied for this report on a limited basis:

- **Adoption provision 1: Current financial impacts** - applied for transition impacts only.
- **Adoption provision 2: Anticipated financial impacts** - applied for transition impacts only.
- **Adoption provision 5**: **Comparatives for Scope 3 GHG emissions** - comparative periods are provided in line with our historical reporting to calendar year rather than our reporting period.
- **Adoption provision 6: Comparatives for metrics** - comparative metrics are provided in line with our historical reporting to calendar year rather than our reporting period.
- **Adoption provision 7: Analysis of trends** - comparative periods and any interpretation of trends are provided in line with our historical reporting to calendar year rather than our reporting period.

Disclaimer

This report contains forward looking statements in respect to metrics, scenarios, targets, projections and the interpreted impacts of climate-related risks and opportunities.

Mainfreight have sought to use quality internal and independent data as inputs to our models. The methodologies, assumptions and limitations have been outlined as they are best currently understood. These remain in our view; relevant and representative at the time of publication. There are, however, considerable uncertainties in making forward projections. Changes in data, improvements in methodology and a plethora of scientific, technological, economic and political factors will influence the validity of such projections.

As a result, users of these statements should take caution that they will not possess the same level of reliability as other statements made in Mainfreight's annual reporting.

We are nonetheless committed to accommodating future developments in understanding through ongoing improvements in our climate-related disclosure reporting.

Nothing in this report constitutes guidance or advice with respect to the Group's financial, legal or strategic performance or growth.

Governance

Board

The Mainfreight Group Board of Directors (the Board) are responsible for the proper direction and control of the Group's activities. This includes oversight for the identification and control of the Group's risks (including climate-related risks).

The Audit Committee, established by the Board, is responsible for ensuring that the company has an effective risk control framework in place for:

- Safeguarding company assets (including appropriate insurance cover and other mitigation)
- Maintenance of proper accounting and business records
- Compliance with legislation
- Ensuring reliability of financial information
- Maintaining an overview of business risk factors and establishing the means of mitigating these

The Audit Committee members are developing the skills and competencies to oversee climate-related risks and opportunities. The Board also ensures directors have access to ongoing training and education relating to the business, along with changes in corporate conduct and legal compliance. Additional information in climate science and modelling are provided by the Group Sustainability and Group Finance teams to the Chief Financial Officer (CFO) in support of the Audit Committee.

The Audit Committee meets annually to monitor progress against climate-related targets and addressing material and unmitigated risks, with findings and recommendations made to the Board.

Remuneration policies do not directly consider performance against climate metrics and targets. However, progress remains at or above expectation.

The Board delegates the conduct of the day-to-day affairs of the company to the Group Managing Director and Executive Management.

Management

Executive Management (Management) is responsible for ensuring the business is identifying, managing, and controlling climate-related risks alongside other risks. Risk mitigation strategies directed by the Board are implemented and monitored by Management. Performance towards these strategies, and new assessments of climate risks and hazards, are reported by Management back to the Board and Audit Committee.

The Group Finance and Group Sustainability teams, reporting to the Chief Financial Officer, support the practical implementation of climate-related risk mitigation strategies and transition planning. The Group Sustainability Team is also responsible for preparing climate risk assessments and providing updated information to Management and the Audit Committee.

Our Climate Governance Structure

Figure 1. Climate Governance Structure

Engagement

Mainfreight's Board meet seven times a year.

Mainfreight's Audit Committee meets annually to discuss climate-related risks and opportunities.

Mainfreight's CFO with support from the Sustainability Team and Finance Team report annually into the Audit Committee.

The Sustainability Team formally reviews climate-related risks with the CFO annually as well as on discovery of any new material risk, or where an existing risk is evaluated to have changed significantly.

Risk Management

Introduction

Risk management is a fundamental component of effective governance, ensuring progress against strategic objectives remains unabated despite emergent challenges and uncertainties.

Both governance and management functions have been working over the past 18 months towards adoption of climate-related risk management.

The risk models prepared and reported here, provide an assessment based on impact and probability, much like a traditional risk matrix. This allows us to assess and prioritise climate-related risks alongside other risk categories.

Mainfreight's Climate-related Risk Management Process, shown in Figure 2, outlines our steps to identify, measure, manage, monitor and control, as they are applied to climate-related risks.

Climate-related Risk Management Process

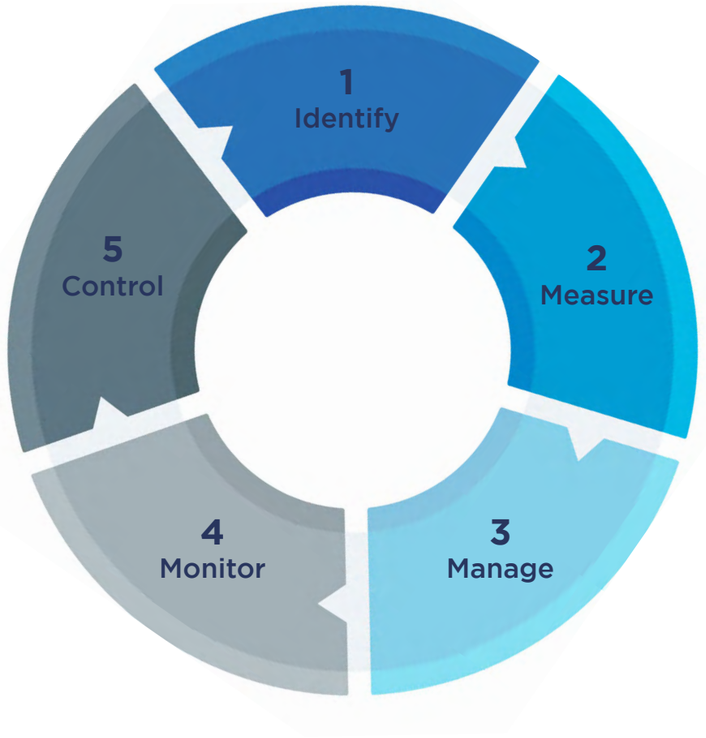


Figure 2. Climate-related Risk Management Process

1 Identify

We have used various sources to identify potentially relevant climate-related risks and opportunities, including but not limited to:

- Academic publications and literature related to climate change
- Scientific assessments and data
- Policy guidance and public sector research
- Industry and regional specific reports and developments
- Regulation and formal standards
- Independent natural and climate hazard risk assessments
- Organisational experience with transition planning and implementation of new projects and technologies
- Organisational experience with natural hazards, responses and resilience

Assessments of materiality are made against possible impacts throughout the business and value chain to warrant their disclosure in this report. The absence of a specified risk here, does not preclude that risk from assessment, and may well be addressed strategically at local levels. Instead, material risks are presented from a Group perspective.

2 Measure

Once identified, climate-related risks are assessed within their category for scope, size, probability and overall impact. Our models and methodologies for calculating risks against each of the categories are detailed further in our Strategy section which cover:

- Acute physical risks to assets
- Acute physical risks and opportunities to operations
- Chronic physical risks to assets (largely not material)
- Chronic physical risks to operations
- Transition risks and opportunities

Time Horizons

For each of the assessed risks and opportunities we have compared their likely consequence across three time horizons between 2023 (the year of our first Climate Risk Report) and 2050.

1. Short Term: 2023 – 2030
2. Medium Term: 2030 – 2040
3. Long Term: 2040 – 2050

3 Manage

After a climate-related risk is identified and assessed material within the Group's Climate-related Risk Management Process, an appropriate management response is developed and implemented. The responses roughly follow the below classifications:

Watch and wait: A material risk is acknowledged, but uncertainty around its impact or the efficacy of more active responses requires further information gathering. This differs from risk acceptance, here a risk is being actively monitored until such a time as a more informed response can be enacted or until a risk is assessed as immaterial.

Minimise or maximise: This response is associated with efforts to reduce or increase the likelihood of a given risk or opportunity occurring. These are more commonly applied to transition risks, where there may be organisational influence to actively affect the likelihood of given risks and opportunities. This is largely not true for physical risks as a result of global climate change.

Mitigate or instigate: This response is where efforts are taken to reduce the overall impact of a risk, were it to occur. These responses are more aligned to physical risks and opportunities (although opportunities are largely constrained to competitive performance in preparedness for a negative event). The most common form of mitigation is insurance. We hold building and contents policies for all of our major sites, in addition to business disruption policies to safeguard our operations. However, there are also practical examples like flood or fire prevention, and water and energy independence which can be effective strategies.

4 Monitor

Our risk monitoring process involves the regular evaluation and validation of the current state of identified risks, as well as the level of collective risk. This is considered alongside the effectiveness of management responses and interventions.

5 Control

The control element provides the resource and capability to deliver all other core functions of the Climate-related Risk Management Process, along with determination of broader strategic responses.

Efforts to identify, standards to measure, projects to manage and conditions against which to monitor risks are all formulated within risk management control. Our existing and well-practiced risk management processes are critical to our resilience and adaptability to climate-related and other business risks.

Strategy

Business Model & Strategy

Mainfreight is a an international provider of logistics and integrated supply chain solutions. Spanning managed warehousing, domestic and cross-border transport, international freight forwarding and everything in between.

Our network of 337 branches across 27 countries, with 10,644 team members, helps to connect businesses, markets and communities all around the world.

At Mainfreight we are proudly long-term thinkers. Our ever stretching 100-year vision allows us to look beyond short-term cycles to the business we aim to be decades from now.

To prepare for the many possible futures, our climate strategy sets out three areas of focus:

Responsiveness:
In cultivating agility and decisiveness at all levels of the business so that we can respond swiftly to the diverse implications of a global transition.

Embodied resilience:
In our infrastructure, our systems, our network and our people to sustain the flow of goods in the face of major events.

Innovation and collaboration:
In developing the tools and solutions for Mainfreight and its customers to succeed and thrive in a low carbon economy.

Understanding Climate-related Risks and Opportunities

Transition Risks

Transition risks are those that emerge from efforts to transform global economies toward a low carbon future, in order to avert the worst effects of global climate change. These risks fall under various categories such as policy, legal, technological, market and reputation.

The rate of change and the drivers behind it will have meaningful implications on where and how these risks materialise. Many of which will have a financial component, although this can be difficult to assess.

Physical Risks

Physical risks are those that arise from both extreme weather events (acute risks) and gradual shifts in shifts in climate conditions, such as, increasing temperature, rainfall and sea levels (chronic risks).

They pose operational, financial and supply chain risks to organisations, and threats to life and livelihoods for individuals and communities (who are our team members and customers). These are risks arising from climate change.

Opportunities

Climate-related opportunities can exist from both a transition and physical standpoint, however, given the nature of these two classes, they fall most commonly under transition. This is because physical considerations, especially acute risks like major storms or wildfires carry few upsides. It is possible an especially effective response to major acute risks could predicate an improvement in market share. Or alternatively, certain industries may have opportunities in the emergence of chronic climate changes (i.e increased precipitation for some crops).

Climate Scenarios

Our Approach to Scenario Analysis and Selection

In order to assess our resilience to plausible climate futures, three scenarios have been chosen and modelled here, as described in Table 1. These allow us to explore the range of impacts different emission pathways could have on our material risks and opportunities.

All three scenarios are based on the "Middle of the Road" Shared Socioeconomic Pathway (SSP2). This pathway does not markedly shift from historical patterns, where both global and local institutions make slow progress towards the Sustainable Development Goals. Each scenario has been built from this same starting point and explores how varying levels of physical and transition risk could lead to different climate futures.

The SSP framework is widely used in the climate change research community in order to facilitate the integrated analysis of future climate impacts, vulnerabilities, adaptation, and mitigation. External data was sourced from the NGFS Phase 4 Scenario Explorer, using the REMIND-MAgPIE 3.2-4.6 model, as this had a broad range of temperature outcomes and, is the only NGFS model which integrates potential future damages from physical risks.

The variation between our three scenarios comes from the level of policy coordination over the short, medium and long term, as well as technology availability.

These scenarios were selected in order to capture a range of assumptions about uncertain futures. Two of our scenarios meet the Paris Agreement goal of <2°C by 2100, but compare the effects of a smooth and delayed transition. Our third scenario leads to a hot house world, where emissions continue to rise into the long term above 3°C by 2100.

Our Climate Scenarios

Orderly Transition

The defining characteristic of the Orderly Transition Scenario, the most optimistic of the three, is an immediate and largely coordinated global response towards climate action, resulting in a 1.45°C temperature increase by 2100. Driven by nonpartisan cooperation and resounding public consensus, ambitious policy and fiscal intervention is made towards decarbonisation.

A clear pathway is defined for the phaseout of fossil fuels, creating certainty and spurring investment in climate friendly technologies. Industry, investor and community groups fill the remaining voids, driving decarbonisation in international shipping, aviation and wider transport, allocating capital to fast transitioning businesses and divesting and litigating against laggards.

Coordinated national and international transport planning facilitates intermodal connectivity, permitting short-term mitigation, as harder to abate sectors continue to evolve.

Low carbon technologies perform better than expected and quickly evolving iterations continue to improve their operational efficiency, making legacy technologies increasingly unviable.

A systems approach is taken to the development of supporting infrastructure, particularly towards electrification. Renewable generation grows exponentially and is supplemented by large grid scale batteries. Investment in transmission and distribution is made early, in preparation for growing demands, and commercial operators are incentivised toward self-generation and building grid resilience.

Increasing transparency and growing concern quickly shifts consumer preferences and behavior toward more sustainable alternatives, and the associated premium allows for further reinvestment.

Climate-related events spurred by already increasing temperatures, incite greater interest and investment in the transition, rather than distract from it.

Under this scenario, the worst of the catastrophic climate events and climatic changes are largely avoided. However, even with substantial support, organisations face significant upheaval in near term transition risks, with those poorly prepared or heavily entrenched in emission intensive industries especially exposed.

Disorderly Transition

In the Disorderly Transition Scenario, competing social and geopolitical interests persist, resulting in little short-term international coordination towards decarbonisation. The result is a 1.77°C hotter world by 2100, missing the lower 1.5°C goal of the Paris Agreement.

Fossil fuel use peaks by 2030 but demand remains sticky. Lower emission fossil fuels, like natural gas, divert attention from greater renewable and energy system investment.

Globally, organisations struggle to stay abreast of disparate regional regulations and policy frameworks adding to confusion and delaying critical investments. A lack of transparency makes organisation and industry performance toward climate aims difficult to assess. Consumer and market responses, as a result, are relatively constrained.

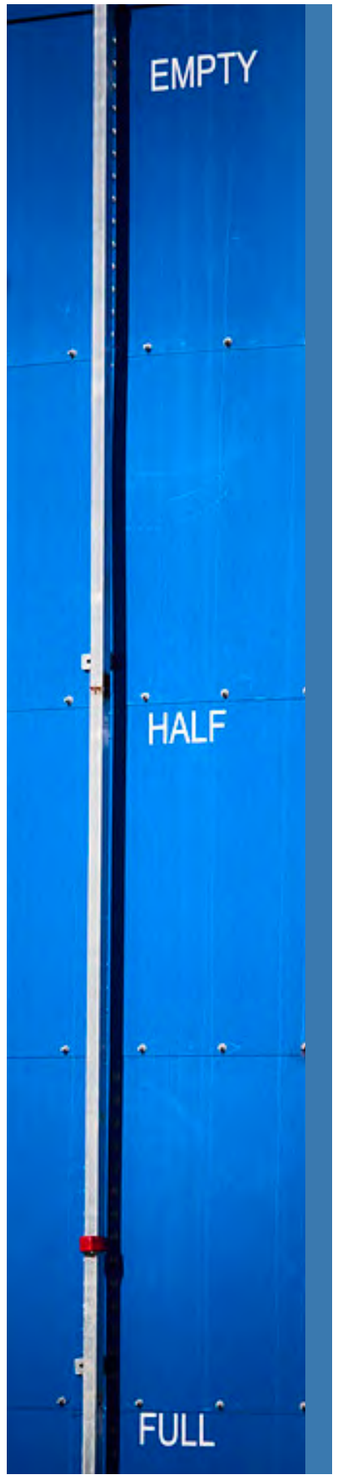
In the early 2030s, the world reaches an abrupt tipping point. Social and consumer frustrations confront a slow moving political and industrial response, and lead to a dramatic shift in policy and accelerated international collaboration.

With a delayed starting point, the response required is now steeper. Significant and highly disruptive policy interventions are implemented, imposing massive strain on economic and social systems.

Competition for low emission technologies is intense, further pushing up prices and leaving out many smaller players and markets.

Policy, coupled with a rapid escalation in emissions pricing, heavily devalues emission intensive assets. Emissions intensive industries with difficult abatement pathways incur, and pass on, major cost increases. In particular, aviation becomes prohibitively expensive for many consumers and cargo interests, in the medium term.

At the same time, increasing global temperatures are already contributing to a growing incidence of major climate events, requiring significant further investment in recovering and remediating impacts.



Business as Usual (BAU)

Our final scenario Business As Usual (BAU) is the most broadly impactful. Here, there is little to no effective coordination over the short, medium and longer terms.

Competitive global politics detract from national efforts towards the transition. Without any clear global leadership, there are few incentives for nations to decarbonise, while others continue to proliferate fossil fuels.

Economies and industry stay the current course, largely unencumbered by regulation or forces for change. Low emission technologies remain niche in most markets and their inability to reach scale prevents them from being cost competitive with legacy technology until nearer mid-century.

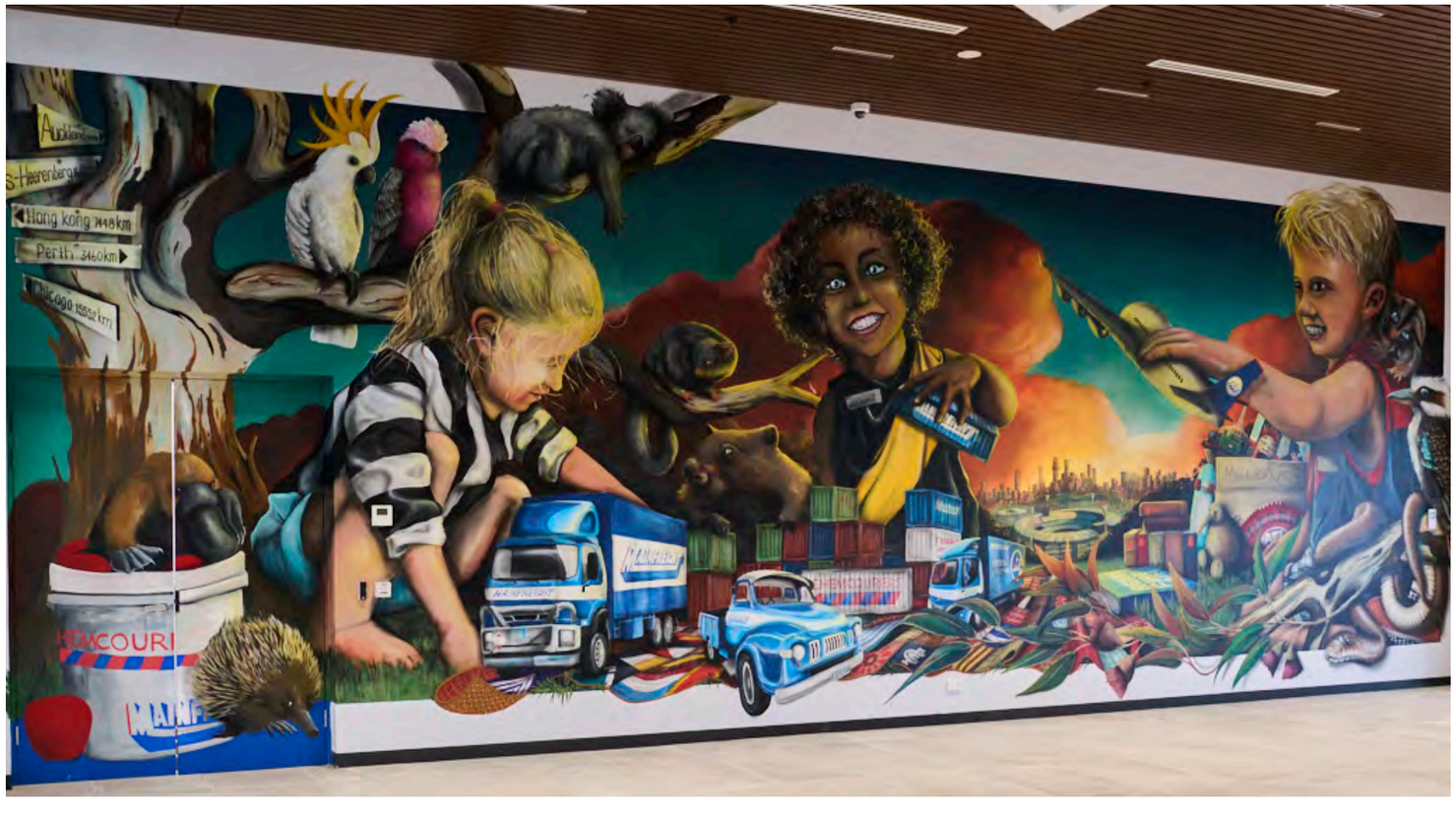
The gains that are made toward decarbonisation and renewable energy are largely offset by growth in population and consumption over the medium term.

Widespread climate-related catastrophes become increasingly more common, and government expenditure is heavily directed towards recurring recoveries and rebuilding national infrastructure. Industry responds to growing uncertainty by becoming increasingly cost sensitive, coupled with pervasive insurance unaffordability there are major headwinds towards productive investments.

Extreme climate-related events constantly disrupt industry, supply chains and the markets they seek to serve. The rolling crises increase the costs of production and shipping. Communities, struggling to adjust, see their disposable incomes shrink. The outcome is deep economic retrenchment.

Despite the lack of investment and coordination, renewables and low emission technology slowly supplant existing energy systems and technologies on a cost basis.

Climate, economic and social systems are permanently changed.



Scenario	Orderly Transition	Disorderly Transition	Business As Usual
Action to reduce emissions	Immediate	Delayed	None
Policies to achieve low-carbon economy	High Coordination	Regional Variation	No new policies enacted
Global Mean Temperature increase by 2100 (67th Percentile)	1.5°C	1.8°C	3.0°C
Net Emissions	Smooth transition to net zero by 2050	Delayed and more severe transition to net zero by 2060	Start to decrease from 2090
Transition Impacts	Moderate	Moderate	Low
Physical Impacts	Low	Moderate	High
Short Term Temperature Increase	1.58°C	1.58°C	1.58°C
Medium Term Temperature Increase	1.71°C	1.83°C	1.84 °C
Long Term Temperature Increase	1.69°C	1.91°C	2.11°C
Trends to 2050			
Transportation Energy	Starts to decline	Declines from 2030	Continually increases
Transportation Energy Mix	Transitions toward electric and lower carbon gases	Less rapid transition to electric and low carbon gas, remains reliant on oil	Remains reliant on oil with a small introduction of lower carbon gases and electricity
Investment in Energy Supply	Investment in low carbon sources and energy efficiency, with significantly reduced reliance on fossil fuels by 2040	Investment in low carbon sources and energy efficiency, with significantly reduced reliance on fossil fuels by 2050	Low investment in low carbon sources and energy efficiency, remains reliant on fossil fuels
Carbon Price	Steady increase from 2020	Steep increase from 2030	Consistently very low
Carbon Sequestration	Most energy production emissions are captured as well as using land-based sinks	Most energy production emissions are captured as well as using land-based sinks	Relies on land-based sinks (e.g. afforestation, soil carbon enhancement, biochar)
Scenario Explorer Data	Net Zero 2050	Delayed Transition	Current Policies

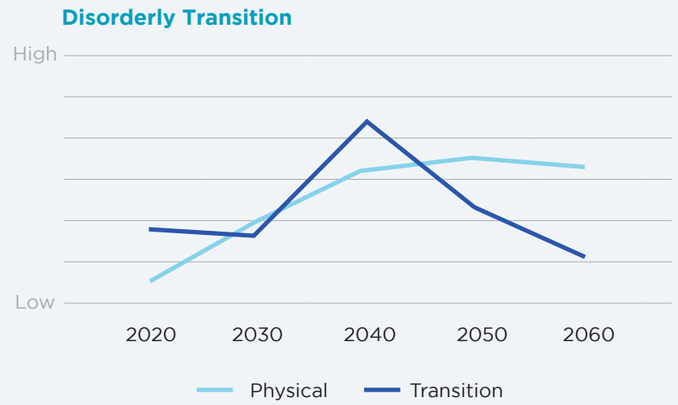
All scenario data was accessed through: NGFS Phase 4 Scenario Explorer hosted by IIASA and uses REMIND-MAgPIE 3.2-4.6 inputs

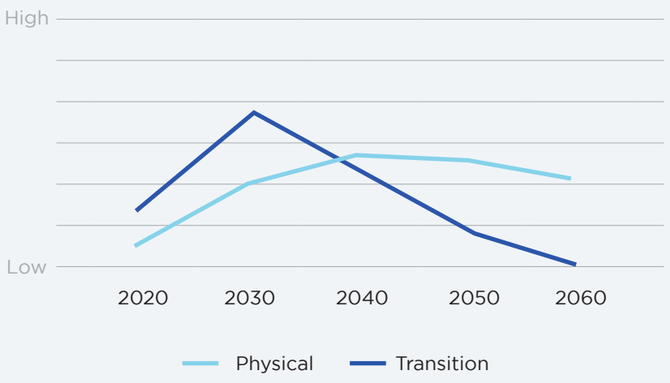
Table 1. Mainfreight Climate Scenarios

Interpretation & Link to Time Horizons

The relationship between scenarios, risk type and time horizon, loosely follows the dynamic outlined in Figure 3.

In simplistic terms, transition and physical risks have an inverse relationship. A BAU scenario imposes little to no transition risk, but extreme physical risk. Alternatively, in our Orderly Transition scenario, the worst of the physical risks are largely avoided through the immediate and sustained efforts towards decarbonisation (transition impacts).





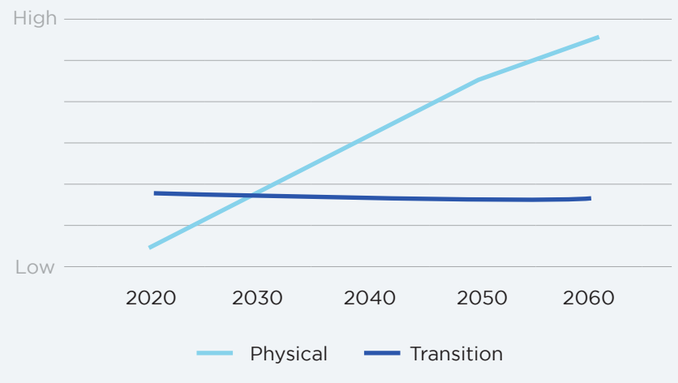


Figure 3. Scenario Risk Profiles

Current Physical Impacts

Events & Claims

Mainfreight is a large international company with a diverse and dispersed network of facilities around the world. As such, minor disruptions due to natural hazards are common, which our network is adept at quickly responding to.

Over the past three years there have been only two material climate-related events:

- Cyclone Gabrielle – Hawkes Bay, New Zealand, February 2023
- New South Wales Floods – New South Wales, Australia, November 2023

Mainfreight has extensive insurance coverage that includes direct impacts as well as impacts to operations. Both of these events were covered under existing policies, with the net impact after insurance estimated at approximately NZD$110,000.

Case Study Assessment

To support our understanding of current physical impacts, we have also undertaken a limited case study assessment to determine whether climate-related events affect the longer-term growth prospects of impacted regions. The assessment included the following events:

- Hurricane Ian – Florida, USA, September 2022
- Auckland Floods – Auckland, New Zealand, January 2023
- Cyclone Gabrielle – Hawkes Bay, New Zealand, February 2023
- New South Wales Floods – New South Wales, Australia, November 2023
- Cyclone Jasper – Queensland, Australia, December 2023

Our analysis mapped a 12-month period (or 6 months for recent events) centred on the event, as well as a comparison to the same period in the prior year. The resulting performance in revenue was then compared to the wider regional performance for both inbound and outbound freight.

Somewhat counterintuitively, we found that despite a very short-term reduction (typically one to two weeks), the impacted areas performed neutral to above average when compared to wider regional performance. The interpretation and implications are explored further in our Future Physical Impacts to Operations section. We note there is a high degree of uncertainty, given the small sample size and other dependent variables.

Climate Impact Accrual

The final component in our evaluation of current physical impacts, and the foundation of our calculations for future anticipated impacts, is our modelled Climate Impact Accrual.

This new tool is intended to assess the probability and impact of different classes of risk against each of our sites around the world. We then generate a single year 'accrual' for each site against each class of risk (equivalent to the annualised cost exposure after insurance/mitigation). Across our operating regions, 250 sites were assessed against seven physical risks, generating over 1,800 individual values.

The primary input to our modelling was a natural and climate hazard assessment provided by Gallagher (formerly Crombie Lockwood) with licensed use of the Swiss RE CatNet software. This was contrasted to asset type, value, ownership model, insurance coverage and other mitigation measures to assess the relative exposure in a given year.

The branch values have been summarised by region and risk type below, with our anticipated yearly physical impact to the Group assessed at NZ$193,908 (in year one). This appears a little conservative relative to the lived experience over the last three years - at less than 0.01% of total assets.

NZ$	Chronic			Acute				
Operating Region	Drought	Increased Precipitation	Sea Level Rise	Flood	Storm Surge	Wildfire	Windstorm	Total
Americas	$391	$7	$37	$2,125	$220	$425	$1,355	$4,560
Asia	$28	$1	$5	$233	$416	$138	$566	$1,388
Australia	$306	$95	$206	$5,447	$2,144	$16,114	$8,771	$33,084
Europe	$2,707	$29	$270	$31,734	$40,612	$603	$11,294	$87,248
New Zealand	$184	$88	$800	$12,729	$23,037	$1,599	$29,192	$67,629
Grand Total	$3,617	$220	$1,317	$52,268	$66,429	$18,879	$51,178	$193,908

Table 2. Current Climate Impact Accrual (after insurance) by Hazard & Region

Current Transition Impacts

The transition impacts of an adapting global economy are already being felt, although there remains much variety in the pace and priority of national and industrial strategies toward lower emissions.

We continue to navigate and engage with the various global progammes of work, while delivering on our own transition plan. In Figure 4 we have outlined some of the observable transition impacts to date.

Many of these impacts are not black and white and reflect both risks and opportunities relative to organisational responses.

In this year's report we have sought to provide a qualitative rather than quantitative assessment of transition risks, here and in the Future Transition Impacts section. Our intention is to build towards further quantification of these classes of risks in future reports.

Risk Impact	Risk/Opportunity Type	Opportunity Impact
Mainfreight has invested considerable time and effort in preparing for climate reporting obligations in New Zealand and offshore.	Enhanced reporting requirements	We are increasingly able to leverage the knowledge base we have built to prepare for these standards, as an asset assisting our customers in the outset of their journey.
GHG pricing changes via regulated Emissions Trading Schemes (ETS), or carbon taxes which are indirectly incurred through fuel prices. These in turn are largely passed onto the market by contract Fuel Adjustment Factors, a common industry mechanism to share fuel volatility risks.	GHG pricing	As operators of a modern, fuel efficient fleet, cost increases disproportionately impact carriers with older vehicles, improving our competitive standing.
New technology often has teething issues. Our experience with existing electric trucks has not yet proven to be competitive with mature legacy vehicle technology.	Technology adoption	The increased operating cost of 1st and 2nd generation electric trucks shouldn't be viewed in isolation. There is considerable benefit in the early learnings of how to operate these new fleets, for when the technology matures. They have also served to facilitate new discussions and opportunities with customers, and provided immediate, although modest, reductions in emissions.
There is a strong emerging preference for sustainability focused supply chain solutions. We expect this to become increasingly ambitious.	Customer preferences	So far, our performance has placed us well to meet these demands in acquiring and retaining business. We have also found a more receptive customer base to rail and coastal transport modes where we have invested heavily.
Mainfreight's new facilities have significant sustainability aligned capabilities, including solar, batteries and water capture and storage. There remains a risk that these will not perform to expectation, and capital could have been more productively allocated elsewhere.	Building and resource efficiency	So far, these investments are perfoming adequately. However, there is additional benefit in our reduced exposure to utilities price increases, and the resilience afforded in being more self-sustaining.

Figure 4. Current Transition Impacts

Low Impact — High Impact

Future Physical Impacts to Assets

Our evaluation of the physical risks to our assets, has generated a number of key findings to inform business decision making. In particular, where and what mitigation to deploy, how we manage and prepare for possible events, and where capital is best directed in supporting climate resilient growth. Some of these observations include:

- Storm surge, flood and windstorm are all similarly rated as our top global risks.
- Windstorms, although not viewed as especially impactful, are highly pervasive.
- Our wildfire risk is heavily centred around Queensland, Australia.
- Europe has our highest overall risk exposure. This is especially pronounced (and perhaps partly mitigated) by lower asset ownership compared to New Zealand or Australia.
- Our Air & Ocean business unit, with a smaller physical footprint is less exposed to acute physical risks. However, it is highly dependent on critical infrastructure, like ports and airports, which could be disrupted.
- Chronic physical risks are viewed here as not especially material to Mainfreight facilities.

Tables 3 and 4 show the accumulation of Climate Impact Accruals relative to time horizon and weighted for each of our three scenarios.

NZ$	Scenario 1. Orderly			Scenario 2. Disorderly			Scenario 3. BAU		
Region	Short	Medium	Long	Short	Medium	Long	Short	Medium	Long
Americas	32,616	137,368	333,757	32,616	147,078	376,616	32,616	148,003	416,898
Asia	9,930	41,821	101,612	9,930	44,778	114,660	9,930	45,059	126,924
Australia	236,656	996,728	2,421,706	236,656	1,067,183	2,732,687	236,656	1,073,897	3,024,967
Europe	624,114	2,628,585	6,386,559	624,114	2,814,390	7,206,683	624,114	2,832,097	7,977,487
New Zealand	483,768	2,037,490	4,950,400	483,768	2,181,512	5,586,101	483,768	2,195,237	6,183,573
Total	1,387,083	5,841,992	14,194,034	1,387,083	6,254,940	16,016,747	1,387,083	6,294,293	17,729,848

Table 3. Future Physical Impacts by Region, Scenario and Time Horizon

NZ$	Scenario 1. Orderly			Scenario 2. Disorderly			Scenario 3. BAU		
Event	Short	Medium	Long	Short	Medium	Long	Short	Medium	Long
Flood	373,889	1,574,713	3,826,013	373,889	1,686,024	4,317,327	373,889	1,696,632	4,779,094
Storm Surge	475,186	2,001,347	4,862,586	475,186	2,142,815	5,487,011	475,186	2,156,296	6,073,884
Wildfire	135,048	568,783	1,381,947	135,048	608,988	1,559,409	135,048	612,819	1,726,198
Windstorm	366,090	1,541,867	3,746,206	366,090	1,650,855	4,227,272	366,090	1,661,242	4,679,407
Drought	25,872	108,965	264,746	25,872	116,667	298,744	25,872	117,401	330,696
Precipitation	1,576	6,639	16,130	1,576	7,108	18,202	1,576	7,153	20,149
Sea Level Rise	9,421	39,678	96,405	9,421	42,483	108,784	9,421	42,750	120,420
Total	1,387,083	5,841,992	14,194,034	1,387,083	6,254,940	16,016,747	1,387,083	6,294,293	17,729,848

Table 4. Future Physical Impacts by Event, Scenario and Time Horizon

Exposure over time (NZ$)

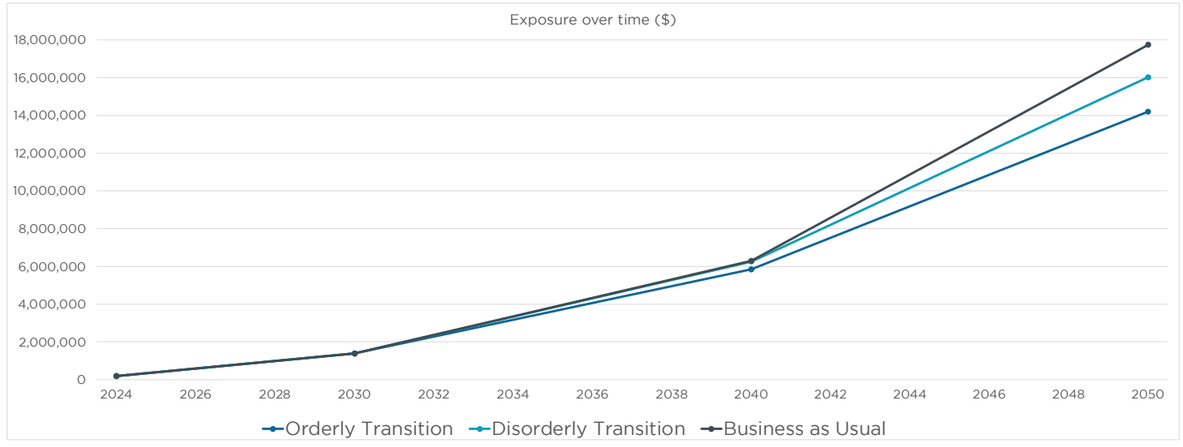


Figure 5. Anticipated Physical Acute Impacts by Scenario

Future Physical Impacts to Operations

Acute

Our limited case study assessment in respect to operating performance, is outlined in Table 5 below. It includes freight revenue generated both into and out of the respective areas, compared to their wider regions.

Event	Region Impacted	Event Area Performance	Regional Performance	Operating Difference
Cyclone Gabrielle (Aug 22-Jul 23)	New Zealand	10.2%	1.2%	9.0%
NSW Floods (Sep 23-Feb 24)	Australia	-25.8%	-22.8%	-2.9%
Hurricane Ian (Mar 22-Feb 23)	Americas	28.2%	20.6%	7.5%
Cyclone Jasper (Sep 23-Feb 24)	Australia	-22.8%	-22.8%	0.0%
Auckland Floods (Jul 22-Jun 23)	New Zealand	4.3%	5.4%	-1.0%

Table 5. Case Study Assessment

Overall, we found two areas that outperformed, two neutral (within 1%) and one that underperformed. Our interpretation, made with a high degree of uncertainty, is that there are neutral to positive net impacts of major hazards in respect to freight revenue.

We hypothesise three potential factors that may contribute:

Urgent essentials:
In early disaster response, a significant supply of essential goods are required to get communities back on their feet, with food, beverages, and pharmaceuticals all in high demand. These are all profiles of freight where Mainfreight is well represented.

Stretching supply chains:
Over the medium-term, disruption to traditional supply chains and sources of supply will prompt businesses to look further afield, increasing the broader freight task.

Build back:
Looking ahead, communities will need to rebuild. Here, we are likely to see a sustained increase in new building and construction, and with it the freight flows needed to facilitate this activity.

However, this comes with a significant caveat that there are likely to be increased operating costs, although these are partly offset with existing insurance policies. In addition, these events have serious negative effects on local infrastructure and communities, including our teams, and we would be very reluctant to classify these as opportunities even if the effects were further substantiated.

Chronic

Chronic changes in climate, and the associated physical risks, have been viewed here as less impactful to Mainfreight relative to acute physical events and transition impacts.

However, there are modelled chronic risks in the regions that we operate in, which could be material to the local customers and industries we serve. The most notable of these is a drought in Europe. Sea level rise, while rated Moderate for New Zealand, is not viewed as having a material impact on the performance of our customer industries, which individually may or may not be exposed to sea level rise.

In Table 7, we have grouped our customer verticals (industry segments), relative to the perceived exposure of their value chains to chronic risks. As an example, agriculture would be considered directly impacted, whereas industries that rely on agricultural raw materials would be indirectly impacted.

In total, we see less than 3% of group revenue, both directly and indirectly, as being potentially exposed to the drought risk in Europe.

Overall, Mainfreight possesses a relatively diverse industry revenue base. Of our internally tracked verticals, only one regional segment accounts for more than 5% of group revenue. This reflects the Group's resilience, not just to chronic risks, but to any number of business risks and disruptions.

Chronic Event	Americas	Asia	Australia	Europe	New Zealand
Drought	Low	Negligible	Low	Very High	Very low
Precipitation	Negligible	Negligible	Negligible	Negligible	Negligible
Sea Level Rise	Negligible	Negligible	Very low	Low	Moderate

Table 6. Regional Chronic Risk Ratings

Chronic Risk Exposure	Australia	Europe	New Zealand	Americas	Asia	Total (NZD)
Directly Exposed	0.88%	1.93%	2.46%	0.16%	0.07%	5.51%
Indirectly Exposed	7.68%	0.96%	6.26%	2.34%	0.14%	17.38%
Not Exposed	21.75%	20.73%	13.20%	19.13%	2.30%	77.11%
Total	30.32%	23.62%	21.92%	21.63%	2.51%	100.00%

Table 7. Group Revenue Split by Chronic Risk Exposure & Region

Future Transition Impacts

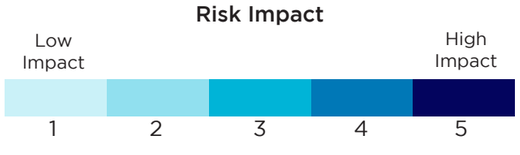
Globally, shipping, logistics and transportation represents a major source of GHG emissions contributing to climate change, and one which continues to grow.

As a result, the wider industry features heavily in many national transition strategies toward climate action. Our expectation is that transition impacts are likely to be significant, especially over the short and medium time horizons.

Scenario analysis indicates transition impacts will be broadly similar in scale but vastly different in experience between scenarios, 1 and 2. With an immediate, steady and sustained evolution of those impacts contrasted to one of delay followed by a violent readjustment.

Many models, including the REMIND-MAgPIE 3.2-4.6 inputs used to develop our scenarios, anticipate little to no transition risks under BAU/+3.0°C warming scenarios over all terms. This is largely to be expected, given the weighting of modelled inputs like carbon and energy price or investment in the energy supply, as proxies for broader transition impacts. Less immediately obvious, and more difficult to model, are changes in public and market sentiment and the subsequent spillover impacts they are likely to drive.

Specifically, we anticipate that where political means fail to enact the transition, public and market responses via changing preferences/behavior and litigation will impose transition impacts of their own. We expect this to be especially true over the longer term, as the impacts of climate change and improvements in attribution science paint a clearer picture of those contributing to global harms.



Area	Risk / Opportunity	Impact	Response	Time Horizon	Orderly	Disorderly	BAU
Risks							
Policy & Legal	GHG pricing volatility	Increasing the cost of goods and raw materials, most notably fuel.	Costs are largely passed on through Fuel Adjustment mechanisms, although our efficient modern fleet minimises exposure.	Short	3	2	2
				Medium	2	5	2
				Long	2	3	2
Policy & Legal	Enhanced reporting requirements	Further organisational compliance obligations.	We are well prepared for various standards globally many of which we will publish in advance of our obligations.	Short	2	2	2
				Medium	2	3	2
				Long	2	2	2
Policy & Legal	Policy uncertainty	Lack of direction, detail or delay in establishing appropriate policy, impedes business decision making and stifles early investment.	Our climate strategy is politically agnostic. We avoid dependence on subsidies and focus on building viable solutions from the ground up.	Short	4	2	2
				Medium	3	4	2
				Long	2	2	2
Policy & Legal	Exposure to litigation	Increasing stakeholder litigation against companies demonstrating poor climate action.	Although we can't fully mitigate this risk, our focus is on being transparent and ambitious in the face the challenges ahead.	Short	2	2	2
				Medium	3	4	3
				Long	3	3	4
Technology	Cost and potential for failure in new technology adoption	Early adopters at the 'bleeding edge' incur additional operating costs and potential for stranded assets.	While we have borne additional costs in our adoption of new technologies, we intend to persist and see this as a necessary first step.	Short	4	2	2
				Medium	2	4	2
				Long	2	2	2
Market	Changing customer preferences/loss of customers	Changing customer behaviour and preferences impacts sales activity across certain industries and organisations.	We have developed a suite of sustainable supply chain tools and alternatives to support our customers at all stages of their journeys.	Short	2	2	2
				Medium	3	3	3
				Long	2	4	4
Opportunities							
Policy & Legal	Early preparation and developed capability in areas of legislative attention	Low exposure to regulatory disruption and fast adaption enables gains in market share over slow to react competitors.	We have worked proactively to move past compliance toward being a knowledgeable trusted partner to support customers' reporting needs.	Short	5	4	2
				Medium	4	4	2
				Long	3	3	2
Reputation	Early transition response and positioning offers market share gains	In the face of change and crises, those that respond actively and early are likely to develop a more enduring reputational boost.	Our response so far has been well received with customers and investors. However, this is just the beginning and, we are investing extensively to remain a leading provider of sustainable solutions.	Short	4	3	2
				Medium	3	4	2
				Long	3	3	3
Energy Source & Resilience	Building & Resource Efficiency	New sustainability aligned investments support lower operating costs and reduce exposure to utilities price increases.	Developing sustainable, future-proofed infrastructure is a core strategy to reduce costs, build resilience and support electrification.	Short	2	2	2
				Medium	4	4	2
				Long	5	5	3
Markets	Collaboration	Shared interests facilitate new partnerships and collaboration to solve problems that would be otherwise insurmountable.	These partnerships are already being formed with customers and suppliers alike. We see this as a cornerstone in achieving our climate goals.	Short	4	2	2
				Medium	5	5	2
				Long	5	5	3
Products & Services	Products and services	Growing interest in sustainable supply chain allows for the development of new products and services and the repositioning of old ones (e.g. rail).	We have developed sophisticated emissions tracking tools to support whole new approaches to supply chain design.	Short	3	3	2
				Medium	3	5	2
				Long	3	3	4

Table 8. Future Transition Impacts

Models & Methodologies

Acute Physical Impacts to Assets

As noted previously, the primary input to our modelling was a natural and climate hazard assessment provided by Gallagher (formerly Crombie Lockwood) with licensed use of the Swiss RE CatNet software. This provided an evaluation of all major hazard classes for over 250 sites around the world (some 1,800 individual ratings).

These values informed our ratings of probability. For example, if a branch is deemed to be at risk of a 1 in 100 year flood, the applied single year probability for a flood at that branch is 1%. Other risks were translated from different qualitative terms to similar percentage scales as outlined in Additional Information Table 13.

For consideration of the impact of an event if it were to occur, we have used a simplified classification of branch values based on size, type and ownership model (Additional Information Table 14). Each event was then individually assessed as having a detrimental impact as a proportion of the total asset value (Additional Information Table 15). For example, a storm surge event at an owned, extra large, transport facility would have a pre-insurance and pre-mitigation calculation of $100m x 20%, totaling $20m.

We then control for insurance and other mitigation, to generate a post-insurance and post-mitigation value which, once multiplied by event probability, gives us the Climate Impact Accrual for that branch for a storm surge event.

Impact over Time Horizons
To calculate the risk at our three specified time horizons, we accumulate the climate impact accruals by the number of years, alongside an average compounding growth rate of 7%.

Applying Scenarios
The final step is to apply separate weightings relative to our three scenarios over the different time horizons, using the changes in average global surface temperature as a proxy for our weightings in Table 16.

Acute Physical Impacts to Operations

Our analysis of the potential physical impacts to operations was built from our limited case study assessment. We examined the revenue performance of five areas impacted by recent natural events. We used the event as the centre point, and viewed performance for the 6 months leading up to the event and the 6 months following. The New South Wales Floods and Cyclone Jasper were more recent so instead used a 3-month period either side of the event.

Revenue figures included freight originating in or destined for, the affected area, for both the Transport and Air & Ocean business units. The performance was then compared to that of the wider operating region, with regional revenue growth subtracted from the impacted area growth to produce our operating difference percentage.

While we believe the findings were interesting enough to warrant their inclusion in this report, we caution that the small sample size and high interdependence on other economic factors creates considerable uncertainty.

Chronic Physical Impacts to Operations

Modelling of chronic physical risk relative to each region was derived from our natural and climate hazard assessment.

Only drought – Europe was considered to be material. Note, only drought and increased precipitation were viewed as relevant. Sea level rise, while not insignificant is not viewed as a risk specific to industry.

To examine Mainfreight's potential exposure we summarised our revenue split by region and customer industry. Of our classified industry categories, two were identified as directly impacted and a further two were identified as indirectly impacted.

The result was a percentage of total Group revenue exposed to material Chronic Physical Risks.

Assumptions, Limitations and Uncertainty

Almost all forms of prediction in complex systems carry a high degree of uncertainty. Doing so over decades, while accounting for climate science, geopolitics, energy dynamics, technology and market sentiments is especially ambitious. Prediction is hard, however the prediction itself isn't really the desired goal. The process, tools and models to be able to continuously ingest new information, improve models and prepare for different eventualities is the intended purpose.

We have made significant efforts to source independent data and reviews of our approach. We have clearly outlined the assumptions and workings behind our models, so that they can be tested and improved, and we continue to validate predicted impacts against lived experience.

Of our models, we perceive the physical impacts to assets as more robust, having been independently sourced and with a large volume of data. Conversely, our physical impacts to operations, with a small internally sourced dataset is more uncertain.

Transition risks have been assessed on a qualitative basis, albeit with interpreted scales of relative impact. As we work toward financial quantification of transition impacts, we expect there to be an especially high degree of uncertainty.

Despite the limitations, we believe the information contained within this report to be consistent with the needs and purposes of primary users.

Transition Planning

The provided scenario analysis reflects the challenge and uncertainty, but also opportunity, posed by climate change and climate responses. Our approach is consistent with managing for all scenarios and time horizons based on the current context and outlook. Where signals and emerging understanding lend themselves toward one scenario over others, pace, priority and associated capital deployment will be adjusted accordingly.

We are also cognisant of the high expectations held of us, both as a large multinational organisation and one in an emissions intensive industry. Those expectations are not only that we do our part, but that we play a part in our customers' own evolution towards resilient and low emission supply chains.

On balance, we continue to view our position in respect to climate impacts as net positive, where our preparation, resilience and adaptability serve to improve our competitive offering, albeit with higher operating costs.

Responsiveness

Our commitment to a 100-year vision isn't about stubbornly hanging on while the future unfolds. Rather, it's a journey of continuous incremental improvement, where each day we lay the groundwork for the business we aspire to become.

Responsiveness entails constant experimentation with new technologies and ways of serving our customers in order to remain relevant and valuable partners. To cater to the wider needs of our customer base, we are developing a broad suite of tools and alternate supply chain channels. Our focus isn't on picking a winning technology, but rather familiarising our business with a range of solutions and being prepared to bring to scale those needed most, when they are most needed.

In answer to growing global mandates for climate reporting, we have prepared early and comprehensively, gaining reasonable assurance across all GHG scopes since 2018, and publishing our first Climate Risk report in 2023. Our intention is not just to meet, but exceed our obligations, to be open and transparent in the way that information is shared and ultimately to become a resource for our customers.

Our responsiveness strategy is about cultivating agility and decisiveness at all levels of the business, so that we can respond swiftly to the diverse impacts and opportunities of a global transition.

Embodied Resilience

We recognise that the design decisions we make today will determine the operational capabilities and resilience we have tomorrow and although we can't predict the future, we can prepare for versions of it.

Our new branch design philosophies are geared towards greater efficiency, self-sufficiency, further electrification and resilience. This includes:

- Solar generation - now at over 8,400kW some sites are over 80% self-sufficient.
- Futureproofed engineering - supporting further solar expansion if and when required.
- Site batteries (BESS) – now at over 9,500kWh.
- Energy Management Systems (EMS) optimising energy use and facilitating supply to grid or Virtual Energy Networks.
- Extensive car and truck charging infrastructure – up to 180kW DC.
- Rainwater capture, storage and filtration – some sites are now over 90% self-sufficient.
- Greywater capture and storage for truck wash and ablutions.
- Raised docks and racking – keeping our customers' freight further from flood risks.
- Climate and natural hazard risk assessment undertaken before commissioning any new builds.
- Further exploration of mitigation measures in higher risk areas.

In recent years our operations have sought to serve customers affected by major floods, bushfires, global supply chain disruptions, earthquakes and a pandemic. Our capacity to respond quickly and re-establish critical supply chains, has seen our business grow bigger, better and more resilient.

Innovation and Collaboration

Mainfreight is actively working to decarbonise core elements of the business, and facilitate understanding of value chain emissions to share that journey with our customers. This includes, among other investments:

- Maintaining a modern, efficient fleet.
- Supporting multi-modal connectivity with significant integration and support for rail and coastal.
- Electrifying the truck fleet (20+ heavy vehicles so far, many more to come).
- Getting closer to customers through network intensification.
- Electrification of our material handling equipment/forklifts (over 80%).
- Transition of our small fleet to electric and hybrid.
- Route and planning optimisation tools.
- Providing advanced emissions analytics to customers. See an example of our Customer Emissions Platform below.

Of Mainfreight's total GHG Emissions Inventory, around 60% is tied to air freight, with a further 10% tied to international sea freight. The only way we can have a meaningful impact on these emission sources is through extensive collaboration with our partners throughout the world. In particular, novel sustainable fuels like methanol, ammonia and SAF will be critical over all time horizons.

We continue to work with partners on the implementation of these solutions, and how we can share the benefits with our customers.

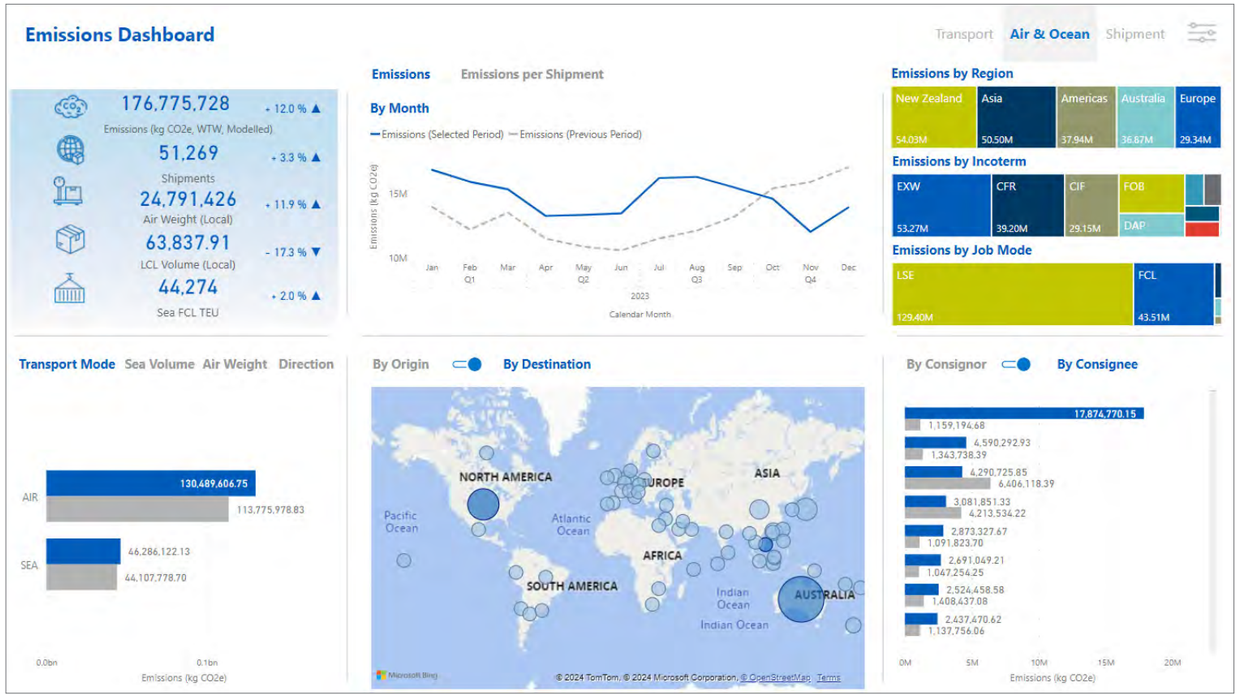


Figure 6. Mainfreight's Air & Ocean Customer Emissions Dashboard

Metrics & Targets

Introduction

The following summary of metrics relating to Mainfreight's GHG emissions have been prepared in accordance with ISO 14064-1:2018, and verified to reasonable assurance across all six categories. The mapping between ISO 14064-1:2018 and the commonly referenced scopes of the GHG Protocol, is provided in Table 9. All figures refer to tonnes CO2e unless otherwise stated.

We have taken an operational control approach to the inclusion of different material emission sources, whereby sources not within our direct financial control have been included, where they are significant. The primary example of this is our owner drivers.

We have sought to use the latest AR6 GWPs (Assessment Report 6 Global Warming Potential) provided by the Intergovernmental Panel on Climate Change (IPCC). Where sourced emission factors have used previous GWPs, we have applied appropriate conversions.

Mainfreight has not employed an internal emissions price over this reporting period, therefore for the purposes of primary users this could be interpreted as $0. Remuneration policies do not directly consider performance against these metrics and targets, however progress remains at or above expectation.

For a complete breakdown of our emissions factors, sources, exclusions, methods, assumptions, uncertainties, reporting boundaries and trends, we invite readers to view our 2024 Financial Year GHG Inventory report. This is available at the link below, along with previous reports dating back to 2018.

https://www.mainfreight.com/global/en-nz/investor/reports-library/sustainability-information

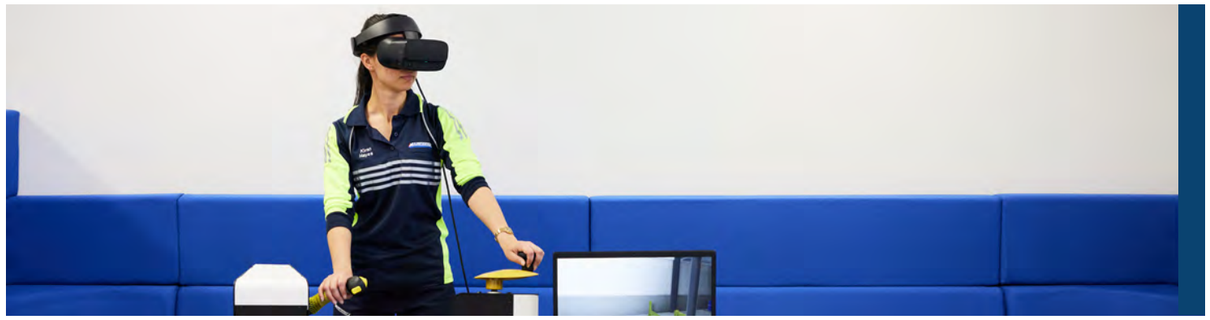
Vulnerability of Business Activities to Climate-related Impacts

Our interpretation of the analysis provided, is that all three of our business units and their associated activities are susceptible to climate-related risks, as well as opportunities. Although individual impact classifications will be felt differently across our business, we believe that no part will be untouched.

From a physical standpoint, this is clear in our approach to assessing impacts to assets, operations, and revenue for all parts of the business. While, in respect to transition impacts, the oncoming disruption has been widely signalled across the transport and logistics industry and its role in the climate transition.

GHG Protocol	ISO 14064-1: 2018
Scope 1 – Direct GHG emissions	**Category 1 –** Direct GHG emissions and removals
Scope 2 – Indirect GHG emissions from purchased electricity, heat, cooling or steam	**Category 2 –** Indirect GHG emissions from imported energy
Scope 3 – Other indirect GHG emissions (Corporate Value Chain emissions)	**Category 3 –** Indirect GHG emissions from transportation
	Category 4 – Indirect GHG emissions from products used by the organisation
	Category 5 – Indirect GHG emissions associated with the use of products from the organisation
	Category 6 – Indirect GHG emissions from other sources

Table 9. GHG Standard Comparison



Category	Category Description	2024 FY	2022 CY	2021 CY
Category 1	Direct GHG emissions and removals	303,309	239,241	278,964
Category 2	Indirect GHG emissions from imported energy	16,798	18,385	14,865
Category 3	Indirect GHG emissions from transportation	1,082,068	1,170,369	1,309,744
Category 4	Indirect GHG emissions from products used by the organisation	88,581	68,501	76,389
Category 5	Indirect GHG emissions associated with the use of products from the organisation	-	-	-
Category 6	Indirect GHG emissions from other sources		131	137
TOTAL		**1,490,756**	**1,496,627**	**1,680,099**

Table 10. GHG Category Split

Source	2024 FY	2022 CY	2021 CY
Road	409,331	461,391	464,327
Rail	9,305	10,233	9,603
Air	880,806	818,980	943,337
Sea	144,099	163,960	226,769
Total Customer Freight Emissions (Total of Road, Rail, Air , Sea)	1,443,541	1,454,564	1,644,036
Direct Operational Emissions	47,215	42,063	36,063
Total Emissions	1,490,756	1,496,627	1,680,099

Table 11. GHG Mode Split

Intensity Factors	2024 FY	2022	% Change
CO2e per tonne kilometre Domestic (Road/Rail) freight	0.084 kg	0.094 kg	-10.6%
CO2e per tonne kilometre of Air freight	1.210 kg	1.216 kg	-0.5%
CO2e per TEU kilometre of Sea freight	0.066 kg	0.071 kg	-7.0%

Table 12. Intensity factors

Year on Year Trends - Emissions

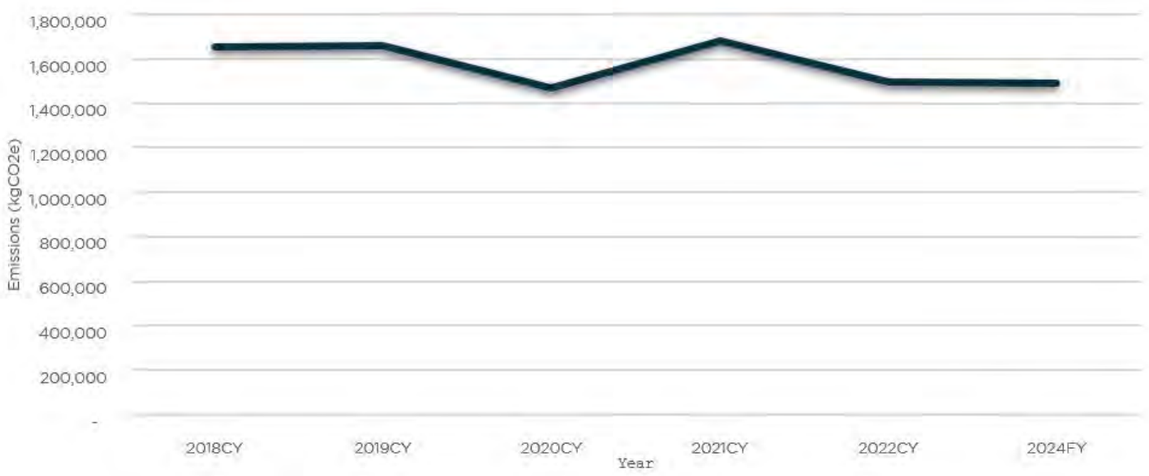


Figure 7. Gross Emissions Trend Tracking

Freight Modes

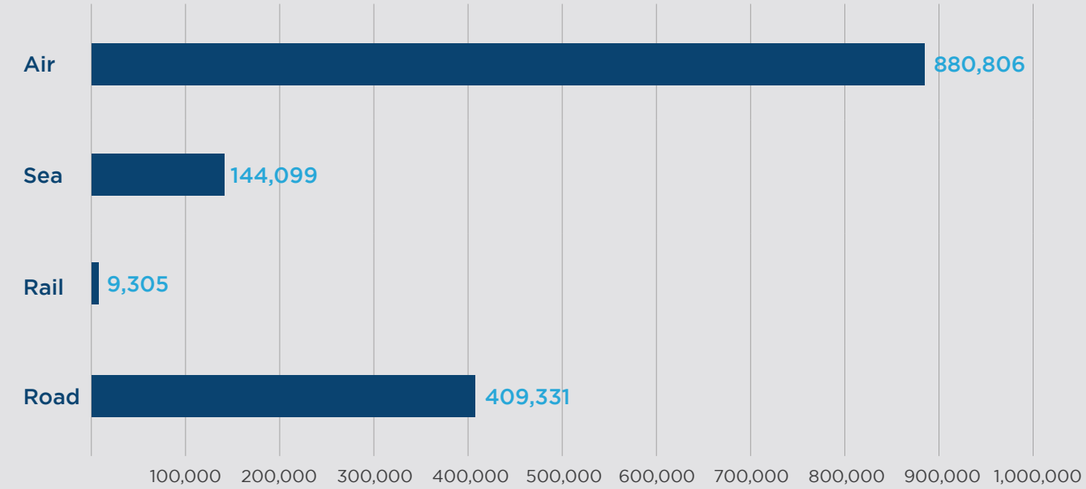
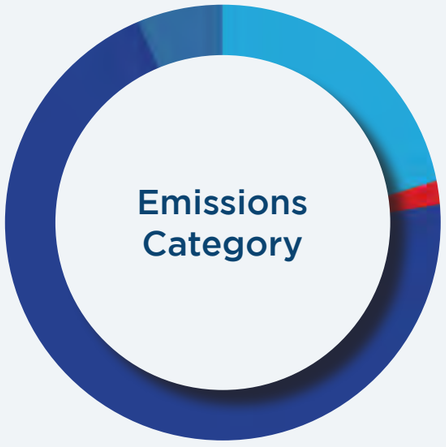
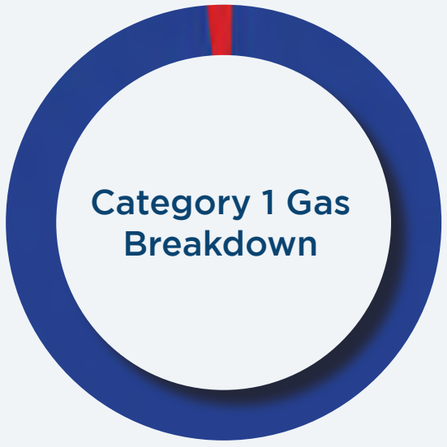


Figure 9. Emissions Mode Split



Category 1 20.35%
Category 2 1.13%
Category 3 72.59%
Category 4 5.94%
Category 5 0.00%
Category 6 0.00%

Figure 8. Emissions Categories Split



Carbon Dioxide CO2 98.46%
Methane CH4 0.18%
Nitrous Oxide N2O 1.30%
Hydrofluorocarbon HFC 0.06%

Figure 9. Emissions Gas Split

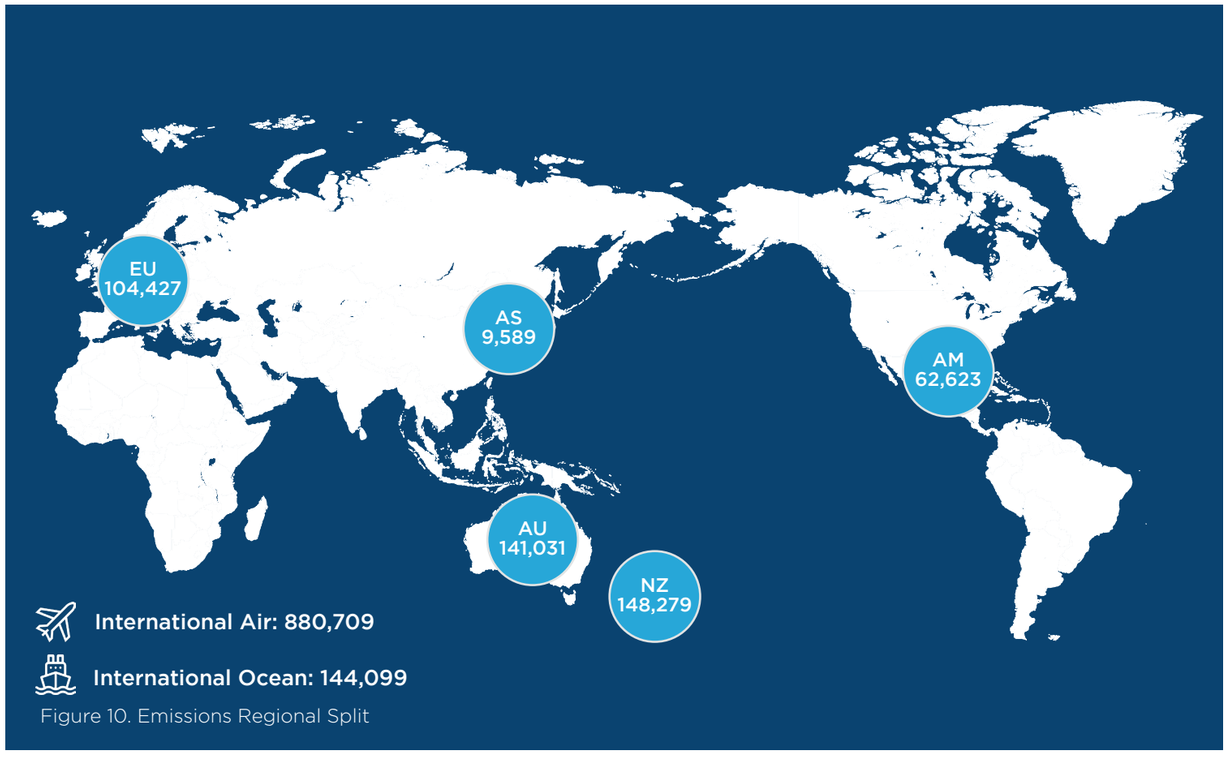


Figure 10. Emissions Regional Split

Targets

Below we have outlined a number of our sustainability and climate focused goals for the business over the coming five years. With respect to emissions, our current target is for continued improvement across our tracked emission intensity values. We continue to evaluate additional targets, including absolute targets, and will publish any developments in future iterations of this report. Offsets are not included or intended to form part of our decarbonisation strategy and associated targets.

Capital, Planning and Climate-related Impacts

Mainfreight expect capital expenditure through to the end of 2026 will total $509 million. This will be used to further expand and modernise our network, facilities, technology and infrastructure.

Many of these investments will directly support elements of our mitigation plans, in addition to self-sufficiency, resilience and adaptation. However, much of this expenditure will assist other business imperatives as well. For example, expanding our network is a growth strategy that also mitigates risk from acute physical events. Whereas new solar installations have a climate mitigation benefit, but also an attractive rate of return.

Next Steps

We are committed to improving the inputs, models and ultimately the insights provided in climate-related risk reporting, for both internal decision makers and other interested stakeholders.

As well as meeting the disclosure requirements within the Aotearoa New Zealand Climate Standards, we also endeavor to publish information consistent with the stated reporting principles: Relevance, Accuracy, Verifiability, Comparability, Consistency, Timeliness, Balance, Understandability, Completeness and Coherence.

Below are a number of planned workstreams as we continue to develop our climate reporting capabilities:

- Continue to capture, investigate and verify our GHG emissions data and metrics.
- Assessments of materiality, changes in risk weightings and the emergence and consideration of new risks and opportunities, will all be examined annually in accordance with our Climate-related Risk Management Process.
- Developing scientific research and climate data will be incorporated, where appropriate, into adaptations of our scenario analysis.
- Assessment of further climate-related targets.
- Quantification of transition risks and opportunities for both current and anticipated impacts.
- Accumulation of more case studies for our physical impacts assessment.
- Further analysis of trends and reconciliation to our transition planning.
- Alignment with the Australian Climate-related Financial Risk Disclosures.
- Alignment with the European Corporate Sustainability Reporting Directive.
- Review and alignment with other global, state and industrial reporting regimes where applicable.

Our Sustainability Goals

2025 FY

Increased use of electric delivery vehicles in all regions

CO2e intensity factors continue to decline, with support of greater supply of novel fuels, especially in sea and air

Our global solar arrays reach 12,000kW

Operating over 10,000kWh in site battery capacity

Our Zero Emissions fleet grows to over 50 vehicles

2026 FY

Water collection on all owned sites

Solar power across as many sites as possible

CO2e intensity factors continue to decline

Carbon Tracking technology being used by more than 1,000 customers

All freight terminals feature fast charging, and all owned sites support EV charging

Carrier, vessel and aircraft specific emission factors for international shipments

2027 FY

Electric vehicles feature across all Transport businesses

Hydrogen vehicle options assisting carbon footprint reductions

Our global solar arrays reach 20,000kW

Our Zero Emissions fleet grows to over 100 vehicles

Global site battery capacity exceeds 15,000kWh

2028 FY

Static batteries join solar arrays and water capture as standard design features for new Mainfreight sites

Over 10% of all metro transportation served by Zero Emission Vehicles

Carbon Tracking technology used widely, analytics and machine learning provide optimised routes and prompt possible decarbonisation strategies

2029 FY

Zero emission line-haul implemented in first medium haul lanes

Zero emission fleet of over 150 vehicles

Solar arrays pass 25,000kW

SAF and low emission maritime fuels directly integrated into our offering to customers

Figure 11. Sustainability Goals

Additional Information

Models & Methodologies Source Tables

Probability	Fluvial Flood	Wildfire	Windstorm	Storm Surge	Drought	Precipitation	Sea Level Rise
0.01%	Outside	Negligible		Outside	Negligible	No Change	No Change
0.01%		No Data			Extremely Low		
0.10%		Very Low	Very Low		Very Low	Very Low Increase	Very Low Decrease
0.10%						Very Low Decrease	
0.20%	Moderate	Low	Low	500 years	Low	Low Decrease	Low Increase
0.20%						Low Increase	
0.33%					Moderate		
0.40%		Moderate	Moderate	250 years	Medium	Moderate Decrease	Moderate Increase
0.50%	Significant	Significant	Significant		Significant		
1.00%	High	High	High	100 years	High	High Decrease	High Increase
2.00%	Very High	Very High		50 years	Very High		Very High Increase
10.00%					Extreme		

Table 13. Event Probability Translation

Leased					
Division	**XS**	**S**	**M**	**L**	**XL**
Air & Ocean	10,000	50,000	250,000	1,000,000	2,000,000
CaroTrans	10,000	50,000	250,000	1,000,000	2,000,000
Transport	500,000	1,000,000	2,500,000	5,000,000	10,000,000
Warehousing	500,000	1,000,000	2,500,000	5,000,000	10,000,000
Owned					
Division	**XS**	**S**	**M**	**L**	**XL**
Air & Ocean	1,000,000	2,000,000	5,000,000	10,000,000	20,000,000
CaroTrans	1,000,000	2,000,000	5,000,000	10,000,000	20,000,000
Transport	5,000,000	10,000,000	25,000,000	50,000,000	100,000,000
Warehousing	5,000,000	10,000,000	25,000,000	50,000,000	100,000,000

Table 14. Generalised Asset (Branch) Valuations

Events	Type	Leased Exposure	Owned Exposure
Fluvial Flood	Acute	40%	20%
Wildfire	Acute	5%	10%
Windstorm	Acute	1%	1%
Storm Surge	Acute	40%	20%
Drought	Chronic	0.01%	0.01%
Precipitation	Chronic	0.01%	0.01%
Sea Level Rise	Chronic	0.01%	0.01%

Table 15. Event Impact Assumptions

Surface Temperature (°K)		NGFS Phase IV Scenarios using REMIND-MAgPIE 3.2-4.6 MAGICCv7.5.3|67.0th Percentile		
Time Horizon	**Year**	**Orderly Transition (Net Zero)**	**Disorderly Transition (Delayed Transition)**	**Business as Usual (Current Policies)**
Short Term	2030	1.58	1.58	1.58
Medium Term	2040	1.71	1.83	1.84
Long Term	2050	1.69	1.91	2.11
Scenario/Time	Medium/Short Term	1.08	1.16	1.16
Multipliers	Long Term/Medium Term	1.07	1.20	1.33

Table 16. Scenario Global Surface Temperature Changes

Year End	Annual Accrual	Cumulative Accrual	S1 Multiplier	Cumulative S1	S2 Multiplier	Cumulative S2	S3 Multiplier	Cumulative S3
2024	193,908	193,908	1.00	193,908	1.00	193,908	1.00	193,908
2025	207,482	401,390	1.00	401,390	1.00	401,390	1.00	401,390
2026	222,005	623,395	1.00	623,395	1.00	623,395	1.00	623,395
2027	237,546	860,940	1.00	860,940	1.00	860,940	1.00	860,940
2028	254,174	1,115,114	1.00	1,115,114	1.00	1,115,114	1.00	1,115,114
2029	271,966	1,387,080	1.00	1,387,080	1.00	1,387,080	1.00	1,387,080
2030	291,004	1,678,084	1.08	1,812,841	1.16	1,940,984	1.16	1,953,196
2031	311,374	1,989,458	1.08	2,149,220	1.16	2,301,140	1.16	2,315,618
2032	333,170	2,322,628	1.08	2,509,145	1.16	2,686,507	1.16	2,703,409
2033	356,492	2,679,120	1.08	2,894,265	1.16	3,098,849	1.16	3,118,346
2034	381,446	3,060,566	1.08	3,306,343	1.16	3,540,056	1.16	3,562,328
2035	408,148	3,468,714	1.08	3,747,266	1.16	4,012,146	1.16	4,037,389
2036	436,718	3,905,432	1.08	4,219,055	1.16	4,517,284	1.16	4,545,705
2037	467,288	4,372,720	1.08	4,723,868	1.16	5,057,781	1.16	5,089,602
2038	499,998	4,872,718	1.08	5,264,019	1.16	5,636,112	1.16	5,671,572
2039	534,998	5,407,717	1.08	5,841,980	1.16	6,254,927	1.16	6,294,280
2040	572,448	5,980,165	1.07	6,374,034	1.20	7,192,550	1.33	7,961,842
2041	612,520	6,592,684	1.07	7,026,896	1.20	7,929,248	1.33	8,777,336
2042	655,396	7,248,080	1.07	7,725,458	1.20	8,717,516	1.33	9,649,913
2043	701,274	7,949,354	1.07	8,472,919	1.20	9,560,962	1.33	10,583,572
2044	750,363	8,699,717	1.07	9,272,703	1.20	10,463,449	1.33	11,582,586
2045	802,888	9,502,605	1.07	10,128,472	1.20	11,429,110	1.33	12,651,531
2046	859,090	10,361,695	1.07	11,044,144	1.20	12,462,367	1.33	13,795,303
2047	919,227	11,280,922	1.07	12,023,913	1.20	13,567,953	1.33	15,019,138
2048	983,573	12,264,494	1.07	13,072,266	1.20	14,750,930	1.33	16,328,642
2049	1,052,423	13,316,917	1.07	14,194,004	1.20	16,016,714	1.33	17,729,811

Table 17. Physical Impacts to Assets Calculation

TOITŪ ENVIROCARE

INDEPENDENT AUDIT OPINION
Toitū Verification

TO THE INTENDED USERS

Organisation subject to audit: Mainfreight Limited

Audit Criteria: ISO 14064-1:2018
ISO 14064-3:2019
Audit & Certification Technical Requirements 3.0

Responsible Party: Mainfreight Limited

Intended users: Mainfreight managers, team, customers, investors and all other stakeholders

Registered address: 2 Railway Lane, Otahuhu, Auckland, 1741, New Zealand

Inventory period: Cross Over Year: 01/01/2023 - 31/03/2023
Current Year: 01/04/2023 - 31/03/2024

Inventory report: 2024FY GHG Emissions Inventory Report V0.4

We have reviewed the greenhouse gas emissions inventory report ("the inventory report") for the above named Responsible Party for the stated inventory period.

RESPONSIBLE PARTY'S RESPONSIBILITIES

The Management of the Responsible Party is responsible for the preparation of the GHG statement in accordance with ISO 14064-1:2018 . This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation of a GHG statement that is free from material misstatement.

VERIFIERS' RESPONSIBILITIES

Our responsibility as verifiers is to express a verification opinion to the agreed level of assurance on the GHG statement, based on the evidence we have obtained and in accordance with the audit criteria. We conducted our verification engagement as agreed in the audit letter, which define the scope, objectives, criteria and level of assurance of the verification.

The International Standard ISO 14064-3:2019 requires that we comply with ethical requirements and plan and perform the verification to obtain the agreed level of assurance that the GHG emissions, removals and storage in the GHG statement are free from material misstatement.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit carried out in accordance with the ISO 14064-3:2019 Standards will always detect a material misstatement when it exists. The procedures performed on a limited level of assurance vary in nature and timing from, and are less in extent compared to reasonable assurance, which is a high level of assurance. The procedures performed on a limited level of assurance vary in nature and timing from, and are less in extent compared to reasonable assurance, which is a high level of assurance. Misstatements are differences or omissions of amounts or disclosures, and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers, taken on the basis of the information we audited.

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

BASIS OF VERIFICATION OPINION

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

VERIFICATION

We have undertaken a verification engagement relating to the Greenhouse Gas Emissions Inventory Report (the 'Inventory Report')/Emissions Inventory and Management Report of the organisation listed at the top of this statement and described in the emissions inventory report for the period stated above.

The Inventory Report provides information about the greenhouse gas emissions of the organisation for the defined measurement period and is based on historical information. This information is stated in accordance with the requirements of International Standard ISO 14064-1 Greenhouse gases – Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals (ISO 14064-1:2018).

VERIFICATION STRATEGY

Our verification strategy used a combined data and controls testing approach. Evidence-gathering procedures included but were not limited to:
—activities to inspect the completeness of the inventory;
—interviews of site personnel to confirm operational behaviour and standard operating procedures;
—re-perform access controls to onsite records;
—sampling and/or reconciliation of fuel and freight records to confirm accuracy of source data into calculations;
—recalculation, retracing/sense checking of remaining emissions;

The data examined during the verification were historical in nature.

QUALIFICATIONS TO VERIFICATION OPINION

The following qualifications have been raised in relation to the verification opinion:
The opinion is unmodified.

VERIFICATION LEVEL OF ASSURANCE

January to March 2023	**tCO_2e Location based**	**Level of Assurance**
Direct Emissions:		
Category 1	58,184.78	**Reasonable**
Indirect emissions from imported energy:		
Category 2	4,665.16	**Reasonable**
Indirect emissions from transportation		
Category 3	275,424.79	**Reasonable**
Indirect emissions from products used by organisation:		
Category 4	19,795.82	**Reasonable**
Total gross emissions	**358,070.55**	

April 2023 to March 2024	**tCO_2e Location based**	**Level of Assurance**
Direct Emissions:		
Category 1	303,308.67	**Reasonable**
Indirect emissions from imported energy:		
Category 2	16,798.11	**Reasonable**
Reasonable		
Category 3	1,082,068.22	**Reasonable**
Indirect emissions from products used by organisation:		
Category 4	88,581.16	**Reasonable**
Total gross emissions	**1,490,756.15**	

RESPONSIBLE PARTY'S GREENHOUSE GAS ASSERTION (CERTIFICATION CLAIM)

Mainfreight Limited has measured its greenhouse gas emissions in accordance with ISO 14064-1:2018 in respect of the operational emissions of its organisation.

VERIFICATION CONCLUSION

We have obtained all the information and explanations we have required. In our opinion, the emissions, removals and storage defined in the inventory report, in all material respects:
• comply with ISO 14064-1:2018 ; and
• provide a true and fair view of the emissions inventory of the Responsible Party for the stated inventory period.

ADDITIONAL INFORMATION RELEVANT TO INTENDED USERS

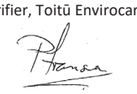
Without qualifying our opinion expressed above, we wish to draw the attention of the intended users to the following :

The disclosures required by the Aotearoa New Zealand Climate Standards 1-3 were not included in the scope of the Toitū audit. We therefore did not assess consistency between these disclosures and the Greenhouse Gas inventory report which is the subject of this report. We do not express an opinion on the accuracy and completeness of these disclosures.

OTHER INFORMATION

The responsible party is responsible for the provision of Other Information to meet Programme requirements. The Other Information may include climate related disclosures around Governance, Strategy and Risk management, emissions management, reduction plan and purchase of carbon credits, but does not include the information we verified, and our auditor's opinion thereon.

Our opinion on the information we verified does not cover the Other Information and we do not express any form of audit opinion or assurance conclusion thereon. Our responsibility is to read and review the Other Information and consider it in terms of the programme requirements. In doing so, we consider whether the Other Information is materially inconsistent with the information we verified or our knowledge obtained during the verification.

Verified by:		**Authorised by:**	
Name:	Pieter Fransen	Name:	Billy Ziemann
Position:	Verifier, Toitū Envirocare	Position:	Certifier, Toitū Envirocare
Signature:		Signature:	
Date verification audit:	22-23 April 2024		
Date opinion expressed:	14 May 2024	Date:	16 May 2024

CRD Content Index

Sub-heading	Clause	Disclosure	Page Number(s)
Governance: To enable primary users to understand both the role an entity's governance body plays in overseeing climate-related risks and climate-related opportunities, and the role management plays in assessing and managing those climate-related risks and opportunities.			
Disclosures	7a	the identity of the governance body responsible for oversight of climate-related risks and opportunities;	28
	7b	a description of the governance body's oversight of climate-related risks and opportunities (see paragraph 8);	28
	7c	a description of management's role in assessing and managing climate-related risks and opportunities (see paragraph 9).	28
Governance Body Oversight	8a	the processes and frequency by which the governance body is informed about climate-related risks and opportunities;	28
	8b	how the governance body ensures that the appropriate skills and competencies are available to provide oversight of climate-related risks and opportunities;	28
	8c	how the governance body considers climate-related risks and opportunities when developing and overseeing implementation of the entity's strategy;	28
	8d	how the governance body sets, monitors progress against, and oversees achievement of metrics and targets for managing climate-related risks and opportunities, including whether and if so how, related performance metrics are incorporated into remuneration policies (see also paragraph 22(h))	28
Management's Role	9a	how climate-related responsibilities are assigned to management-level positions or committees, and the process and frequency by which management-level positions or committees engage with the governance body;	28
	9b	the related organisational structure(s) showing where these management-level positions and committees lie;	28
	9c	the processes and frequency by which management is informed about, makes decisions on, and monitors, climate-related risks and opportunities.	28
Strategy: To enable primary users to understand how climate change is currently impacting an entity and how it may do so in the future. This includes the scenario analysis an entity has undertaken, the climate-related risks and opportunities an entity has identified, the anticipated impacts and financial impacts of these, and how an entity will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future.			
Disclosures	11a	a description of its current climate-related impacts (see paragraph 12);	35,36
	11b	a description of the scenario analysis it has undertaken (see paragraph 13);	32,33
	11c	a description of the climate-related risks and opportunities it has identified over the short, medium, and long term (see paragraph 14);	29, 35-39, 45
	11d	a description of the anticipated impacts of climate-related risks and opportunities (see paragraph 15);	37-39
	11e	a description of how it will position itself as the global and domestic economy transitions towards a low-emissions, climate-resilient future state (see paragraph 16).	31, 41
Current impacts and financial impacts	12a	its current physical and transition impacts;	35,36
	12b	the current financial impacts of its physical and transition impacts identified in paragraph 12(a);	35 AP1
	12c	if the entity is unable to disclose quantitative information for paragraph 12(b), an explanation of why that is the case.	AP1
Scenario analysis undertaken	13	An entity must describe the scenario analysis it has undertaken to help identify its climate-related risks and opportunities and better understand the resilience of its business model and strategy. This must include a description of how an entity has analysed, at a minimum, a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario (see paragraph 11(b))	32, 33
Climate-related risks and opportunities	14a	how it defines short, medium and long term and how the definitions are linked to its strategic planning horizons and capital deployment plans;	29
	14b	whether the climate-related risks and opportunities identified are physical or transition risks or opportunities, including, where relevant, their sector and geography;	35-39
	14c	how climate-related risks and opportunities serve as an input to its internal capital deployment and funding decision-making processes.	45
Anticipated impacts and financial impacts	15a	the anticipated impacts of climate-related risks and opportunities reasonably expected by the entity;	37-39
	15b	the anticipated financial impacts of climate-related risks and opportunities reasonably expected by an entity;	37,38 AP2
	15c	a description of the time horizons over which the anticipated financial impacts of climate-related risks and opportunities could reasonably be expected to occur;	37, 38 AP2
	15d	if an entity is unable to disclose quantitative information for paragraph 15(b), an explanation of why that is the case.	AP2
Transition plan aspects of its strategy	16a	a description of its current business model and strategy	31
	16b	the transition plan aspects of its strategy, including how its business model and strategy might change to address its climate-related risks and opportunities	41
	16c	the extent to which transition plan aspects of its strategy are aligned with its internal capital deployment and funding decision-making processes	41
Risk Management: To enable primary users to understand how an entity's climate-related risks are identified, assessed, and managed and how those processes are integrated into existing risk management processes.			
Disclosures	18a	a description of its processes for identifying, assessing and managing climate-related risks (see paragraph 19);	28-30
	18b	a description of how its processes for identifying, assessing, and managing climate-related risks are integrated into its overall risk management processes.	28
	19a	the tools and methods used to identify, and to assess the scope, size, and impact of, its identified climate-related risks	29
	19b	the short-term, medium-term, and long-term time horizons considered, including specifying the duration of each of these time horizons	29
	19c	whether any parts of the value chain are excluded	29
	19d	the frequency of assessment	28,30
	19e	its processes for prioritising climate-related risks relative to other types of risks	29-30
Metrics and Targets: To enable primary users to understand how an entity measures and manages its climate-related risks and opportunities. Metrics and targets also provide a basis upon which primary users can compare entities within a sector or industry.			
Disclosures	21a	the metrics that are relevant to all entities regardless of industry and business model (see paragraph 22)	37, 38, 43, 45
	21b	industry-based metrics relevant to its industry or business model used to measure and manage climate-related risks and opportunities	43
	21c	any other key performance indicators used to measure and manage climate-related risks and opportunities	43
	21d	the targets used to manage climate-related risks and opportunities, and performance against those targets (see paragraph 23)	43, 45

Sub-heading	Clause	Disclosure	Page Number(s)
Metric categories	22a	greenhouse gas (GHG) emissions: gross emissions in metric tonnes of carbon dioxide equivalent (CO2e) classified as (see paragraph 24): (i) scope 1; (ii) scope 2 (calculated using the location-based method); (iii) scope 3;	37, 38, 43, 45
	22b	GHG emissions intensity;	43
	22c	transition risks: amount or percentage of assets or business activities vulnerable to transition risks;	43
	22d	physical risks: amount or percentage of assets or business activities vulnerable to physical risks;	37,38
	22e	climate-related opportunities: amount or percentage of assets, or business activities aligned with climate-related opportunities;	43
	22f	capital deployment: amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities;	45
	22g	internal emissions price: price per metric tonne of CO2e used internally by an entity;	43
	22h	remuneration: management remuneration linked to climate-related risks and opportunities in the current period, expressed as a percentage, weighting, description or amount of overall management remuneration (see also paragraph 8(d)).	43
Targets	23a	the time frame over which the target applies;	45
	23b	any associated interim targets;	45
	23c	the base year from which progress is measured;	43
	23d	a description of performance against the targets;	43
	23e	for each GHG emissions target: (i) whether the target is an absolute target or intensity target; (ii) the entity's view asto how the target contributes to limiting global warming to 1.5 degrees Celsius; (iii) the entity's basis for the view expressed in 23(e) (ii), including any reliance on the opinion or methods provided by third parties; and (iv) the extent to which the target relies on offsets, whether the offsets are verified or certified, and if so, under which scheme or schemes.	45
GHG Emissions	24a	a statement describing the standard or standards that its GHG emissions have been measured in accordance with	43
	24b	the GHG emissions consolidation approach used: equity share, financial control, or operational control;	43
	24c	the source of emission factors and the global warming potential (GWP) rates used or a reference to the GWP source	43
	24d	a summary of specific exclusions of sources, including facilities, operations or assets with a justification for their exclusion.	43
Assurance of GHG Emissions			
	25	Part 7A of the Financial Markets Conduct Act 2013 requires that the disclosure of an entity's GHG emissions as required by Aotearoa New Zealand Climate Standards are the subject of an assurance engagement. This Standard requires that this assurance engagement is a limited assurance engagement at a minimum.	47,48
	26	For the avoidance of doubt, the following information required by Aotearoa New Zealand Climate Standards is subject to an assurance engagement:	43
	26a	GHG emissions: gross emissions in metric tonnes of CO2e classified as (see paragraph 22(a)): (i) scope 1; (ii) scope 2 (calculated using the location-based method); (iii) scope 3;	43
	26b	additional requirements for the disclosure of GHG emissions (see paragraph 24);	43
	26c	GHG emissions methods, assumptions and estimation uncertainty (see NZ CS 3 General Requirements for Climate-related Disclosures paragraphs 52 to 54).	43

AP refers to the adoption provision used, as detailed on Page 27

GRI Index

Mainfreight has reported the information cited in this GRI Content Index for the period 01/04/2023-31/03/2024 with reference to the GRI Standards, GRI 1: Foundation 2021

Disclosure	Name	Page Number(s)	Explanation/Other References*
GRI2: General Disclosures 2021			
2-1	Organisational details	AR: 28, 29, 82	
2-2	Entities included in the organisation's sustainability reporting	IR6	
2-3	Reporting period, frequency and contact point	SR27, AR115	Annual
2-4	Restatements of information		Not Applicable
2-5	External assurance		Not Assured
2-6	Activities, value chain and otherbusiness relationships		Six largest customer verticals that are a focus for our network – Food & Beverage, DIY, FMCG, Chemicals, Technology & Electronics, and Medical & Healthcare
2-7	Employees	AR64	GRI Disclosure 2-7 Workforce
2-9	Governance structure and composition	AR62-65	
2-10	Nomination and selection of the highest governance body		Constitution of Mainfreight Limited
2-11	Chair of the highest governance body	AR75	
2-12	Role of the highest governance body in overseeing the management of impacts	AR62-65	Board Charter
2-13	Delegation of responsibility for managing impacts	SR28	
2-15	Conflicts of interest		Board Charter, Code of Ethics
2-17	Collective knowledge of the highest governance body	SR28	
2-18	Evaluation of the performance of the highest governance body	SR28	
2-19	Remuneration policies	SR28, AR108	
2-20	Process to determine remuneration	SR43, AR65	Remuneration Committee Charter, Remuneration Policy
2-22	Statement on sustainable development strategy	SR2	
2-26	Mechanisms for seeking advice and raising concerns		Code of Ethics, Whistle-Blower Policy
2-28	Membership associations		Lean & Green Europe, Smart Freight Centre, ISO14064-1:2018
2-29	Approach to stakeholder engagement	SR3	

Disclosure	Name	Page Number(s)	Explanation/Other References*
GRI 201: Economic Performance 2016			
201-1	Direct economic value generated and distributed	AR77-81	
201-2	Financial implications and other risks and opportunities due to climate change	SR29-42	
GRI 203: Indirect Economic Impacts 2016			
203-1	Infrastructure investments and services supported	AR: 32, 54	
GRI 205: Anti-corruption 2016			
205-2	Communication and training about anti-corruption policies and procedures	AR65	Guidelines for Anti-Corruption Practices
GRI 305: Emissions 2016			
305-1	Direct (Scope 1) GHG emissions	IR3-18	Note Scope 1 is equivalent to ISO14064-1:2018 Category 1
305-2	Energy indirect (Scope 2) GHG emissions	IR3-18	Note Scope 2 is equivalent to ISO14064-1:2018 Category 2
305-3	Other indirect (Scope 3) GHG emissions	IR3-18	Note Scope 3 is equivalent to ISO14064-1:2018 Categories 3-6
305-4	GHG emissions intensity	IR20	
GRI 404: Training and Education 2016			
404-2	Programs for upgrading employee skills and transition assistance programs	AR31	
404-3	Percentage of employees receiving regular performance and career development reviews		99% - reviews conducted as part of our discretionary profit bonus (captured in internal branch audits)
GRI 405: Diversity and Equal Opportunities 2016			
405-1	Diversity of governance bodies and employees	AR66-75	
GRI 3: Material Topics 2021			
3-1	Process to determine material topics	SR3	
3-2	List of material topics	SR3	
3-3	Management of material topics	SR4-24	

Documents shown in green are available in the Corporate Governance section of the Company's website: https://www.mainfreight.com/global/en-nz/investor/corporate-governance

Key:
AR - Mainfreight Annual Report 2024
IR - Mainfreight Greenhouse Gas Emissions Inventory Report 2024
SR - Mainfreight Sustainability Report 2024

Glossary

Term	Definition
AR6	Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report.
BAU	Business as Usual.
BESS	Battery Energy Storage System.
BMS	Building Management System.
CO2e	Carbon dioxide equivalent.
CRD	Climate-related Disclosures.
CS1	Aotearoa New Zealand Climate Standard 1: Climate-related Disclosures
CS2	Aotearoa New Zealand Climate Standard 2: Adoption of Aotearoa New Zealand Climate Standards.
CS3	Aotearoa New Zealand Climate Standard 3: General Requirements for Climate-related Disclosures
CY	Calendar Year.
DC	Direct Current.
DG	Dangerous Goods.
DMS	Duress Management System.
EMS	Energy Management System.
ETS	Emissions Trading System.
EV	Electric Vehicle.
FCAS	Frequency Control Ancillary Services.
FY	Financial Year.
GHG	Greenhouse Gas.
GLEC	Global Logistics Emissions Council.
GRI	Global Reporting Initiative.
GWP	Global Warming Potential.
HVO	Hydrotreated Vegetable Oil.
HVAC	Heating, Ventilation, and Air Conditioning.
ICE	Internal Combustion Engine.
IDEA	Intellectual Disability Empowerment in Action
IOT	Internet of Things.

Term	Definition
IPCC	Intergovernmental Panel on Climate Change.
ISO	International Organization for Standardisation.
ISO 14064-1	Standard for the quantification and reporting of greenhouse gas emissions and removals for organisations.
kW	Kilowatt.
kWh	Kilowatt-hour.
LMS	Learning Management System.
LNG	Liquefied Natural Gas.
LPG	Liquefied Petroleum Gas.
MHE	Material Handling Equipment.
MSSP	Mainfreight Site Sustainability Platform.
MW	Megawatt.
MWh	Megawatt-hour.
NGFS	Network for Greening the Financial System.
NOx	Nitrogen oxides.
OD	Owner Driver
PAT	Positive Action Team (meetings).
PM	Particulate Matter.
PUD	Pick Up and Delivery.
SAF	Sustainable Aviation Fuel.
SSP	Shared Socioeconomic Pathways.
TCFD	Task Force on Climate-related Financial Disclosures.
TEU	Twenty-foot Equivalent Unit.
TEU-km	Twenty-foot Equivalent Unit-kilometre.
Tkm	Tonne-kilometre.
VEN	Virtual Energy Network.
VPP	Virtual Power Plant.
VRF	Variable Refrigerant Flow.
XRB	External Reporting Board.

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