CARBON FOOTPRINT REPORT

2025

ZQN
Queenstown Airport

PURPOSE OF THIS DOCUMENT

This document provides an overview of Queenstown Airport Corporation's (QAC) greenhouse gas (GHG) emissions inventory for the 2025 financial year (FY25) being 1 July 2024 to 30 June 2025.

This carbon footprint report aims to provide stakeholders, including regulators, business partners, and the public, with a concise summary of QAC's carbon footprint. The report has been prepared in alignment with the:

- **GHG Protocol: A Corporate Accounting and Reporting Standard (2004),**
- **the requirements of the Airport Carbon Accreditation (ACA) programme at Level 4+ Transformation, one of the highest levels of carbon management certification, and**
- **the GHG emissions requirements in the XRB Climate Standards 1 and 3.**

Conversio Pty Ltd has provided assurance over FY25 GHG emissions in accordance with NZ SAE 1 and ISO 14064-3:2019, with reasonable assurance over Scope 1 and Scope 2 emissions and limited assurance over selected Scope 3 categories.

For further details, readers are encouraged to refer to QAC's Sustainability Report for comprehensive climate-related disclosures and its progress toward long-term sustainability targets, and the Annual Report for additional operational context. Both documents are accessible on QAC's website.

PHYSICAL DESCRIPTION

Queenstown Airport is located on 153.5 ha of land in the Frankton Flats, approximately 350m to the east of Lake Wakatipu. Approximately 136.9 ha of our land is designated for aeronautical purposes.
Queenstown Airport is New Zealand's fourth busiest airport by passenger numbers, with daily scheduled flights from Auckland, Wellington, Christchurch and the east coast of Australia. It is the gateway to the lower South Island for visitors, providing easy access to some of New Zealand's most iconic destinations, including Queenstown, Wānaka, Fiordland and Central Otago. It is also the home base for a range of helicopter and fixed-wing operators offering scenic flights and other tourism activities.

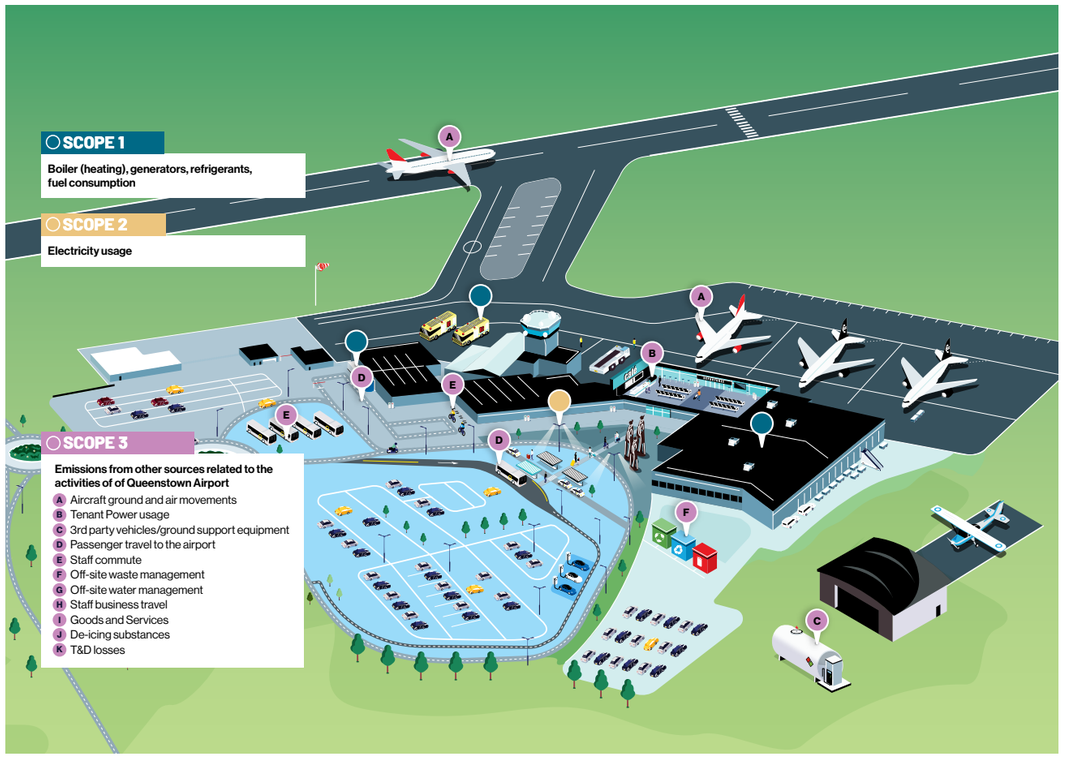
Total annual passenger numbers for FY25 were 2.6 million and are made up of approximately 64% domestic and 36% international.

ORGANISATIONAL BOUNDARY

QAC used the operational control consolidation approach to account for its GHG emissions.

The figure below provides an insight into the day-to-day activities of our airport and associated sources of emissions that are captured in our GHG inventory.

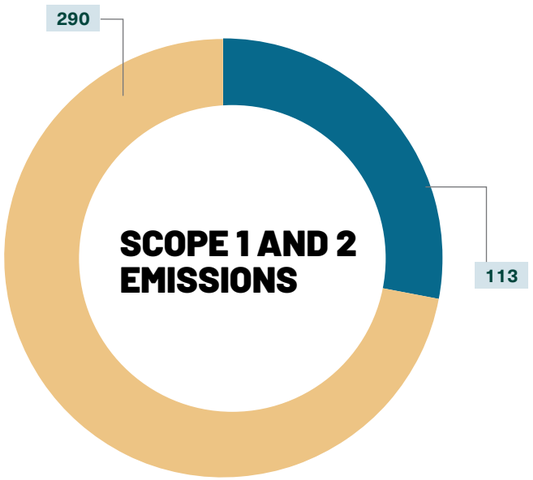
As an entity, QAC is 75.01% owned by Queenstown Lakes District Council and 24.99% owned by Auckland International Airport. Our business activities are generally limited to the operations of Queenstown Airport and commercial development across our land holdings, as summarised below:



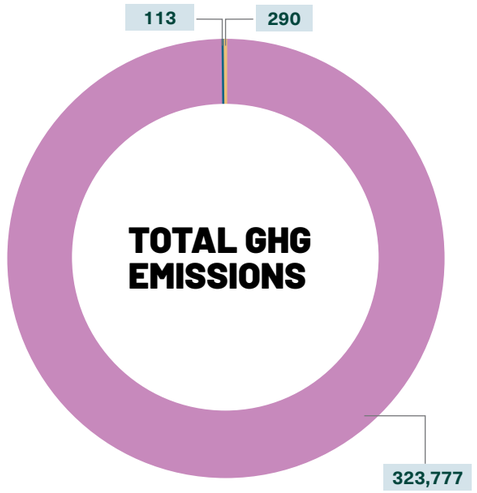
SUMMARY OF GHG EMISSIONS

SCOPE	EMISSION SOURCE & CATEGORY	2025 EMISSIONS (tCO_2-e) location based	2025 EMISSIONS (tCO_2-e) market based
Direct emissions (Scope 1)	Diesel – stationary	70.13	70.13
	Transport diesel & petrol	42.55	42.55
	Fire extinguishers	0	0
	Refrigerants	0	0
	Total Scope 1	**112.68**	**112.68**
Indirect emissions (Scope 2)	Purchased electricity	290.37	0
	Total Scope 2	**290.37**	**0**
Indirect emissions (Scope 3)	**Category 1:**		
	• Water supply and treatment	2.27	2.27
	• Purchased goods & services	8791.39	8,791.39
	• Park & Ride diesel bus	35.11	35.11
	Category 3:		
	• Electricity T&D losses	22.10	22.10
	Category 5:		
	• Waste to landfill	45.19	45.19
	• Wastewater discharged	21.17	21.17
	Category 6: Business travel	45.17	45.17
	Category 7: Employee commuting	91.04	91.04
	Category 11:		
	• Aircraft full flight	266,017.95	266,017.95
	• Aircraft Engine testing	0.59	0.59
	• De-icing fluid	6.4	6.4
	• Passenger ground transport emissions	48,425.03	48,425.03
	Category 13:		
	• Tenant electricity usage	124.01	124.01
	• On-sold diesel	119.33	119.33
	• Tenant purchased natural gas	30.08	30.08
	Total Scope 3	**323,776.89**	**323,710.51**
Total emissions (1, 2 & 3)		**324,179.94**	**323,889.57**

QAC Scope 1 and 3 emissions using the location based approach



QAC total GHG emissions using the location based approach



COMPARISON TO PREVIOUS YEARS AND BASELINE YEAR

EMISSIONS	FY19 (tCO_2-e)	FY23 (tCO_2-e)	FY24 (tCO_2-e)	FY25 (tCO_2-e)	FY25 Baseline reduction (%)
Scope 1	121	149	116	113	- 6%
Scope 2 (location-based)	233	288	189	290	+ 24%
Scope 2 (market-based)	233	0	0	0	- 100%
Scope 3*	N/A	89	275,961	323,777	N/A
Total GHG emissions (location-based)	770	526	276,266	324,180	N/A
Total GHG emissions (market-based)	770	238	276,077	323,890	N/A
Organisational emissions (location-based)**	770	526	396	477	- 38%
Organisational emissions (market-based)**	770	238	207	186	- 76%

* QAC first reported a full scope 3 inventory in FY24, hence why FY23 scope 3 emissions are limited to those included in organisational emissions

**Organisational emissions are defined as scopes 1, 2 and limited scope 3 (QAC waste, T&D losses and business travel)

STANDARDS AND GUIDELINES

In compiling Queenstown Airport's GHG inventory, QAC has used the principle methodologies and requirements outlined in the ACA Application Manual, Issue 14, December 2023, as set out for Level 4+. To comply with the ACA programme, we have adopted the GHG Protocol reporting methodology which has to be adapted to fit the complex operating environment of Airports. Accordingly, there is not always a clear match between reporting categories and emission sources. QAC has adopted the preferred reporting methodology of the ACA programme where possible. We have referred and relied on the following GHG Protocol standards and guidance, specifically the:

- Corporate Accounting and Reporting Standard (revised edition),
- Corporate Value Chain (Scope 3) Accounting and Reporting Standard,
- Technical Guidance for Calculating Scope 3 Emissions (version 1.0), and
- Scope 2 Guidance.

RENEWABLE ELECTRICITY AND OFFSETS

At Queenstown Airport, we offset our Scope 1 and some Scope 3 emissions and mitigate Scope 2 emissions, in accordance with the ACA programme guidance.

In FY25, QAC has:

- invested in native CarbonCrop Units (CCUs) from the Climate Action Company, which are attributed to native reforestation within the Queenstown Lakes District,
- bought renewable energy certificates, issued by BraveTrace and coordinated by Meridian Energy, allowing us to report market-based scope 2 emissions as zero,
- offset all staff business travel through the airline voluntary programme or with CCUs.

BASE YEAR SELECTION

QAC's selection base year for the purpose of its GHG emissions inventory is FY19 as it is the first year we received independent verification of our GHG inventory, provided by Toitū Envirocare under the Toitū Carbonreduce programme. The selection of FY19 as the baseline year complies with the reporting requirements set out under the ACA programme, which stipulates that the baseline year selection should align with the first year for which accurate and reliable source data is available.

During the transition from Toitū to the Airport Carbon Accreditation Programme in FY24, QAC increased the range of emission sources included in the GHG inventory, all captured under Scope 3. As such, FY24 forms the baseline year for several emission sources, including aircraft and passenger ground transport.

RECALCULATION POLICY

Base-year data should be revised when material changes occur and have an impact on calculated Scope 1-3 emissions. This includes:

- If additional sources are discovered and represent more than 5% of total Scope 1 and 2 emissions;
- If emission factors change substantially and are relevant to prior years (e.g. if the science behind a factor changed); or
- If the operational boundary changes significantly.

QAC is mindful of these and other requirements when completing our annual GHG inventory.

EXCLUSIONS

The following business units are excluded from the GHG inventory for the following reasons:

EMISSIONS SOURCE	REASON FOR EXCLUSION
Wānaka Airport, Glenorchy Airfields and the other businesses that operate at these airfields	QAC does not have operational control over the Wānaka Airport and Glenorchy Airfields with accountability residing with QLDC. QAC is contracted to provide day-to-day airfield management services to Wānaka Airport under a management services agreement with QLDC. QAC employs two FTE to manage the day-to-day operations of the Wānaka Airport with one operational vehicle and a tractor. No staff are employed in relation to the management of the Glenorchy Airfields. Emissions are not expected to exceed 5% of the total footprint within the organisation boundary stated.
Biogenic emissions	The compost facility on-site at Queenstown Airport enables us to divert organic waste from landfill for a large portion of the terminal. The emissions associated with composting form less than 1% of the total inventory.
Taxi use and vehicle hire associated with staff business travel	Reliable data from expense claims and credit card use is not available to calculate this based on distance travelled or spend.
Downstream emissions from the lease of pastoral land for grazing that is owned by QAC around Wānaka Airport	Data reported in FY24 demonstrated that this emission source formed less than 1% of the inventory.
Fire training fuels	Data on the quantities of fuel used for training activities, was not available. The FY24 inventory demonstrated that this emission source formed less than 1% of reported emissions.

DATA COLLECTION METHODOLOGIES AND UNCERTAINTIES FACTORS

Table 4 below provides details of each GHG emissions source included in the FY25 inventory.
Our Scope 2 emissions have been reported using both the location and market-based approaches. Certified renewable energy is purchased from our power supplier, Meridian Energy, which allow us to report our Scope 2 emissions as zero using the location-based methodology. The use of renewable energy certificates and the associated reporting methodology is accepted by Airports Council International under the ACA programme.

In accordance with ACA guidance, we have adopted the full flight, one-way approach for calculating aircraft emissions, inclusive of emissions associated with landing, taxiing and take-off. This means we calculate the emissions for all departing aircraft from Queenstown Airport to the destination airport. Where possible, we have used individual aircraft emission factors, as provided by either the International Civil Aviation Authority (ICAO) or ACA. The methodology used has been developed and approved by international airline authorities and is commonly used by airports participating in the ACA verification process.

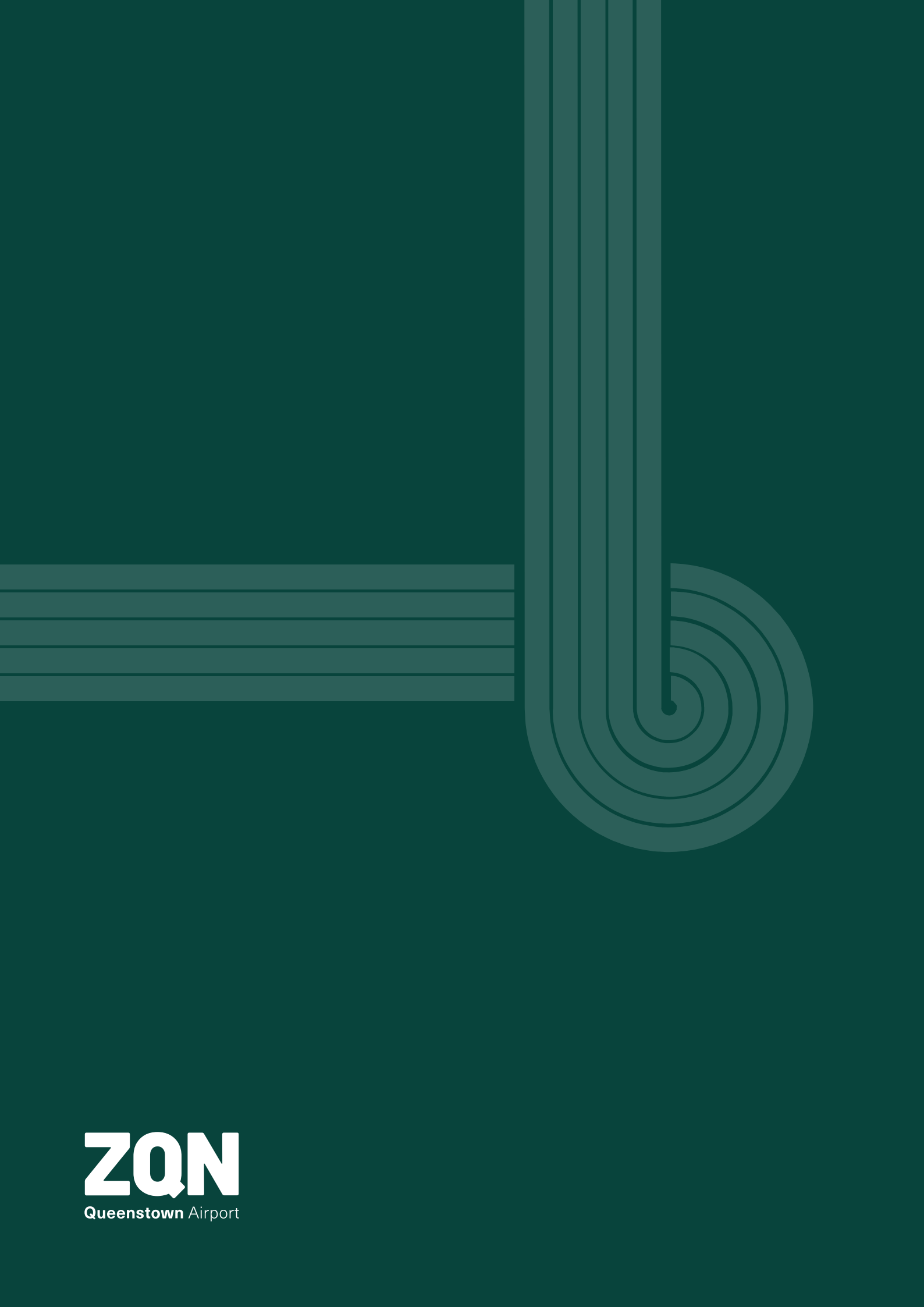
In establishing the GHG emissions inventory, QAC estimated the global warming potential using emission factors and calculation methodologies available in:

- The Ministry for the Environment (MfE) Measuring emissions: A guide for organisations: 2025 detailed guide
- The Airport Council International's Airport Carbon and Emissions Reporting Tool ('ACERT'), for providing emission factors for capital and asset upgrades only.
- ICAO CORSIA CO2 Estimation and Reporting Tool Cert Tool 2024. For all commercial, light and small aircraft, including helicopters.
- Expenditure-based or spend based emission factors from the Auckland Council Consumption Emissions Modelling completed by Market Economics Limited March 2023.

DATA COLLECTION METHODOLOGIES, UNCERTAINTIES AND EMISSIONS FACTORS

EMISSIONS SOURCE	DATA SOURCE	DESCRIPTION OF METHODOLOGY AND UNCERTAINTIES	EMISSIONS FACTOR SOURCE
Scope 1 **Diesel – stationary**	Supplier invoices	Used for generating heat across the terminal during cold months, the boiler was removed / disestablished in March 2025. Transport fuel use is recorded with a fuel card (allocated to QAC or tenant) and the remainder is assumed to be stationary fuel.	Stationary diesel, MfE 2025
Scope 1 **Transport diesel & petrol**	Fuel card data	Usage data comes from the use of the fuel card associated with the QAC vehicle or machinery (e.g.: lawn mower, tractor).	Transport diesel and transport petrol, MfE 2025
Scope 1 **Fire extinguishers**	Supplier invoice and maintenance contractor report	Assume the consumption occurs in the same year as purchase, with no purchases recorded for FY25.	Relevant combustion fuel emissions factor, MfE 2025
Scope 1 **Refrigerants**	Maintenance contractor report	Use the top-up methodology, with no top-ups recorded in FY25.	Relevant refrigerant emissions factor, MfE 2025
Scope 2 **Purchased electricity**	Supplier invoices	All usage data has come from Meridian invoices, with relevant tenant electricity usage subtracted through sub-metered data.	Purchased energy – annual average, MfE 2025
Scope 3 **Category 1 – Water supply**	WaterMetrics consumption report	QAC accounts for all water through the main supply which has one electronic meter, recording total and average flow in the WaterMetrics platform.	Water supply, MfE 2025
Scope 3 **Category 1– Purchased goods & services**	QAC Finance team	The top 10 vendors by spend for FY25 was reported by QAC finance team. Emissions factors have been allocated based on vendor service type. 5 of the top 10 vendors are construction or maintenance related. This approach assumes that all the invoice coding to suppliers is correct and therefore contains a high level of uncertainty.	Relevant spend-based emissions factor, Market Economics Report 2023
Scope 3 **Category 1– Park & Ride diesel bus**	Supplier invoices	QAC contracts the operation of this service to a third provider, who provide total distance travelled.	Diesel bus <7500kg, MfE 2025
Scope 3 **Category 3– Electricity transmission and distribution (T&D) losses**	Supplier invoices	This is calculated based on purchased electricity. QAC takes responsibility for all T&D losses, QAC and relevant tenants.	Transmission and distribution losses, MfE 2025
Scope 3 **Category 5 – Waste to landfill**	Waste audit data	This is limited to QAC office waste, which is estimated through periodic general waste audits. The QLDC Victoria Flats landfill had gas capture installed in 2021.	Waste to landfill with gas recovery, MfE 2025
Scope 3 **Category 5 – Wastewater discharged**	WaterMetrics consumption report	Assumes 95% of water supply is discharged for wastewater processing.	Wastewater treatment, MfE 2025
Scope 3 **Category 6 – Business travel**	Supplier invoices	Includes air travel and accommodation from invoices collated by the QAC Office Manager.	Passenger travel with aircraft type with radiative forcing, country specific hotel stay, MfE 2025
Scope 3 **Category 7 – Employee commuting**	Survey data	Quarterly staff commuting surveys help us to estimate the type of travel (e.g.: vehicle, bicycle) and the distance travelled. Survey respondent data is extrapolated for all staff for the entire year. This assumes all staff take 6 weeks annual leave each year and no sick leave is taken. This includes staff working from home.	Relevant transport mode emissions factor, working from home, MfE 2025

EMISSIONS SOURCE	DATA SOURCE	DESCRIPTION OF METHODOLOGY AND UNCERTAINTIES	EMISSIONS FACTOR SOURCE
Scope 3 Category 11 – Aircraft full flight	Aircraft movement data from Airways	QAC uses the full flight, one way methodology for estimating aircraft emissions, as developed by ACA. Aircraft movement data is collected from Airways, then matched up with ZQN arrival and departure data.	Relevant aircraft type emissions factor including radiative forcing, ICAO 2024
Scope 3 Category 11 – Aircraft Engine testing	Airline reports	Fuel burn is estimated based on the average length of time the engine test was reported for (short, medium or long).	Aviation fuel (Kerosene), MfE 2025
Scope 3 Category 11 – De-icing fluid	Airline reports	De-icing fluid volume is recorded in each report. Type of de-icing fluid is assumed to be glycol.	Glycol volume, ACERT 2024
Scope 3 Category 11 – Passenger ground transport	Ground transport data from the QAC Commercial team	Passenger travel to the airport is estimated through a range of sources: • QAC has barrier arms preventing unauthorised access or ticketed access only to all commercial transfer or parking areas. Using this data, we can estimate the total number of vehicle movements associated with passenger operations. • To calculate vehicle movements in areas that are not controlled by barrier arms, such as the pick-up and dropoff zone, vehicle counts were completed over the months February – April. This data was then extrapolated out to estimate the number of annual movements. • Otago Regional Council (ORC) provides a record of ticket sales at the airport from their airport bus service upon request. • Several scheduled commercial bus services operate from Queenstown Airport. It is unknown how many passengers board these services at the airport, so assumptions are made based on the ORC data.	Relevant transport mode emissions factor, MfE 2025
Scope 3 Category 13 – Tenant electricity usage	Quasar data	This includes tenants within our terminal precinct only as QAC does not record and report electricity usage of off-site tenants. Quasar provides sub metered electricity data to on-charge to tenants.	Purchased energy – annual average, MfE 2025
Scope 3 Category 13- On-sold diesel	Fuel card data	Queenstown Airport on-sells diesel to ground handlers for the fuelling of ground service equipment, which is recorded with fuel cards and allocated to tenants.	Transport diesel, MfE 2025
Scope 3 Category 13- Tenant purchased natural gas	Tenant data	Our tenants hold the supply arrangement with the gas provider. Records of average monthly use are provided from the supplier to QAC on request; QAC cannot obtain records of actual consumption.	Natural gas for commercial use, MfE 2025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