A STAR ALLIANCE MEMBER

AIR NEW ZEALAND

Greenhouse Gas Emissions Inventory Report 2025

The new uniform prints have been designed to tell a story around the heritage and culture of Aotearoa, curated to reflect Air New Zealand and its people.

Kōwhai o te rangi

The kōwhai tree blooms as a living symbol of renewal, resilience and the first light of creation.

Woven into the pattern, the koru represents new beginnings and the mangōpare signifies strength.

Introduction

This Greenhouse Gas (GHG) Emissions Inventory Report is for the parent company Air New Zealand Limited and its subsidiaries (together referred to as Air New Zealand, the Group, or the airline) along with the Group's interests in associates.

The inventory covered is a complete quantification of the amount of GHG emissions that can be directly attributed to the Group's operations within the declared boundary and scope for the specified reporting period. Any exclusions from reporting are disclosed and justified.

The report has been prepared in accordance with *The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard* [1] (GHG Protocol) and the *Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard* [2] (GHG Protocol Value Chain Standard).

Deloitte Limited has been appointed as the third-party independent assurance provider for this 2025 GHG Emissions Inventory Report. A reasonable level of assurance has been obtained over Scope 1 and 2 emissions, and a limited level of assurance has been obtained over Scope 3 emissions disclosed in this report. The assurance report can be found on pages 14 - 15.

GHG emissions information can also be found in the Group's 2025 Climate Statement. Deloitte Limited has provided assurance over Selected GHG emissions disclosures with reasonable assurance provided for Scope 1 and 2 emissions and related disclosures, and limited assurance over Scope 3 emissions and related disclosures in the Climate Statement. The Climate Statement, including the related assurance report, is available on the Sustainability Reporting and Communication page on Air New Zealand's website.

Reporting period covered

This GHG Emissions Inventory Report is for the financial year 1 July 2024 to 30 June 2025 (2025). Throughout this report, all mentions of years should be interpreted as referring to the respective financial year period of 1 July to 30 June.

Base Year

Air New Zealand has been calculating its GHG emissions on an annual basis since 2011. The base year for Scope 1 and 2 emissions is 2019.

This year, the Group set a base year for Scope 3 emissions. For category 3, which covers upstream emissions as well as transmission and distribution losses relating to purchased energy, the base year has also been set to 2019. This is to align with the baseline year of the Group's 2030 Emissions Guidance, which was issued on 1 May 2025 and includes upstream Well-to-Tank emissions from jet fuel reported under category 3.

Consequently, the 2019 base year emissions have been recalculated to now include emissions for Scope 3, category 3.

For all other Scope 3 categories, the base year has been set to 2024, being the first year that all material emissions categories were included in the inventory.

Base year recalculation

A recalculation of the base years shall be triggered by structural changes to the Group, changes in methodology, or identification of omissions that meet a 5 percent significance threshold. The 2019 base year emissions were recalculated this year to include emissions from Scope 3, category 3 for the first time. A recalculation of the 2024 base year for all other Scope 3 categories was not required.

Disclaimer

This report summarises the greenhouse gas emissions inventory for Air New Zealand Limited and its subsidiaries (the Group) along with the Group's interests in associates. The report informs readers about GHG emissions created by the Group's business activities throughout the 2025 financial year.

It is intended to be read alongside the Group's 2025 Annual Report, which includes the Consolidated Financial Statements and the Sustainability Update, and can be found at the Financial Results and Announcements page on our Investor centre website, providing further context about the Group's strategy, sustainability goals and financial performance. This report is referenced in the Group's 2025 Climate Statement, prepared in accordance with the Aotearoa New Zealand Climate Standards.

While the Group has taken steps to ensure assumptions and input data have a reasonable basis, assessments of emissions remain a developing area with a high degree of estimation uncertainty. Modelling assumptions, emission factors and third-party data are expected to evolve. The Group is committed to continuous improvement and to working with its suppliers to develop the quality of third-party data.

To the extent permitted by law, the Group does not accept any liability whatsoever for any loss arising directly or indirectly from any use of, or reliance upon, the information contained in this GHG Emissions Inventory Report.

Greenhouse gas emissions summary

Table 1 provides a summary of emissions by Scope for the last three years as well as the 2019 base year. Table 2 shows 2025 Scope 1 and 2 emissions split out by the gases stated in the Kyoto Protocol. Table 3 provides a full overview of emission sources, with each Scope broken down further into emissions categories. A detailed look at this year's results and trends over time can be found on page 8.

Table 1. GHG emissions by Scope in tCO_2-e

Scope	2025	2024	2023	2019
Scope 1	3,157,207	3,250,851	2,839,358	3,925,650
Scope 2	2,598	2,049	3,357	3,098
Scope 3	1,071,226	1,026,989	857,031[1]	787,948[2]
Total	**4,231,031**	**4,279,889**	**3,699,746**	**4,716,696**

Table 2. Total 2025 emissions by greenhouse gas[3] in tCO_2-e

Scope	CO_2	CH_4	N_2O	HFC	Total tCO_2-e
Scope 1	3,132,413	781	23,638	375	3,157,207
Scope 2	2,523	70	5	-	2,598
Total	**3,134,936**	**851**	**23,643**	**375**	**3,159,805**

Table 3. GHG emissions inventory by Scope and category in tCO_2-e

Emissions source	2025	2024	2023	2019
Scope 1	**3,157,207**	**3,250,851**	**2,839,358**	**3,925,650**
Jet fuel – domestic	580,291	604,348	621,444	629,876
Jet fuel – international	2,571,440	2,639,807	2,210,836	3,286,502
Jet fuel – ground	25	255	953	941
Sustainable Aviation Fuel (SAF)[4]	406	87	108	-
Other fuels[5]	4,670	6,336	6,017	8,331
Fugitive refrigerants[6]	375	18	-	-
Scope 2	**2,598**	**2,049**	**3,357**	**3,098**
Electricity consumption (location-based)	2,598	2,049	3,357	3,098
Scope 3	**1,071,226**	**1,026,989**	**857,031**	**787,948[2]**
Category 1: Purchased goods and services	266,911	239,391	218,032	-
Category 2: Capital goods	99,930	84,043	62,215	-
Category 3: Fuel- and energy-related activities	678,742	685,745	570,462	787,948
Category 5: Waste generated in operations	1,704	665	620	-
Category 6: Business travel	5,749	6,354	5,702	-
Category 7: Employee commuting	17,091	9,952	-	-
Category 15: Investments	1,099	839	-	-
Total reported Scope 1, 2, 3 emissions	**4,231,031**	**4,279,889**	**3,699,746**	**4,716,696**
Biogenic emissions[7]	55,455	13,487	3,927	725

1. Includes categories 1, 2, 3, 5 and 6 only.
2. Includes category 3 only. Included in this inventory for the first time, with the base year for this category now set to 2019.
3. SF_6, PFCs and NF_3 are not listed here as there have been no emissions relevant to Air New Zealand's activities.
4. Methane (CH_4) and nitrous oxide (N_2O) only.
5. Other fuel combustion includes diesel use in ground service equipment (mobile and stationary), diesel and petrol use in vehicle fleet, LPG and natural gas used for heating as well as engine oil used on aircraft. This also now incorporates emissions from wood pellets, which were listed separately in previous years.
6. Newly included in 2024, so no comparative data for prior years.
7. Includes direct biogenic emissions from the combustion of SAF and the burning of wood pellets.

Organisational boundaries

Air New Zealand applies an operational control approach to determine the boundary of its GHG emissions inventory. This means that 100 percent of the emissions from operations over which Air New Zealand, or one of its subsidiaries, has control, are accounted for.

None of Air New Zealand's subsidiaries are excluded from this GHG emissions inventory. Most do not emit any GHG emissions, and those that do are reported within the Group. Table 4 provides an overview of all subsidiaries and associates as at 30 June 2025, and details how each entity is treated for GHG accounting purposes.

Table 4. Organisational boundaries

Company name	Principal activity	Interest held	Treatment for GHG emissions inventory
Air New Zealand Limited	Parent company	100%	Operational control (100% for Air New Zealand's Scope 1, 2, 3).
Air Nelson Limited	Aviation labour services	100%	Operational control (100% for Air New Zealand's Scope 1, 2, 3) – included under Air New Zealand. Dormant from May 2025, no emissions thereafter.
Air New Zealand Associated Companies Limited	Investment	100%	Non-operating holding company, therefore no emissions.
Air New Zealand Aircraft Holdings Limited	Aircraft leasing and financing	100%	No direct emissions from operations. Indirect emissions are included under Air New Zealand.
Mount Cook Airline Limited	Aviation labour services	100%	Operational control (100% for Air New Zealand's Scope 1, 2, 3) – included under Air New Zealand. Dormant from May 2025, no emissions thereafter.
TEAL Insurance Limited	Captive insurer	100%	No direct emissions from operations. Indirect emissions are included under Air New Zealand.
Air New Zealand (Australia) Pty Limited	Holding company	100%	Non-operating holding company, therefore no emissions.
Air New Zealand Express Limited	Holding company	100%	Non-operating holding company, therefore no emissions.
Air New Zealand Regional Maintenance Limited	Engineering services	100%	Operational control (100% for Air New Zealand's Scope 1, 2, 3) – included under Air New Zealand. Dormant from October 2024, no emissions thereafter.
ANNZES Engines Christchurch Limited	Holding company	100%	Non-operating holding company, therefore no emissions.
Pratt & Whitney Air New Zealand Services Partnership (trading as the Christchurch Engine Centre)	Engineering services	49%	No operational control. Proportional (49%) Scope 1 and 2 emissions included under Scope 3, category 15.
Drylandcarbon One Partnership LLC	Forestry and carbon credit generation	20.7%	No operational control. No direct emissions to include under Scope 3.

Operational boundaries

In alignment with the GHG Protocol, Air New Zealand's GHG emissions inventory is split into three Scopes:

Scope 1 includes direct emissions occurring from the airline's operations, most notably from the combustion of jet fuel on domestic and international flights. Smaller emission sources include the combustion of fuels for heating (LPG, natural gas and wood pellets) and transport (diesel and petrol) as well as emissions from refrigerant leaks and from the combustion of engine oil.

Scope 2 covers emissions from the generation of purchased electricity consumed at Air New Zealand operated sites.

Scope 3 refers to all other indirect emissions across Air New Zealand's value chain, both upstream and downstream, and can be divided into 15 different categories according to the GHG Protocol Value Chain Standard.

GHG emission source inclusions

For Scope 3, multiple criteria are considered to determine which categories are accounted and reported on, starting with a quantitative materiality of 1 percent of total Scope 3 emissions per category. Currently, there are four categories that are material based on this criterion, as shown in the following list of included categories. Additionally, criteria for identifying relevant Scope 3 emissions as outlined by the GHG Protocol Value Chain Standard[8] served as guidance on which categories to disclose, with a focus on areas of interest to stakeholders, opportunities to influence emissions activities, and sector guidance. Access to the required activity data also played a key role.

As a result, the following categories are quantified within the Group's GHG emissions inventory:

- **Category 1:** Purchased goods and services (24.9 percent of total Scope 3 emissions);
- **Category 2:** Capital goods (9.3 percent);
- **Category 3:** Fuel- and energy-related activities (63.4 percent);
- **Category 5:** Waste generated in operations (0.2 percent);
- **Category 6:** Business travel (0.5 percent);
- **Category 7:** Employee commuting (including emissions associated with working from home) (1.6 percent); and
- **Category 15:** Investments (0.1 percent).

A further three categories were identified as not applicable:

- **Category 10:** Processing of sold products;
- **Category 13:** Downstream leased assets. Not applicable in 2025; and
- **Category 14:** Franchises.

Table 6 on pages 9 - 11 provides an overview of all emission sources included in Air New Zealand's GHG emissions inventory, with details on the data sources, method used, assumptions made, and an explanation of uncertainties based on activity data and emission factors used.

8. See page 61 of the GHG Protocol Value Chain Standard.

Operational boundaries (continued)

GHG emission source exclusions

Air New Zealand strives to disclose all Scope 1 and 2 emissions due to the Group's influence over these emissions. However, where the effort and difficulty to obtain accurate data outweigh the benefits, for example, where emissions are small and / or Air New Zealand's ability to influence emissions reductions is limited, some immaterial exclusions apply (see Table 5).

Five Scope 3 categories are not included in the Group's inventory. They have been identified as sitting outside of the minimum boundary for required disclosures outlined by the GHG Protocol Value Chain Standard or being immaterial, and disproportionally difficult to obtain data for:

- **Category 4:** Upstream transportation and distribution. For most purchased products, transport is covered by categories 1 and 2 as it is included in the overall purchase price. Where freight is split out, the resulting transport- and distribution-related emissions are immaterial and therefore not included in the inventory;
- **Category 8:** Upstream leased assets. Most emissions from the operation of leased assets are covered in Scope 1 and 2. Energy use and refrigerant leaks at offshore locations and some regional airports are difficult to track, but immaterial and therefore excluded;
- **Category 9:** Downstream transportation and distribution. This could include optional emission sources, such as passenger transport to and from airports. Air New Zealand has elected not to include this category due to the difficulty in obtaining activity data;
- **Category 11:** Use of sold products. For Air New Zealand, the key product sold is air transportation. Whether for passengers or cargo, these emissions are already reported in the inventory through Well-to-Wake jet fuel emissions; and
- **Category 12:** End-of-life treatment of sold products. Optional disclosure could cover the end-of-life treatment of products sold via the Airpoints™ store. These emissions have been excluded as they are considered immaterial, and it is difficult to obtain accurate data or influence emissions reductions.

Categories not covered by the airline's GHG emissions inventory are reviewed annually and may be included in future disclosures if they become material or applicable.

Additional individual emission sources not included within reported Scopes or categories are summarised in Table 5.

Other emissions – biogenic CO_2

Sustainable Aviation Fuel (SAF) is the industry term given to alternative jet fuel that is made from feedstocks other than fossil fuels and which seek to produce lower life cycle emissions than fossil jet fuel. SAF is almost chemically identical to jet fuel from fossil sources and generates approximately the same CO_2-e emissions as fossil jet fuel when combusted in the aircraft's engines. However, the CO_2 emitted from the combustion of biofuels is considered biogenic, meaning it equates to the CO_2 absorbed by the feedstock before SAF production. The CO_2 portion of the combustion emissions of SAF is therefore treated as carbon neutral and is reported on separately in the GHG emissions inventory. Other biogenic emissions captured in this separate category come from the burning of wood pellets for heating at the Christchurch hangar.

Table 5. Individual emission sources excluded from Air New Zealand's GHG emissions inventory

Emissions Scope / category	Excluded emissions activity	Reasons for exclusion
Scope 1: Fuel combustion (diesel)	Fuel use by offshore ground service equipment (GSE) and vehicle fleet	Difficulty obtaining data. Immaterial
Scope 2: Electricity consumption	Electricity used for charging EV fleet where this is done offsite	Difficulty obtaining data. Immaterial
Scope 3 – category 5: Waste generated in operations	Wastewater Waste from some smaller, leased sites	Difficulty obtaining data. Immaterial Limited data available as waste contracts held by lessors
Scope 3 – category 15: Investments	Vehicles driven by Christchurch Engine Centre	Immaterial

Methodology

Air New Zealand uses an internal process guide for GHG emissions calculations to ensure consistency in preparing the inventory over time. This lays out, for example, the calculation methodology, materiality and significance thresholds, and data control processes used to ensure conformance with the GHG Protocol Standards.

For data collection and the calculation of emissions, Air New Zealand uses the carbon accounting software BraveGen. Activity data is requested from the data source owners who upload directly to the platform where, after Air New Zealand management reviews, it is then multiplied with the appropriate emission factors. Examples of activity data include kilowatt-hours of electricity used, litres of jet fuel combusted, or spend per product category. An overview of activity data sources as well as the calculation methods used by category is provided in Table 6.

Where possible, emission factors are sourced from the latest publication of the Ministry for the Environment's (MfE) *Measuring emissions: A guide for organisations* [3]. Across Scope 3, the inventory draws on additional factors as summarised below and detailed in Table 6:

- Greenhouse gas reporting conversion factors, published by the UK Department for Environment, Food and Rural Affairs (DEFRA) [4], are used for most Well-to-Tank emissions, some business travel emissions, and UK-based employees' commuting emissions;
- All spend-based calculations (categories 1 and 2) use Auckland Council-published consumption emission factors [5]. These are adjusted for inflation to December of the financial year in question;
- For aircraft purchased in 2025, product-type specific emissions data has been used as proxy (ecoinvent factors sourced from SimaPro);
- Well-to-Tank emissions for electricity specific to New Zealand have been sourced from Agrilink [6];
- Carbon intensity values for purchased SAF are sourced from documentation provided by suppliers.

MfE and DEFRA emission factors, which make up the majority of factors used in Air New Zealand's emissions inventory, use global warming potential (GWP) rates from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) [7] to convert quantities of each greenhouse gas to tonnes CO_2-e. Auckland Council's spend-based factors draw on GWP rates from the IPCC's Fourth Assessment Report (AR4) [8] and factors from SimaPro and Agrilink are based on GWP rates from the IPCC's Sixth Assessment Report (AR6) [9].

All emissions disclosed in this report are expressed in total tonnes of carbon dioxide equivalent (tCO_2-e). The time horizon in all cases is 100 years.

Uncertainty

In general, GHG emissions accounting relies on assumptions and estimates that lead to estimation uncertainty. Air New Zealand uses a qualitative assessment of uncertainty as a measure of data quality, with a focus on parameter uncertainty. Table 6 provides an overview of the emission sources covered by Air New Zealand's GHG emissions inventory, including an assessment of the uncertainty for each source, along with details on the calculation methods applied and any assumptions made.

Uncertainty is highest where data limitations require the airline to adopt the spend-based method because product- or supplier-specific data are not available. This method multiplies the value of purchased goods or services by an emissions intensity for the commodity per dollar of expenditure.

Emissions calculated using the spend-based method currently make up 8.5 percent of the airline's GHG emissions inventory.

While the GHG Protocol Value Chain Standard highlights that higher uncertainty for Scope 3 calculations is acceptable[9], the spend-based method has limitations: the activity data used are allocated into purchasing categories rather than organised by individual product or service type; and, similarly, emission intensities refer to high level commodity groups and are calculated using underlying assumptions that might not be applicable to the actual purchases by the airline.

Uncertainty also remains relatively high for employee commuting emissions. The calculation method applied relies on employee participation in a survey or conservative assumptions on the mode of transport used. While historical, country-wide Stats NZ averages of commuting distances used in the 2024 calculation have been replaced by Air New Zealand-specific data for the 2025 calculation, meaning the activity data is more representative in terms of time and geography, opportunities to reach low uncertainty are limited as commuter data is inherently difficult to track. Details on the calculation methodology used for this emissions category and changes made from the year prior are outlined on page 7.

Air New Zealand has made other minor improvements across its inventory in 2025 to reduce uncertainties. The airline is committed to continuing this work by engaging with suppliers and improving data quality where possible. A working group made up of members of the Sustainability, Finance, and Procurement teams has been set up, focussing on areas that are likely to have the highest emissions impact.

9. See page 75 of the GHG Protocol Value Chain Standard.

Methodology (continued)

Emissions calculations for category 7: Employee commuting (including working from home)

Air New Zealand has a large and widespread workforce with many employees conducting operational roles (for example, cabin crew and pilots), rather than being desk-based. As these members of the workforce are so mobile, a company-wide survey is not considered an appropriate tool to identify individual and collective commuting behaviours that are representative across all employees in the Group. Given the importance of including this emissions source, an alternative methodology for quantifying this category has been implemented. This section outlines the different aspects of the calculation, any assumptions made, and the improvements to data quality that have been achieved since last year's calculation.

To estimate commuting emissions, employees are split into categories depending on where they are based, what type of work they do, and how often they are likely to commute to work each week:

- Commuting habits of **employees based at the Auckland Fanshawe Street head office** were captured by a commuting survey undertaken by the Wynyard Quarter Transport Management Association (WQTMA) in 2024. The average emissions per person calculated based on the responses were extrapolated for all current employees based in the head office;
- **Long-haul cabin crew based in Auckland** have access to a transport service to and from multiple pick-up points across the city and the airport, and it was possible to calculate emissions based on the actual number of trips taken per month. The average distance from all pick-up points to the airport was applied for all trips. Potential travel from these crew members' homes to the pick-up points is not accounted for as this is considered immaterial, with pick-up points widely spread across Auckland.
- For all other **cabin crew**, the number of return commutes is based on the sum of the actual number of work starts;
- Similarly, **all pilots'** commute to work is based on the actual number of work starts;
- Some Air New Zealand employees, such as maintenance or airport staff, **can fulfil their work duties on-site only**. It is assumed these employees commute five days per week or, where the employees work shift hours that differ from the standard five-day working week, the number of days worked per calendar week has been calculated. They are assumed to work for an average of 46 weeks per year, taking into account six weeks per year for annual leave, sick leave or public holidays; and
- In addition to employees working at the head office, a small number of employees **can perform their work duties either on-site or from home**. For this group, the average days of attendance per week has been obtained from the airline's internal swipe card system. This increases the reliability of the data used, compared to last year's assumption that every office employee works from their office base for three days per week. The number of days at an office were then subtracted from five days of work per week to additionally account for emissions from working from home. Again, employees are assumed to be away from work for six fulltime-equivalent weeks each year for annual leave, sick leave, or public holidays, meaning they commute to work for the remaining 46 weeks per year.

The latter four employee groups are assumed to travel to work using a petrol car, which is considered reasonable based on employees' business hours, limited access to public transport to most places of work, and petrol cars being the most widely used vehicle type across the country [10]. For the distance travelled per commute, instead of applying a national average, the calculation now draws on anonymised internal data to calculate the average return distance between each employee's work location and home address, by employee group.

Overall, emissions have increased from the year prior which can mainly be attributed to Air New Zealand-specific average commuting distances being longer than the average commuter distance applied to the calculation last year (for some employee groups up to 3.5 times longer), and employees commuting to the office more frequently each week, highlighting a return to working from an office location.

Results

GHG emissions results 2025

In 2025, Air New Zealand emitted 4.2 million tCO_2-e across its direct and indirect emission sources (Scopes 1, 2 and 3). This is a reduction of 1.1 percent from the prior year. Figure 1 shows a summary of 2025 emissions by Scope and category.

Jet fuel

Total Well-to-Wake emissions associated with jet fuel, which include jet fuel-related emissions across all Scopes, decreased by 2.5 percent compared to 2024 and by 18.6 percent from the base year.

After 2019, the airline experienced a significant drop in jet fuel emissions due to lower demand for travel during the Covid-19 pandemic. Jet fuel emissions from international flights increased steadily between 2020 and 2024, but reduced slightly in 2025 as a result of emissions reductions achieved through the increased use of SAF, and a number of grounded aircraft unable to fly resulting from engine availability issues.

Domestic air travel emissions have been more variable since 2019, almost reaching pre-Covid-19 levels in 2023 before dropping again in the two reporting years since. This drop is largely due to corporate and government travel demand reducing.

Figure 2 shows the movement of Air New Zealand's jet fuel emissions across the years, broken down into Tank-to-Wake (Scope 1) and Well-to-Tank (Scope 3, category 3) emissions.

Other Scope 1

Other fuel use emissions have dropped by 26.3 percent from last year, and 43.9 percent since 2019. The key drivers here are reductions in diesel and natural gas use, which combined make up about 81.1 percent of Scope 1 emissions from other fuel use, as the Group continues to electrify its ground-based operations. Reported refrigerant emissions have increased significantly from last year as the inventory now includes refrigerant data from most regional airport sites operated by Air New Zealand.

Scope 2

Electricity emissions have seen an increase of 26.8 percent from last year, which is due only to a less renewable electricity grid mix in New Zealand. As a result, the emissions factor for electricity increased by 38.7 percent on last year, whereas Air New Zealand's electricity consumption decreased by 8.6 percent. Compared to the 2019 financial year, Scope 2 emissions reduced by 16.2 percent.

Scope 3

Scope 3 emissions increased by 4.3 percent compared to 2024, despite the reduction in fossil jet fuel impacting category 3 emissions. This increase is primarily the result of increased costs driving up emissions in categories 1 and 2 as these are calculated using the spend-based method. For example, costs associated with the construction of the new hangar at Auckland airport, an increase in purchases of spare parts, and an increase in fleet maintenance. Additionally, the airline experienced price increases higher than average New Zealand inflation across a variety of products purchased as well as higher fees, levies and charges, leading to an increase in the emissions reported.

Emissions from waste generated in operations (category 5) have increased compared to last year as they now include emissions from inflight waste from international flights arriving into Auckland. A lot of this is methane-generating food waste, which for biosecurity reasons is required to be disposed of in landfill. Employee commuting emissions (category 7) have increased by 71.7 percent compared to last year due to the changes in the calculation methodology as outlined in the previous section of this report. The increase in emissions from the changes in these two categories is below the significance threshold and therefore does not warrant a recalculation of last year's inventory.

Figure 1. 2025 emissions by Scope and category

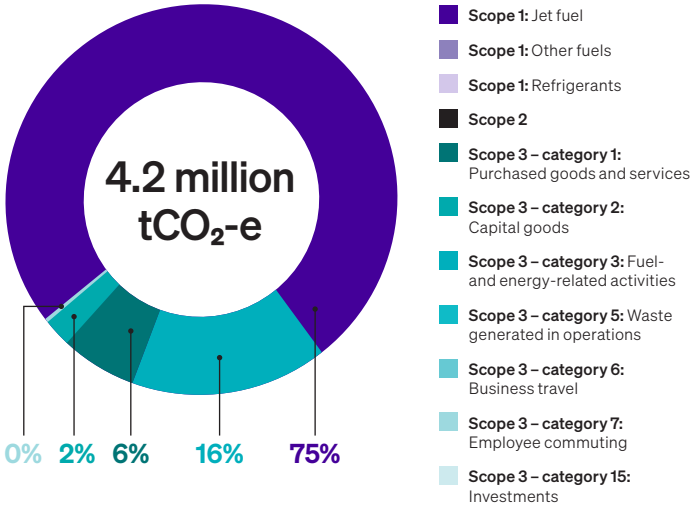
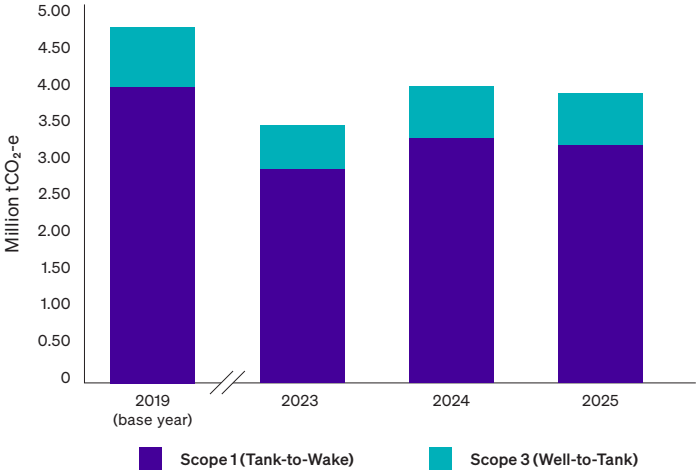


Figure 2. Well-to-Wake emissions from jet fuel over time in tCO_2-e



Emission source inclusions

Table 6. Emission source inclusions

Scope / category	Activity	Calculation method	Activity data source	Emission factor source	Assumptions / estimations	Level of uncertainty
Scope 1						
Jet fuel (domestic and international)	Fuel used to operate aircraft	Fuel-based method	Supplier invoices reconciled with internal systems	MfE (2025): Aviation fuel (kerosene); AR5		Low uncertainty.
Jet fuel (ground)	Fuel used for ground engine testing	Fuel-based method	Actual use records reconciled with supplier invoices	MfE (2025): Aviation fuel (kerosene); AR5		Low uncertainty.
Sustainable Aviation Fuel (SAF)	SAF purchased by Air New Zealand	Fuel-based method	Supplier certificates reconciled with supplier invoices	MfE (2025): Aviation fuel (kerosene) – CH_4 and N_20 only; AR5	Assumes CH_4 and N_20 emissions that occur from the combustion of SAF are comparable to those from the combustion of fossil jet fuel.	Some emission factor uncertainty that is considered acceptable as there is currently no more accurate data available, and emissions are immaterial.
LPG	LPG combusted for heating in Christchurch and Nelson	Fuel-based method	Supplier invoices	MfE (2025): LPG (industrial); AR5		Low uncertainty.
Natural gas	Natural gas combusted for heating in Auckland	Fuel-based method	Supplier invoices	MfE (2025): Natural gas (industrial); AR5		Low uncertainty.
Diesel	Diesel combusted in GSE and vehicle fleet	Fuel-based method	Supplier invoices	MfE (2025): Diesel (Transport fuel); AR5	Assumes that all diesel from tanks is combusted for mobile use, as it is not possible to differentiate fuel use by GSE type.	Low uncertainty.
Petrol	Petrol combusted in vehicle fleet	Fuel-based method	Supplier invoices	MfE (2025): Petrol / premium petrol (Transport fuel); AR5		Low uncertainty.
Engine oil	Engine oil used to ensure engine system operates effectively and safely	Fuel-based method	SAP transactions	MfE (2025): Heavy fuel oil (Transport fuel); AR5	Assumes all uplifted oil is burnt.	Moderate uncertainty in activity data as some oil might not be burnt, therefore emissions are slightly overestimated. As engine oil emissions are small this is considered negligible.
HFC	Fugitive HFC losses from HVAC systems or chillers	Top-up method	Service provider reports	MfE (2025): R-134a / R32 / R410a / R-290 / 404a; AR5		Low uncertainty.
Wood pellets	Wood pellets burned for heating in Christchurch	Fuel-based method	Supplier invoices	MfE (2025): Wood (commercial pellets) - CH_4 and N_20 only; AR5	Assumes all purchased wood pellets are burned.	Some emission factor uncertainty as disclosed by MfE that is considered adequate as the emissions source is immaterial.
Scope 2						
Electricity	Electricity consumed at Air New Zealand operated sites, including to charge electric GSE	Location-based method	Supplier invoices reconciled with meter data from energy efficiency system	MfE (2025): Electricity (annual average); AR5		Low uncertainty.

Emission source inclusions (continued)

Table 6. Emission source inclusions (continued)

Scope / category	Activity	Calculation method	Activity data source	Emission factor source	Assumptions / estimations	Level of uncertainty	Emissions calculated using data provided by value chain partners[10]
Scope 3							
Category 1: Purchased goods and services	Extraction, production, and transportation of goods and services purchased in 2025, not otherwise included in categories 2 - 8	Spend-based method	General ledger	Auckland Council Consumption Emissions (2023): 26 categories; AR4 (adjusted for inflation)	Categorisation of activity data is high level. Emission factors applied refer to high level commodity groups.	High uncertainty from emission factors used and high-level categorisation of purchased products and services. See also under Uncertainty on page 6. This is a priority category to further reduce uncertainty.	0%
Category 2: Capital goods	Extraction, production, and transportation of capital goods (including aircraft and engines) acquired in 2025	Average-product method for newly acquired aircraft; spend-based method across remaining assets	Fixed asset register	Auckland Council Consumption Emissions (2023): 15 categories; AR4 (adjusted for inflation) Ecoinvent via SimaPro (accessed July 2025): very short haul passenger aircraft / long haul passenger aircraft; AR6	Proxy emissions data used to calculate upstream emissions from aircraft acquired in 2025. Emission factors used for spend-based method refer to high level commodity groups.	High uncertainty from emission factors used and high-level categorisation of purchased assets, especially where using spend-based factors. This is a priority category to further reduce uncertainty.	0%
Category 3: Fuel- and energy-related activities	Extraction, production, and transportation of fuels and energy purchased in 2025, not already accounted in Scope 1 and 2	Average-data method	Same as Scope 1 and 2 fuel and energy data	DEFRA (2025): WTT Liquid Fuels – Aviation Turbine / Fuel oil / Diesel / Petrol, WTT gaseous fuel – LPG / Natural Gas; AR5 MfE (2025): Natural Gas – T&D losses / Electricity T&D losses; AR5 Agrilink (2023): WTT NZ Electricity; AR6 SAF supplier certificates (2025); AR5		Some uncertainty from the use of average emission factors, including for SAF as the supplier uses default values published by ICAO [11]. This is considered adequate as it uses the best data currently available. Conversations with suppliers are ongoing to obtain supplier-specific data relevant to upstream emissions.	0%
Category 5: Waste generated in operations	Landfill and organic waste disposed of by Air New Zealand employees, customers, and contractors across 61 sites. Inflight food and other waste from international flights returning to Auckland.	Waste-type specific method	Supplier reports on weight of waste picked up, by waste stream per site	MfE (2025): Waste (unknown composition) – Office waste to landfill with gas recovery / Waste (unknown composition) – General waste to landfill / Biological treatment of waste –composting / Waste (known composition) – Food waste to landfill with gas recovery; AR5	Assumes landfills with gas recovery and commercial composting facilities are used. Assumes waste collected and reported by service providers belongs to Air New Zealand only and is not from a shared waste station. Assumes waste at leased sites where the lessor holds the waste contract is captured by the contract owner and therefore not included by Air New Zealand.	Moderate uncertainty over activity data as waste data is not separated into more specific waste streams. Minor uncertainty from emission factors as they represent a New Zealand average rather than being site specific. This is considered adequate as the emissions source is immaterial.	0%

10. Proportion of emissions calculated based on primary data, for both activity data and emission factors, obtained from suppliers or other value chain partners.

Emission source inclusions (continued)

Table 6. Emission source inclusions (continued)

Scope / category	Activity	Calculation method	Activity data source	Emission factor source	Assumptions / estimations	Level of uncertainty	Emissions calculated using data provided by value chain partners[10]
Scope 3 (continued)							
Category 6: Business travel	Air travel on other airlines, hotel stays, travel in rental cars and taxis. Employees' own vehicles where this was reimbursed by the Group	Distance-based method for all except taxi travel and employee mileage, where the spend-based method is applied	Supplier reports for crew and pilot travel, and rental car trips. Internal booking systems' reports for other employees' business travel. General ledger for spend on taxis and mileage claims.	MfE (2025): Accommodation (relevant countries and nearby country factors for countries not available in MfE factors) / International air travel with radiative forcing / Taxi travel Regular – dollars spent / Vehicle type km (2015 – 2020 Fleet) /; AR5 DEFRA (2025): Regular Taxi – km; AR5	Assumes that employees use preferred booking methods for duty travel. Assumes taxis are petrol vehicles and the most direct route per trip is used. Hotel stays are calculated using country-specific factors, but are not specific to the type of accommodation.	Moderate uncertainty as some activity data relies on conservative assumptions, and most emission factors are averages. This is considered adequate as the emissions source is relatively small, there is a high level of control over key booking systems, and difficulty obtaining more accurate data.	0%
Category 7: Employee commuting (including emissions associated with working from home)	Employee commute, and energy use associated with working from home	Distance-based method	HR reports for staff per location and business unit, and anonymised location data for return distance to work. Wynyard Quarter Transport Management Association (WQTMA) survey results for Auckland head office staff. Supplier records for crew transport to airports. Sum of annual work starts for crew and pilot commuting. Swipe card data for average attendance by employee group.	MfE (2025): Private petrol car / Working from home (default); AR5 DEFRA (2025): Average car km petrol / Homeworking; AR5	Commuting data for Auckland head office employees is based on survey results from October 2024. The number of days commuted by pilots and cabin crews is based on actual work starts. For all other employee groups, the number of days in the office is based on anonymised internal data, as are the distances travelled. Reasonable but conservative assumptions remain around the transport mode. For further details see the explainer on Air New Zealand's commuting emissions calculation on page 7.	Despite improvements to the calculation in 2025, uncertainty remains relatively high as emissions are based on multiple assumptions. This is considered adequate due to difficulties in tracking accurate data, but the category remains a focus area for further reducing uncertainty.	5.6%
Category 15: Investments	Fuel and electricity use by Christchurch Engine Centre	Investment-specific method	Supplier invoices for Christchurch Engine Centre facilities.	MfE (2025): Aviation fuel (kerosene) / LPG (industrial) / Electricity (annual average); AR5		Low uncertainty.	100%

Scope / category	Activity	Calculation method	Activity data source	Emission factor source	Assumptions / estimations	Level of uncertainty
Other						
Biogenic emissions	SAF and wood pellets combusted by Air New Zealand	Fuel-based method	Supplier certificates and invoices	MfE (2025): Aviation fuel (kerosene) – CO_2 only / Wood – Pellets (Commercial use) – Biogenic CO_2-e/unit; AR5	Assumes the carbon emissions created from the combustion of SAF are the same as from the combustion of fossil jet fuel, however, they are biogenic and considered to be neutral, and therefore accounted for separately.	Low uncertainty.

Dame Therese Walsh
Chair

For and on behalf of the Board,
28 August 2025

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Appendix

Summary of GHG emissions inventory recalculations across years

Basis for recalculation	Description of change	Effect on inventory	Year of reporting change
Improvements to calculation methodologies and emission factors used	Improved categorisation and updates to emission factors used across Scope 3	2023: Scope 3 – category 1: - 24,183 Scope 3 – category 2: - 42,088 Scope 3 – category 5: - 1,316 Scope 3 – category 6: - 6,214	2024
Setting of a Scope 3 base year	Scope 3, category 3 emissions had not previously been disclosed, but with its base year now set to 2019 these have been added to the inventory	2019: Scope 3 – category 3: + 787,948	2025

Assurance

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Independent Assurance Report

To the Shareholders of Air New Zealand Limited on Air New Zealand's Greenhouse Gas Emissions Inventory Report for the year ended 30 June 2025

We have undertaken a reasonable assurance engagement relating to Scope 1 and 2 greenhouse gas ('GHG') emissions and a limited assurance engagement relating to Scope 3 emissions within the Greenhouse Gas Emissions Inventory Report (the **'GHG Inventory Report'**) of Air New Zealand Limited (the **'Company'**) and its subsidiaries (the **'Group'**) for the year ended 30 June 2025, comprising the emissions inventory and the explanatory notes set out on pages 1 - 13.

The GHG Inventory Report provides information about the GHG emissions of the Group for the year ended 30 June 2025 and is based on historical information. This information is stated in accordance with the requirements of the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)* and *Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)* (collectively the **'Applicable Criteria'**).

Reasonable assurance opinion for Scope 1 and 2 GHG emissions and related disclosures

In our opinion, the Scope 1 and 2 GHG emissions and related disclosures within the GHG Inventory Report of the Group for the year ended 30 June 2025 have been prepared, in all material respects, in accordance with the requirements of the Applicable Criteria.

Limited assurance conclusion for Scope 3 GHG emissions and related disclosures

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Group's Scope 3 GHG emissions and related disclosures within the GHG Inventory Report for the year ended 30 June 2025 have not been prepared, in all material respects, in accordance with the requirements of the Applicable Criteria.

Basis for reasonable assurance opinion and limited assurance conclusion

We conducted our engagement in accordance with International Standard on Assurance Engagements (New Zealand) 3410: *Assurance Engagements on Greenhouse Gas Statements* (**'ISAE (NZ) 3410'**) issued by the New Zealand Auditing and Assurance Standards Board (**'NZAuASB'**).

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our reasonable assurance opinion for the Scope 1 and 2 GHG emissions and related disclosures and limited assurance conclusion for the Scope 3 GHG emissions and related disclosures.

Other matter – separate Climate Statement

The Group has also prepared a Climate Statement for the year ended 30 June 2025 which includes some GHG emissions information disclosed in accordance with requirements of *The Aotearoa New Zealand Climate Standards*, issued by the External Reporting Board (**'XRB'**). We performed a separate assurance engagement, on behalf of the Auditor-General, in accordance with International Standard on Assurance Engagements (New Zealand) 3410: *Assurance Engagements on Greenhouse Gas Statements* ('ISAE (NZ) 3410'), issued by the NZAuASB, and New Zealand Standard on *Assurance Engagements 1 Assurance Engagements over Greenhouse Gas Emissions Disclosures* issued by the XRB over selected GHG disclosures included within the Climate Statement. The Climate Statement together with our separate limited assurance report is available through the Investor Centre on the Air New Zealand website.

Directors' responsibilities for the GHG Inventory Report

The Directors are responsible for the preparation of the GHG Inventory Report, in accordance with the Applicable Criteria. This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation of a GHG Inventory Report that is free from material misstatement, whether due to fraud or error.

Our responsibilities

Our responsibility is to express an independent reasonable assurance conclusion for the Scope 1 and 2 GHG emissions and related disclosures and a limited assurance conclusion for the Scope 3 GHG emissions and related disclosures within the GHG Inventory Report based on the procedures we have performed and the evidence we have obtained.

Our engagement was performed in accordance with ISAE (NZ) 3410. That standard requires that we plan and perform this engagement to obtain the level of assurance identified.

Reasonable assurance for Scope 1 and 2 GHG emissions and related disclosures

A reasonable assurance engagement in accordance with ISAE (NZ) 3410 involves performing procedures to obtain evidence about the quantification of emissions and related information in the GHG Inventory Report. The nature, timing and extent of procedures selected depend on our professional judgement, including the assessment of the risks of material misstatement, whether due to fraud or error, in the GHG Inventory Report. In making those risk assessments, we considered internal controls relevant to the Group's preparation of the Scope 1 and 2 GHG emissions and related disclosures in the GHG Inventory Report. A reasonable assurance engagement also includes:

- Assessing the suitability in the circumstances of the Group's use of Applicable Criteria, as the basis for preparing the Scope 1 and 2 GHG emissions and related disclosures in the GHG Inventory Report;
- Evaluating the appropriateness of quantification methods and reporting policies used, and the reasonableness of estimates made by the Group; and
- Evaluating the overall presentation of the Scope 1 and 2 GHG emissions and related disclosures in the GHG Inventory Report.

Matters Relating to the Electronic Presentation of the 2025 Greenhouse Gas Emissions Inventory Report

This reasonable and limited assurance report relates to the GHG Emissions Inventory Report of the Group for the year ended 30 June 2025, included on Air New Zealand Limited's website. The Directors are responsible for the maintenance and integrity of Air New Zealand's website. We have not been engaged to report on the integrity of Air New Zealand's website. We accept no responsibility for any changes that may have occurred to the 2025 Greenhouse Gas Emissions Inventory Report since it was initially presented on the website.

The reasonable and limited assurance report refers only to the GHG Emissions Inventory Report named above. It does not provide an opinion on any other information which may have been hyperlinked to/from the GHG Emissions Inventory Report.

Assurance (continued)

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Limited assurance for Scope 3 GHG emissions and related disclosures

A limited assurance engagement in accordance with ISAE (NZ) 3410 involves assessing the suitability in the circumstances of the Group's use of the Applicable Criteria as the basis for the preparation of the Scope 3 GHG emissions and related disclosures in the GHG Inventory Report, assessing the risks of material misstatement whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Scope 3 GHG emissions and related disclosures in the GHG Inventory Report. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgement and included enquiries, observations of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

In undertaking our limited assurance engagement for Scope 3 GHG emissions and related disclosures in the GHG Inventory Report, we:

- Obtained, through inquiries, an understanding of the Group's control environment, processes and information systems relevant to emissions quantification and reporting. We did not evaluate the design of particular control activities, or obtain evidence about their implementation;
- Evaluated whether the Group's methods for developing estimates are appropriate and had been consistently applied. Our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate the Group's estimates;
- Tested a limited number of items to, or from, supporting records, as appropriate;
- Performed analytical procedures on particular emissions categories by comparing the expected GHGs emitted to actual GHGs emitted and made inquiries of management to obtain explanations for any significant differences we identified;
- Evaluated the appropriateness of emissions factors applied; and
- Considered the presentation and disclosure of the Scope 3 emissions in the GHG Inventory Report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether the GHG Inventory Report has been prepared, in all material respects, in accordance with the Applicable Criteria.

Our independence and quality management

We have complied with the independence and other ethical requirements of the Professional and Ethical Standard 1 *International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand)* issued by the NZAuASB, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm is the statutory auditor of the Group financial statements (on behalf of the Auditor-General) and also carries out other assurance services for the Group which include the review of the interim financial statements, and assurance services relating to passenger facility charges, greenhouse gas emissions in the Climate Statement, and compliance with student fee protection rules. We also provide non-assurance services in the form of a climate-related disclosure pre-assurance readiness assessment and services to the Corporate Taxpayers Group for which Air New Zealand is a member, along with a number of other organisations. These services have not impaired our independence as assurance practitioner of the Group. In addition to this, partners and employees of our firm deal with the Group on normal terms within the ordinary course of trading activities of the business of the Group. Our firm has no other relationship with, or interest in the Group.

Our firm applies Professional and Ethical Standard 3: *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, which requires us to design, implement and operate a system of quality management including policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Inherent limitations in preparing the GHG Inventory Report

Non-financial information, such as that included in the GHG Inventory Report, is subject to more inherent limitations than financial information, given both its nature and the methods used and assumptions applied in determining, calculating and sampling or estimating such information. Specifically, 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.

As the procedures performed for this engagement are not performed continuously throughout the relevant period and the procedures performed in respect of the Group's compliance with the Applicable Criteria are undertaken on a test basis, our limited assurance engagement cannot be relied on to detect all instances where the Group may not have complied with the Applicable Criteria. Because of these inherent limitations, it is possible that fraud, error or non-compliance may occur and not be detected.

In addition, we note that an assurance engagement is not designed to detect all instances of non-compliance with the Applicable Criteria, as it generally comprises making enquires, primarily of the responsible party, and applying analytical and other review procedures.

Use of our report

Our assurance report is intended for users who have a reasonable knowledge of GHG related activities, and who have studied the GHG Inventory Report with reasonable diligence and understand that the GHG Inventory Report is prepared and assured to appropriate levels of materiality.

Our assurance report is made solely to the Company's shareholders, as a body. Our assurance engagement has been undertaken so that we might state to the shareholders those matters we are required to state to them in our report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the shareholders for our work, for this assurance report, or for the reasonable assurance opinion and the limited assurance conclusion we have formed.

Deloitte Limited

Auckland, New Zealand
28 August 2025

A STAR ALLIANCE MEMBER

AIR NEW ZEALAND