CLIMATE-RELATED DISCLOSURE FY24

CIAL CLIMATE-RELATED DISCLOSURE FY24

TABLE OF CONTENTS

Contact Details:
Christchurch International Airport Ltd
P O Box 14 001
Christchurch
New Zealand

Phone: +64 3 358 5029
Website: www.christchurchairport.co.nz

CLIMATE STATEMENT

INTRODUCTION

We are pleased to present our first Climate-related Disclosure for the reporting period 1 July 2023 – 30 June 2024 prepared in accordance with Aotearoa New Zealand Climate Standards (NZ CS).

Christchurch International Airport Limited (CIAL) is a climate-reporting entity (CRE) under the Financial Markets Conduct Act 2013. These Climate-related Disclosure are for Christchurch International Airport Limited and its wholly owned subsidiaries. As the wholly owned subsidiaries were not trading and held no assets and liabilities during and at the end of the period of review, this Climate-related Disclosure represents both the parent and the group as a whole.

CIAL's Climate-related Disclosure for the year ended 30 June 2024 pages 4–39 complies with NZ CS 1, 2 and 3 issued by the External Reporting Board (XRB) in December 2022.

In preparing this Climate-related Disclosure, CIAL has elected to utilise Adoption Provisions 1, 2, 3, 6 and 7 as provided for in NZ CS 2 (refer to Appendix 1 for more details).

This Climate-related Disclosure and the data it contains is unaudited. It contains forward-looking information that is subject to limitations and disclaimers (see page 5 for details).

Approved on behalf of Christchurch International Airport Limited on 10th Ocotber, 2024.

Sarah Ottrey
Chair

Andrew Barlass
Director

IMPORTANT NOTE

This Climate-related Disclosure sets out CIAL's current approach to scenario analysis, our current understanding of, and response to, our climate-related risks and opportunities and our current and anticipated impacts of climate change in relation to the group. This reflects CIAL's current understanding as at publication date. We acknowledge that climate-related risk is an evolving area, and often uses data and methodologies that are developing and uncertain. This Climate-related Disclosure contains forward looking statements, including climate-related scenarios, targets, assumptions, climate projections, forecasts, statements of CIAL's future intentions, estimates and judgements that may not evolve as predicted. We base those statements and opinions on reasonable information at the date of publication. We do not represent those statements and opinions will not change or will remain correct after publishing this Climate-related Disclosure, or promise to revise or update those statements and opinions if events or circumstances change or unanticipated events happen after publishing this Climate-related Disclosure.

CIAL cautions reliance on climate-related forward-looking statements that are necessarily less reliable than other statements CIAL may make in its annual reporting. In particular, these statements involve assumptions, forecasts and projections about CIAL's present and future strategies and CIAL's future operating environment. Such statements are inherently uncertain and subject to limitations, particularly as inputs, available data and information are likely to change.

The risks and opportunities described in this Climate-related Disclosure, and our strategies to achieve our targets, may not eventuate or may be more or less significant than anticipated. There are many factors that could cause CIAL's actual results, performance or achievement of climate-related metrics (including targets) to differ materially from that described, including economic and technological viability, climatic, government, consumer, and market factors outside of CIAL's control. CIAL gives no representation, warranty or assurance that actual outcomes or performance will not materially differ from the forward-looking statements. We disclaim to the fullest extent possible any liability whatsoever for any loss arising directly or indirectly from any use of the information contained in this report.

This disclaimer should be read along with the methodologies, assumptions and uncertainties and limitations outlined within these Climate-related Disclosures.

This Climate-related Disclosure is not an offer document and does not constitute an offer or invitation or investment recommendation to distribute or purchase securities, shares, or other interests. Nothing in this report should be interpreted as capital growth, earnings or any other legal, financial tax or other advice or guidance. For detailed information on our financial performance, please refer to our Annual Report, available at: https://www.christchurchairport.co.nz/globalassets/about-us/who-we-are/financial-reports/2024-annual-report--financial-statements.pdf

GOVERNANCE

Governance body's oversight of climate-related risks and opportunities

Our Board of Directors is responsible for the company's corporate governance and, as part of this, oversees the management of climate-related risks and opportunities. The Board's oversight includes:

- Ensuring that CIAL has appropriate risk management and regulatory compliance policies and practices in place, and monitoring the appropriateness and implementation of these.
- Promoting the long-term ambitions of the company with regard to Environmental, Social and Governance (ESG) matters by ensuring that appropriate strategies and action plans are in place to help underpin long-term shareholder and stakeholder value, including CIAL's Climate Policy (discussed below).
- Approving key performance criteria for CIAL and monitoring the performance of the Chief Executive Officer (CEO) against these.
- Approving and monitoring the company's Climate-related Disclosure and ensuring disclosure obligations are met.

Further information about the Board's role can be found in the Corporate Governance section of our FY24 Annual Report, page 70.

The Risk Audit and Finance (RAF) Committee is a sub-committee of the Board that supports the Board. It oversees the enterprise risk management framework and associated procedures for effective identification and management of the company's financial and strategic business risks (including climate-related risks); the setting and execution of our ESG strategy and priorities; and has specific responsibility for our Climate-related Disclosure and compliance with NZ CS.

All other Board sub-committees (Aeronautical, Property & Commercial, and People, Culture & Safety) as appropriate individually consider the impact of climate-related risks and opportunities on underlying strategies and business decisions being reviewed on behalf of the Board.

Governance processes and frequency

The Board receives updates such as progress against strategic initiatives and science-based targets, and relevant legislative changes in the monthly reporting prepared by management. Additional board papers are provided as required for deep dives into specific climate-related matters.

In the year ended 30 June 2024, the Board was kept appraised of key climate-related risks and opportunities via quarterly updates. These updates are prepared by management and reviewed by the relevant board sub-committee prior to being submitted to the Board.

Board skills and competencies

The Board Charter notes the high-level skills and competencies that are required of board members. The Board uses a skills matrix to assess and monitor its members' range of skills, including sustainability and climate change risk competencies.

The Board accesses climate-related expertise and advice from within the business and externally as required.

> "*The organisation* has established a dedicated team with high levels of competence and experience in climate change."

The organisation, has established a dedicated team with high levels of competence and experience in climate change threats and opportunities, including a Sustainability Transition Leader and sustainability advisors. This team provides the Board and management with updates on emerging best practice, regulatory requirements and other climate-related issues that are relevant. External expert advice and support is drawn upon as required, including to facilitate climate risk assessments and to peer-review the outputs of the assessment.

Integration with strategy

On an annual basis, the Board reviews all material business risks and opportunities, including those related to climate, and considers them in the approval of our company objectives, strategy, business plan activations, and budgets, including capital deployment. Funding of climate-related strategic priorities and ongoing operational activities is considered through these annual business plan and budgeting processes. Any major activations required to manage and mitigate business risk will be reflected as activities in the business plan.

Climate-related risks and opportunities are a key consideration in our airport campus master planning process. Planning to support our long-term terminal and campus plan is typically undertaken on a 10-year cycle, and our last plan was released in 2017. Given the speed of change across the policy, technology, industry, and climate change landscapes, planning is underway to update the Master Plan ahead of 2027 to take into account the potential airport infrastructure that may be needed to support the decarbonisation of the aviation sector and to enhance airport infrastructure resilience.

Setting and managing metrics and targets

The Board is responsible for setting and approving CIAL's Climate Policy, which contains our climate-related commitments and objectives (including GHG emission targets). Sitting under the Climate Policy is our Emissions Reduction Plan (ERP) which outlines the strategic initiatives we intend to activate to help in achieving our emissions reduction targets in line with our Climate Policy and science based targets. Responsibility for activating the ERP sits across the Executive Leadership Team (ELT). The ERP was last revised in 2023 and will undergo further updates every three years. The Board receives updates on the ERP as appropriate, for example where there is a material challenge or anticipated divergence from the agreed pathway.

Key climate-related metrics, including greenhouse gas (GHG) emissions, are reported to the Board monthly and annually through the business planning and reporting cycles.

The CEO is ultimately accountable for executing CIAL's business plan and achieving strategic targets, which is reflected in the performance-based component of the CEO's annual remuneration package. In FY24, the CEO's annual remuneration package included a variable at-risk salary element. One of the elements of the variable at risk remuneration included requirements related to climate-related risks and opportunities. This included master planning associated with future aviation needs, energy requirements and securing renewable energy supply. The Board sets and monitors these key targets as part of our half-yearly and annual reporting.

Management's role in assessing and managing climate-related risks and opportunities

By delegation from the Board, management is responsible for ensuring the business identifies, assesses, and monitors climate-related risks and opportunities.

Key roles with climate-related responsibilities include the CEO, who is ultimately responsible for the delivery of strategy, the Chief Strategy and Stakeholder Officer and the Sustainability Transition Leader.

Management submits to the Board various regular and ad hoc reports covering climate related topics. During the current reporting period the board received papers on climate risk assessment updates, climate scenario development, the Climate Change Commission's 2nd Emissions Reduction Plan, and campus-wide renewable energy generation and network infrastructure. Management attends board meetings to discuss the contents of the papers.

The ELT is informed about, makes decisions on, and monitors climate-related risks and opportunities through various channels, including:

- updates, as necessary, on changes to risk assessments or new / emerging risks through reporting from business units / risk owners in accordance with CIAL's enterprise risk management framework;
- quarterly reporting and review of GHG emissions by business unit (internal carbon dashboards);
- periodic reporting from the Sustainability Transition Leader on market and operating environment trends; and
- engagement in the climate risk assessment processes (planned to be undertaken at least every 5 years, with annual pulse checks).

CLIMATE-RELATED GOVERNANCE & MANAGEMENT RESPONSIBILITIES

BOARD AND BOARD COMMITTEES

CIAL BOARD

- Ensures CIAL has appropriate and effective risk and opportunity management practices in place, including for climate-related issues
- Assigns climate-related goals and targets to Management annually via agreed strategic objectives and targets and holds management accountable to these.
- Receives reports from the Risk Audit and Finance Committee.
- Receives risk and sustainability reports from management
- Approves CIAL Climate Policy

RISK AUDIT AND FINANCE (RAF) COMMITTEE

- Supports the Board in relation to risk management process and oversight.
- Reviews risk reports and new and escalating emerging risks and ensures risks are managed in accordance with policy.
- Periodically reviews whole of business risk analysis and makes recommendations to Board.
- Reviews and updates risk management framework and associated procedures.
- Reviews management's implementation of strategy and action plans on key issues (including climate).
- Monitors and reviews current and emerging trends to ensure the strategy remains well positioned.

OTHER BOARD COMMITTEES

- Consider the impact of climate-related risks and opportunities on the underlying strategies and business decisions being reviewed.

EXECUTIVE LEADERSHIP

CEO

- Delegated authority from the Board for management of climate-related risks and opportunities.
- Primarily responsible for the implementation of strategy and achieving strategic targets, including emissions reduction targets.

GM - FUTURE PLANNING & SUSTAINABILITY

- Reports on climate risks and initiatives and emerging areas.
- Monitors projects aligned to the ERP.

OTHER EXECUTIVE LEADERSHIP TEAM (ELT) MEMBERS

- Owners of the risks in their Business Unit.

OTHER MANAGEMENT ROLES

SUSTAINABILITY TRANSITION LEADER

- Enables effective integration of sustainability into strategy.
- Implements sustainability initiatives aligned with agreed strategic initiatives.
- Owns the CIAL Climate Policy and the Carbon Objectives therein.
- Reports/presents to RAF/Board on climate-related issues quarterly.

KEY RISK OWNERS

- The responsibilities for managing climate-related risks and issues are allocated to roles based on the nature of the issue and the associated Business Unit.

STRATEGY

Current business model

CIAL's core activity is the safe and efficient operation of airport facilities, facilitating air connectivity through the provision of appropriate landside and airside infrastructure, to meet the needs of all airport users (including both commercial and non-commercial aviation users), our customers, staff and the travelling public.

This also includes pursuing commercial opportunities with wider complementary products, services and business solutions where needed.

CIAL operates a diversified business portfolio. We organise our commercial activities into three areas: aviation; terminal and ground transport; and property development on campus.

Across each of these areas we adopt an intergenerational approach with the view that long-term projects meet future aviation, air-freight and e-commerce demands.

Our Purpose and Mission

Championing
TE WAIPOUNAMU THE SOUTH ISLAND & AOTEAROA NEW ZEALAND FOR TODAY AND TOMORROW

- OUR PURPOSE

CHRISTCHURCH AIRPORT IS RECOGNISED FOR

ENHANCING PEOPLE'S LIVES
Our team, customers, partners, communities

+

FUELLING ECONOMIC PROSPERITY
of the South Island and New Zealand

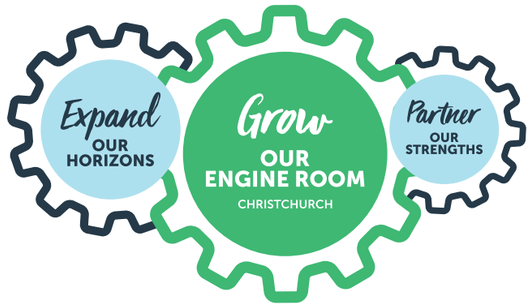
+

GREAT KAITIAKI OF OUR PLANET
Safety, security and sustainability

- OUR MISSION

Our strategy

Our Horizons 2030 strategy (H30) was implemented in FY23. The strategy is built on continuing to grow our engine room at our home base here in Christchurch, expanding our horizons into new geographies and disciplines, and partnering our strengths with others (e.g. Future aviation Energy Infrastructure).



Our framework

Our "4 Ps" framework will drive the activation of our strategy. Based around **planes, passengers, property and planet**, this framework has proven to be a successful approach to our core operations. This framework is well understood and embraced across the organisation and will continue to guide our actions under each strategic priority.

PLANES PROPERTY PASSENGERS PLANET

When developing our H30 strategy, we incorporated the impact of the long-term, macro trends we believe will shape the next decade – Digital Transition, Climate Change and the Future of Work. The integration of climate change considerations in our strategy development has identified three main areas of impact:

- **Mitigation** –removing emissions from our own controlled business operations[1] and supporting the emissions reduction goals of the wider aviation sector.
- **Adaptation** – adapting to changing weather patterns and building resilience into our assets and operations.
- **Transition** – preparing for societal scale energy transition.

The integration of climate change considerations into our strategy was aided by our scenario analysis.

[1]Further description of CIAL's controlled business operations is contained in the Metrics and Targets section of this Climate-related Disclosure.

SCENARIO DEVELOPMENT PROCESS

1. FOCAL QUESTION

Participants agreed the focal question, which was "How could climate change plausibly affect our business model and strategy, what should we do, and when?". The focal question provides a guiding purpose to the scenario analysis process while allowing flexibility to explore future possibilities.

2. DETERMINE BOUNDARIES

The boundary of the scenario analysis was confirmed as being defined by CIAL's core operations, and one tier up, and one tier down the value chain. The time horizons were agreed as short-term (now -2030), medium-term (2030-2050), and long-term (2050-2100).

3. KEY DRIVING FORCES

CIAL's view of the key driving forces was determined, with participants choosing from a long list drawn from various sector scenarios, including New Zealand Green Building Council; Aotearoa Circle's Tourism sector scenarios; and the Aviation sector's WayPoint 2050 Technology and SAF/Fuel availability scenarios. The modelling which is inherent in these sector scenario archetypes is the extent of the modelling used by CIAL in its scenario analysis.

4. RANKING

The key driving forces were ranked on an influence / certainty matrix, to determine which were most relevant to inform CIAL's scenario narratives.

5. FORMULATE

Participants worked in groups to formulate the driving forces' narratives under each scenario and time horizon, considering the political, social, and economic context.

6. CONSOLIDATE

The results of this session were consolidated into the scenario narratives as provided below, which were reviewed, challenged, and endorsed by the ELT and Board.

Scenario analysis

To help identify the risks and opportunities related to climate change, and better understand the resilience of our business model and strategy to these, we analysed three scenarios that describe challenging, plausible futures, exploring different assumptions for how climate policy, emissions, temperatures and physical risk impacts might evolve over time.

To develop and analyse the scenarios, a team of subject matter experts from across the business participated in a workshop session, facilitated by Deloitte, and followed the process outlined in the table opposite.

> "A team of subject matter experts participated in a Deloitte-facilitated workshop to identify climate change *risks, opportunities & scenarios.*"

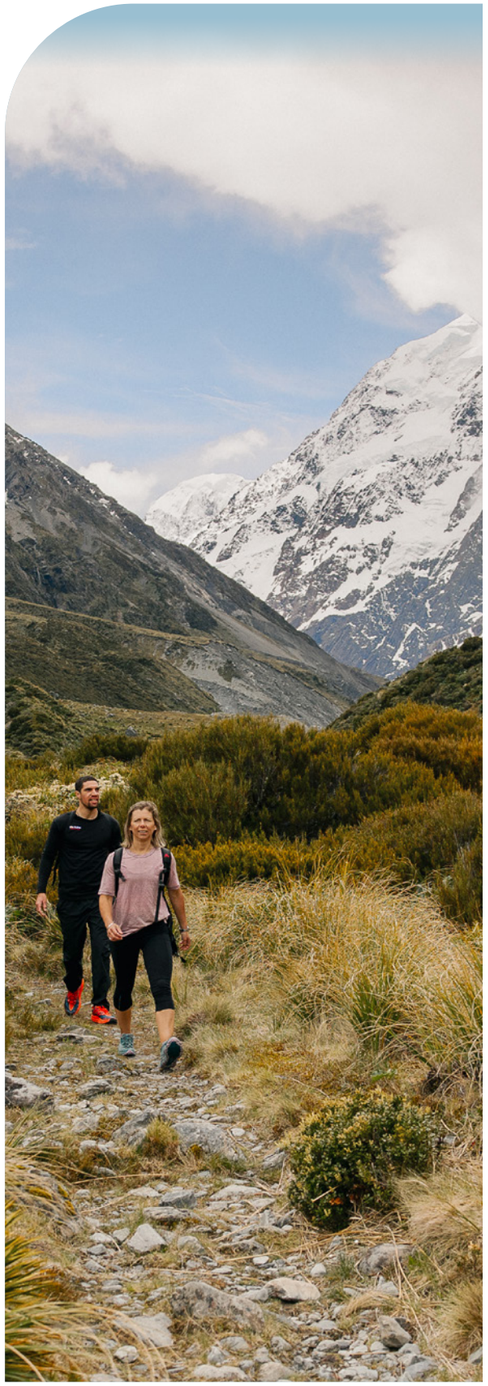
Scenarios chosen

We chose the scenarios for our analysis in accordance with NZ CS 1, to include a 1.5°C scenario ('Orderly') and a 3°C scenario ('Hot house world'). Our third scenario is a 'Disorderly' scenario, in which global average temperatures are limited to below 2°C. This scenario was chosen as the combination of transition and physical risks it presents in the medium-term makes it a highly challenging scenario under which to consider the resilience of our business model.

Timeframes used in scenario analysis

Within each scenario we focused primarily on the timeframe within which the scenario would present the greatest challenge to our strategy and business model. For an orderly transition, the short term will present high transition challenges, with low exposure to physical risk over the longer-term; a disorderly transition, where the response is delayed and disjointed, will result in higher transition challenges and slightly elevated exposure to physical impacts in the medium-term; while under a hot house world scenario, where the status quo is maintained, exposure to some transition risks is low, however, the years beyond 2050 will be increasingly challenging as exposure to physical impacts becomes more extreme.

Our scenario narratives were developed during FY24. This year the process was not integrated with the annual strategic planning process but was undertaken as a standalone exercise. We intend to review scenarios annually to determine if a refresh is required. Any updates will be submitted to the Board for endorsement.



ORDERLY SCENARIO

Critical Timeframe: Present Day – 2030
Average global temperature +1.5°C

LOCAL CLIMATE HAZARDS

- 45 wet days per annum
- 80 hot days per annum
- Extreme wind 70 km/hr

KEY DRIVING FORCES

Government priorities	Decisive and swift, supportive of decarbonisation
Infrastructure and energy needs	Early action and a well signalled pipeline
Decarbonisation of air travel	Well supported by infrastructure investors, regulators, and consumers
Emerging technology	Early investment & adoption of technology
Consumer preferences	Consumers actively seek lower emission air travel and products

SCENARIO ARCHETECTURE AND DATA SOURCES*

Intergovernmental Panel on Climate Change (IPCC) AR5, AR6	SSP1-RCP1.9
Network for Greening the Financial System (NGFS)	Orderly – Net Zero
Climate Change Commission (CCC)	Headwinds / Tailwinds^
NIWA	Downscaled RCP2.6
The Aotearoa Circle – Tourism Sector Climate Change Scenarios	Orderly Scenario
New Zealand Green Building Council – Climate change scenarios for the Construction and Property sector	Scenario 1
Air Transport Action Group – Waypoint 2050	Waypoint 2050

* Refer to appendix 3 for data sources.

^ CCC pathways were not used to inform physical and transition risk exposure; given the global drivers that influence the aviation sector, CIAL adopted global data sets (IPCC and NGFS), and downscaled NIWA data to inform physical risk exposure. In this regard, CCC transition pathways were referenced in a qualitative context only, to inform the types of national policy settings that would be in place under an orderly scenario

CIAL's Orderly scenario narrative

Political stability and strong policy frameworks reward investment into low-carbon aviation technology and the SAF supply chain, providing a stable investment environment. Globally, governments leverage fiscal and trade policies to address climate change and take a coordinated approach to reducing emissions from air travel.

Robust carbon markets and financial market regulation encourage investment into low carbon and climate resilient technologies and practices, indicating that economic growth is steadily decoupling from fossil fuels.

Government policy incentivises investment into renewable energy generating capacity and distribution networks. Public spending is invested in resilient low carbon infrastructure.

Consumers embrace decarbonising behaviour, which results in a change in consumer demand across different markets. Consumer demand for low-carbon alternatives accelerates change in the aviation industry. This is coupled with investors holding businesses to account for progress towards short –to-medium-term emissions targets.

New workforce pathways are formed in relation to sustainable aviation technologies. This provides local employment opportunities and confers a competitive advantage on New Zealand's aviation sector in terms of ready access to a local, highly skilled and competent workforce able to service next generation aircraft technology. New Zealand successfully internalises the benefits of the transition to a low carbon economy through advanced training opportunities, job creation and economic growth.

Under an orderly scenario, global warming is successfully constrained, and natural resources are carefully managed, which reduces price volatility and supply side shocks. Price stability and steady demand for clean tech provides investor confidence. Investors are willing to back sustainable aviation technology at a lower short-term economic return. There is appetite to accept write-downs on older assets in view of the cost savings potential and resilience opportunities associated with new, innovative technologies.

DISORDERLY SCENARIO

Critical Timeframe: 2030 - 2050
Average global temperature <+2°C

LOCAL CLIMATE HAZARDS

- 50-60 wet days per annum
- 75-85 hot days per annum
- Extreme wind 70-85 km/hr

KEY DRIVING FORCES

Government priorities	Delayed and disjointed
Infrastructure and energy needs	Delayed investment leads to high prices and resource scarcity
Decarbonisation of air travel	Slow and lacking clear direction in the early years, then rapid uptake and high demand
Emerging technology	Late investment in and adoption of technology leads to increased prices
Consumer preferences	Air travel declines in popularity due to price, especially long-haul

SCENARIO ARCHETECTURE AND DATA SOURCES*

Intergovernmental Panel on Climate Change (IPCC) AR5, AR6	SSP1-RCP2.6, SSP2-RCP4.5
Network for Greening the Financial System (NGFS)	Disorderly – Delayed Transition
Climate Change Commission (CCC)	n/a
NIWA	NIWA downscaled RCP4.5
The Aotearoa Circle – Tourism Sector Climate Change Scenarios	Disorderly
New Zealand Green Building Council – Climate change scenarios for the Construction and Property sector	Scenario 2

* Refer to appendix 3 for data sources.

CIAL's Disorderly scenario narrative

The international government policy response to climate change is delayed and disjointed. Emission reduction mandates are slow to be introduced and are poorly communicated and enforced, undermined by weak monitoring and compliance. This creates confusion and distrust among the aviation sector and consumers.

Governments across the globe are inconsistent regarding treatment of aviation emissions within their carbon budgets and targets until 2035. After 2035, governments introduce fiscal measures to penalise high emitting sectors. A combination of frequent climate-related delays and higher costs due to carbon taxes costs impacts air travel dynamics. Increasing social pressure to limit air travel culminates in increased opportunities for flight shaming activists.

Workforce pathways for sustainable aviation technologies are delayed and challenging to form. Training is time-pressured and local employees are not well supported to upskill. The result is higher overheads as skilled labour is imported.

The introduction of carbon border adjustment mechanisms has been delayed, as has international and domestic policy relating to low emissions fuel for aviation. This delay culminates in a surge in demand for technology and infrastructure that supports low carbon aviation, and New Zealand is limited in how it can respond due to its relative lack of buying power. With airlines slow to adopt technology, a lack of standardisation and coordination between networks and a reluctance from consumers to use new technology, advances in low-carbon air travel are limited.

HOT HOUSE WORLD

Critical Timeframe: 2050 - 2100
Average global temperature >+3°C

LOCAL CLIMATE HAZARDS

- 50-105 wet days per annum
- 70-85 hot days per annum
- Extreme wind 70-95 km/hr

KEY DRIVING FORCES

Government priorities	Limited focus and action on decarbonisation
Infrastructure and energy needs	Focus is on remediating impacts of climate change on infrastructure
Decarbonisation of air travel	Industry remains largely dependent on fossil fuels
Emerging technology	Little investment or adoption of technology
Consumer preferences	Demand impacted as air travel and freight becoming expensive and disrupted

SCENARIO ARCHETECTURE AND DATA SOURCES*

Intergovernmental Panel on Climate Change (IPCC) AR5, AR6	SSP5 RCP8.5
Network for Greening the Financial System (NGFS)	Hot house world – current policies
Climate Change Commission (CCC)	Current Policies
NIWA	NIWA downscaled RCP8.5
The Aotearoa Circle – Tourism Sector Climate Change Scenarios	Hothouse Scenario
New Zealand Green Building Council – Climate change scenarios for the Construction and Property sector	Scenario 3

* Refer to appendix 3 for data sources.

CIAL's Hot house world scenario narrative

Globally, governments' approach to managing climate change results in limited frameworks being established to incentivise decarbonisation of the aviation sector. Failure to adequately address climate change through policy and regulation has prolonged dependency on fossil fuels rather than sustainable activities.

A lack of regulation on financed emissions and climate-related disclosures results in limited sustainable finance options being made available to commercial borrowers. This extends demand for fossil fuels, causing countries to miss emissions targets.

The lack of skilled workers available to service aviation technologies within New Zealand requires imported labour, which comes at a high cost. Extreme weather events are frequent and intense and have a significant impact on the supply chain of equipment and components required for next generation aircraft technology and clean energy generation, causing prices to frequently spike.

While demand for domestic and international air travel continues, extensive and frequent disruptions due to climate change and geopolitical instability increase the risks and costs of air travel.

Price inflation due to resource scarcity has made air travel extremely expensive, while climate-related service disruptions have rendered air travel and air freight unreliable.

The physical climate impacts on aviation networks and airports significantly alters the mix of airline partners and travel destinations. The cost of finance increases and access to finance is limited as investors and banks price risk into debt.

Climate-related risk processes

A full Organisational Climate Change Risk Assessment (OCCRA) process was undertaken in FY23, with updates made to our Transition Risk assessment in FY24. This process entailed Deloitte facilitating a series of workshops to establish the scope and boundaries of the climate-related risk assessment; agree the global warming scenarios and strategic time horizons to test climate hazards against; and identify the key subject matter experts who would contribute to the physical and transition climate risk and opportunity identification and rating process.

Boundaries of risk assessment

The climate risk assessment included risks within the airport's direct sphere of operational control (for example, assets and operations within the airport campus, over which the airport has direct control); tier 1 upstream risks, (for example, supply chain logistics, resourcing through contractors, and energy security); and tier 1 downstream risks directly related to airside (for example, risks presenting for CIAL's airline customers). No parts of the value chain were specifically excluded.

Physical risks

Our physical climate change risk assessment process adopts the ISO14091-2021 climate risk methodology and aligns with the methodology followed by New Zealand Ministry for the Environment's National Climate Change Risk Assessment (NCCRA) for identifying, analysing, and evaluating physical climate risks.

> *Our physical* climate change risk assessment process adopts the ISO14091-2021 climate risk methodology...

Our most recent physical climate risk assessment involved subject matter experts (SMEs) from across the business identifying and rating physical risks. We ran a series of workshops, facilitated by Deloitte, in which our SMEs identified the risks, based on their insights, knowledge and observations, and assessed and rated the level of exposure, sensitivity and adaptative capacity of the airport to the identified risks over the selected time horizons and scenarios.

Physical risks were considered at three strategic points in time (2030, 2050, and 2100). These time horizons were chosen to align with our strategic planning horizons and asset design life and renewal cycles. This will help to ensure that, any major capital infrastructure investments we make in the short-to-medium term, incorporate the appropriate design specifications to withstand climate stressors that are projected to be in effect toward the end of the century.

The global warming scenarios adopted for the physical risk assessment included SSP1-2.6, SSP2-4.5 and SSP5-8.5, and we used NIWA's downscaled data for these scenarios to understand the climate change projections for the Canterbury region (Eastern South Island). The risks identified were systematically rated, using the downscaled climate projections provided by NIWA.

Initially more than 130 individual physical risks were identified and rated across the three risk areas of Operations, Assets, and People. The outputs of the physical risk workshops were then modelled to identify the most material risks by climate hazard, risk type, and risk area. See below physical risk table that outlines material risks identified as part of this workstream.

Transition risks

Our transition risk assessment adopted the categories provided by the Taskforce for Climate-related Financial Disclosures (TCFD) framework guidance. Transition risks were identified and assessed in a series of workshops that drew on the expertise and experience of SMEs from across the business.

Transition risks were identified against the backdrop of a NGFS Orderly Transition / IPCC AR6 SSP1-1.9 pathway. The assumption of the orderly transition is that the global objective of achieving emissions reductions commensurate with limiting global warming to no more 1.5°C has been achieved. The rationale for testing against this scenario is that, in terms of regulatory and policy frameworks, consumer preferences and expectations, and access to capital, transition risks are assumed to be high.

Transition risks were considered over a 30-year time horizon (i.e. a shorter horizon than applied for our physical risk assessment), on the basis that that the next 30 years are critical for the transition to a decarbonised economy. The short-term timeframe is current day to 5 years into the future (2024 – 2028), medium-term 5-15 years (2029 – 2038), and long-term 15-30 years (2039 – 2053). These time horizons were chosen to align with our strategic planning horizons.

In total, 31 transition risks were identified, and categorised as policy and legal risks, technology risks, market risks and reputation risks. 11 transition opportunities were identified and were categorised under the five TCFD categories of Resource Efficiency, Energy Source, Products and Services, Markets and Resilience. See below transition risk and opportunity tables that outline the material risks and opportunities identified as part of this workstream.

Our transition risks were assessed in FY23 using an urgency and time-bound criteria rating. During FY24 the assessment was expanded to rate the materiality and impact of the risks previously identified as most urgent, by applying our standard risk-consequence framework, which assesses the likelihood of the risk materialising and severity of the impacts.

Oversight of climate risks

The results of the physical and transition risk assessments were presented to the RAF Committee for review and feedback, prior to being presented to the Board for review and feedback.

Climate-related risks and opportunities, and anticipated impacts

While we have not yet quantified the potential financial impacts of the climate-related risks and opportunities identified, on a qualitative basis, transition risks are anticipated to present the most material risk to CIAL, particularly in the short to medium term.

Transition risks and opportunities

Because we have achieved significant reductions in our Scope 1 and 2 emissions, the transition risks and opportunities identified as priorities primarily relate to Scope 3 emissions in our value chain, both downstream in relation to the activities and costs associated with a transition to low carbon aviation and upstream in relation to power supply to support decarbonisation more broadly.

TRANSITION RISKS

Risk Area Key

- Markets
- Technology
- Policy & Legal
- Reputation

Scenario Key

- Orderly – SSP1-2.6
- Disorderly – SSP2-4.5
- Hot house world- SSP5-8.5*

Risk Key

- Low
- Moderate
- High
- Extreme

Timeframes Key

ST - Short-term: Now to 2028
MT - Medium-term: 2029 to 2038
LT – Long-term: 2039 to 2053

Risk Area	Risk Description	Current Impacts	Anticipated Impacts	Scenario	Timeframe ST | MT | LT
Markets, Policy & Legal, Technology	International and national policy response and / or investment in supporting infrastructure are not sufficient to facilitate the aviation sector's shift to zero-emissions technology.	Current levels of policy response and consequent investment in supporting infrastructure varies internationally, which is slowing the development and shift to zero-emission technology	If the industry doesn't shift to zero-emissions technology, it may result in CIAL being unable to capture an appropriate share of the next-generation aviation market.	Orderly – SSP1-2.6 Disorderly – SSP2-4.5 Hot house world- SSP5-8.5*	High | High | Low High | Extreme | High Low | Low | Low
Markets, Technology	Energy generation and transmission capacity is insufficient to support the decarbonising economy, and supply constraints cause higher prices and / or interrupted supply (black/brown outs).	CIAL continues to participate in loadshedding for Orion by using diesel generators rather than the grid during demand peaks.	Higher energy prices and supply interruptions may result in operational disruption and, ultimately, revenue / market share loss.	Orderly – SSP1-2.6 Disorderly – SSP2-4.5 Hot house world- SSP5-8.5*	High | High | Low High | Extreme | High Low | Low | Low
Markets	The cost of air travel increases (due to regulations e.g., carbon tax, SAF mandates and / or market forces e.g., fuel price).	No current impact being specifically observed related to the cost of air travel due to regulation or market forces.	Increased costs of air travel may result in inequitable access to travel, reduced demand, and consequent loss of revenue for CIAL.	Orderly – SSP1-2.6 Disorderly – SSP2-4.5 Hot house world- SSP5-8.5*	Moderate | High | Low Moderate | High | Moderate Low | Low | Low
Markets	Scarcity of Sustainable Aviation Fuel (SAF) or deployment of other new technologies presents a procurement and investment challenge for the sector and presents risks to the make-up of CIAL's future long-haul network partners.	CIAL's long-haul network partners are currently impacted by scarcity of SAF, making it hard to source and more expensive. The scarcity is not currently impacting flight schedules to and from Christchurch.	If CIAL cannot facilitate the required volumes of SAF to meet demand from its partner airlines it may lose market share.	Orderly – SSP1-2.6 Disorderly – SSP2-4.5 Hot house world- SSP5-8.5*	Moderate | Low | Low Moderate | High | Moderate Low | Low | Low
Markets	Public attitude towards climate change and aviation means heightened scrutiny and shifting consumer preferences for travel and freight.	No material impact has been identified from change in public attitude or customer preferences.	A change in consumer demand for air travel and freight may cause a stagnation or contraction of the overall market and reduce CIAL's revenue.	Orderly – SSP1-2.6 Disorderly – SSP2-4.5 Hot house world- SSP5-8.5*	Moderate | Low | Low Moderate | High | Moderate Low | Low | Low

* A Hot house world scenario describes a future where limited effort, policies or consumer change has taken place to transition to a low emissions environment. Consequently, transition risks are limited under this scenario.

TRANSITION OPPORTUNITIES

Opportunity Type Key

- Energy Source
- Resilience
- Resource Efficiency
- Markets

Timeframes Key

ST - Short-term: Now to 2028
MT - Medium-term: 2029 to 2038
LT – Long-term: 2039 to 2053

Opportunity type	Opportunity description	Current Impacts	Anticipated Impacts	Timeframe ST | MT | LT
Energy Source	Our ability to invest in infrastructure and our access to land is an advantage.	Kowhai Park development includes construction of an onsite substation which will be owned by CIAL to support electrical distribution for both future aeronautical and property demand.	Creates opportunity for market leadership in terms of Investment in and leverage of access to renewable sources and clean technology infrastructure.	High | Low | Low
Energy Source	We have an opportunity to facilitate onsite renewable energy generation, for example we are partnering on the Kōwhai Park development.	As part of the Kowhai Park development process the Airport has secured a long-term renewable Purchase Price Agreement (PPA)	PPA shields CIAL from rising energy prices and if onsite H2 production is undertaken, fossil fuel supply scarcity issues	High | Low | Low
Resource Efficiency	We have an opportunity to electrify operations (for both our own operations and facilitation of our partners' operations, for example this may include ground power units for aircraft and charging stations for ground transport).	A new electric charging hub is in construction by one of our tenants to support both rental and personal vehicle charging on campus.	Reduction in costs relating to fossil fuel, improved supply chain resilience by reducing reliance on fossil fuel (CIAL and partners), and the potential opening up of new markets.	High | Low | Low
Resilience	Kōwhai Park unlocks opportunity and attracts investors, tenants, and customers.	Engagement with existing and potential campus tenants and customers to articulate the value Kowhai Park opportunity provides and how we can support their decarbonisation journey.	This will enhance CIAL's relationships with local and external stakeholders and improve our ability to form and leverage partnerships.	Low | Moderate | Low
Markets	The transition presents an opportunity for CIAL to be first mover and market leader in New Zealand future aviation infrastructure and expertise.	No current impact	Market leadership will provide early access to low emissions aviation technology – New Zealand will need to leverage the buying power of being a first mover.	Low | Moderate | Low
Markets	First mover advantage afforded through rapid investment in future focused aviation infrastructure and opportunity to become a green infrastructure hub in New Zealand.	No current impact	This has the potential to improve CIAL's market share and open up potential new aviation markets.	Low | Moderate | Low
Markets	There is an opportunity for CIAL to partner with airlines that are aligned with our climate goals.	Airline partner and potential partner engagement includes specific focus on how to collectively align and support decarbonisation strategies	This has the potential to open up potential new aviation markets.	Moderate | Low | Low
Resilience	Our market position provides an opportunity for CIAL to advocate for policy through trusted engagement with regulator and key stakeholders.	CIAL currently sits or advises a number of regulatory and industry groups	Our market position and advocacy could enhance policy development to support the transition to a low-carbon economy.	Moderate | Low | Low

PHYSICAL RISKS

CIAL experienced no material physical impacts from climate change in the reporting period.

Scenario Key

- Orderly – SSP1-2.6
- Disorderly – SSP2-4.5
- Hot house world- SSP5-8.5

Risk Key

- Moderate
- High
- Extreme

Timeframes Key

- Short-term (ST): Now to 2030
- Medium-term (MT): 2030 to 2050
- Long-term (LT): 2050 to 2100

Climate Hazard	Risk types	Anticipated Impacts	Scenario	Timeframe ST | MT | LT
	Increasing hot days result in energy insecurity, increased operations and maintenance costs, disruption to operations and asset upgrade investments.	Asphalt flushing of linear infrastructure in and around the airport campus (including the apron and runways), presenting risk of increased remediation costs.		
		Rolling brownouts due to drought impacts on hydro energy generating capacity, presenting an energy security risk.		
		Increased investment in heat refuge for customers, requiring increased investment in air bridges, covered walkways, walking carpets etc.		
		Increased energy demand, requiring electrical equipment and HVAC upgrade across the airport campus, presenting a risk of increased remediation and maintenance costs.		
	Extreme weather events such as storms and tropical cyclones result in disruptions to the supply chain, critical work, and logistics, lost revenue / increased costs and injuries to people.	Aviation fuel supply is disrupted by port closures and shipping delays, causing a fuel security risk.		
		Reduced weather windows for construction and maintenance (airside and landside) present a risk of increased cost and/or revenue losses associated with delays and cost over-runs.		
	Fluvial and pluvial flooding result in increased repair costs, disruption to operations and asset upgrade investments	Flood damage to airport campus due to the Waimakariri River breaching the stop banks.		
		Subsidence occurs due to shifting subsoil structure and subsequent damage to infrastructure, presenting a risk of increased remediation costs.		
	Increased rainfall results in investments in asset upgrades; increased operating costs; revenue loss.	Stormwater and wastewater infrastructure requires upgrading to increase capacity.		
		Leaks in campus and terminal buildings result in increased remediation costs and disruptions to operations.		
		Investment is required in covered walkways, anti-slip surfacing, covered carparks and rental car yards.		

TRANSITION PLANNING

New Zealand's aviation sector is expected to face increasingly frequent and severe weather events, and constraints relating to SAF availability and the commercialisation and availability of next-generation aircraft. In light of these challenges, CIAL aims to develop its airport as an alternative fully capable all-weather airfield to provide additional resilience to the country's long-haul capable airport infrastructure, and we plan to reflect our physical and transition risks in our transition plan, which is in development[2]. The output of the transition planning is intended to feed into our wider business strategy, master plan and updated asset management plan. Many of the key building blocks for our transition plan are already in place, as set out below.

CIAL has committed to maintaining Net Zero Scope 1 & 2 emissions,[3] which we achieved in 2021, and to eliminating all Scope 1 and 2 GHG emissions from our operations by 2035.

We are also focussed on partnering where possible to accelerate the decarbonisation of our wider aviation sector and supporting the sector collective long-term aspirational goal (LTAG[4]) of net zero carbon emissions by 2050.

Our Emissions Reduction Plan (ERP) sets out initiatives to help in addressing our remaining scope 1 & 2 emissions, (as well as barriers and dependencies). It also contains details of our proposed actions to bolster support of the wider sector LTAG net zero 2050 goal.

We recognise that many factors will contribute to our ability to achieve our goals, and much is uncertain about the path to 2050 in the aviation sector in particular. We are focussed on implementing change for those emissions sources within our direct control. For our scope 3 emissions, which include emissions from flying, we recognise that these are outside of our direct control. The ability of the sector to reach LTAG net zero by 2050 will rely on a number of external factors including a supportive policy environment, the ability of our airline partners to decarbonise, the availability of next-generation aircraft and the availability of alternative forms of aviation fuel. That's why we are committed to the initiatives outlined below, including our Stakeholder Partnership Plan (which forms part of the wider ERP) that underpins our engagement with airlines, to play our part in the sector's decarbonisation. These initiatives are incorporated into our business plans and budgets.

> "CIAL *has committed* to maintaining Net Zero Scope 1 & 2 emissions, achieved in 2021."

Major project – Kōwhai park

The energy transition presents the most material and immediate transition risk to CIAL. Within our climate action pathway, it is one of the most impactful activations that is within our control.

In 2021 Christchurch Airport set aside 400 hectares of land to the western side of the airfield for the development of Kōwhai Park. Kōwhai Park is intended to be developed under an ecosystem approach where the total system, rather than a single development, can enable a range of potential future technology and opportunities across solar generation, battery storage, national transmission and local distribution, future aviation charging, and hydrogen production (noting that such future technology and opportunities are dependent on a range of external factors outside of CIAL's control (including government policy, viability of technology, appropriate investment and customer demand)).

The plan for the initial phase is to deliver a 230-hectare solar array, which in turn will enable an increased grid connection. Contact Energy and Lightsource bp have been selected as our preferred development partners for Phase One. They reached final investment decision to proceed with the project in August 2024.

Facilitating on-site solar generation and potential future storage is expected to help in addressing a climate related risk as it provides us, and the wider network, with a degree of energy supply resilience.

The ability to support potential future development of green hydrogen using energy generated from Kōwhai Park may also provide a degree of supply chain resilience.

[2] As noted in Appendix 1, CIAL is utilising the first reporting period exemption from NZCS 1 paragraphs 16(b) and 16(c).
[3] We define 'net zero' according to the GHG Protocol, as having reached 90% absolute CO_2e emissions reductions in Scope 1 and 2 with the remaining balance of greenhouse gas (GHG) that's produced having been removed from the atmosphere. To achieve net zero, we utilise offsets as described further on page 33.
[4] 2500 delegates from 184 States and 57 organizations at the 41st International Civil Aviation Organisation (ICAO) Assembly, adopted a collective long-term global aspirational goal (LTAG) of net-zero carbon emissions by 2050.

Emissions reduction

Over recent years we have removed over 90% of our Scope 1 and 2 emissions from our operations (against our 2015 baseline). Our current priority in relation to GHG emissions is to support our stakeholders to achieve their ambition of low-carbon aviation in New Zealand. This includes supporting on campus customers to reduce energy usage by enabling low emission buildings, an EV charging hub and the ability to electrify using the Kowhai Park network connection (once built).

CIAL has developed a detailed Stakeholder Partnership Plan to identify supply chain Scope 3 emissions. This plan includes working with our airline partners to provide (or enable the development of) the infrastructure required to support the transition to low carbon aviation.

We will continue to participate in a range of working groups to understand and advocate best practice emissions reductions across our industry, including Sustainable Aviation Aotearoa, Sustainable Business Council, Airports Council International (ACI) Asia Pacific and New Zealand Airports Association.

Adaptation / resilience

We recognise the physical impacts of climate change may present risks to our assets in the long-term future, and the consequent need to adapt and future proof our assets and operations, and reduce our vulnerability to climate hazards. To help us respond to this, we are commencing a process to update our 30-year master plan, which will consider a wide range of aspects across the airport campus including the electrification of our terminal and ground transport strategy, investment property strategy, capacity and resilience of energy supply, climate adaptation requirements and operational resilience.

It is worth noting the role CIAL plays in handling displaced aircraft and passengers when major weather events or infrastructure limitations (e.g., fuel supply) impact other parts of the country. Aviation relies on a network, which means that an impact on one node has flow-on effects for the other nodes. As we are the only wide-body capable airport behind Auckland International Airport, and the diversion airport for most international airlines, we will continue to play an active role in supporting national resilience.

As part of the development of our transition plan, we intend to develop our physical risk adaptation plan which will identify key adaptation actions required for the most material physical climate risks together with timeframes and investment needs. None of the required initiatives are likely to be material in the short- to medium-term.

Interaction of Transition Plan and Business Strategy

Our Transition Plan will, once developed, integrate into our overall strategy, inform our Master Plan which, as described elsewhere in this document, serves as a broad guide to our long-term capital deployment strategy and will be refreshed over the next two years.

RISK MANAGEMENT

Integration of climate risks to our Risk Management Framework

Our risk management framework provides the Board and management with a clear understanding of how strategic and operational risk is managed across the organisation. Climate-related risks are assessed under this risk management framework as part of the annual business planning process. It sets out the high-level approach to each stage of risk management:

Risk **identification** considers the objectives of the business plan and strategy, across business-as-usual and projects. Our climate-related risks were identified in a series of workshops with SMEs from across the business, as described previously.

Our **assessment** of non-climate related risks requires the determination of consequence and likelihood, each assessed on a five-point scale, to derive a risk rating. This rating enables risks to be prioritised, to ensure that our resources are focused on the area of greatest exposure or opportunity.

We assess climate-related risks slightly differently, to account for their chronic and temporal nature. Physical climate-related risks are assessed on exposure, sensitivity, and adaptive capacity, and transition risks are assessed on urgency and impact. These elements are scored, and the score is aligned to our five-point scale, thereby enabling the climate-related risks to be integrated into our existing risk register and prioritised and managed in the same manner as all other identified risks.

Risk **management** can then be considered and, depending on the risk appetite, options could include avoiding the risk, reducing the likelihood, or reducing the consequences (including adaptation and mitigation). The treatment then informs the business strategy and planning.

Monitoring is through the Risk, Audit and Finance (RAF) committee's quarterly review, informed by updates from key managers and the ELT. The level of reporting is determined by the severity of the risk, with key risks reported to the Board. External advisors are engaged to undertake a peer review of risk monitoring and reporting activity.

In addition to the regular risk identification, analysis, monitoring, and reporting undertaken as part of the enterprise risk management framework, we intend to undertake a full climate risk assessment review every five years, or as indicated through an annual review for any material changes that indicate a reassessment is required.

> "*Risk identification* considers the objectives of the business plan and strategy, across business-as-usual and projects."

METRICS AND TARGETS

GHG EMISSIONS METRICS[5]

EMISSION SOURCE	TONNES CO2-E (LOCATION-BASED)			TONNES CO2-E (MARKET-BASED)		
	FY24	FY23	FY22	FY24	FY23	FY22
Scope 1: Direct GHG emissions[6]	280	222	219	280	222	219
Scope 2: Indirect GHG emissions	1,042	1,062	1,539	-	-	-
Scope 3, category 1, purchased goods and services	3,172	1,064	953	3,172	1,064	953
Scope 3, category 2, capital goods	4,295	6,022	4,494	4,295	6,022	4,494
Scope 3, category 3, fuel- and energy-related activities	90	173	198	90	173	198
Scope 3, category 5, waste generated in operations	283	563	214	283	563	214
Scope 3, category 6, business travel	393	836	81	393	836	81
Scope 3, category 7, employee commuting	86	423	431	86	423	431
Scope 3, category 11, use of sold products[7]	798,459	698,277	527,465	798,459	698,277	527,465
Scope 3, category 13, downstream leased assets	971	958	1,069	971	958	1,069
TOTAL	**809,084**	**709,600**	**536,663**	**808,042**	**708,538**	**535,124**

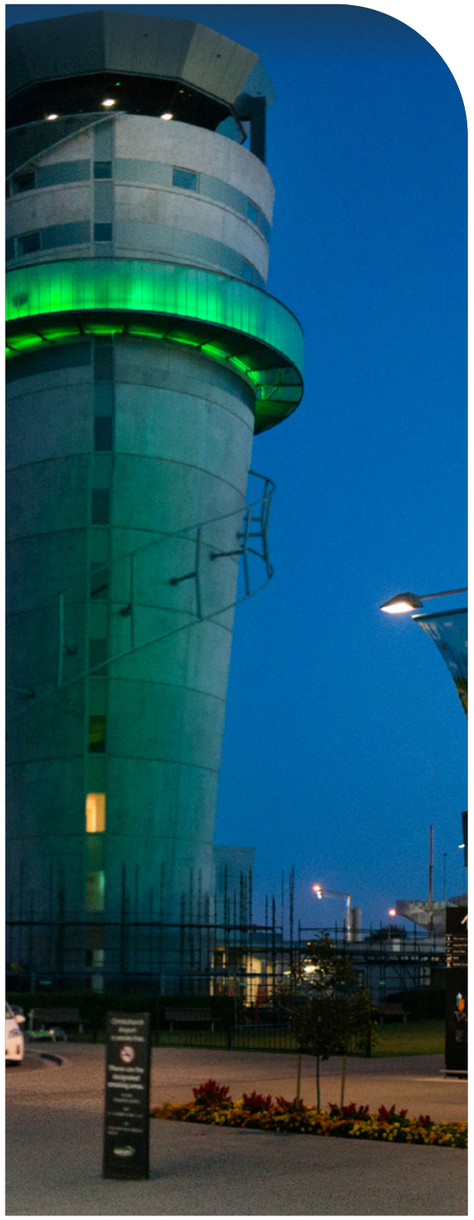
EMISSION SOURCE	TONNES CO2-E PER PASSENGER (LOCATION-BASED)			TONNES CO2-E PER PASSENGER (MARKET-BASED)		
	FY24	FY23	FY22	FY24	FY23	FY22
Scope 1 and 2 Emissions per passenger[8] (tCO2e)	0.0002	0.0002	0.0005	0.0000	0.0000	0.0001
Scope 3 (categories above): Emissions per passenger (tCO2e)	0.1291	0.1245	0.1642	0.1291	0.1245	0.1642
Total: Scope 1,2 and 3 Emissions per passenger[9] (tCO2e)	**0.1293**	**0.1247**	**0.1647**	**0.1292**	**0.1245**	**0.1643**

[5] The figures in this table are based on our GHG inventory, which has been independently verified by TUV SUD America Inc in FY24 and Ruby Canyon Environmental Inc for FY23/FY22.
[6] Whilst we remain on track with our Scope 1 and 2 emissions reduction trajectories to achieve our 2035 target, our FY24 Scope 1 emissions have increased from prior year as a direct result of increased load shedding required to support the national electricity network resilience.
[7] This includes full flight emissions, which are based on fuel consumption on all departing flights from Christchurch Airport to their destination.
[8] The denominator (passengers) refers to any person carried on an Aircraft with the exception of the flight crew and cabin staff operating the flight and infants aged under 2 years.
[9] CIAL does not use an intensity metric in the management of our emissions, as we believe it is more important to focus on absolute emission reductions. We have chosen to disclose the tCO2e/pax metric to align with our peers.

GREENHOUSE GAS EMISSIONS

CIAL is a participant in the Airport Carbon Accreditation (ACA) programme, an institutionally-endorsed, global carbon management certification programme for airports.

It independently assesses and recognises the efforts of airports to manage and reduce their carbon emissions through various levels of certification. CIAL has participated in the programme since 2017 and is currently at Level 5, the highest level. The programme requires, amongst other things, independent verification of our carbon footprint and our claims relating to carbon management processes. We voluntarily offset our residual Scope 1 and 2 emissions in accordance with the ACA.



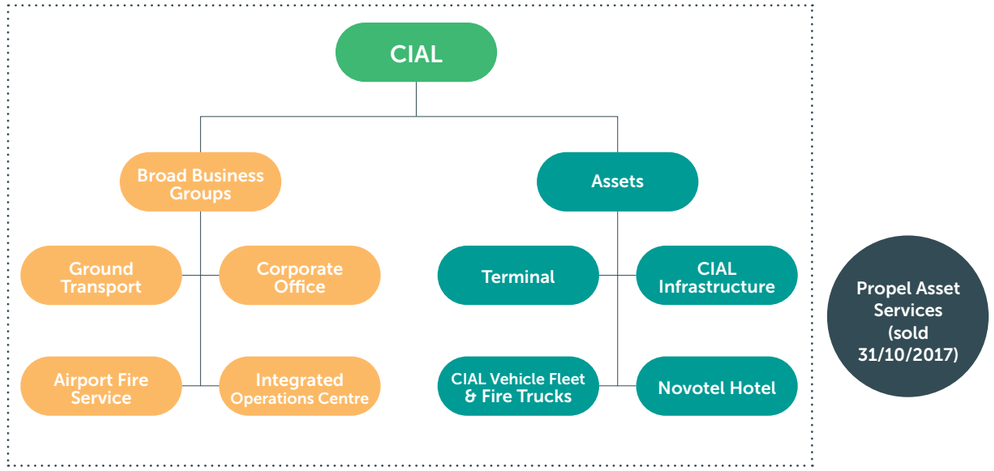
Our GHG Emissions inventory has been prepared in alignment with the following standards:

- The requirements set out in the Airport Carbon Accreditation (ACA) Application Manual, Issue 14, December 2023,
- The New Zealand Ministry for the Environment's (MfE) Measuring Emissions: A Guide for Organisations, MfE Guide 2024 ('Detailed Guide 2024'),
- The relevant 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.
- ISO 14064-3:2019 – Specification with guidance for the verification and validation of greenhouse gas statements
- The guidance and recommendations set out under the
  – Airports International Council's Guidance Manual: Airport Greenhouse Gas Emissions Management, and
  – Airport Cooperative Research Program's Guidebook on Preparing Airport Greenhouse Gas Emissions inventories.

CIAL uses an operational control approach in the measurement of its GHG emissions.

The organisational boundary determines which parts of CIAL are included in the GHG inventory. In the context of airport operations, determining greatest authority to introduce operating, health and safety, and environmental policies can be complex. They may be dependent on the contractual relationship between various parties. In some circumstances, the greatest authority will rest with CIAL as the corporation with day-to-day on-site managerial responsibility. This, however, must be balanced against the ability to introduce operating and environmental policies, which (in the context of CIAL's property portfolio) can sometimes rest with CIAL tenant's.

Figure 1: Organisational Boundary



Emission factors and calculation methodologies used to prepare our GHG inventory are sourced from:

- The NZ Ministry for the Environment's Detailed Guide 2024,
- The Airport Council International's Airport Carbon and Emissions Reporting Tool (ACERT v7.2338),
- The ICAO CORSIA CO2 Estimation and Reporting Tool,
- Australian National Greenhouse Accounts Factors 2023,
- The expenditure-based emission factors from the Australian Climate Active Carbon Neutral initiative Activity Calculator v8.1,
- The e-tool software for estimating up-front embodied emissions (note: this assessment was conducted by Thinkstep ANZ), and
- The UK DEFRA 2024.

Emissions from carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and specified hydrofluorocarbons (HFCs), are included in our GHG inventory. Emissions are measured in tonnes of carbon dioxide equivalent (tCO_2-e). The carbon dioxide equivalent (CO_2-e) allows the different greenhouse gases to be compared on a like-for-like basis relative to one unit of CO_2. CO_2-e is calculated by multiplying the emissions of each of the four GHGs covered in this report by its 100-year global warming potential (GWP) specified in the IPCC's Fourth Assessment Report.

Our sources of emissions are aligned with the ACA program, which uses the GHG Protocol's operational boundary definitions for describing direct and indirect emissions.

The activities considered within Airport direct operational control (those which an airport is able to directly affect) are categorised as Scope 1 and Scope 2 emissions. Those activities that sit within an airport's indirect control (those which an airport may be able to influence but not directly control) within their supply chain are classified as Scope 3 emissions, as per the GHG Protocol and the ACA Application Manual (Issue 14).

Scope 1: Direct GHG emissions that occur from sources that are owned and/or controlled by the airport, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.

Scope 2: Indirect GHG emissions that occur from the generation of purchased electricity, steam, heat or cooling consumed by the airport. Scope 2 emissions physically occur at the facility where purchased electricity is generated.

Scope 3: All other indirect emissions in the value chain of the airport operator that occur from sources not owned and/or controlled by the company (e.g. purchased goods and services, aircraft movements, vehicles and equipment operated by third parties, off-site waste management, etc.). Such sources can be located inside or outside the airport premises (geographical boundary). They include upstream emissions (Categories 1-8: indirect emissions related to purchased or acquired goods and services, if applicable) and downstream emissions (Categories 9-15: indirect emissions related to sold products and services, if applicable). The range of scope 3 emission sources has been expanded over time to respond to new evidence and reach compliance with various other international standards and recommendations.

Our Scope 3 Emissions includes Categories 1, 2, 3, 5, 6, 7, 11, and 13 namely, purchased goods and services, capital goods, fuel and energy-related activities not included in Scope 1 and 2, waste generated in operations, business travel, employee commuting, use of sold products (which includes full flight emissions, which are based on fuel consumption on all departing flights from Christchurch Airport to their destination) and downstream leased assets.

Categories 12, 14 and 15, namely end-of-life treatment of sold products, franchises, and investments are currently excluded from both the GHG inventory and the climate risk assessment, given that these are not relevant for the airport.

CIAL's GHG inventory is based on the best data available and emissions factors at time of compilation. Achieving a complete GHG inventory can require using less accurate or complete indirect/scope 3-related data, affecting accuracy and completeness. It can be difficult to determine or verify the source and quality of indirect/scope 3 emissions data supplied by third parties, etc.

The following sources of emissions have been excluded from the inventory:

- Stored CO2 in fire extinguishers other than those used for fire training – The contribution of this emission source to the total carbon footprint is de minimis.
- SF6 – CIAL is not aware of any SF6 sources being used in airport operations.

A full GHG Emissions Report with greater detail on methodology, boundaries and assumptions is available online at https://www.christchurchairport.co.nz/globalassets/about-us/sustainability/carbon/fy2023-24-independent-ghg-inventory-report.pdf

See FY24 GHG Emissions Verification Opinion in Appendix 2.

Use of offsets

As outlined throughout this CRD, CIAL's principal focus is on gross emissions reductions. In addition to this, in FY24 we worked with New Zealand-based carbon management firm Ekos to purchase and progress the permanent cancellation of a volume of New Zealand Units (NZUs) under the New Zealand Emissions Trading Scheme (ETS) that is equivalent to our FY23 residual Scope 1 and 2[10], and Voluntary Carbon Units (VCUs) equivalent to a portion of CIAL's FY23 scope 3[11] GHG emissions[12] . This purchase and cancellation of NZUs and VCUs has been undertaken by CIAL as a voluntary additional action.

The NZUs cancelled by Ekos on CIAL's behalf in FY24 were sourced from a post-1989 forestry project in Jacks Valley that is registered under the ETS and will also be accounted for by New Zealand's reporting against its Nationally Determined Contribution under the Paris Agreement. The forest consists of indigenous forest and exotic forest that is transitioning to indigenous forest. Further information about the Jacks Valley forest project is available on Ekos's website: https://www.ekos.co.nz/project-jacks-valley. Ekos cancels NZUs on behalf of its clients quarterly and has its unit cancellation independently audited. The VCUs cancelled by Ekos on CIAL's behalf in FY24 were sourced from an avoided deforestation project in the New Ireland province, Papua New Guinea. These offsets are certified to the Plan Vivo Standard and retired in the Markit Environmental Registry. We intend to cancel NZUs and VCUs equivalent to our FY24 remaining emissions.

> "CIAL's principal focus is on gross emissions *reductions.*"

Other metrics and targets

Our metrics and targets are set out in the following tables.

We do not currently use any relative emissions measures (i.e. per passenger or per square metre)- these measures have been included above for peer comparison purposes only.

[10] These NZUs were voluntarily cancelled on 24 Sept 2024.
[11] As of the date of this Climate-related Disclosure, we are awaiting the retirement of these VCUs through Ekos.
[12] Extended Scope 3 emissions were deemed to include upstream transport and distribution of goods, business travel (flights, accommodation etc), staff working from home, waste generated in operations (solid waste to landfill and wastewater to water treatment plants), transmission and distribution losses for electricity and natural gas), well to tank emissions for fuel, emissions from purchased goods, downstream leased assets, and tenant de-icing substances.

OTHER METRICS AND TARGETS

Metric	GHG Emissions - Scope 1 and 2.	
Absolute Target	Maintain Net Zero Scope 1 and 2 emissions (this includes maintaining 90% reduction across Scope 1 and 2 from 2021 onwards). This is an absolute (as opposed to intensity) reductions target.	Absolute zero Scope 1 and 2 emissions by 2035. Absolute target (not intensity).
Timeframe	Ongoing.	2035.
Base year	2015.	2015.
Performance against target	We have achieved Net Zero Scope 1 and 2 emissions since 2021. Net Zero is as defined by the GHG Protocol and requires us to maintain over 90% reduction in Scope 1 and 2 emissions (from a 2015 base year) and to offset the remaining emissions. In FY24 we offset our emissions from FY23 and we also maintained the 90% reductions for FY24. We intend to offset our remaining FY24 emissions in FY25.	We have successfully reduced our Scope 1 and 2 emissions by more than 90% against a 2015 baseline. We are committed to the long-term target of absolute zero Scope 1 and 2 emissions, no later than 2035. Our current Scope 1 and 2 emissions for FY24 are reported on page 29 (FY24 – 1,322 Tonnes CO2-e (location-based) and 280 Tonnes CO2-e (market-based)).
How target contributes to limiting global warming to 1.5°C and basis of this opinion	We set these targets to be ahead or aligned with the projected pathway created using the free online Science Based Targets Initiative net-zero tool, which outlines the reductions in emissions required to meet the Paris Agreement and limit global warming to 1.5°C.	
The extent to which the target relies on offsets	In this reporting period we offset the remaining Scope 1 and 2 emissions from FY23 to achieve net zero. Refer to page 33 for further explanation regarding CIAL's use of offsets.	This target does not rely on offsets.
Offset verification and scheme	Refer to page 33.	N/A
Assumptions and sources of uncertainty	Our ability to maintain a 90% reduction and our Net Zero position relies on a number of factors, some outside of CIALs control. These include the availability of clean back-up generator technology, zero emission refrigerants, zero emission fire fleet alternatives, decarbonised de-icing substances and continued access to renewable energy certificates. Further, the assumptions and sources of uncertainty associated with measuring our GHG emissions are covered in detail in the GHG Inventory document (available at https://www.christchurchairport.co.nz/globalassets/about-us/sustainability/carbon/fy2023-24-independent-ghg-inventory-report.pdf). This includes explanation of operational and organisational boundaries, methodologies used. With Scope 1 & 2 this is based around volumes consumed and NZ or industry specific emissions factors. With Scope 3 this details where data is unavailable, how we have used capital expenditure to estimate emissions.	To achieve our 2035 target, new technologies will be required. This includes low emission refrigerants, a full fire truck fleet conversion, and new technology to replace our back-up generators.

In addition to our scope 1 and 2 targets, in order to align with a 1.5°C pathway as laid out by the SBTi net zero tool, our ambition is to support the LTAG net zero targets of the broader aviation sector by 2050. As noted in the scenario analysis narratives as well as the transition planning section contained in this Climate-related Disclosure, there is significant uncertainty about the exact trajectory towards 2050, and this pathway will be extensively reliant on technology (eg. availability of next-generation aircraft and availability of alternative forms of aviation fuel), regulation and partner capability, much of which is outside our control. We will update our position and pathway toward 2050 over time in light of progress and changing circumstances.

OTHER METRICS

Business activity vulnerable to transition risks	• While we have not yet undertaken a detailed quantitative assessment, we estimate based on FY24 audited financial information that all of CIAL's core operational business activity (aeronautical, passenger, and park to plane), which represents c.64% of our total revenue, is vulnerable to transition risk. • We have made significant progress in reducing our controllable emissions, however the ability and timeframe for the aviation industry to develop and access the technology and investment needed to decarbonise exposes all of CIAL's aeronautical, freight and passenger related revenue streams to a degree of transition risk.
Assets / business activity vulnerable to physical risks	• While we have not yet undertaken a detailed quantitative assessment, we estimate the majority of CIAL's assets and business activities are subject to essentially the same physical hazards, given they are located on the Christchurch campus. However, the degree to which they are expected to be impacted varies, as a function of each asset's exposure, sensitivity and adaptive capacity, as considered in our climate risk assessment processes. • In terms of business activity, the core operations of aeronautical, passenger, and park to plane, which together comprise c.64% of our revenue, are all subject to disruption from severe weather events. Property revenue, which represents c.36% of revenue, is less likely to be impacted by severe weather events.
Assets / business activities aligned with climate-related opportunities	• While there are several key climate-related opportunities for Christchurch Airport (described on pages 23), the potential impact has not yet been quantified. • The opportunities we have identified include: - On-site renewable electricity generation. - Electrification of ground units and vehicle fleets. - Early-stage master planning for potential renewable energy activities (e.g. hydrogen production / liquefaction) • $12m of assets are currently aligned to climate-related opportunities. This relates to land specifically allocated to on-site renewable generation and a vehicle charging hub.
Amount of capital expenditure deployed toward climate-related risks and opportunities	• In the current reporting period, we have made the following investments towards climate-related risks and opportunities: - Investment in energy solutions $1.9m – This amount reflects spend on various energy solution initiatives including the Kōwhai Park solar farm, EV energy hub, upgrading LED lighting and electrifying fleet vehicles. - Investment in water and drainage initiatives ($267,000) to both increase current understanding of water usage across the campus and build in climate resilience to new drainage infrastructure.
Internal emissions price:	• CIAL does not currently use an internal emissions price. We follow Climate Commission pathway and projections. Our focus is on reduction of absolute emissions and our initiatives are selected based on the potential abatement.
Management remuneration linked to climate-related risks and opportunities	• The CEO's variable remuneration is determined by the Board, based on the achievement of the strategy and plan. In FY24 the CEO has a specific KPI within the short-term incentive which has a 10% weighting linked to specific climate and sustainability initiatives.

APPENDICES

Appendix 1: Adoption Provisions utilised

Adoption provision 1: Current financial impacts

This provides a first reporting period exemption from NZ CS 1 paragraph 12(b), which requires a CRE to disclose the current financial impacts of the physical and transition impacts it identified.

Adoption provision 2: Anticipated financial impacts

This provides a first reporting period exemption from NZ CS 1 paragraph 15(b), which requires a CRE to disclose the anticipated financial impacts of climate-related risks and opportunities reasonably expected by an entity.

Adoption provision 3: Transition Planning

This provides a first reporting period exemption from NZCS 1 paragraphs 16(b) and 16(c) which require a CRE to disclose: (a) the transition plan aspects of its strategy, including how its business model and strategy might change to address its climate-related risks and opportunities; and (b) the extent to which transition plan aspects of its strategy are aligned with its internal capital deployment and funding decision-making processes.

Adoption provision 6: Comparatives for metrics

This provides a first reporting period exemption from NZ CS 3, paragraph 40 which requires a CRE to disclose comparative information for the immediately preceding two reporting periods for each metric disclosed in the current reporting period. This provision is being used for metrics except GHG emissions.

Adoption provision 7: Analysis of trends

This provides a first reporting period exemption from NZ CS 3, paragraph 42 which requires a CRE to disclose an analysis of the main trends evident from a comparison of each metric from previous reporting periods to the current reporting period.

Appendix 2: Verification Opinion

Verification Opinion

Submitted to: Christchurch International Airport
PO Box 14001
Christchurch 8544, New Zealand

Verification Body: TÜV SÜD America, Inc. – Ruby Canyon Services
743 Horizon Court, Suite 385
Grand Junction, CO 81506

Lead Verifier: Jessica Stavole
jessica.stavole@tuvsud.com

Submitted: September 4, 2024

TÜV SÜD America, Inc. (TÜV) conducted the Level 5 ACA verification of CHC according to the requirements found in ISO 14064-3:2019. The objective of this verification was to ensure that the GHG statement is materially correct and conforms to all relevant criteria. The GHG statement is the responsibility of Christchurch International Airport. A summary of the GHG statement is as follows:

- GHG-related activity: Christchurch International Airport
- GHG statement: CY2024
- Criteria:
    - Airport Carbon Accreditation Application Manual Issue 14 (December 2023)
    - Airport Carbon Accreditation Offset Guidance Document (December 2023)
    - Airport Carbon Accreditation Guidance on Reducing Emissions Before Offsetting Issue 1 (November 2020)
    - Airport Carbon Accreditation Verifier Manual Issue 1 (November 2020)
    - GHG Protocol, developed by World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSB)
    - ISO 14064-3:2019 “Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions”

Appendix 2: Verification Opinion *cntd*

The data and information supporting the GHG statement were historical in nature. For Scope 1 and Scope 2 sources, TÜV has ensured CHC's effective use of controls related to the GHG statement. TÜV concludes that there is sufficient and appropriate evidence to support CHC's GHG statement and is issuing an Unmodified Opinion. For Scope 3 sources, based on the examination of the evidence, nothing comes to TÜV's attention which gives cause to believe that the GHG statement is not a fair representation of GHG data and information. TÜV confirms that there is evidence that the GHG statement has been prepared:

- Without material discrepancy,
- In accordance with all applicable criteria, and
- Verified to a reasonable level of assurance (Scope 1 and 2 emissions only).

The verified GHG statement is summarized below.

Table 2. Total Entity Emissions (tCO_2e) by Scope and Year Under Operational Control (FY2024)

FY2024	Scopes 1 & 2 Total	Scope 3 Total
Location-based	1,322.17	807,761.55
Market-based	279.72	807,761.55

** Totals may not sum due to rounding.*
Please note Scope 3 sources were verified to a limited level of assurance.

Lead Verifier Signature

Jessica Stavole

Appendix 3: Scenario archetecture and data sources

	Orderly scenario	Disorderly scenario	Hot House World scenario
Intergovernmental Panel on Climate Change AR5, AR6 **AR5** https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf **AR6** https://www.ipcc.ch/assessment-report/ar6/	SSP1-RCP1.9	SSP1-RCP2.6, SSP2-RCP4.5	SSP5-RCP8.5
Network for Greening the Financial System https://www.ngfs.net/ngfs-scenarios-portal/explore/	Orderly – Net Zero	Disorderly – Delayed Transition	Hot house world – current policies
Climate Change Commission https://www.climatecommission.govt.nz/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf	Headwinds / Tailwinds Pages 93 & 94	N/A Pages 93 & 94	Current Policies Pages 93 & 94
NIWA https://niwa.co.nz/climate-change-adaptation-toolbox/projected-regional-climate-change-hazards/regional-projections-zone-5	NIWA downscaled RCP2.6	NIWA downscaled RCP4.5	NIWA downscaled RCP8.5
The Aotearoa Circle – Tourism Sector Climate Change Scenarios, https://static1.squarespace.com/static/62439881aa935837b9ad6ac9/t/642cea446df4a245d8641bad/1680665189109/P0381992_Aotearoa+Circle+Report_Tourism_Scenarios+v07.pdf	Pages 25-28	Pages 30-32	Pages 35-38
New Zealand Green Building Council – Climate change scenarios for the Construction and Property sector https://23159811.fs1.hubspotusercontent-na1.net/hubfs/23159811/NZGBC%20-%20Climate%20Scenarios%20for%20the%20Property%20and%20Construction%20Sector.pdf	Scenario 1 Page 10	Scenario 2 Page 11	Scenario 3 Page 12
Air Transport Action Group – Waypoint 2050 https://aviationbenefits.org/media/167417/w2050_v2021_27sept_full.pdf	Waypoint 2050		


CHRISTCHURCH
AIRPORT