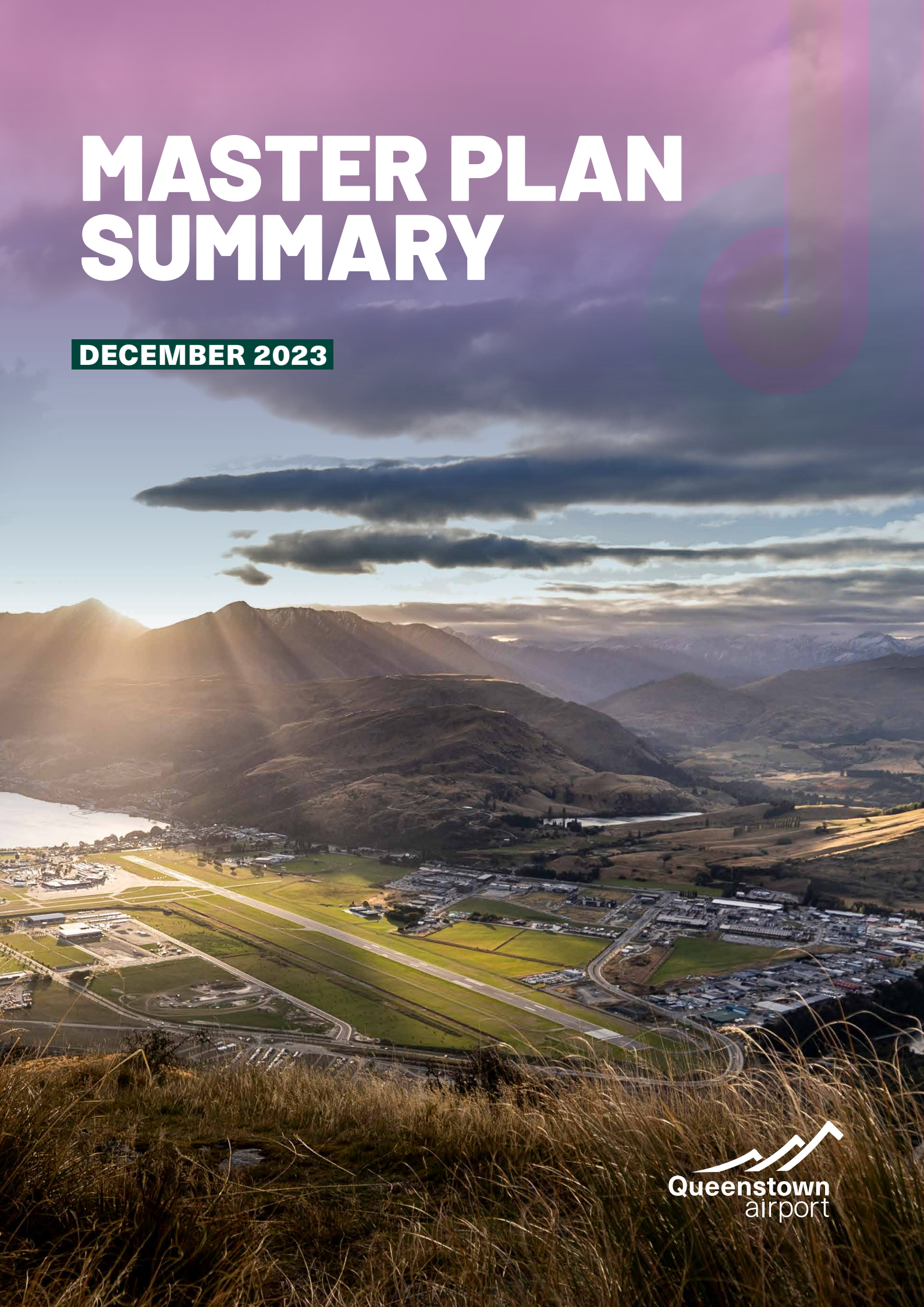
MASTER PLAN SUMMARY

DECEMBER 2023



Queenstown airport

CHAIR AND CEO'S MESSAGE

We are pleased to present our Master Plan for Queenstown Airport.

Our mission is to proudly connect our home with New Zealand and the world. Our vision is to be an innovative airport that people love to travel through, and the community takes pride in.

Queenstown Airport was established by the community for the community in 1935 in Frankton. The airport's greatest attribute and strategic value is its central site in the heart of the Southern Lakes, providing both residents and visitors with highly convenient and efficient connections to and from the region.

It is one of the most spectacular settings for an airport anywhere in the world. As locals, we know we are home the moment we step off the plane and take a deep breath of mountain air. Our visitors are awestruck when they first glimpse the Remarkables and Lake Whakatipu.

Queenstown Airport also plays a crucial role in supporting the economic and social wellbeing of our region. We serve the Queenstown Lakes District, including Wānaka and the Upper Clutha, Central Otago and Fiordland – a steadily growing catchment of more than 75,000 people.

With daily scheduled flights from Auckland, Wellington, Christchurch and the east coast of Australia, ZQN is an international gateway to the lower South Island and connects the communities of the Southern Lakes region with New Zealand and the world.

It is timely, as we emerge from the global disruptions caused by the COVID-19 pandemic, to think deeply about the future of aviation, and the associated challenges and opportunities. We are on the verge of global changes to the aviation sector as the focus on decarbonisation and innovative technology escalates. It is, therefore, important to have a Master Plan for an airport that is future-ready and continues to contribute to the social and economic wellbeing of the region over the long term.

We are mindful of the importance of balancing aeronautical activity with both the capacity of regional infrastructure and preserving what makes the region a special place to live, work and visit.

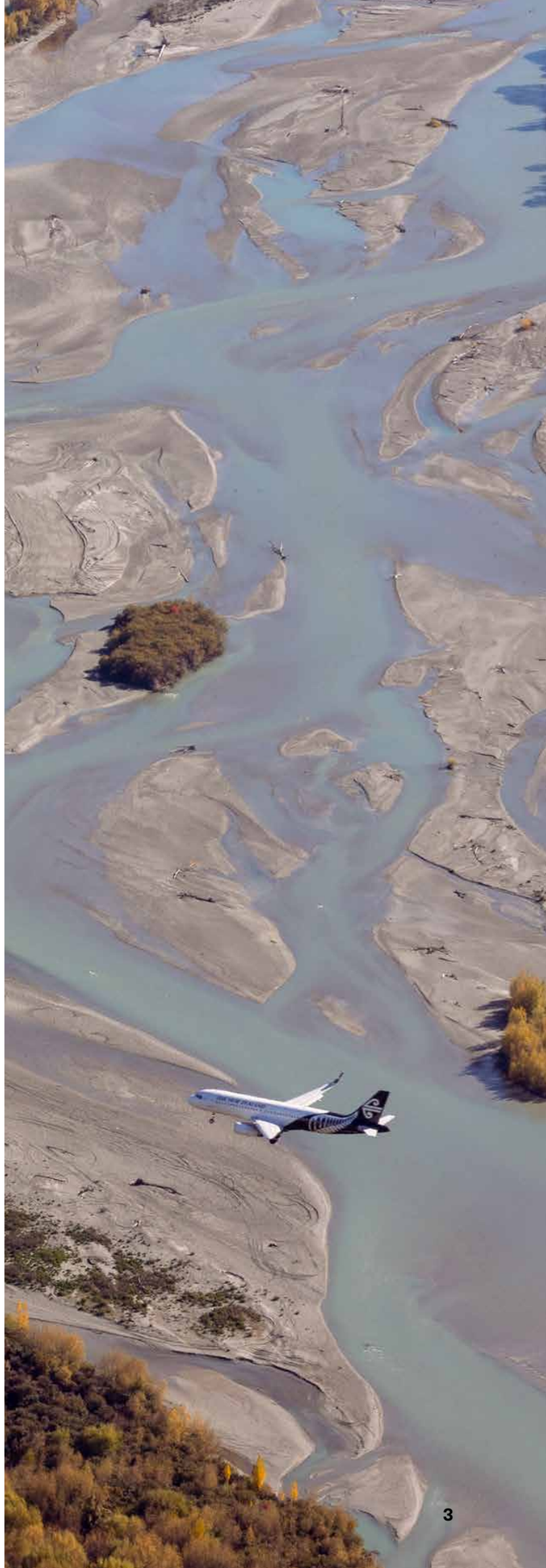
A key decision taken during the preparation of our 10-year Strategic Plan in 2022 was to plan for modest growth within the existing Queenstown Airport noise boundaries and not to exceed these boundaries before 2032. Improvements in aircraft technology and increasing use of quieter aircraft will be a significant part of achieving this goal, and we will actively manage aviation activity at the airport to ensure this commitment is met.

We've also considered the Queenstown Lakes District Council's Spatial Plan for the district, including the outcomes sought by Kāi Tahu, alongside QLDC's Frankton Master Plan to ensure our Master Plan for the airport responds to and connects well with the district's broader aspirations and plans. We also recognise the importance of aligning our planning with the aspirations and plans of other districts in the airports catchment, including Central Otago District Council.

The Southern Lakes are a world-class destination and we want to match that with a world-class customer experience reflecting the natural attractions and unique attributes of our region.

The Master Plan places high value on creating a customer-centric experience at the airport. We intend to seamlessly integrate land and air journeys at Queenstown Airport and deliver a flexible response to the evolving needs of both passengers and our community, with smart infrastructure upgrades and development staged over the coming decades.

We have the opportunity to increase the efficiency of the airfield by building a parallel taxiway, creating one additional aircraft parking stand, and by relocating general aviation (helicopters, fixed-wing and corporate jet facilities). A new Airport Emergency Services station is also planned.



The modest extension to the terminal will enable us to make the best use of the current footprint and greatly improve the experience for those travelling, meeting and farewelling, and working at the airport. The journey to and from the airport will also improve. We are prioritising active travel and public transport links. We're proposing a new green link that will connect the terminal to cycle trails and down to the proposed ferry jetty on Lake Whakatipu.

In our region, there is strong alignment as we tackle the challenges associated with climate change.

We support the Queenstown Lakes District's ambitious target, announced in November 2022 under the banner 'Travel to a thriving future', to be the world's first carbon-zero tourism destination by 2030.

We are already working with our colleagues at Destination Queenstown and Lake Wānaka Tourism, alongside tourism operators, on this. Planning for and enabling the decarbonisation of aviation is core to our strategy and will be critical to achieving this bold ambition. Technology is advancing quickly and the Master Plan has preserved space at the airport to allow us to quickly adopt and adapt for sustainable aviation requirements.

Like much of Aotearoa New Zealand, we live in a geologically active and climate-challenged region. Queenstown Airport is a designated lifeline for Civil Defence in the event of a natural disaster or other major emergency. While this particularly relates to access in and out of the region by air, the terminal and related infrastructure are also a site that could be put to a wide range of uses in a major emergency.

As QAC is a Council Controlled Trading Organisation (CCTO) and important community infrastructure asset, we have valued the input of our stakeholders in preparing the Master Plan.

Between 24 May and 23 June 2023, we undertook successful community engagement on the draft Master Plan in partnership with our major shareholder, the Queenstown Lakes District Council (QLDC).

In line with our Statement of Intent (SOI) commitment, special efforts were made to engage with community stakeholders. These included community associations directly and indirectly affected by the airport's operations, residents' associations, iwi, the business community, regional tourism organisations, industry sector groups and community groups specifically established around airport matters.

In addition to the community consultation in partnership with QLDC, QAC held a series of meetings and workshops with airport stakeholders, including government agencies, commercial partners and industry bodies.

A wide range of individuals and organisations took the time to review the Queenstown Airport draft Master Plan and provide comprehensive feedback, which was greatly appreciated.

There was a shared focus on tourism, destination management, sustainability and community wellbeing in the feedback. A comprehensive report on the community consultation was published on our website in September.

A great deal of work and analysis has gone into incorporating the feedback received and finalising our Master Plan.

The board of directors and management team are privileged to be custodians of this asset. We have appreciated the guidance and support received from our shareholders throughout the preparation of this Master Plan.

On the following pages, you will see the long-term spatial plan for Queenstown Airport and greater detail on our key projects to bring this to life. As we progress to design and programme implementation, the QAC Board will review and approve detailed timing and prioritised roll out of projects. We will provide regular updates to our shareholders, customers and the communities we serve.

Adrienne Young-Cooper
Chair

Glen Sowry
CEO

December 2023

MISSION, VISION & STRATEGIC PILLARS

MISSION	VISION
Why we exist	Where we want to be
PROUDLY CONNECTING OUR HOME WITH NEW ZEALAND AND THE WORLD	**AN INNOVATIVE AIRPORT THAT PEOPLE LOVE TO TRAVEL THROUGH, AND THE COMMUNITY TAKES PRIDE IN**

STRATEGIC PILLARS

EXPERIENCE
Exceed expectations at every touch point

RESILIENCE
Strong and capable

COMMUNITY
Respect for people and place

HOW WE FLY

DO THE RIGHT THING

REMARKABLE EVERY DAY

we get it DONE

ZQN SNAPSHOT

	ARRIVING AND DEPARTING PASSENGERS	SCHEDULED AIRCRAFT MOVEMENTS	NON-SCHEDULED MOVEMENTS	TERMINAL	LAND DESIGNATED FOR AERONAUTICAL PURPOSES	NON AERONAUTICAL LAND	SCHEDULED AIRCRAFT STANDS	RUNWAYS
2023	2.4M	17,900	36,000	18,000 SQM	136.88 HA	16.59 HA	8	2
2032	3.2 M	22,112	43,000	21,000 SQM	136.88 HA	16.59 HA	9	2

3.2%
COMPOUND ANNUAL GROWTH RATE

15%
LARGER THAN THE CURRENT TERMINAL

OUR CONNECTIONS

Queenstown Airport's catchment

COMMUNITY PERSPECTIVES

PRE ENGAGEMENT

Early in the development of the draft Master Plan, we held four pre-engagement workshops to canvass what is important to the communities we serve and what improvements they would like to see at Queenstown Airport. These workshops were held in Queenstown, Wānaka and Cromwell in late September and October 2022 and were independently facilitated.

Independently facilitated workshops were also held for QAC staff to ensure our team had an opportunity to contribute as the draft Master Plan was being prepared.

ENGAGEMENT APPROACH

In partnership with our major shareholder, the Queenstown Lakes District Council, we undertook community consultation on the draft Master Plan in May and June 2023.

We took a multi-channel approach to maximise community reach and visibility, providing several ways to participate and give feedback, both in person across the district and digitally. In line with our Statement of Intent (SOI), special efforts were made to engage with community stakeholders. These included community associations directly and indirectly affected by the airport's operations, residents' associations, iwi, the business community, regional tourism organisations, industry sector groups and community groups specifically established around airport matters.

In summary, engagement included:

- a highly visible communications and marketing campaign using screens in the airport terminal, radio advertising, local and national print media, local websites, and a podcast
- a dedicated page on the QAC website allowing anyone to view a video explaining the draft Master Plan, download a summary document or the full draft Master Plan, and to ask questions about it
- a short online survey, hosted on QLDC's Let's Talk platform
- pop-up information sessions held at various locations around the Southern Lakes region to provide an opportunity for people to speak to the project team members about the plan
- an online webinar to provide an overview of the plan and an opportunity for Q&A session.

A wide range of comments were provided by the community on the Let's Talk platform. After comprehensive analysis, these were categorised into nine themes:

1. Community pride in the airport
2. Tourism, passenger numbers and growth
3. Airport terminal, landside precinct and capacity
4. Enhancement infrastructure and transport
5. Collaboration and stakeholder engagement
6. Sustainability and environmental
7. Planning considerations/commercial/financial
8. Airfield and safety
9. Noise management and community well-being

In addition to community consultation, QAC held a series of meetings and workshops with airport stakeholders, including government agencies, commercial partners and industry bodies.

Feedback was collated into a Schedule of Changes, and updates were made to the Master Plan where appropriate.

IWI ENGAGEMENT

QAC is committed to positive engagement with iwi and hapū. QAC's majority shareholder, the Queenstown Lakes District Council, has established partnerships with both Aukaha and Ngāi Tahu ki Murihiku (Te Ao Marama), who work on behalf of iwi to work with relevant territorial local authorities. We have begun discussions with a goal to building relationships with these organisations as we work to respect the whakapapa of Kāi Tahu as part of our master planning and cultural heritage initiatives.

QAC will ensure that iwi values and issues are reflected in plans and initiatives.

QUALITY OF LIFE SURVEY 2022

The Queenstown Lakes District Council's Quality of Life survey ranked an airport with regular scheduled national and international flights as No. 2 on the list of top 10 positive impacts of tourism, behind the network of cycling and walking trails.

The top negative impacts of tourism related to traffic and parking pressures.

Demographic statistics of interest to us include:

- **more than 50%** of residents were born somewhere other than New Zealand
- **19%** have lived here less than two years, and a further 19% between two and four years
- **8%** of the district's population lives in Frankton

WHAT INFRASTRUCTURE DO WE NEED TO CONSIDER?

AVIATION

- Runways
- Taxiways
- Apron
- Runway End Safety Area (RESA)
- Boundary fencing & security
- Airfield & apron lighting
- General aviation / corporate jet operations & facilities
- Aircraft maintenance
- Airport Emergency Service (AES)
- Air Traffic Control
- Airlines & ground handlers
- Cargo operations
- Aviation refuelling & charging
- Airline catering
- Aircraft engineering
- Snow clearing, de-icing
- Utilities
- Provision for decarbonisation of aviation

TERMINAL & FORECOURT

Customer Facilities & Services

- Check-in area
- Safety & security
- Departure gates
- Airline lounges
- Arrivals hall
- Baggage carousels
- Toilets
- Lockers
- Trolleys
- Rental car counters
- Technology – Flight information displays
- Information desk
- First aid areas
- Family facilities
- Cultural spaces
- Retail
- Food & beverage
- ATMs and currency exchange
- Renewable energy supply

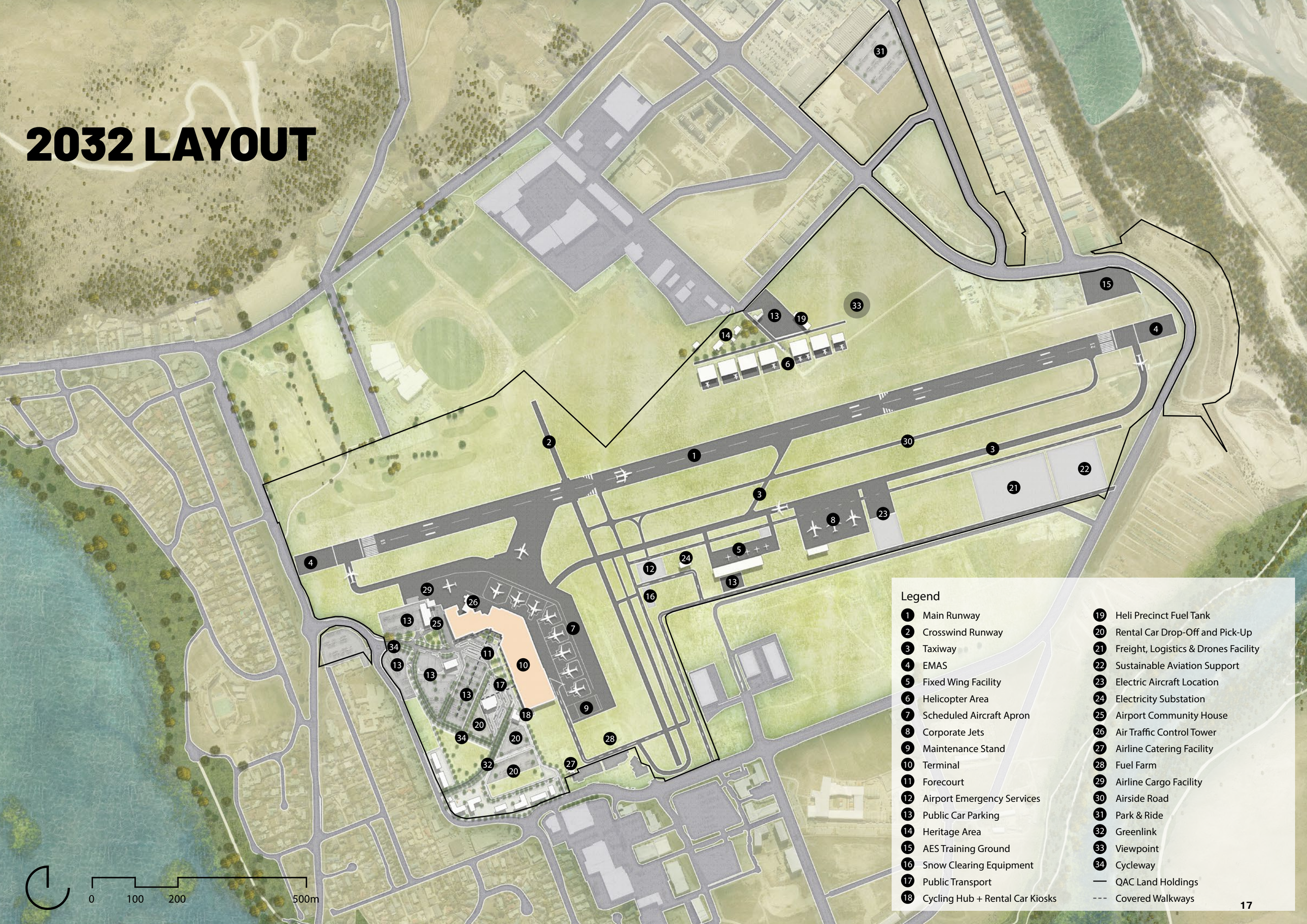
Passenger Facilitation

- Passport control (Customs)
- Biosecurity (MPI)
- Security screening & airfield security (Avsec)
- Police

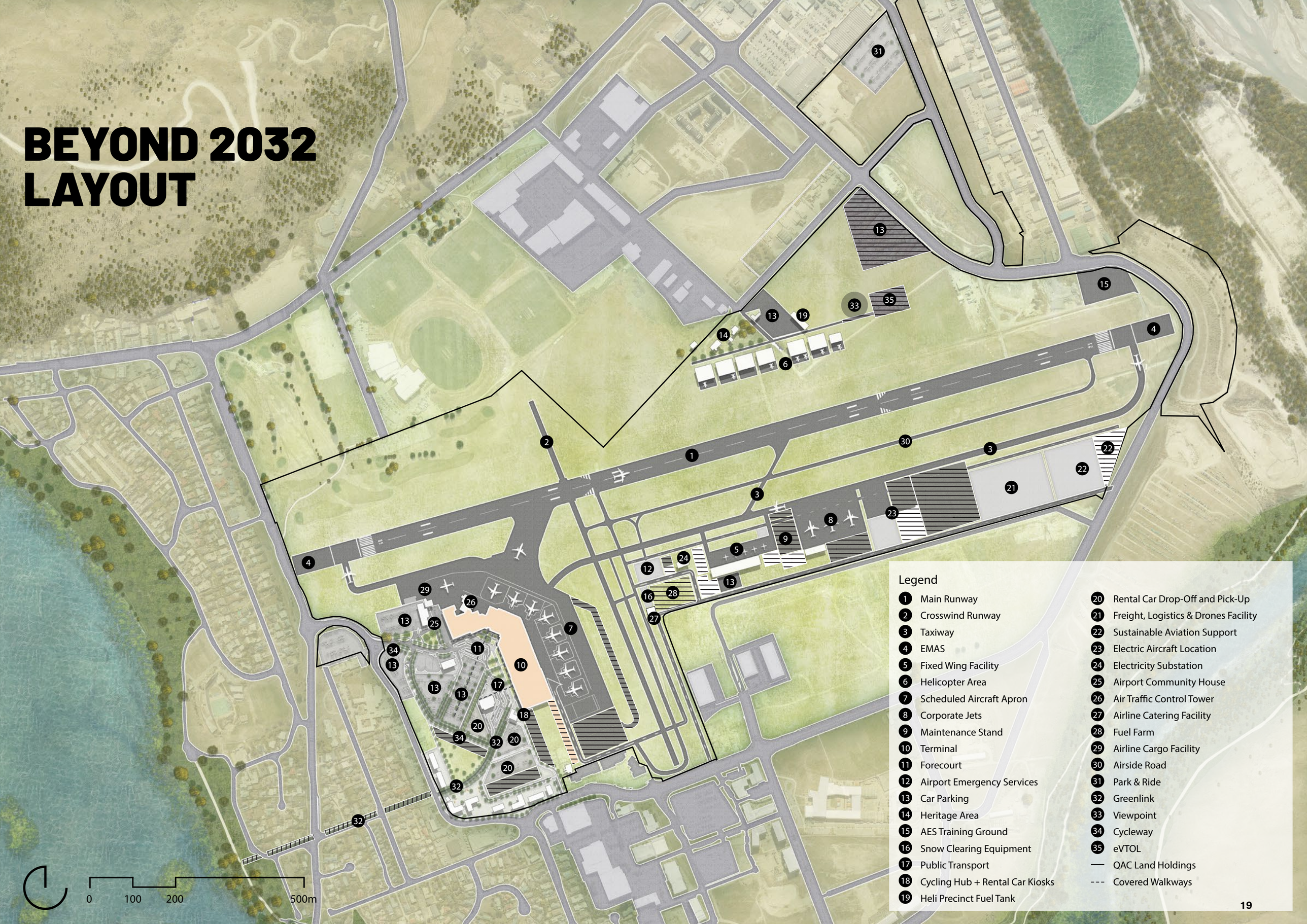
LAND TRANSPORT

- All active travel
- Public transport
- Car parking
- Rental cars
- Taxis
- Coaches
- Shuttles and other land transport services and activities
- Landscaping
- Inclusive & accessible public amenity spaces
- EV charging
- Roading & walkways

2032 LAYOUT


Legend
1 Main Runway
2 Crosswind Runway
3 Taxiway
4 EMAS
5 Fixed Wing Facility
6 Helicopter Area
7 Scheduled Aircraft Apron
8 Corporate Jets
9 Maintenance Stand
10 Terminal
11 Forecourt
12 Airport Emergency Services
13 Public Car Parking
14 Heritage Area
15 AES Training Ground
16 Snow Clearing Equipment
17 Public Transport
18 Cycling Hub + Rental Car Kiosks
19 Heli Precinct Fuel Tank
20 Rental Car Drop-Off and Pick-Up
21 Freight, Logistics & Drones Facility
22 Sustainable Aviation Support
23 Electric Aircraft Location
24 Electricity Substation
25 Airport Community House
26 Air Traffic Control Tower
27 Airline Catering Facility
28 Fuel Farm
29 Airline Cargo Facility
30 Airside Road
31 Park & Ride
32 Greenlink
33 Viewpoint
34 Cycleway
QAC Land Holdings
Covered Walkways
0
100
200
500m

BEYOND 2032 LAYOUT



Legend

1. Main Runway
2. Crosswind Runway
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4. EMAS
5. Fixed Wing Facility
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8. Corporate Jets
9. Maintenance Stand
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27. Airline Catering Facility
28. Fuel Farm
29. Airline Cargo Facility
30. Airside Road
31. Park & Ride
32. Greenlink
33. Viewpoint
34. Cycleway
35. eVTOL

— QAC Land Holdings

--- Covered Walkways

APPROACH TO PRECINCT PLANNING

LAND-USE PRIORITIES

In developing this Master Plan, we have prioritised the use of our land as follows:

PRIORITY 1

AVIATION

Facilitating aviation requirements over the long term, including airfield and apron facilities to serve aircraft and passenger movements directly associated with aviation activities.

PRIORITY 2

TERMINAL & FORECOURT

Optimising passenger and community experience and commercial returns for the terminal building and forecourt.

PRIORITY 3

LAND TRANSPORT CONNECTIVITY

Providing easy and seamlessly integrated journeys for passengers, airport visitors and airport community staff to and from Queenstown Airport, Queenstown and the wider region.

PRIORITY 4

NON-AERONAUTICAL DEVELOPMENT

Optimising shareholder and community value on non-aeronautical land, or aeronautical land for airport-related commercial opportunities. This category includes mixed-used development opportunities, with good links to the airport walking and cycling connections, and public amenities.

ZQN – AN AIRPORT FOR THE FUTURE

We are always looking for ways to improve the resilience, safety and efficiency of operations at Queenstown Airport for both scheduled flights by airlines and unscheduled flights by general aviation operators.

RUNWAY SAFETY UPGRADES

Queenstown Airport plans to build an engineered materials arresting system (EMAS) at each end of the runway, which would assist an aircraft to decelerate and stop safely in the unlikely event of a runway overrun. ZQN will be the first airport in Australasia to install an EMAS. This new technology has been successfully implemented at major airports in North America and Europe. It is particularly well suited to operational environments such as ours and we are confident it will increase safety at Queenstown Airport.

PARALLEL TAXIWAY

A parallel taxiway is proposed to improve operational efficiency and capacity on the existing runway and airfield. It will also enhance safety and sustainability, as it will reduce the length of time pilots are asked to fly a holding pattern while waiting to land. It will also reduce ground delays and, in the event of an emergency response, it could act as an additional runway for light aircraft.

AIRCRAFT PARKING STANDS

The plan allows room for extra aircraft parking stands and expansion of the apron. We believe one additional parking stand will be required by 2032 to increase operational efficiency and flexibility. We are also proposing to create a dedicated stand for aircraft maintenance and resilience, which Queenstown Airport does not have at present.

CREATING NEW AVIATION PRECINCTS

Creating precincts for specific activities and relocating general aviation operators will improve operational efficiency and protect space for emerging technologies.

NORTHERN AVIATION PRECINCT

A new Northern Aviation Precinct for helicopter operations is proposed to consolidate operations. Moving helicopters to this location will improve airspace and operational efficiencies and enable modest terminal expansion. One advantage of this will be to move noise away from the main Frankton residential area.

SOUTHERN AVIATION PRECINCT

The acquisition of land south of the main runway (Lot 6) allows Queenstown Airport the opportunity to provide vital core airport infrastructure in a more efficient manner, as well as providing space for future and rapidly emerging aviation technologies and alternative fuel supply. Fixed-wing operators will be moved to this precinct.

SUSTAINABLE AVIATION

We will plan for and enable emerging technologies for sustainable aviation with adaptability to cater for sustainable aviation fuels (SAF), electric and hydrogen aircraft in the future.

A TERMINAL THE COMMUNITY TAKES PRIDE IN

The Queenstown Airport terminal has developed in stages over several decades as the district has grown. As part of our long-term planning, we have an opportunity to create better passenger flow and land transport connections, as well as to increase the building's seismic strength and resilience, deliver operational and environmental benefits, and improve the customer experience.

EXTENDING & MODERNISING THE TERMINAL

Much of the existing terminal infrastructure will remain. Some areas will be refurbished, while others will be seismically strengthened, altered to create more adaptable spaces, or rebuilt. To allow this work to happen and to ensure smooth passenger flow, a terminal extension to the south towards Tex Smith Lane is included in this plan.

We'll take the opportunity when upgrading the terminal to incorporate new energy-saving initiatives and design a space that reflects all that is special and unique in our region.

We will seek guidance from iwi and work to reflect Kāi Tahu values and narratives in the terminal precinct, showcasing the richness of the region's culture.

GREEN LINK

To enhance active travel options to and from the airport, we propose a green link that will be a high-quality pathway for pedestrians and cyclists, separated from vehicles. The first phase of the link will feature native planting and landscaping and be a travel corridor to join the local cycle trail network via a new cycle hub where passengers can park, assemble, disassemble, or rent a bicycle.

Beyond 2032, the green link could connect Queenstown Airport to the proposed ferry jetty at Frankton, capitalising on the views of Lake Whakatipu and the Remarkables. By providing the link, we will encourage people to make the most of the outdoor experience in Queenstown.

LAND TRANSPORT & ACCESSIBILITY

We will provide airport users with choice to meet individual transport needs, while promoting a shift from private vehicles to other modes of transport. To encourage people to make more sustainable choices, we are providing connections to existing active and public transport networks and giving them prime positions in front of the terminal.

We aspire to be the world's most cycle-friendly airport.

OTHER INITIATIVES

Beyond developing robust infrastructure for aviation, we need to make plans for other assets and projects.

HERITAGE PRESERVATION

We recognise the historical significance of Arranmore Farm (formerly McBride's Farm), including the former smithy, dairy, woolshed, and mature trees that date back to the 19th century. Preservation of these important heritage assets and buildings is an important factor in our planning and infrastructure development.

NON-AERONAUTICAL LAND DEVELOPMENT

We will develop our non-aeronautical land assets to promote economic diversification for the Queenstown Lakes region, as well as diversifying QAC's revenue streams to support ongoing financial stability.

DECARBONISATION ROADMAP

We have developed a Decarbonisation Roadmap and set science-based targets to achieve net-zero for the airport's operational emissions by 2028. Planning for and enabling the decarbonisation of air travel is a priority in this Master Plan. Core to our planning is to significantly improve the sustainability and environmental efficiency of our terminal and our operations.

ECONOMIC IMPACT

Queenstown Airport, as a significant infrastructure asset majority-owned by the Queenstown Lakes District, makes important contributions to the local and national economy.

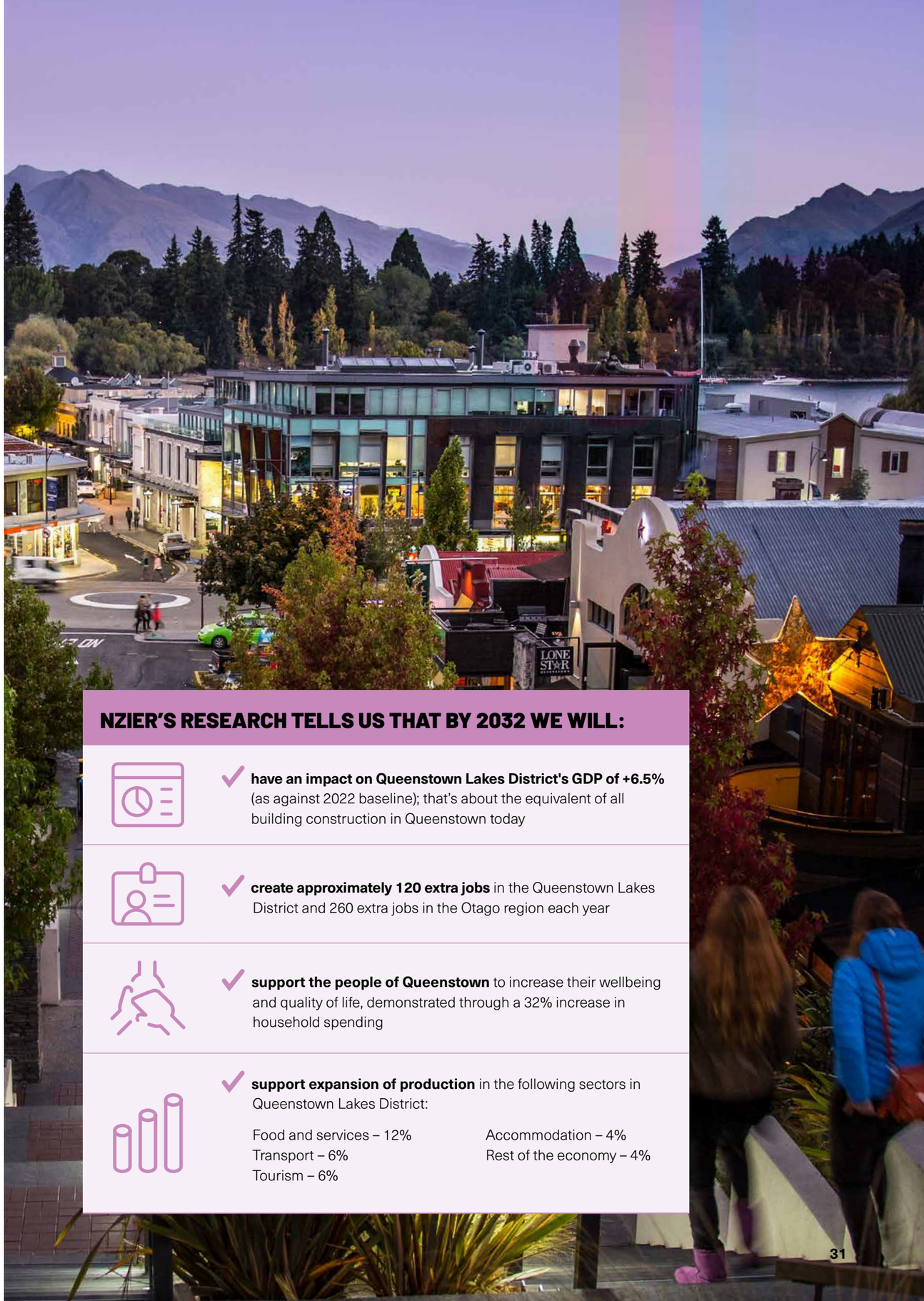
The services the airport provides to travellers are the most immediate and direct contributions. These services are used by both local residents and visitors to the region.

In providing these services, the airport buys goods and services from other providers. These are described as 'indirect contributions'.

QAC engaged the New Zealand Institute of Economic Research (NZIER) to prepare an independent, authoritative and data-driven analysis to understand Queenstown Airport's current and potential contribution to the local and regional economies and to the New Zealand economy as a whole. A particular focus was on the economic impact of delivering the proposed outcomes of the Master Plan over the 10 years to 2032.

These outputs tell us the overall economic impact of the airport and its operations:

- across three geographical areas – Queenstown Lakes District, the rest of Otago and New Zealand
- covering the economic variables of GDP, household expenditure and employment in each area
- including output from four tourism sectors (domestic, international, tourism spending and international flights), as well as the accommodation, food and other transport industries.



NZIER'S RESEARCH TELLS US THAT BY 2032 WE WILL:

- **have an impact on Queenstown Lakes District's GDP of +6.5%** (as against 2022 baseline); that's about the equivalent of all building construction in Queenstown today
- **create approximately 120 extra jobs** in the Queenstown Lakes District and 260 extra jobs in the Otago region each year
- **support the people of Queenstown** to increase their wellbeing and quality of life, demonstrated through a 32% increase in household spending
- **support expansion of production** in the following sectors in Queenstown Lakes District:

  Food and services – 12%
  Transport – 6%
  Tourism – 6%
  Accommodation – 4%
  Rest of the economy – 4%

SUSTAINABILITY

It is a privilege to call this remarkable place home. We are dedicated guardians, committed to preserving and protecting our region alongside the community for the benefit of generations to come. Sustainability guides the way we think, the decisions we make and the way we do business.

Embedding sustainability and resilience across our business and across the airport is a significant focus of our Master Plan. It will provide the pathway to develop a more sustainable, resilient and adaptable airport with net-zero emission operations.

We recently secured sustainability-linked loans with our four banks, which tie our debt facilities to the achievement of ambitious and independently verified sustainability targets. This is a positive step in embedding sustainability across the company.

Our immediate focus up to 2032 is reducing emissions within our control on the ground, while preparing for the innovative fuel and engine technologies that will enable the decarbonisation of aviation.

New and emerging digital technologies offer ways to improve operational efficiencies and enhance customer journeys. We will plan for, enable and adopt these technologies as appropriate.

AIRCRAFT EMISSIONS

The decarbonisation of aviation is a global challenge and airports have an important role to play in facilitating the changes required to successfully decarbonise. We are supporting the global Fly Net Zero by 2050 target through infrastructure planning, collaboration and advocacy.

In the coming years there will be an incremental annual increase in aviation-related emissions as passenger and aircraft activity grows. While QAC is not directly responsible for aircraft emissions, we recognise that the decarbonisation of air travel is where the greatest opportunities lie.

We will support and encourage airline and general aviation partners in their pursuit of carbon-reduction objectives and technologies.

QUEENSTOWN AIRPORT'S TRANSITION TO NET-ZERO

Our Sustainability Strategy and Decarbonisation Roadmap detail our emission-reduction targets, with clear strategies outlining how we will be a sustainable infrastructure and service provider. Our approach to net-zero aviation prioritises the elimination of emission sources, only using offsets as a last resort. To achieve these targets, we will:

- reduce Category 1-6 emissions as measured and reported in accordance with the Greenhouse Gas Protocol
- decarbonise our airfield through the provision of electric infrastructure for aircraft and ground service equipment
- advocate for policy and regulatory change, both as an organisation and through aviation sector bodies
- reserve space for changing infrastructure service requirements as airlines and operators adopt new clean-energy technologies, including hydrogen, sustainable aviation fuel (SAF) and ground power for aircraft recharging
- support the decarbonisation of land transport, including provision of electric vehicle charging infrastructure for passengers and commercial transport operators, improving the range and access to public and active transport services and enhanced connections with the wider transport network.
- To enhance our resilience, we will report annually on our climate risks and opportunities, as aligned with external reporting board (XRB) guidance. Climate-related financial disclosures are a useful tool for identifying and quantifying the risks and opportunities posed by climate change and direct organisational mitigation efforts. These will be important considerations in our planning.

We are also developing sustainable construction and development guidelines that will set minimum standards for renovations of existing facilities and all new construction. The guidelines will include the consideration of low embodied carbon materials, and healthy indoor environments designed to highlight connections to nature.

ZQN'S RUNWAY TO NET-ZERO

We've set some ambitious targets to achieve net-zero carbon emissions by 2028 at ZQN.

We recognise the biggest impact we can have, is to plan for and enable the decarbonisation of air travel. Our planning will anticipate and allow for the infrastructure required to achieve this.

Reducing our operational emissions is our immediate priority. We've prioritised three key areas of focus that contribute significantly to our emissions: Energy, Waste and Transport.

ENERGY

- Improve energy efficiency across the airport.
- Committed to using only renewable energy.
- Electrify our airfield.
- Provide EV charging facilities.
- Phase out and replace infastructure that relies on diesel or CFCs to operate.

WASTE

- Go single-use cup free.
- Reduce waste to landfill.
- Improve our waste management facilities.
- Expand our composting programme.
- Include recycling and waste management requirements in procurement policies and service contracts.

TRANSPORT

- Transition company vehicle fleet to electric vehicles.
- Facilitate and enhance active and public transport connectivity to and from the airport.
- Support active and public transport for staff commuting.
- Offset flights and have preferred suppliers for company travel.

UNDERSTANDING THE AIRPORT'S CARBON FOOTPRINT

2019 – 2021

- **First carbon audit completed (2019 baseline year)**
- Toitū carbonreduce certification
- Set emissions reduction target, aiming to reduce absolute emissions by 60% against baseline year by 2030
- Began replacing operational vehicle fleet with hybrid and electric vehicles
- Offset all company travel with Air New Zealand
- The Queenstown Lakes District Council installed a gas capture and destruction system at the Victoria Flats landfill, resulting in a reduction in Scope 3 emissions associated with waste.

2022 – 2023

- **Achieved 65% reduction in absolute emissions and progressed to Toitū net carbonzero certification**
- Switched to 100% certified renewable electricity supply
- Upgraded to more efficient lighting across the airport terminal
- Completed first phase of terminal heating and cooling upgrade
- Ended use of diesel generator to supplement electricity supply during peak demand
- Improved waste and recycling management across the whole airport
- Established onsite composting facility
- Invested in regional native reforestation carbon credits to offset emissions from all our compulsory emission sources measured in accordance with the Greenhouse Gas Protocol

2024 – 2028

- **Revised target to reduce absolute emissions by 85% by 2028**
- Achieve Airport Carbon Accreditation and increase the range of emissions we report on
- Second phase of terminal heating and cooling upgrade
- Replace Park & Ride shuttle with an electric vehicle
- Explore options for renewable energy generation on site
- Complete transition to electric operational vehicle fleet
- Investigate electric options for emergency vehicles and set replacement timeline
- Introduce energy efficiency targets
- Decommission diesel boiler
- Offset residual emissions through local native reforestation projects

USING OUR INFLUENCE

We will:

- introduce universal equipment charging stations for use by ground handling operators
- introduce power plug-in units for aircraft on the ground
- support transition to electric vehicles by businesses operating at the airport
- review procurement processes to reduce supply chain emissions
- improve cycling facilities for passengers and staff
- implement sustainable construction guidelines, reducing embodied carbon emissions for all new construction projects
- develop infrastructure to support decarbonisation of air travel

FUTURE OF AVIATION

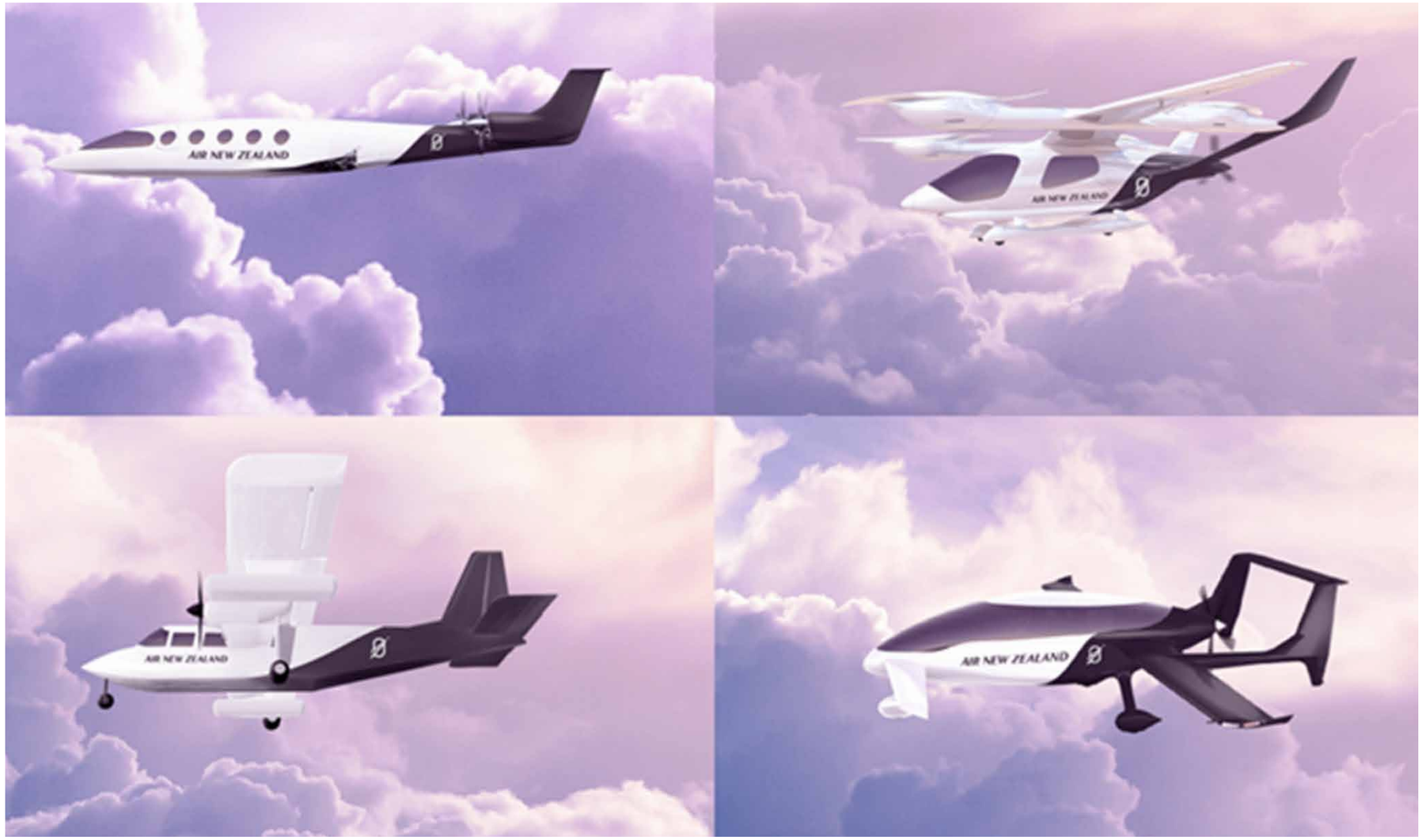
In November 2021, at the 26th United Nations Climate Change Conference of the Parties (COP26), the international aviation community declared an ambition to achieve net-zero emissions by 2050. This has triggered a significant effort to transform operations to make zero-emission aviation possible.

Queenstown Airport fully supports the ambition of the international aviation community to eliminate carbon emissions and intends to be a local leader.

The introduction of new technologies will enable the decarbonisation of aviation, changing the way people fly, the way they travel to and from the airport, and the way goods are transported. While these technologies are still emerging, this Master Plan provides a flexible framework to adapt to and adopt new technology quickly.

The following sections discuss options for the aviation industry – including airlines and airports – to decarbonise. Almost inevitably this is going to result in increased demand for non-fossil fuel energy sources, with a heavy weighting towards a need for additional electricity supply and/or generation – for example the electrification of aircraft, ground fleet, terminal operations, and rental car fleets, and the generation of green hydrogen.

QAC is actively working on the identification of solar power generation opportunities, and also advocating for more reliable, consistent and sufficient energy sources of electricity. The rest of the region is also actively seeking to decarbonise, which will add additional demands on electricity supply. QAC is committed to working with other stakeholders in the region, as well as with energy distributors, to ensure supply needs are understood for the district and planned and delivered in line with, or ahead of, needs.



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KEY MASTER PLAN CONSIDERATIONS

AERONAUTICAL PROJECTIONS

SCHEDULED AIRCRAFT MOVEMENTS & PASSENGER MOVEMENTS

The key assumptions that underpin our projections are that trans-Tasman – our only direct international connections – and domestic scheduled services will be operating for the period of the Master Plan, that demand for travel to and from Queenstown Airport remains strong, and that the airport will operate within its existing noise boundaries up to at least 2032. All aircraft movements at Queenstown Airport, including general aviation movements, are included in our annual noise compliance report.

PASSENGER NUMBERS EXPLAINED

Airports report passengers and aircrafts as movements. Passenger movements count both arrivals and departures. That is, one passenger is counted as two movements – their arrival and then their departure. This means that the actual number of visitors or residents arriving into the region via the airport is approximately half the number of passengers. Domestic passenger numbers include international visitors travelling on domestic flights.

Aircraft and passenger projections are a critical part of master planning and enable planners to ensure infrastructure is appropriately sized. Projections are subject to variation, particularly in a post-COVID environment. Care has been taken to account for all the factors that could affect our projections, both upwards and downwards.

The Queenstown Lakes District and Queenstown Airport experienced strong growth between 2012 and 2019. This was followed by the global travel restrictions associated with the COVID pandemic. Demand for air travel started to return in 2022 and is now back to pre-COVID levels, which peaked at 18,000 aircraft movements and 2.4 million passenger movements.

We are actively managing demand and expect growth rates over the coming years to be more modest than experienced before 2020. We are planning for up to 1.6 million arriving passengers (3.2 million passenger movements) by 2032.

The introduction of larger, quieter and more fuel-efficient aircraft enables incrementally higher numbers of passengers per aircraft while we continue to operate within our noise boundaries.

International passengers are expected to account for about a third of passengers flying to and from Queenstown, as is the case today.

The draft Master Plan identifies areas that will not be developed in the short to medium term but have been protected for planning purposes beyond 2032. We have not made any assumptions about passenger volumes, aircraft movements or aircraft fleet composition in these later years. However, as a long-term infrastructure provider, we need to ensure we provide scope and adaptability for the future.

PLANNING EFFICIENT & SUSTAINABLE INFRASTRUCTURE

Aircraft schedules and passenger numbers have been analysed to determine infrastructure requirements to deliver an exceptional experience for passengers and staff in a safe and efficient airport. Thought has been given to the importance of adaptable and sustainable spaces that function well and reflect our unique home.

During this process we considered:

- rolling-hour aircraft movement forecasts to inform the runway requirements and taxiway options, noting that the largest planes to operate at Queenstown are, and will continue to be, narrow-body Code C aircraft
- rolling-hour passenger forecasts to determine the optimal footprint for the terminal and forecourt precinct, as well as any landside infrastructure
- aircraft stands utilisation to determine the number of scheduled aircraft stands required in the future
- daily aircraft movements to understand and plan for seasonal variation
- general aviation, including helicopter, fixed-wing aircraft and corporate jet movements.

WHAT ARE ROLLING-HOUR FORECASTS?

A rolling hour is a sum of the preceding 60 minutes of activity. For example, the rolling sum at 14:25 includes everything after 13:25 and on or before 14:25. To move forward 5 minutes from 14:25, we roll our start time to 13:30 and our end time to 14:30.

Rolling hours are used because they can show the peaks in usage better than summing over a clock hour.

For example, imagine in a quiet terminal where a surge of passengers arrives about 14:00. On the clock hour, it should show half the passengers arriving 13:00 to 14:00, and half in 14:00 to 15:00, hiding the surge pattern. However, on the rolling hour at 14:30, we would include 13:30-14:30 and capture all these passengers, better representing the spike we would see inside the terminal.

RUNWAY CAPACITY

Analysis of the forecast aircraft schedule was used to determine the infrastructure requirements for the runways and taxiways.

This analysis shows that the vast majority of aircraft movements can be accommodated on the runway without the need for additional supporting taxiway infrastructure. However, a parallel taxiway would increase operational efficiency of the airfield, reduce delays and congestion, support better management of airspace near the airport, and provide extra capacity in peak periods. This would have several benefits, including smoother peak-hour operations and lower aircraft emissions.

STAND REQUIREMENTS

There are eight scheduled aircraft stands at Queenstown Airport, which is sufficient for current aircraft numbers. However, these can come under pressure in a dynamic operating environment linked to a wider network where issues such as local weather, national weather disruptions, and airline network issues caused by technical or operational disruptions come into play.

Analysis shows nine operational stands will be required in 2032.

It is also proposed that a maintenance stand be provided at Queenstown Airport to accommodate aircraft repairs or maintenance. This would be provided in the Southern Aviation Precinct in the future, but in the shorter term it could be located adjacent to the active scheduled aircraft stands and serve a dual purpose of resilience and maintenance.

Space has been preserved for a total of 12 stands if required beyond 2032.

SLOT MANAGEMENT

QAC has recently introduced an enhanced 'slot coordination' system, which manages the availability of the runway for aircraft landing and departing, as well as the use of aircraft stands on the apron, where passengers board and disembark, and aircraft are loaded.

Carefully controlling the slots allocated to airlines means QAC can actively manage peaks, so we are not building infrastructure that would be used for only very short periods of a day.

This must be balanced with passengers' preferences for time of travel, and airlines' ability to serve many different routes while working around the constraints at the airports they are flying to and from.

GENERAL AVIATION OUTLOOK

General aviation consists of fixed-wing aircraft, helicopters, corporate jets, search and rescue operations, and itinerant flights.

In 2022, there were 35,222 general aviation movements, compared with 42,924 movements in the 2018 peak.

For the purposes of planning infrastructure and noise modelling, projections for general aviation activity have been based on the highest movements experienced in 2018.

About two-thirds of these movements were helicopters, and one-third were fixed-wing planes. The main driver of the general aviation business is tourism, with flightseeing to Milford Sound particularly significant.

No flight training activity is based at Queenstown Airport, and there is minimal agricultural activity.

General aviation at Queenstown Airport currently has four fixed-wing operators and six helicopter operators, and no increase in the number of operators is anticipated in the period covered by the Master Plan.

The mix of fixed-wing and helicopter activity at Queenstown Airport is also expected to remain similar to now.

Image source: Glenorchy Air

NOISE MANAGEMENT

We are committed to being a good neighbour. Our proximity to Frankton and Queenstown has significant advantages and benefits for travellers, but it also means we are located close to homes and communities. We recognise the impact our airport operations can have. We have committed to operate within our existing noise boundaries for the next 10 years, and to reduce the negative impacts of our operation wherever possible. This will include working closely with airlines to encourage and incentivise the deployment of new generation, quieter, lower emissions aircraft into Queenstown.

All aircraft movements, including general aviation and corporate jet movements, are measured as part of our annual noise monitoring, and all technical modelling is undertaken by independent acoustic engineers.

Our noise boundaries set a limit on the total amount of noise aircraft using the airport can make. Land-use restrictions apply to properties inside these boundaries.

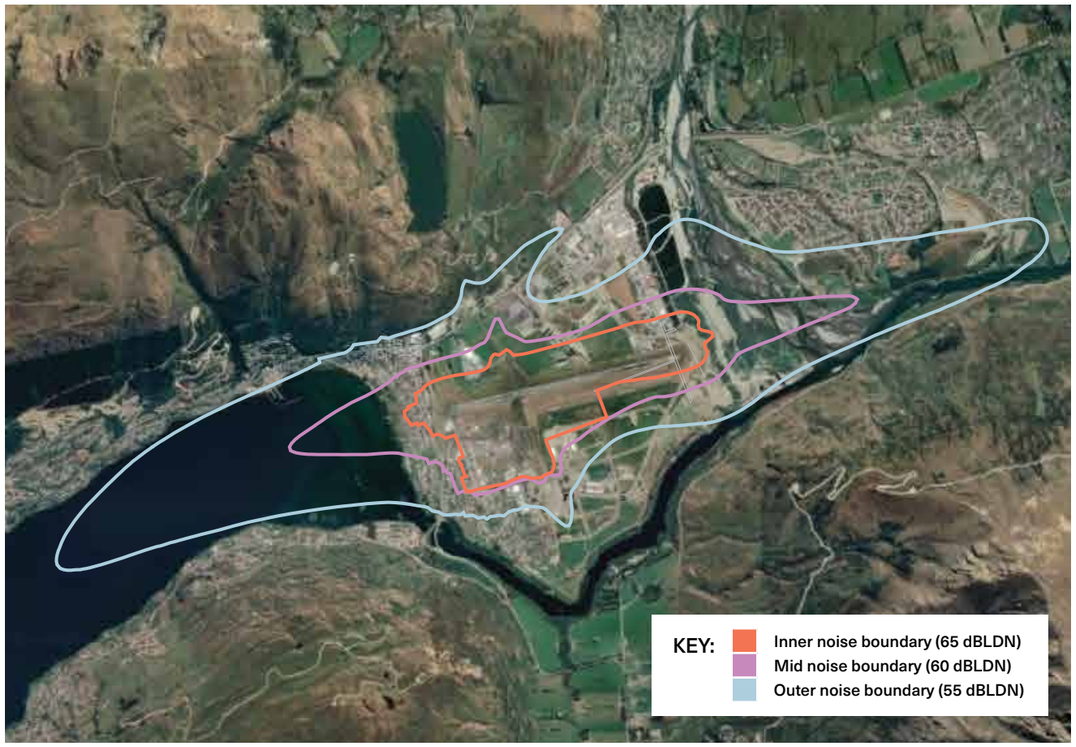
These noise boundaries will ultimately cap the amount of aviation growth within the district. The growth provided for within the existing noise boundaries aligns with the goals set out in our region's Destination Management Plan.

Aircraft noise is closely monitored for compliance and reported annually. It is measured using a New Zealand standard that has been especially developed for the purpose following international best practice. Noise levels are recorded in decibels (dB) and averaged over a 24-hour period. This average day/night measurement of noise is called Ldn.

Ldn takes into account both the number of noise events and the loudness of each event to provide a measure of the 'noise exposure energy', and then averages this using the busiest consecutive three-month period of the year.

A 10 dB penalty is added during night-time hours (between 10pm and 7am) to account for sleep disturbance. For noise monitoring purposes, this means one flight between 10pm and 7am is equivalent to 10 flights between 7am and 10pm.

Queenstown Airport's operating hours are 6am to 10pm, and these hours are strictly enforced. QAC has also chosen not to allow scheduled flights before 7am to reduce the disturbance of local residents and to actively manage our noise footprint.



Queenstown Airport Operative / Existing Noise Boundaries

FINANCIAL STRATEGY & FUNDING IMPLICATIONS

As a Council Controlled Trading Organisation, we seek to deliver shareholder value in a manner that recognises the need of the company to be profitable, return a financial dividend to its shareholders, invest for the future and support community wellbeing.

In preparing the Master Plan, we applied core financial and funding principles. We will:

Ensure we are making the best use of our assets

We are seeking a commercial return on all investments, including investment in aeronautical infrastructure, which will be recovered through well-established aeronautical pricing principles.

We set aeronautical pricing for the use of the airport and associated services and facilities. This is in accordance with the Airport Authorities Act 1966 and in consultation with our airline customers and general aviation operators.

Pay a dividend to shareholders

We intend to pay dividends over the period, while ensuring there is sufficient capacity to enable the required investment in aeronautical and other assets. Dividends will be set to adhere to our policy and will be paid at an appropriate and sustainable level.

Manage debt at a prudent level

The availability of funding is integral to our future development; we need to ensure that we live within our means. Funding for the delivery of the Master Plan will come from a mix of working capital and debt. We will not be seeking a financial contribution from our shareholders to finance the Master Plan.

While we remain focused on keeping debt at a manageable level over the course of the Master Plan, we will take on an increased level of debt at certain periods. We will utilise a mix of debt products, including corporate banking and debt capital markets, to ensure we can continue to secure borrowing on competitive terms. We will align our funding with our Sustainability Strategy.

Stage development

In addition, over the course of the 2032 Master Plan and in line with our Strategic Plan, we intend to take a staged approach to development to ensure that the economic outlook will support the incremental investment. Each stage of development will be subject to stage gates and approvals of capital spend by the board of directors. The total potential investment over the 10-year period is forecast to be about $350 million.

PUTTING OUR MASTER PLAN INTO ACTION

Consultation on a draft plan began in May and gave us a valuable opportunity to talk to people across the Southern Lakes region about how we can develop an airport we can all be proud of and that meets the needs of the communities we serve, far into the future.

A final Master Plan was approved by the Queenstown Airport board of directors on 7 December 2023, and has the endorsement of our shareholders – the Queenstown Lakes District Council and Auckland International Airport.

This is an exciting time for ZQN. We will now move into more detailed planning, procurement, and delivery.

The key pieces of work under way are a Terminal Development Plan, an Airfield Development Plan and a Landside Development Plan.

Before individual projects begin, assumptions made in the master planning process will be tested to ensure their technical, operational and financial feasibility.

The Queenstown Lakes District Council and its Audit, Finance and Risk Committee will be consulted about the staging of our capital investment programme.

FIND OUT MORE:

Read our full Master Plan at www.queenstownairport.co.nz/MasterPlan

Scan here to see a short video showing our vision for ZQN

Queenstown
airport