



# Master Plan 2026





Our vision

To revitalise and  
inspire as we connect  
people and place







Carrie Hurihanganui,  
**Chief Executive, Auckland Airport**



Julia Hoare,  
**Chair, Auckland Airport**

## We are pleased to share with you Auckland Airport's Master Plan 2026.

Auckland Airport's Master Plan is a blueprint for how we will manage journeys for decades to come. While it is a long-term view, we are underway with the biggest upgrade since the airport opened 60 years ago, across 400,000sqm of airfield infrastructure, transportation, and terminals. This Master Plan guides our path, ensuring we build what is needed, in the right place, and at the time it is needed.

The site of Auckland Airport on Manukau Harbour has always been a place of journeys, whether it be migratory seabirds that for millennia have come to our shores, the arrival of seagoing waka, or the waka rererangi – the aircraft – that have been a feature of this site for nearly 100 years.

Today, Auckland Airport is a vital enabler of Aotearoa New Zealand's economic and social potential. It is crucial to the nation's wellbeing and prosperity, hosting close to 19 million travellers, managing more than 158,000 aircraft movements, and moving about \$26 billion in trade. This makes us not only New Zealand's largest airfreight port but the third-biggest trade port, behind Ports of Auckland and Tauranga, in terms of cargo value.

Auckland Airport is the nation's primary border, the place of arrival or departure for 73% of overseas visitors and voyaging New Zealanders. It's also where 25,000 people work on a 1581ha precinct that is the base for a multitude of aeronautical, logistics, commercial, retail and hospitality companies, supporting \$35.1 billion in economic output.

This is a dynamic period for Auckland Airport as we transform the airport experience for travellers and create enduring value for New Zealand and for our aviation customers and partners.

Our infrastructure investment in future capacity will not only bring improvements for travellers – reduced delays and congestion, creating comfortable dwell spaces, and encouraging competitive airfares and greater choice of airlines – but is forecast to support \$54.9 billion in economic output and \$41.1 billion worth of trade by the early 2030s. It's a show of confidence in the long-term ambitions of our city, Tāmaki Makaurau Auckland, and our country.

We are on a journey of many stages. Our Master Plan will guide our pathway forward as we build resilient infrastructure.

E mahi ana mātou mō Aotearoa - we are working for New Zealand.



# Contents

About this Master Plan	06
Master Plan principles	07
Auckland Airport Master Plan 2026 - a snapshot	09
The pillars that drive our planning	10
Master Plan evolution and key developments	12
Key achievements since the 2014 Master Plan	14
Stakeholder and community engagement	15
<b>1. Auckland Airport today</b>	<b>18</b>
1.1 Auckland Airport today	20
1.2 Auckland Airport's journey through time	22
1.3 Auckland Airport and Te Ao Māori (the Māori world)	24
1.4 Auckland Airport's connections	25
1.5 Overview of international connections	26
1.6 Overview of domestic and regional connections	26
1.7 We are well underway	27
<b>2. Airport growth forecasts</b>	<b>28</b>
2.1 Approach	30
2.2 Passengers	31
2.3 Aircraft movements	33
2.4 Cargo and freight	34
2.5 Busy-day forecasts	35
2.6 Busy-hour passengers	37
<b>3. Master Plan considerations</b>	<b>38</b>
3.1 Drivers of traffic growth	40
3.2 Long term planning in the aviation environment: forecasting and volatility drivers	41
3.3 Fleet development and future aircraft concepts	43
3.4 Energy transition and future aircraft fuels	46
3.5 Environment and sustainability	47
3.6 Accessibility and inclusivity	50
3.7 Digital and technology	51
<b>4. Land use planning</b>	<b>54</b>
4.1 Airside precinct	58
4.2 Terminal precinct	59
4.3 Surface access precinct	60
4.4 Non-aeronautical precincts (interim use of the land)	61
4.5 Land use plans	62

<b>5. Airside precinct</b>	<b>64</b>
5.1 Runway capacity	67
5.2 Transitioning towards a dual-runway airport	70
5.3 Runway performance	74
5.4 Navigation aids (navaids)	76
5.5 Taxiways	78
5.6 Apron	81
5.7 Ground support equipment	87
5.8 Cargo precinct	93
5.9 Support facilities	97
5.10 Aerodrome safeguarding	105
<b>6. Terminal precinct</b>	<b>108</b>
6.1 The present dual-terminal system	110
6.2 Evolving the dual-terminal concept	112
6.3 Future trends and technologies	115
6.4 The integrated terminal	117
6.5 Improving transfer journeys	136
6.6 New regional terminal	140
<b>7. Surface access</b>	<b>144</b>
7.1 Today's surface access network	146
7.2 Public transport network	148
7.3 Approach to planning the surface access network	152
7.4 Proposed surface access improvements throughout the Master Plan period	160
<b>8. Utilities and services</b>	<b>166</b>
8.1 Aircraft fuel distribution network plan	168
8.2 Electrical distribution network	169
8.3 Stormwater	171
8.4 Wastewater	172
8.5 Digital and fibre	173
8.6 Outlook to the future	175
<b>9. Non-aeronautical precincts</b>	<b>178</b>
9.1 Overview	180
9.2 The Quad	181
9.3 Hotels	183
9.4 The Landing	185
<b>10. Consolidated airport development</b>	<b>188</b>
<b>Abbreviations &amp; glossary</b>	<b>198</b>
Abbreviations	199
Glossary	202

# About this Master Plan

This Master Plan considers the Auckland Airport precinct and its operations holistically, with our aeronautical assets at the core.

It serves as a strategic framework for the long-term development of Auckland Airport, extending its vision to the late 2040s.

The Master Plan is a living document and will be reviewed over time. This ensures Auckland Airport remains responsive to evolving conditions while maintaining a sustainable and efficient growth trajectory. It refers to airport infrastructure using the names and terminology in use today (such as piers, stands, and terminals) to provide clarity and continuity. Over time, these names may evolve as part of a considered naming convention framework that supports a more customer centred experience, recognising that clear, intuitive naming support users better understand and navigate places, spaces, and systems.

This Master Plan has been prepared taking also into consideration the Auckland Deal, a City and Regional Deal between the Central Government and Auckland Council signed in 2026, which identifies the Auckland Airport Precinct as a priority growth area and recognises its national role in trade, freight, tourism and connectivity.

Identified developments are informed by a series of modelling exercises undertaken during the Master Plan process.

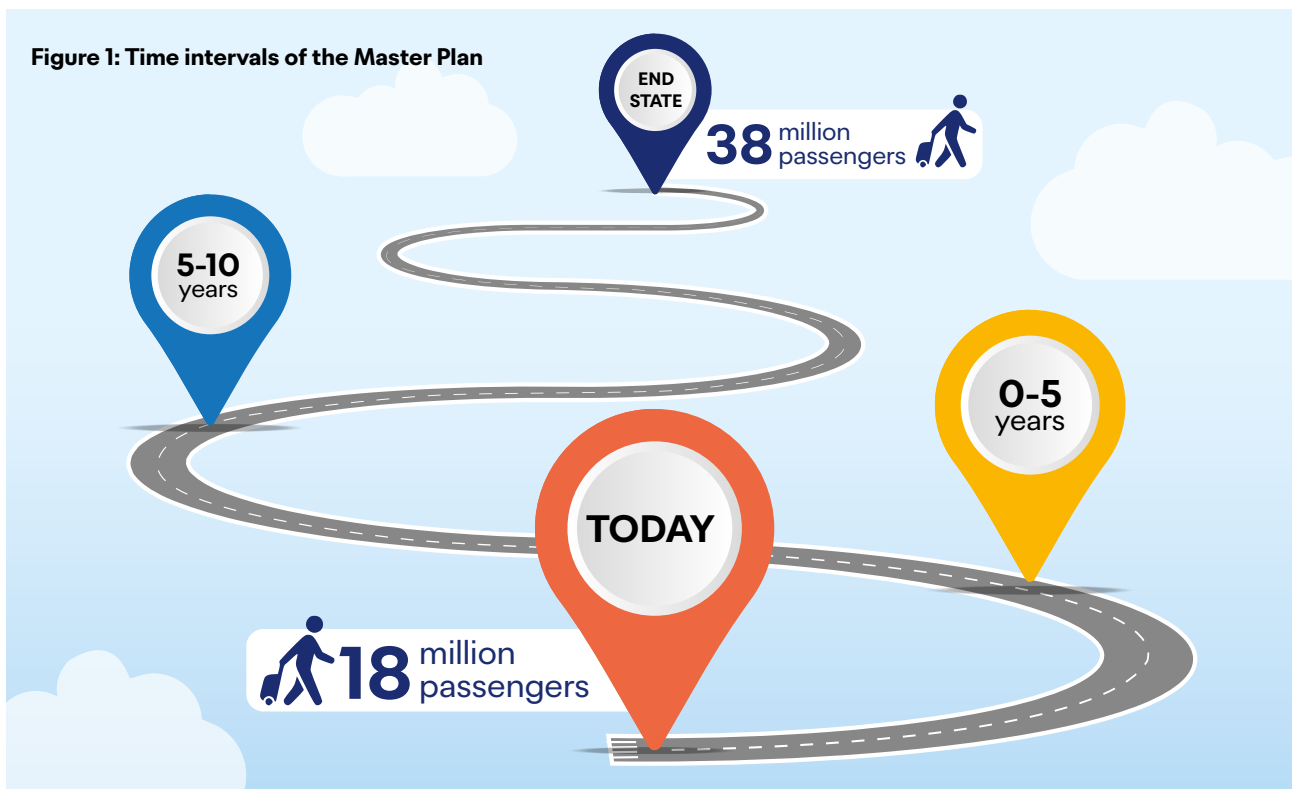
Short and medium term proposed developments are planned to occur within a five-year interval—not necessarily at its start—allowing for flexibility in timing and implementation while still aligning with projected demand, operational priorities and capacity requirements. The five-year intervals (FY28 to FY32 and FY33 to FY37) also align with Auckland Airport’s internal capital planning cycles, helping to structure and prioritise capital spending across each period.

Further studies will be undertaken to reassess assumptions and update the underlying models. As a result, the timing of developments may shift earlier or later within or across intervals, depending on the outcomes of future modelling and demand forecasts.

It is important to note that the further out in time a development is planned, the less certainty there is around its timing and scope. This is due to the increasing complexity and unpredictability of long-term forecasting. For this reason, the intervals should be treated as indicative rather than fixed schedules. They provide a strategic framework for planning and prioritisation, but remain flexible to accommodate future insights and changing conditions.

The “End State” plan outlines what Auckland Airport is expected to look like at the conclusion of the Master Plan timeframe.

Infrastructure upgrades outlined in the Master Plan are expected to support approximately 38 million travellers by the late 2040s.



This Master Plan is intended to be read in its entirety. Individual sections are interrelated and should not be interpreted in isolation.

## Master Plan principles

The core principles established in the 2014 Master Plan continue to underpin the airport's development strategy: **terminal integration, a northern runway, pier development, and a rapid transit corridor** will be the key drivers shaping the future of the airport.

Auckland Airport's commitment to a dual-runway system is reaffirmed in this latest plan, which confirms the pathway to meet anticipated growth. The 2,983m northern runway, originally consented in 2002, will be on airport-owned land and without the need for any reclamation of the Manukau Harbour.

The timing for the northern runway has been reviewed several times, due to the change in airline fleets, passenger-demand projections, the ability to increase the number of movements on the existing runway, and the economic needs of the country.

A new principle has been identified and incorporated into the 2026 Master Plan, emphasising the importance of integrated development to achieve efficiency and prioritise safety. Implementing a **Cargo Precinct Area** has been recognised as a cornerstone to achieving best planning practices for integration, allowing optimised operations, and enhancing safety through strategic co-location.

Associated priorities are sustainability, carbon reduction and climate resilience, the wellbeing of our immediate community and of the city of Auckland, the application of new technologies, and the property needs of organisations within the aviation system and the land transport networks connecting Auckland Airport to the wider Auckland region. Any actions we take revolve around the needs of our aviation customers and the needs of travellers.

By incorporating these elements, along with a continued emphasis on leveraging existing assets, Auckland Airport is strategically positioned to meet the challenges and opportunities of the coming decades while maintaining its role as a critical infrastructure asset for the region and the nation.





# Auckland Airport Master Plan 2026 - a snapshot



## Building for the long-haul

This Master Plan looks at the development of Auckland Airport to the late 2040s, segmented into intervals that align with our capital planning cycles.

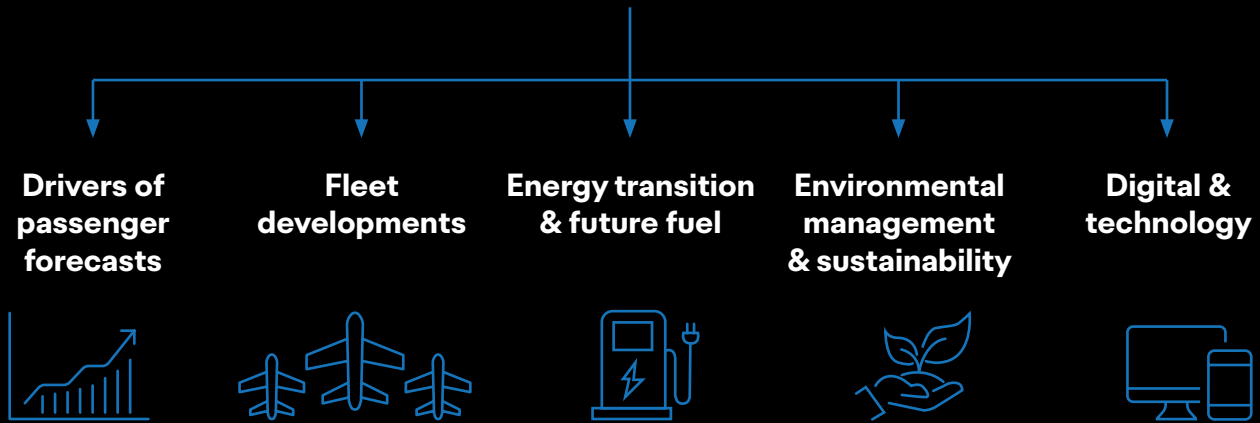


## Airport growth forecasts

Passenger forecasts are a critical component of an airport Master Plan, providing the foundation for developing a robust and efficient development pathway to accommodate future growth.

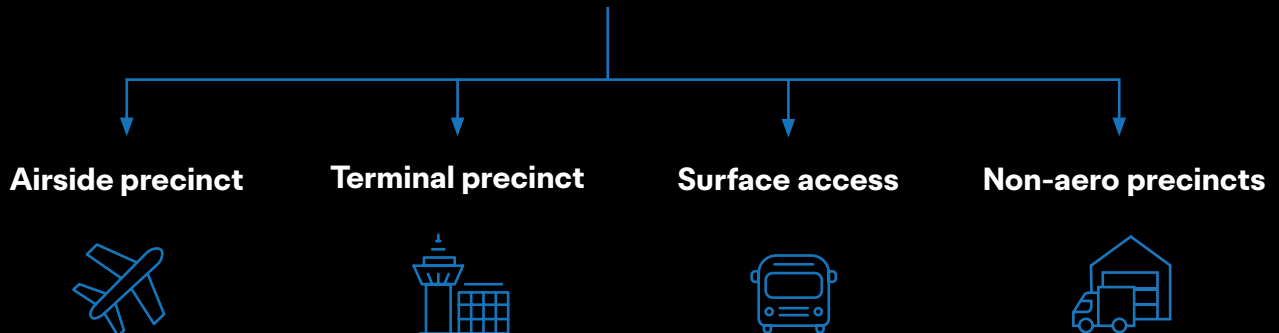
## Master Plan considerations

In developing this Master Plan a range of factors have been considered that over the life of the plan will influence the airport's growth.



## Land use planning

This Master Plan looks at four distinct precincts with priority given to aeronautical-related activities.



## The pillars that drive our planning

Strong foundations are essential for any organisation. The foundations of Auckland Airport are the five pillars of the Building a Better Future strategy.

### THRIVING ENTERPRISE

This Master Plan positions Auckland Airport and its operators as a thriving enterprise by focusing on long-term growth, innovation and sustainability.

Initiatives and areas in the Master Plan that contribute to this vision:

#### Terminal precinct

- International & domestic operations under one roof (concept of integration).

#### Airside precinct

- Transition to a dual-runway airport based on demand triggers.

#### Surface access precinct

- Improve surface access roads, expand public transport options, and integrate with rapid transport.

### FUTURE RESILIENCE

The Master Plan prioritises adaptable infrastructure, sustainable practices, and scalable capacity to meet evolving passenger demands and operational challenges.

#### Terminal precinct

- Implement cutting-edge technologies, such as biometrics for seamless traveller processing and automated baggage handling systems.
- Create scalable designs that can accommodate future modification.

#### Airside precinct

- Optimise apron layouts by considering overall airfield operations and ensuring efficient use of the area.
- Optimise aircraft movement and incorporate new technologies to enhance efficiency.
- Incorporate infrastructure to build resilience to climate change.
- Promote a te taiao approach to future resilience, aligning infrastructure development with the health and the interconnectedness of the natural environment.

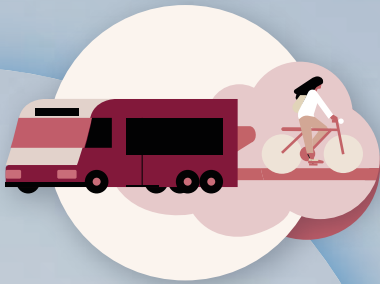
### FIVE FOUNDATIONAL PILLARS

Auckland Airport's **PURPOSE** is "to inspire as we connect people and places."

Thriving enterprise

Future resilience

## Seamless connectivity



## Enduring infrastructure



## Empowered community



Our **MISSION** is “working for New Zealand to create positive change in the airport experience, the community, the environment, and for our country’s long-term prosperity.”

## SEAMLESS CONNECTIVITY

Integrating domestic and international operations, streamlining passenger transfers, and enhancing multimodal transport links to deliver a smooth and efficient travel experience.

### Terminal precinct

- Interconnected terminals allowing travellers to transfer easily between terminals.
- Implement automated check-in kiosks and bag-drop systems enabling contactless processing.

### Airside precinct

- Increase capacity and improve airside operations.
- Optimise apron layouts to support faster aircraft turnaround and efficient ground handling.

## ENDURING INFRASTRUCTURE

Building resilient, sustainable, and adaptable facilities designed to support long-term growth and evolving operational needs.

### Master Plan considerations

- Decarbonisation pathway to achieve a 90% reduction of direct emissions by 2030.

### Airside precinct

- Ensure infrastructure is able to service new aircraft technologies, and is adaptable.

### Surface access precinct

- Future-proof the transport network to enhance connectivity and provide for low-emission transport modes.

### Utility and services

- Ensure infrastructure is able to cater for different fuels.
- Shift to electricity and away from fossil fuel consumption.
- Ensure infrastructure is resilient to climate change.

## EMPOWERED COMMUNITY

Fostering strong partnerships, creating local employment opportunities, and engaging with stakeholders to ensure the airport’s growth benefits the local community and the wider region.

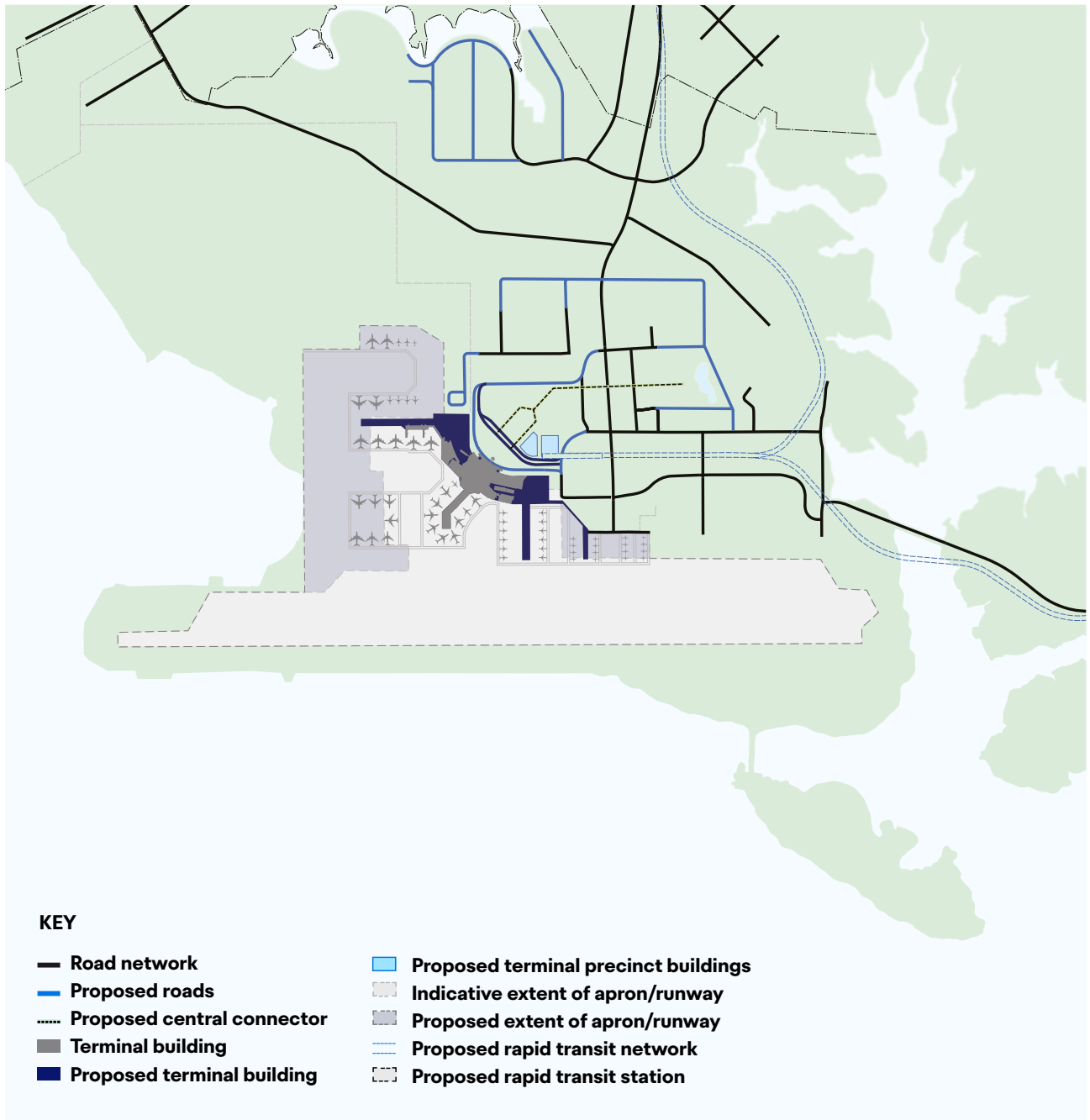
- Improve regional connectivity by supporting remote areas.
- Providing early visibility of projects and working through impacts and opportunities together.
- Supporting iwi aspirations for sustainable development, environmental restoration, and cultural expression across the precinct.
- Creating pathways for employment, training, and business participation in airport development and operations.

# Master Plan evolution and key developments

## 2014 Master Plan – by 2022 Phase

The 2014 Master Plan outlined the strategic vision for Auckland Airport’s growth. It assumed that by 2022 several projects would already be completed:

- The Domestic Jet Terminal (DJT)
- Demolition of the existing domestic terminal building (DTB)
- Expansion of the international terminal building (ITB)
- Provision for rapid transit & changes to the roading network.



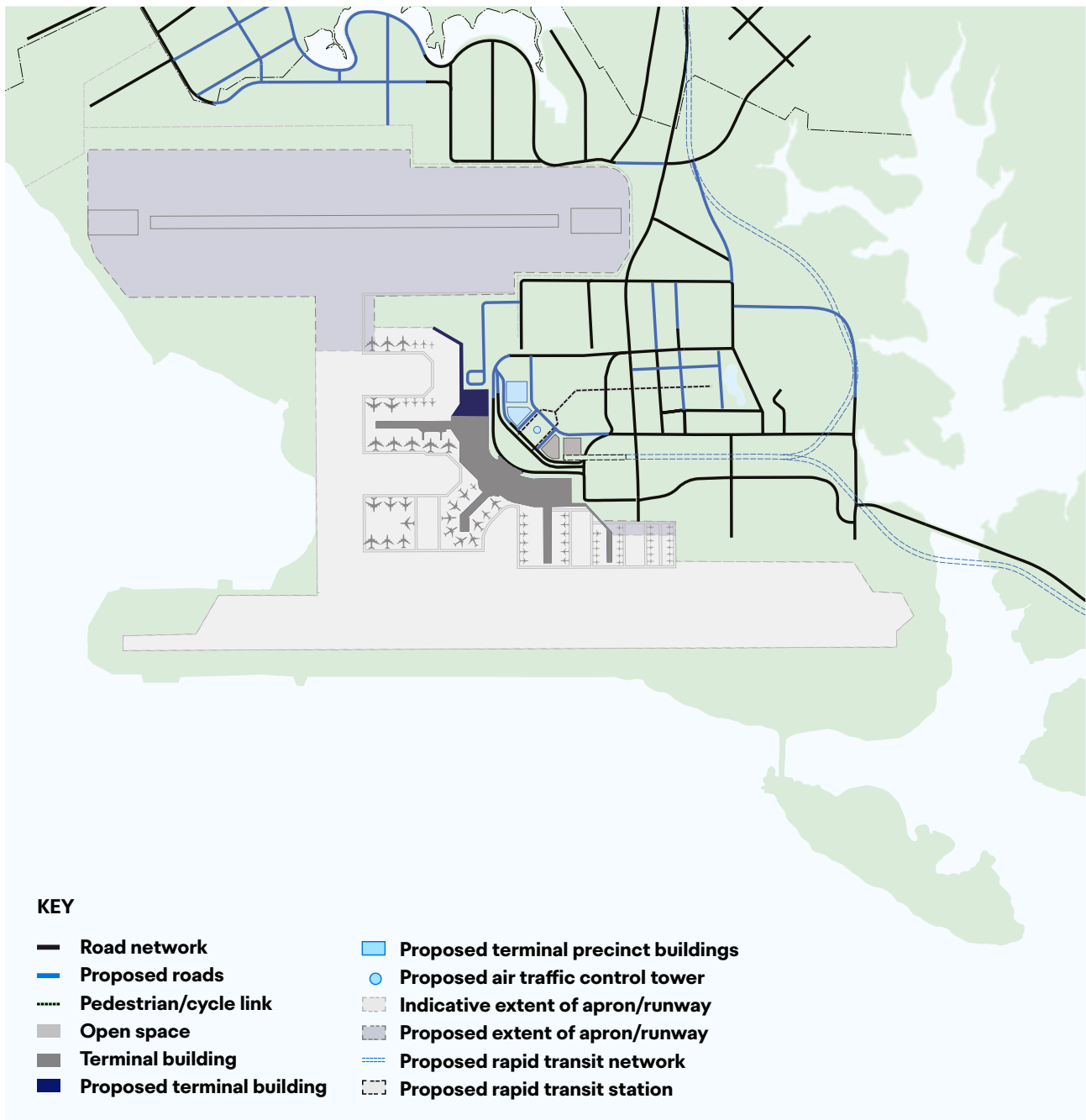
## 2014 Master Plan – by 2030 Phase

Looking ahead to 2030, the 2014 Master Plan anticipated additional critical development, including:

- Construction of the northern runway
- Further expansion of the ITB
- Additional aircraft stands.

These developments and timing were driven by projected demand and infrastructure needs, and reflected a phased approach to ensure airport capacity was aligned with growing demand and evolving aviation trends.

Embedded within Auckland Airport's ways of working is the ability to adapt dynamically, respond to change and meet the evolving needs of customers. Hence, some of these projects have been revisited to account for a change in passenger forecasts as a result of the COVID-19 pandemic, technology advancements, a focus on efficiency, and the strategic optimisation of existing infrastructure.



## Key achievements since the 2014 Master Plan

Since 2014, numerous developments have been successfully delivered. Alongside these projects, Auckland Airport implements an ongoing maintenance programme—covering pavement renewals, buildings, and utilities—to ensure safe and efficient airport operations.

### Terminal and Airside

#### Pier B non-contact stands

This 250,000 sqm development commissioned in October 2025, expands taxiway capacity and adds aircraft parking stands designed for large aircraft such as the Airbus A380.

The six new stands respond to the need for extra stands and associated taxiways (TWYs) to accommodate the forecasted international demand. The stands are Multiple Aircraft Ramp Systems (MARS), each able to accommodate two small narrow-body aircraft or one single wide-body aircraft.

This project delivered pipework and treatment ponds to meet drainage requirements for the Pier B Northern stand development, the terminal precinct, future cargo development and north-western non-contact stands.

#### LED runway lights

Six hundred new LED runway lights are in place on the existing runway since November 2024. These lights have replaced the halogen lamp system.

New LEDs use up to 70% less energy and last 15 times longer than halogen lighting contributing towards Auckland Airport's strategy of investing in low carbon options as part of the infrastructure renewal programme.

#### Domestic terminal improvements

Auckland Airport enhanced the traveller experience in the domestic terminal by upgrading bathrooms, wayfinding, entry portals, and general areas, including ceilings, flooring, and seating. These improvements were part of ongoing efforts to ensure the terminal remains comfortable and functional for travellers.

#### International airside dwell space and Pier B extension

The new international dwell, which opened in 2017, introduced a variety of retail and food and beverage options, along with enhanced waiting areas for travellers preparing to board their flights. This development featured a mix of in-terminal restaurants, casual dining, grab-and-go outlets, and fast-food retailers, providing a comfortable and relaxed space for travellers without access to an airline lounge programme.

Later in 2017, the Pier B extension was commissioned, adding two new gate lounges and airbridges to accommodate international flights.

### Landside and Roading

#### George Bolt Memorial Drive and Laurence Stevens Drive upgrades

Since 2014, several upgrades have been made to the roading network to enhance traffic flow. These include optimising traffic light phasing and lane configurations at the intersection of George Bolt Memorial Drive and Tom Pearce Drive, updating lane configurations at the George Bolt Memorial Drive and Laurence Stevens Drive roundabout, and implementing a new transit lane system across the airport precinct between December 2017 and 2020 for buses and high-occupancy vehicles.

#### Park & Ride South

Park & Ride South opened in June 2024 and provides 3,000 parking spaces. A free shuttle bus connects travellers and other users to/from the domestic or international terminal every 10 – 12 minutes. Electric vehicle charging spaces are available to use.

#### Transport Hub

The 70,000sqm Transport Hub opened in April 2024 as the most significant advancement in the transport system at the international terminal.

The Transport Hub has been situated to service the new integrated domestic terminal and to accommodate any future rapid transit to deliver travellers directly to the airport terminal precinct. The building incorporates a 1.2MW solar array on its 14,000sqm roof that supplies energy to the car park building, EV charging facilities and the commercial offices on its upper floors.

#### Non-aeronautical

Auckland Airport continues to expand The Landing business park, supporting the logistics, technology, and light industrial sectors. Several developments have received top industry accolades, recognising both individual buildings and the overall precinct design.

Near the terminal, Auckland Airport has developed hotels to accommodate both business and leisure travellers, with Te Arikiniui Pullman Hotel being the latest addition.

The Non-aeronautical development section of this Master Plan provides additional information on these topics.

# Stakeholder and community engagement

## Our engagement journey

Because Auckland Airport is well underway with what will be the biggest upgrade of its infrastructure since the airport was built 60 years ago, extensive engagement with the aviation stakeholder community has taken place through established forums. The purpose of these forums has been to allow the exchange of information between the airport and these stakeholder groups regarding the FY24–FY29 projects identified in the Master Plan. The projects include but are not limited to: Regional Pathway Minimal Technical Solution and the Domestic Jet Terminal.

These forums include:

- **Monthly Aeronautical Capital Plan Airport Community Consultation (MACPACC)**

This is an Auckland Airport-led forum for stakeholders in the aviation community, including airlines, joint border agencies and Airways New Zealand (Airways). It was set up to discuss the progress and status of the Aeronautical Capital Plan. It will also discuss new regulatory or requested future capital plan projects that will require comprehensive consultation in accordance with regulatory obligations under the Civil Aviation Act 2023.

- **Airline bilateral meetings**

These meetings are between Auckland Airport and airline customers, and have a strategic focus on the various workstreams within the Aeronautical Capital Plan that may be more relevant to that specific airline. They also serve as a point of escalation for matters that are unable to be resolved at a project level.

- **Border Agency Governance Group (BAGG)**

The purpose of the BAGG is to provide a collective governance platform for Auckland Airport and the border agencies to ensure that their specific requirements are captured, planned for, and incorporated into Auckland Airport's infrastructure development plan, and that any potential construction impacts on functional spaces and/or operations are addressed.

## How the Master Plan supports engagement

The Master Planning process allowed the community and aviation stakeholders to understand and provide feedback on future stages and the longer-term vision.

Robust and transparent engagement and communication with the community and identified aviation stakeholders is a critical component of the Master Planning process. Under the Civil Aviation Act 2023 section 232, airport operators are required to consult with airlines and relevant government agencies on its Master Plan from 5 April 2025.

## How we engaged

The Civil Aviation Act, does not specify the duration of the consultation period, so Auckland Airport engaged its airline customers, relevant government agencies, identified stakeholder groups and community through a programme that included:

- A dedicated Master Plan hub on the airport's website providing accessible information on the plan.
- An online platform that enables the community to seek information and provide feedback.
- Digital engagement, media, editorial and social media.
- A series of planned workshops (airline customers, relevant government agencies and iwi only).
- Presentations to other identified stakeholder groups.
- Briefings and drop-in sessions (community).

The engagement programme created awareness and understanding of the Master Plan, and encouraged participation and feedback on our future vision.

## Early engagement with Airways on existing runway capacity and timing of the northern runway

In developing this Master Plan, Auckland Airport identified the projected timing of the northern runway as a critical factor influencing various infrastructure projects. Early engagement with Airways on the present runway's capacity has been essential to allow productive discussions with our airline customers during the Master Plan consultation period.

Early engagement with Airways aimed to identify potential operational or infrastructure improvements that could increase the number of movements on the existing runway, thereby influencing the timeline for the construction of the northern runway.





## Chapter 1

# Auckland Airport today

- 1.1 Auckland Airport today
- 1.2 Auckland Airport's journey through time
- 1.3 Auckland Airport and Te Ao Māori  
(the Māori world)
- 1.4 Auckland Airport's connections
- 1.5 Overview of international connections
- 1.6 Overview of domestic connections
- 1.7 We are well underway



## 1.1 Auckland Airport today

From the arrival of the first seagoing waka into the Manukau Harbour to the aviation pioneers who operated an aeroclub in a converted dairy paddock, Auckland Airport has always been a place of journeys.

In 1966 at the dawn of the jet age, Auckland Airport roared to life as a fully fledged international airport, and it has continued developing to meet New Zealand's growing air-connectivity and economic needs.

Auckland Airport is New Zealand's busiest international and domestic airport. More than 75% of international travellers, including 90% of long-haul travellers, arrive and depart New Zealand through here.

With a comprehensive network of domestic and regional flights, the airport supports trade, tourism, business, and local economies, facilitating connections to domestic and regional destinations.

Tourism is one of New Zealand's biggest export industries, directly contributing more than \$16 billion to annual gross domestic product (GDP). Valuable air cargo capacity provided by passenger aircraft and freighters allows 90% of the country's air freight to flow through Auckland Airport, making it the country's third-largest freight port by value.

Every route and service is important. Over the course of a year, one daily international widebody flight into Auckland Airport will bring \$150 million worth of tourism and more than \$500 million in freight.

As Auckland Airport has welcomed global airlines, aeronautical assets have grown and developed to support airline customers. The original runway built in the 1960s is now 3,535m long, with taxiways, aprons and stands added over time to ensure the single runway operates as efficiently as possible.

Terminal infrastructure has expanded in stages to meet the demand. The original passenger terminal of the 1960s still operates as the airport's domestic and regional hub, albeit one that has expanded over time in step with the growth of air connectivity across New Zealand and changing service needs, such as security screening.

The staged growth extends to the international terminal. Opened in 1977, the building footprint has increased over decades to accommodate changes in aircraft and airport technology, border and security requirements, and demand for travel to New Zealand.

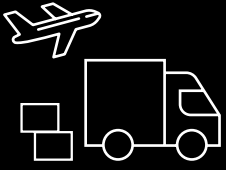
Auckland Airport is well on the way to bringing international and domestic jet services back under one roof with the construction of a new Domestic Jet Terminal integrated into the existing international terminal. Supporting infrastructure is being upgraded on our airfield, including digital systems, utilities and stormwater, as well as roading and transport networks.

In addition to aeronautical facilities and operations, which include the runway, taxiways, aircraft parking aprons, the control tower, passenger and freight terminal buildings, hangars, and other facilities that are directly related to and serve aircraft, travellers, and cargo, Auckland Airport hosts a world-class logistics and distribution hub located in 181ha of comprehensively planned development.

Auckland Airport's diverse aviation precinct incorporates commercial office buildings, hotels, parking, and leisure and recreation facilities – more than over 260 businesses and organisations. This is in line with developments at major international airports worldwide, and reflects a common trend in aviation precinct planning.

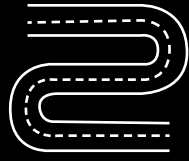
Auckland Airport's journey to the future is one of transformation and growth, supporting employment for 25,000 people today – the second-largest employment hub outside the Auckland CBD. Many of these workers come from the airport's neighbouring communities in South Auckland, establishing themselves in rewarding, long-term aviation careers. Auckland Airport is proud of this transformation and the opportunities it creates.

While Auckland Airport's business is broad, its core purpose remains operating the airport. Auckland Airport is determined to deliver a high-quality experience for Kiwis to be proud of by re-imagining the interactions offered to every customer. Whether engaging with a traveller, an aviation partner, a worker, a greeter and fareweller, or a member of the local community, Auckland Airport strives to enhance the experience for all.



165,000t

cargo processed per year



24km+

of public roads



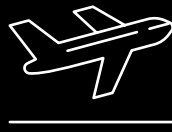
18.7m

passengers in FY25



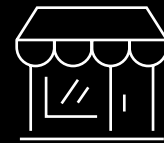
2

terminals



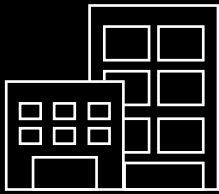
26 airlines

to 44 international  
& 23 domestic destinations



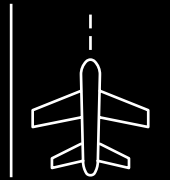
115

terminal retail  
tenancies



150

tenants outside the  
terminals



1.4m

square metres of  
runway and pavement



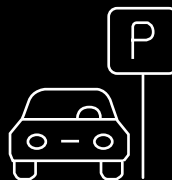
24/7

operation providing aviation,  
fire, medical, and marine search  
and rescue



3

hotels and one more  
being developed



car parking

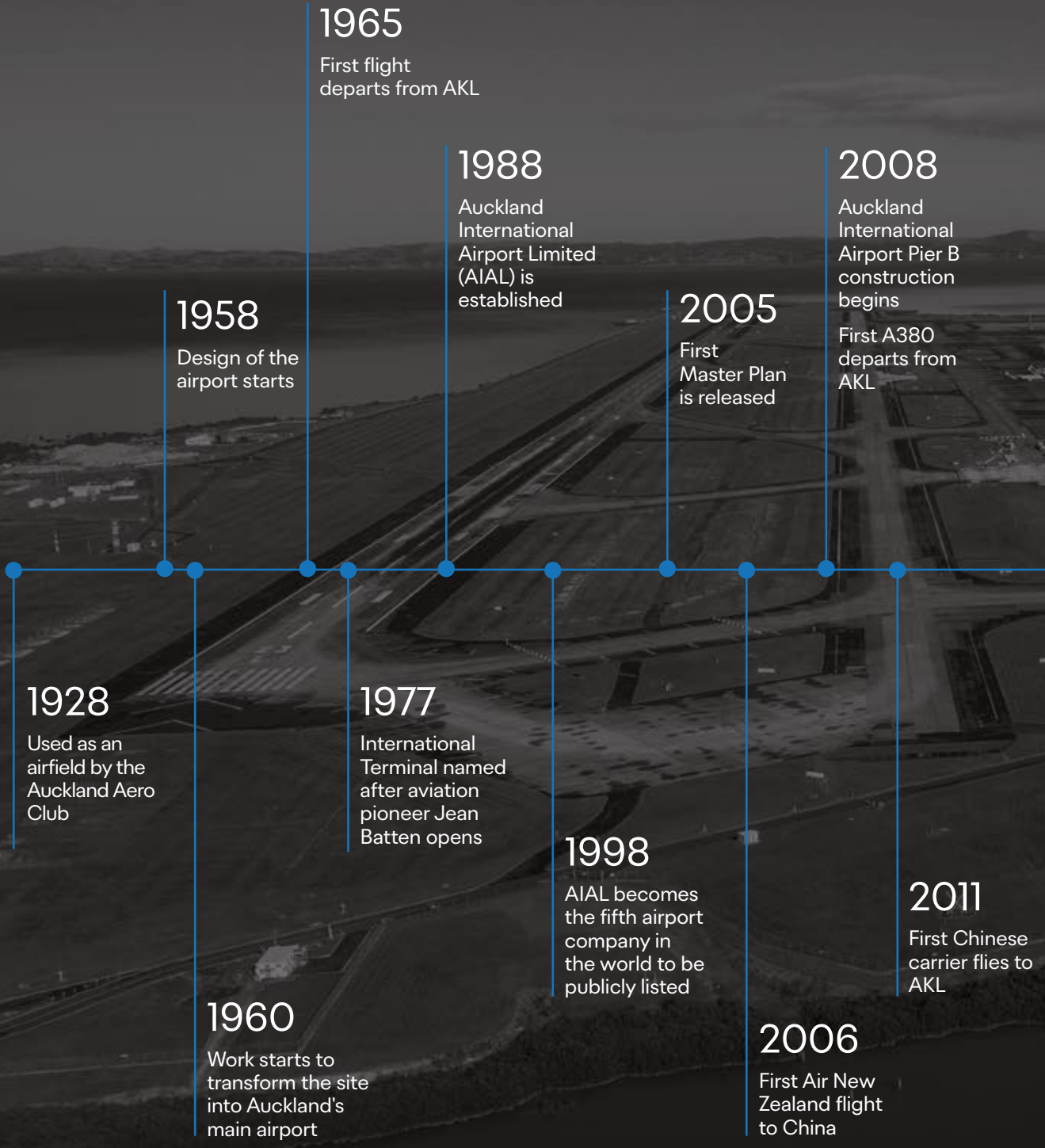
including about 7,500 parking  
spaces across multiple spaces



\$3.4bn

of logistics and distribution  
warehouses, office buildings,  
shopping centres and aircraft  
and freight real estate

# 1.2 Auckland Airport's journey through time





### 2014

New Master Plan released

### 2019

Integrated terminal building announced

### 2022

Major roading upgrade of George Bolt Memorial Drive

### 2026

AKL celebrates 60th birthday

### 2016

Auckland Airport Pier B extended

### 2020

The COVID-19 Pandemic – NZ Borders closed

Pavement replacement of runway touchdown zones

Integrated terminal building paused

### 2024

Park & Ride South opens

Transport Hub opens

Mānawa Bay opens

### 2023

Test piling for new terminal begins

Waste facility delivered

New bag carousel opens

Te Ara Kōrako Drive opens

### 2025

Pier B non-contact stands commissioned

Construction of new stands for regional operations commences

Checkpoint Delta commissioned

## 1.3 Auckland Airport and Te Ao Māori (the Māori world)

Auckland Airport recognises the cultural, historical, and spiritual significance of the land we operate on, and the long-standing connections that mana whenua hold with this area.

These connections are reflected through Crown recognised interests, such as those of Te Ākitai Waiohū, as well as through the whakapapa, history, and ongoing occupation of other iwi with ties to this whenua. The relationships of iwi to this place are significant and continue to shape the identity and the cultural narratives of the area.

As the gateway to Aotearoa, we have the privilege of reflecting the richness of Māori culture in the experience of travellers. Our design approach seeks to honour both the broader Māori identity of Aotearoa and the distinct, place-based relationships of mana whenua. We work with mana whenua to incorporate values, narratives, and tikanga where appropriate, while also ensuring our spaces express the wider Māori story that welcomes visitors to Aotearoa.

Our relationships with iwi focus on areas where our operations and development interact most closely with mana whenua interests, such as environmental planning, stormwater, and resource consents. Through regular engagement, we aim to provide visibility of projects, understand the perspectives of mana whenua, and ensure these views are appropriately considered in our planning and decision-making.

Auckland Airport values its long-standing relationship with Waikato-Tainui, which began in 2003 with an agreement signed with the late Te Arikini Te Atairangikaahu to establish Te Manukanuka o Hoturoa Marae. Unique within a commercial precinct, the marae continues to serve as a cultural centre and place of welcome under Tainui tikanga, and will celebrate its 20 year anniversary in November 2026. Over time, this relationship has grown into a commercial partnership that includes the development and co-ownership of Te Arikini Pullman Auckland Airport and the Novotel Auckland Airport Tainui.

Looking ahead, we remain committed to maintaining constructive relationships with mana whenua and exploring opportunities to strengthen how Māori perspectives are reflected across our operations and future development.



## 1.4 Auckland Airport's connections

Aviation connectivity is crucial to New Zealand's prosperity and wellbeing. This is a responsibility Auckland Airport holds dear as the owner and operator of the nation's most strategic infrastructure asset. It is singular, necessary, and irreplaceable.

With an asset value of more than \$11 billion, Auckland Airport is the global and national hub for the national carrier Air New Zealand. In a globally competitive aviation market, 26 international airlines fly from Auckland Airport to 44 international destinations in Australia, the Pacific Islands, North and South America, China, and Asia. Nationally, airlines connect with 23 destinations from Auckland. Each day of the year an average of 75,000 people travel and work at the precinct.

Auckland Airport plays a critical role in domestic and regional connectivity by serving as a central hub that links smaller towns and cities across New Zealand. As the country's busiest airport, Auckland Airport provides essential domestic connections to regional centres enhancing the New Zealand-wide tourism network.

Auckland Airport supports isolated and remote areas, offering critical air links that reduce dependence on long road journeys. This connectivity enables the timely transport of goods such as fresh produce, seafood and medical supplies to and from regional centres.

For businesses, Auckland Airport provides a lifeline for workforce mobility, allowing professionals, workers and entrepreneurs to travel efficiently between regional towns and economic hubs.

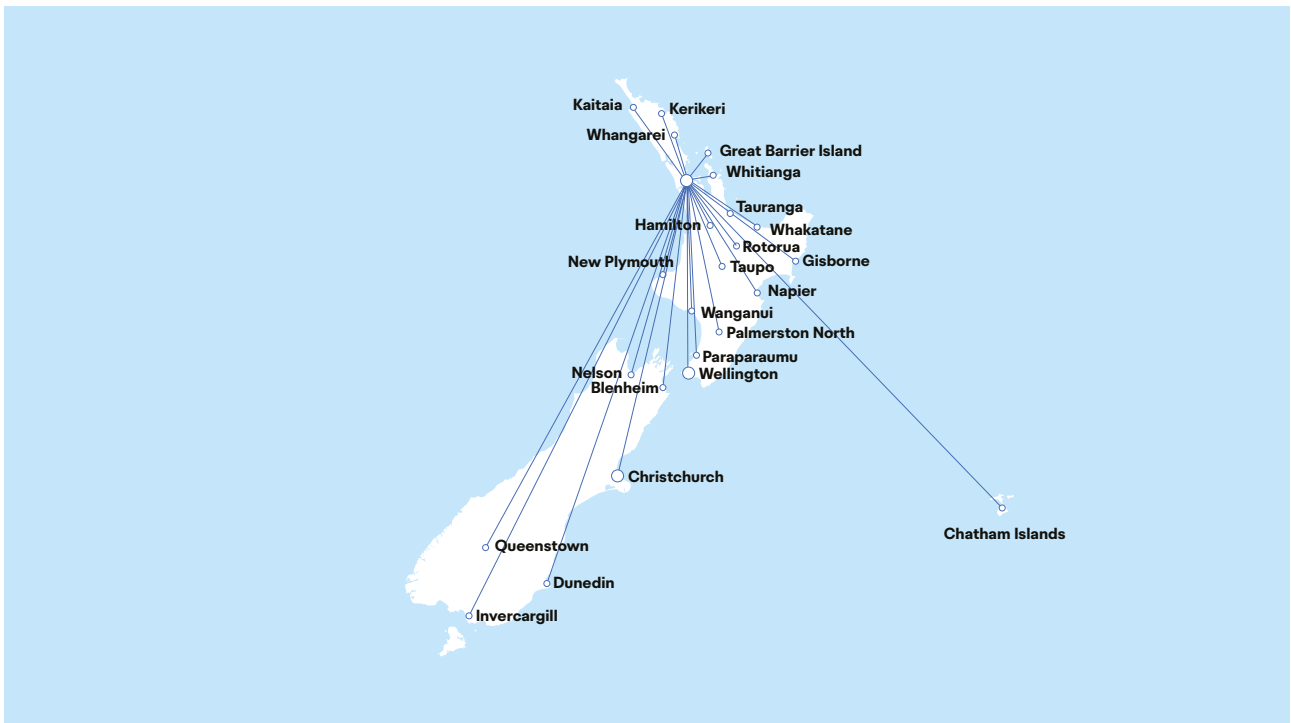


# 1.5 Overview of international connections



26 airlines operating to 44 destinations

# 1.6 Overview of domestic and regional connections



4 airlines operate 133 daily domestic flights to 23 destinations in New Zealand

## 1.7 We are well underway

Progress on the 85 capital projects linked to horizons FY29 and FY33 are in planning, under construction, or have been completed.

### Pathway to a seamless integrated terminal and Pier A1

In the 2014 Master Plan, Auckland Airport confirmed the vision for integrated domestic and international jet operations under one roof. Construction of this vision is well underway with completion expected in FY29. Departing travellers will check in at the same hall and follow a unified path to the departure level on Level 1, where their journeys will then diverge. The combined check-in hall allows for efficiency by sharing infrastructure such as kiosks and automatic bag drops to expedite traveller check-in, a new baggage handling system and improved building systems.

At Level 1, domestic travellers will enter the airside area through a new range of retail, food and beverage options, dwelling, and lounge spaces before boarding their flights from the new Pier A1. Pier A1 caters for 12 jet stands for domestic destinations, all equipped with boarding bridges, and a bus lounge for satellite operations if needed. These stands are capable of accommodating A321 aircraft, enabling approximately 26% greater capacity and flexibility to accommodate widebody aircraft, with the bus lounge providing a further 10% capacity uplift.

The ground floor of the new terminal will house the arrivals hall and baggage reclaim belts for incoming domestic travellers. A forecourt at the entrance will provide transport options for travellers.

### Enhancing the regional traveller's experience

Construction is underway to add capacity to the regional network. The first phase focuses on expanding the regional apron to support future growth.

The new stands will be able to accommodate additional flights while preserving a smooth, enjoyable and intuitive experience for all users.

The development of a new terminal building is then proposed to further increase capacity while future proofing the airport for potential regulatory changes, including updates to security screening requirements. The timing and design of this development is dependent on future regional fleet and network decisions by airlines.

### Future cargo precinct development

The historically dispersed locations of Cargo Terminal Operators (CTO) throughout the airport precinct posed operational challenges to the airport roading system as well as CTO freight processing inefficiencies.

Planning and consultation have taken place over a number of years to assess a future strategically consolidated location for CTO operators.

The area accessed through Manu Tapu Dr has been identified as the ideal Cargo Precinct location to facilitate freight processing as well as benefiting from direct landside/airside location, which would reduce the driving time to/from aircraft, improving the efficiency and safety associated with the movement of freight within the Cargo Precinct. This location also provides future accessibility to the future northern runway.

Operators such as Menzies, Swissport and NZ Post have already transitioned to the new Cargo Precinct, with ongoing negotiations for additional CTOs to relocate/enter the Cargo Precinct.

### Airfield pavements renewals

The airfield pavement renewals programme ensures the airfield pavement and associated infrastructure remains in a serviceable condition, and safeguards the Auckland Airport airfield system.

Ongoing upgrades to taxiway pavements support Auckland Airport's 24/7 operations, now and in the future. The progress to date is positioning Auckland Airport to carry out necessary maintenance on the existing runway as pavement conditions require, while continuing operations.

### Building climate resilience

The physical aspects of our changing climate are already being felt across New Zealand, and the Auckland Airport precinct is no exception. Physical inundation and flooding of assets, due to extreme weather events and, to a lesser extent, rising sea levels, is Auckland Airport's key physical climate-related risk. Auckland Airport is ensuing that it is mitigating against and adapting to this risk with comprehensive improvements to the airport's infrastructure underway or planned.

## Chapter 2

# Airport growth forecasts

- 2.1 Approach
- 2.2 Passengers
- 2.3 Aircraft movements
- 2.4 Cargo and freight
- 2.5 Busy-day forecasts
- 2.6 Busy-hour passengers

Passenger forecasts are a critical component of an airport Master Plan and are the foundation for establishing a robust and efficient development path that includes infrastructure able to accommodate future growth.

Passenger forecasts also anticipate changes in traveller numbers, aircraft movements and cargo volumes, ensuring the airport can handle growth without sacrificing service quality, or compromising safety standards.

Accurate passenger forecasts also help determine the size and timing of airport expansions, such as runway additions or terminal enhancements, thus preventing over or under-capacity. Moreover, they inform financial planning and investment decisions, and can be used as a guide to allocate resources effectively in favour of the economic viability of the airport business, as well as stakeholders and communities.

In 2024 a revised set of passenger, aircraft movements, and cargo tonnage forecasts covering the Master Plan period to late 2040s was produced taking into consideration existing challenges in the aviation industry linked to *supply chain* and *engine issues* and delays in delivering *aircraft orders*.

The methodology used historical traffic, capacity developments, airline competition, and catchment areas, as well as economic, tourism and demographic data as the main inputs. These were used to create short/medium and long-term models, which were then reconciled to generate projections for passenger, cargo and aircraft movements based on historical trends and performance.

The resulting passenger forecasts provide insight into long-term infrastructure demand, and should be viewed as indicative trends. Activity levels over the short-to-medium term will differ as a range of external factors will result in fluctuation in actual demand in any given year.



## 2.1 Approach

### Short/medium-term passenger forecast

Short/medium-term forecasts are based on planned route developments and projected airline seat capacity. Passenger load assumptions were also factored in, taking into account historical seasonal traffic patterns, economic development, and possible traffic evolution over the next three to five years.

The short/medium-term forecast closely evaluated the recovery from the COVID-19 pandemic. It foresaw a swifter recovery in domestic traffic, which was less-affected during the pandemic than international traffic that saw the delayed opening of some international borders and lingering regulatory constraints.

### Long-term passenger forecast

Long-term annual passenger traffic growth is based on macroeconomic factors (e.g. GDP, tourism, demographics), while a regression analysis of dependable variables was conducted to refine the model's accuracy.

### Aircraft movement forecast

The projection of commercial aircraft movements requires links between annual passenger traffic and aircraft movements.

This involves analysing historical passenger traffic and seating capacity to derive historical passenger load factors and average aircraft size. Assumptions were made regarding future load factors and aircraft size to project aircraft movements.

### Cargo forecasts

Cargo forecasts were prepared for international freight using a combination of methodologies.

This included trend analysis and extrapolations, and judgment-based forecasts, while also benchmarking against independent industry forecasts.



## 2.2 Passengers

The impacts of the COVID-19 pandemic have been unprecedented in their duration, scope and magnitude, reaching a global scale.

While most international airports have already reached or even exceeded pre-pandemic traffic levels, recovery in New Zealand is anticipated to lag for three main reasons:

1. New Zealand was among the countries that isolated itself the most and the longest during the pandemic, even after vaccines became widely available. As a result, many markets around the world started to recover much sooner than New Zealand.
2. The airline market structure in New Zealand is highly concentrated with a very limited number of domestic airlines dominating the industry and constraining its growth.
3. Auckland Airport is the gateway to New Zealand with a significant portion of its demand being international travel. The decline in international traffic was significant and the recovery is taking longer.

Passenger volumes are expected to increase at an average annual rate of 3.7% between FY24 and FY29, and 3% between FY29 and late 2040s when Auckland Airport is expected to reach about 38 million passengers.

It is anticipated domestic traffic will have recovered from the pandemic by FY27, but it will take another year for the international market to recover. This delay is attributed partly to supply chain challenges affecting the manufacture and maintenance of aircraft and parts, and partly to the location of New Zealand, which requires ultra-long direct flights from other regions.

Overall, international travel is anticipated to have fully recovered from the pandemic by FY28.

In the long term, traffic demand at the airport will be influenced by demand-side as well as supply-side factors. Long-term traffic demand is centred on growing economies, increasing disposable income, demographics shifts and tourism trends.





With regard to international transit passengers, Auckland Airport will continue to be the country's main hub. However, it is anticipated the share of transit passengers will experience a more modest growth compared to other traffic segments.

**Table 1: Annual passenger growth for the Master Plan period**

Route	Million passengers annually		
	FY28	FY33	END STATE
Domestic-trunk	7.0	8.0	10.9
Domestic-regional	2.7	3.1	3.9
International short-haul	6.2	7.4	11.8
International long-haul	4.7	5.8	10.0
Transits	0.8	0.9	1.3
<b>TOTAL</b>	<b>21.4</b>	<b>25.2</b>	<b>37.9</b>

Given the dynamic nature of the aviation sector, near-term outcomes may diverge from these assumptions in response to changes in airline fleet availability, network strategies, and operational conditions. As such, these forecasts should be considered alongside longer-term trends to avoid overemphasis on current market conditions.

**Figure 2: Summary of forecasts results**

 <b>Passengers (mppa)*</b>			 <b>Movements ('000)</b>		
FY25	FY29	<b>END STATE</b>	FY25	FY29	<b>END STATE</b>
18.7	23.0	<b>37.9</b>	157.0	178.2	<b>260.8</b>
	↑3.6% p.a. (FY24-FY29)	↑3.0% p.a. (FY29-onwards)		↑2.5% p.a. (FY24-FY29)	↑2.1% p.a. (FY29-onwards)
 <b>Domestic passengers (mppa)*</b>			 <b>International passengers (mppa)* (includes transit)</b>		
FY25	FY29	<b>END STATE</b>	FY25	FY29	<b>END STATE</b>
8.4	10.1	<b>14.8</b>	10.3	12.9	<b>23.1</b>
	↑3.6% p.a. (FY24-FY29)	↑2.2% p.a. (FY29-onwards)		↑3.6% p.a. (FY24-FY29)	↑3.5% p.a. (FY29-onwards)

\*mppa = million passengers per annum.



## 2.3 Aircraft movements

In FY19, Auckland Airport facilitated about 180,000 total commercial and non-commercial Aircraft Movements (ATMs) on its single runway, the highest volume in its history.

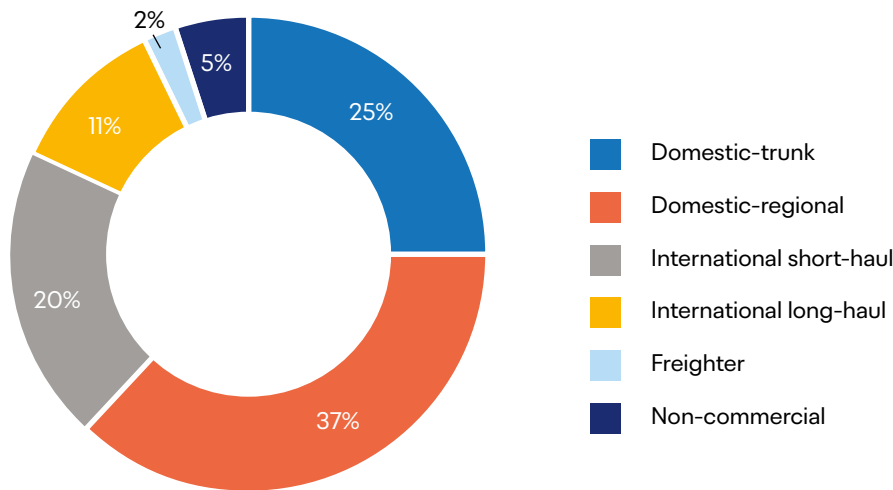
The majority of these operations were commercial aircraft, which accounted for 93% of all operations. Freighter/cargo flights represented 2%, while the remaining 5% were non-commercial flights such as general aviation, military and training.

Similarly to passenger volumes, international aircraft movements were the most affected by the COVID-19 pandemic and are not expected to fully recover to pre-COVID levels until FY29 as airlines are anticipated to prioritise restoring capacity through aircraft up-gauging and higher load factors, rather than promptly resuming previous flight frequencies.

Non-commercial traffic is expected to recover to pre-pandemic levels in the same time frame and sustain moderate growth until the end of the Master Plan period. Most of the non-commercial traffic involves small narrow-body aircraft.

Growth in aircraft movements is expected to average 2% a year over the forecast period.

**Figure 3: Aircraft movement split FY19**



**Table 2: Annual aircraft movement for the Master Plan period**

Segment	Annual aircraft movements		
	FY28	FY33	END STATE
Domestic-trunk	45,800	51,000	65,500
Domestic-regional	60,700	65,700	79,000
International short-haul	34,700	41,200	63,000
International long-haul	20,400	24,400	37,500
<b>Total commercial</b>	<b>161,600</b>	<b>182,250</b>	<b>245,000</b>
Freighter	6,800	7,400	8,900
Non-commercial	5,300	5,700	6,900
<b>TOTAL</b>	<b>173,700</b>	<b>195,400</b>	<b>260,800</b>

## 2.4 Cargo and freight

Overall international cargo volumes at Auckland Airport peaked in FY19 with 190,889 tonnes.

International cargo is well-balanced between inbound and outbound and, between FY10 and FY23, volumes increased annually by 0.8% on average.

During the pandemic, freight forwarders and cargo airlines experienced a surge in demand for air cargo as belly-hold cargo was transferred to dedicated cargo flights. The demand was primarily driven by personal protective equipment (PPE), medications, challenges in the ocean-shipping supply chain, and the sustained and robust growth in e-commerce.

Looking ahead, it is expected that the majority of international cargo will continue to be handled by sea, with air cargo demand expected to remain a relatively minor activity at Auckland Airport.

International cargo volumes are projected to grow annually by about 1.4% until the end of the Master Plan period in late 2040s, when about 223,000 tonnes will be handled at the airport.

**Table 3: Annual cargo tonnes for the Master Plan period**

Segment	Cargo tonnes		
	FY28	FY33	END STATE
Cargo	167,000	181,500	223,000



## 2.5 Busy-day forecasts

A key factor in any airport Master Plan is the conversion of annual traffic volumes into peak-hour values and busy-day profiles, because these are critical inputs when deriving future requirements for airport expansion and infrastructure enhancements.

The peak-hour values help in sizing the facilities against specific levels of service targets, while the busy-day profile provides insight into the traffic patterns and profiles for each market segment.

The analysis is based on FY19, which was the last full year pre-pandemic and therefore presented more reliable traffic volumes and patterns.

### Definition of passenger busy hour, runway busy day and runway busy hour

The passenger peak or busy hour is defined as the clock hour with the 30th-highest-ranked number of passengers during FY19, where the clock hour refers to the scheduled time.

For aircraft movements the runway busy day is defined as the 18th-highest number of daily aircraft movements for the airport in FY19, while the runway busy hour is the hour with the 30th-highest number of hourly aircraft movements, based on clock hour, in FY19.

There is no requirement to split busy hour and busy day movements between international and domestic movements or by direction. Instead, aircraft movements must be based on total airport activity, combining commercial and non-commercial flights.

Total passengers during the busy day are expected to show growth rates slightly lower than the annual traffic growth rate, attributable to seasonal (mostly international flights) and weekly spreads of traffic over time. This results from the airlines' attempts to stimulate off-peak travel with promotional fares to optimise aircraft use and maximise load factors. To meet growing demand during the busy day, airlines will open new routes, increase frequencies on existing routes, and/or deploy larger aircraft to maximise load factors and revenues.

### Aircraft movements

Aircraft movements at Auckland Airport replicate the typical operation at an international hub. The operational profile shows a marked arrivals peak in the evening, driven by the combined international short-haul and domestic trunk arrivals for overnight parking. Conversely, a peak in domestic departures occurs early morning coinciding with arrivals of international long-haul flights.

The overall aircraft peak occurs with the morning wave in a pattern that is repeated across every horizon. The predominance of international flights is mainly in the afternoon (international short-haul flights) and in the morning (mostly international long-haul flights). As expected, the window of operation for domestic flights is much greater, featuring a more evenly distributed operational profile.

**Table 4: Peak hour aircraft movements for the Master Plan period**

ATM per hour	FY28	FY33	END STATE
Arrivals	22	24	32
Departures	23	25	32
Total commercial	38	42	50
<b>TOTAL COMBINED</b> (commercial and non-commercial flights)	<b>43</b>	<b>46</b>	<b>53</b>

\* The total of departures and arrivals does not equal the total combined. The peak departure and arrival periods may occur at different time of the day, rather than within the same single hour.

**Figure 4: Busy day aircraft movements profile for the Master Plan period**



Additional arriving flights are anticipated throughout the day, particularly during the peak hours. The peak hour for arrivals is projected to remain the same across all horizons at 17:00 with three other arrival peaks noted (morning, mid-day and mid-afternoon).

The profile of departure movements is different from the arrivals profile with a morning peak (at 08:00) and a late-afternoon peak (at 16:00). The morning peak is driven by domestic departures while the afternoon peak is a combination of domestic and international (essentially short-haul flights). By early 2040s the morning peak is anticipated to spread across a wider period, extending to 07:00 and 09:00, and driven by increased domestic frequencies.

## 2.6 Busy-hour passengers

Passenger figures include local passengers starting or ending their journey at Auckland Airport, together with those transferring or on transit.

Domestic-to-international are expected to represent the largest transfer segment with 11% of the traffic. International-to-international transit are expected to comprise 4.7% of the traffic volume.

Peak-hour passengers are anticipated to fall into three main peaks, namely in the morning (08:00), during middle of the day (11:00) and in the late afternoon (16:00). The afternoon

peak is driven by domestic and international flights (mostly international short-haul); the mid-day peak is driven mostly by international long-haul flights while the morning peak is driven by domestic flights.

The hourly distribution of arriving passengers closely mirrors that of aircraft arrivals. Additionally, besides the peak hours, passenger growth is anticipated during other hours of the day. Conversely, for departures, the peak is expected to remain at 16:00.

**Table 5: Peak hour passengers for the Master Plan period**

Passengers per hour	FY28	FY33	END STATE
Total arrivals	3,102	3,541	4,906
Total departures	3,035	3,433	4,637
<b>TOTAL COMBINED*</b>	<b>5,409</b>	<b>6,078</b>	<b>8,056</b>

\* The total of departures and arrivals does not equal the total combined. The peak departure and arrival periods may occur at different time of the day, rather than within the same single hour.

**Figure 5: Busy-day passenger profile for the Master Plan period**



## Chapter 3

# Master Plan considerations

- 3.1 Drivers of traffic growth
- 3.2 Long term planning in the aviation environment: forecasting and volatility drivers
- 3.3 Fleet development and future aircraft concepts
- 3.4 Energy transition and future aircraft fuels
- 3.5 Environment and sustainability
- 3.6 Accessibility and inclusivity
- 3.7 Digital and technology

Auckland Airport's Master Plan serves as a roadmap for the expansion of airport land and assets, and the development of aeronautical and non-aeronautical activities. Its preparation has recognised a range of factors that over the life of the Master Plan will influence the airport's growth.

The key considerations and how they influence the Master Plan are:

- Drivers of traffic growth
- Fleet developments and future aircraft concepts
- Energy transition and future fuels
- Environmental management and sustainability
- Digital and technology to influence innovation
- Equitable access.



## 3.1 Drivers of traffic growth

**Auckland is New Zealand's busiest airport and serves as the main international gateway into the country for both passengers and air cargo.**

Auckland Airport is also the country's largest domestic and regional hub. The airport is well positioned to serve business and tourism traffic as well as a wider outbound local population of about 2.9 million living in Auckland region and the upper North Island. Passenger growth at Auckland Airport is driven by demand-side as well as supply-side factors centred on socio-economics, demographics, tourism growth, trade, and decarbonisation.

### Demand-side factors

New Zealand's economy has become increasingly diversified over the past few decades with less reliance on primary industries. The country has also been able to exploit to its benefit the intense globalisation during this period, which has seen growth in tourism and trade. New Zealand's gross domestic product (GDP) is projected to grow by 1.8% a year on average to late 2040s. Tourism forms a key part of New Zealand's economy, accounting for about 14% of the GDP.

Air transport is a key enabler for tourism as almost all visitors to New Zealand come by air. New Zealand's key source markets for tourist arrivals historically include Australia (39%), China (11%), USA (9%), UK (6%), Germany (3%) and Japan (3%). The tourism industry is anticipated to grow at 3.5% a year.

The growing middle class in several countries across Asia and their rising propensity for international travel make it a crucial market for New Zealand's aviation sector. Similarly, economic ties and tourism exchanges with the USA are boosting the demand for flights. India, with its large population is a market that is also expected to grow.

In terms of New Zealand's demographic trends, the nation's population is projected to slowly expand by 0.7% annually to reach 6.0 million by late 2040s, with Auckland and its surrounding area growing at a faster pace (0.9% annually) to reach 3.6 million. As such, Auckland's share of the nation's population, now about 58%, is projected to rise to roughly 61% by late 2040s.

### Supply-side factors

It is expected that Auckland Airport will remain the main international gateway to New Zealand over the Master Plan period. However, its overall share of the international air transport market is expected to slightly decline over time as other New Zealand airports capture markets, aircraft technology evolves, and those airports successfully develop and attract new services, particularly in the international short-haul and trans-Tasman sectors.

Domestically, Air New Zealand is the main airline servicing Auckland Airport and provides the majority of flights both via jet and turboprop operations. In November 2019, Jetstar ceased turboprop-operated regional flights within New Zealand. Looking ahead, it is assumed Air New Zealand will compete with Jetstar only on domestic trunk routes, with Air New Zealand maintaining a near monopoly on regional routes. Airlines such as Air Chathams and Barrier Air are expected to continue their role in providing regional-only connectivity to a selection of destinations from Auckland Airport.

The international short-haul routes are primarily dominated by the trans-Tasman market. It is assumed that, in line with growing demand, the airlines now operating these routes will increase capacity. As frequencies reach a certain level, carriers are likely to deploy larger aircraft to increase capacity. Similarly, for the Pacific Islands in general, aside from the marginal increase in the number of destinations, carriers are also expected to boost frequencies and/or up-gauge routes to meet the growing demand.

The international long-haul segment will experience the strongest growth driven by economic factors (GDP, tourism, demographics and trade), which will naturally support the expansion of this network. Additionally, airline strategies and advancements in aircraft technology will significantly influence the development of long-haul traffic at Auckland Airport. As a result, most of the new routes are projected to be in the international long-haul sector, with India and China emerging as particularly promising markets. Mature inbound and outbound travel markets such as Australia, USA and the United Kingdom are also expected to continue to see ongoing growth.

## 3.2 Long term planning in the aviation environment: forecasting and volatility drivers

### Airport master plans rely on forecasts to guide land use protection, capacity pathways, and the sequencing of enabling infrastructure.

However, aviation demand and airline capacity are shaped by a mix of global and local factors that can change rapidly. For this reason, forecasts should be treated as credible, evidence based estimates, not precise predictions. A forecast remains useful when its assumptions are transparent and its logic remains credible even as real world conditions vary. Forecasts necessarily depend on assumptions about economic conditions, travel preferences, airline strategies, aircraft availability, and operational practices that will evolve over time.

Unlike many infrastructure sectors, an airport's demand is heavily influenced by airline choices, network design, schedule deployment, fleet and route economics, which can shift in response to factors outside airport control.

Recent global experience has highlighted the degree of volatility within the aviation system. Aircraft availability has become a binding constraint on airline growth in many markets, with supply chain disruption, manufacturing

delays, and engine reliability issues contributing to delivery shortfalls and extended order backlogs. These constraints have limited fleet renewal and restricted airlines' ability to deploy capacity in line with underlying demand.

More broadly, recent industry conditions have shown how engine issues, aircraft delivery delays, fuel price volatility, and global supply chain constraints can materially affect airline capacity, network decisions, and recovery trajectories. Such factors can significantly alter short to medium term activity levels relative to any forecast pathway, even where longer term demand fundamentals remain intact.

Auckland Airport's long-term plan is also shaped by complementary constraints and dependencies beyond the aircraft itself. In particular, the capacity, reliability and resilience of the ground transport and roading network play a fundamental role in enabling aviation growth. Congestion or unreliability on key access corridors can directly affect airline punctuality, aircraft turnaround times, cargo and traveller experience.

In this context, this Master Plan considers developments that fall into three broad categories, each responding to different drivers and levels of uncertainty.

**Figure 8: Categories driving the Master Plan**



While these categories are interrelated, not all future investments are driven solely by traffic growth. Some developments may be required to maintain system performance, comply with evolving regulatory frameworks, or strengthen operational resilience, even in the absence of immediate increases in demand.

To manage uncertainty while still enabling orderly development, this Master Plan is designed to be phased, modular and will be reviewed every five years.

**Figure 9: Developments in the Master Plan**

### MONITORING ASSUMPTIONS AND ADAPTING OVER TIME:

Rather than relying on a single static view of the future, this Master Plan recognises that forecasts are based on assumptions that may change. As actual demand, airline behaviour, fleet availability, and operating conditions evolve, these assumptions are reviewed and updated through regular planning cycles, further studies, and engagement with airlines and stakeholders. This enables the timing and scope of future developments to be adjusted as conditions change, without committing prematurely to specific outcomes.

### TRIGGERS AND STAGED DELIVERY:

Developments are sequenced through defined triggers and decision points so that major investments occur when demand signals, operational requirements, and affordability align. This reduces the risk of over building while ensuring the airport can respond when growth materialises.



### 3.3 Fleet development and future aircraft concepts

The aircraft manufacturing industry is undergoing significant change, with the need to balance the continuing surge in demand for air travel with the increased focus on sustainability and fuel efficiency.

In response to the carbon reduction challenge, manufacturers are exploring alternative propulsion systems such as hydrogen fuel cells, and the use of advanced light-weight materials to improve aircraft efficiency. Carbon reduction is also driving the advent of new aircraft concepts. These advancements are not only expected to revolutionise the way we fly, but may also necessitate modifications to airport infrastructure and operations.



## Fleet development

Small aircraft with hybrid-electric propulsion are expected to enter service this decade, while regional aircraft could be available by the mid-2030s. Larger commercial aircraft might be introduced from 2040 onwards.

According to the latest data figures for the aircraft fleet at Auckland Airport, there appears to be a strategic balance between established workhorses and newer, more fuel-efficient models.

It is expected that during the Master Plan period, both domestic and foreign carriers will continue to operate a mix of narrow-body (Code C) and wide-body jets (primarily Code E and, occasionally, Code F) to support the domestic and international networks, with turboprops and the next generation of 'net-zero' aircraft serving the regional routes. It is also expected domestic carriers will average a higher number of seats per aircraft and load factors over time.

For instance, Air New Zealand has indicated its average fleet age is about nine years. It is anticipated the replacement of older aircraft, particularly the Dash 8-Q300, averaging 16 years, will likely be in the form of 'net-zero' aircraft as the next generation of regional aircraft becomes available and established over coming decades.

Air New Zealand has unveiled its Next Gen Aircraft Programme, which includes plans to introduce a commercial, cargo only demonstrator in late 2026. The aircraft will operate on short domestic routes through a partnership with US aerospace firm BETA Technologies.

The aviation industry has committed to achieving net-zero emissions by 2050, aligning with the Paris Agreement's goals to limit global warming. However, the path to 'net zero' by 2050 is complex and requires significant advancements in technology and infrastructure.

Additionally, advancements in aerodynamics and materials science are expected to produce more efficient, quieter and lighter aircraft, further reducing aviation's environmental footprint. The International Civil Aviation Organization's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) initiative also aims to strengthen aircraft certification standards globally to guarantee a transition towards a new lower-emitting generation of commercial aircraft. These innovations are gathering pace – Airbus, for instance, is exploring the ZEROe project, which aims to introduce the world's first hydrogen-fuelled commercial aircraft by 2035.

In November 2023, Auckland Airport announced a collaboration with Heart Aerospace, joining the company's advisory board to help propel innovation in sustainable aircraft. Heart Aerospace is at the forefront of developing electric regional aircraft, such as the ES-30, which is designed for short-haul flights with lower environmental impact. This aligns with Auckland Airport's goals to reduce emissions and prepare for the future of green aviation. Auckland Airport will work with Heart Aerospace to share information as the technology develops, including around charging options and infrastructure.

## Advanced air mobility

Advanced air mobility (AAM) represents an evolution in aviation technology, with the potential to significantly transform airport infrastructure and operations.

The integration of AAM, particularly electric vertical take-off and landing (eVTOL) aircraft, into an existing airport and urban ecosystem will require comprehensive planning and regulation. eVTOL aircraft require less space for take-offs and landings, enabling the development of vertiports, which are compact, versatile and can be integrated into urban environments.

For airports, the advent of AAM means adapting to accommodate a new class of air vehicles that are more energy-efficient, and potentially autonomous. Infrastructure modifications might include the installation of electric charging stations and dedicated vertiports, as well as new air traffic control systems to manage the increased airspace use. Auckland Airport will explore the feasibility of co-locating helicopter operations with e-VTOL operations once more information about the latter becomes available.

AAM also promises to reduce carbon emissions, because they are unlikely to cater for hydrocarbon-fuelled aircraft, and they are expected to be quieter.

In New Zealand, it is expected that the ultimate goal will be to facilitate air taxi services, cargo and medical transport, and to enhance urban and regional connectivity. The viability in the context of Auckland Airport will rely on establishing a robust network of vertiports across urban and regional areas to fully leverage and support AAM connectivity.

As of 2026, eVTOL flight tests have already taken place in New Zealand to demonstrate the commercial viability and the safety of autonomous vehicles, because the country presents an attractive market for AAM developers due to its sparse population and the need for regional connectivity.

The success of AAM will depend on consumer acceptance, regulatory frameworks, operating costs, and the development of necessary infrastructure, such as vertiports. Although AAM is receiving interest from a number of players, existing technologies are not ready to be deployed at a larger scale. Auckland Airport is actively involved in the Aviation Council Working Group, focusing on fostering innovation and embracing new and emerging technologies that will benefit New Zealanders.

## Blended wing aircraft

Blended wing aircraft are not yet a prominent feature in this Master Plan. Too little is known about their practical applications and performance. With research and development still in the early stages, uncertainties surrounding their feasibility and efficiency limit their inclusion in strategic planning. Auckland Airport will continue monitoring this trend.



## 3.4 Energy transition and future aircraft fuels

Aviation is a dynamic industry, continually evolving with technological advancements, economic progress and changing global needs. In the next 10-20 years, several key trends are expected to reshape the landscape of aviation and its entire ecosystem.

The path to decarbonisation includes progressive fleet renewal, the adoption of disruptive propulsion technologies, such as hydrogen-fuelled and electric aircraft, operational efficiency improvements, increased use of sustainable aviation fuel (SAF), and carbon offsetting.

Demand for electricity at airports is on the rise with the electrification of various aspects of airport operations as part of the push to decarbonise the industry.

Energy efficiency measures and the integration of renewable energy sources will help balance the increased demand for electricity, but new generation and storage infrastructure will be required to support the electrification of airport and private vehicles, both airside and landside, as well as net-zero aircraft with new propulsion systems.

The industry is also exploring a shift towards alternative propulsion systems, such as hydrogen-fuelled and all-electric aircraft, to service shorter routes, though long-haul flights will likely depend on SAFs for the foreseeable future. Fuel infrastructure planning also considers fuel resilience, recognising recent and potential variability in supply chain conditions and operational requirements, and incorporates flexibility to respond to change over time.

### Sustainable aviation fuel

Sustainable aviation fuel is an important part of the solution to decarbonising global aviation. SAF – produced from sustainable feedstocks such as waste oils, plant oils, animal fat, energy crops, wood waste or algae, is estimated to reduce flight emissions by up to 70%-80% depending on its production methods, compared to traditional fossil-based jet fuel. However, the current challenge lies in its large-scale availability, concerns about sustainable sourcing, and its cost, prompting considerations for subsidies to increase production and reduce prices.

New Zealand's geographic location and reliance on long-haul aviation for trade and tourism means a consistent supply of SAF will be required to maintain connectivity. Because of this, New Zealand needs a clear strategy for SAF that seeks to contribute to global supply and secure a domestic supply, while being underpinned by international collaboration. Alignment with Australia and the Pacific will be an effective way to develop a regional SAF industry and maintain connectivity across the Pacific and beyond.

### Electric and hybrid

While it is unknown at this stage if wholesale electrification of the aviation sector will be possible, there is scope for regional and domestic flights to be early adopters and make use of hybrid or electric aircraft in the short-to-mid-term to transport travellers and freight.

The plan to achieve an 80-seat electric aircraft may be technically and economically viable by 2035 according to the International Air Transport Association (IATA), whereas larger 180-seat commercial aircraft that could compete against today's narrow-body jets are not expected until the 2040s or beyond. Air New Zealand is actively pursuing its zero-emissions targets and plans to start operating a small electric fleet by 2030, focused on six-to-10-seat fully electric and hybrid aircraft concepts.

In this scenario, airports will need to be equipped with the right electrical charging infrastructure that is also smart, financially feasible and able to integrate with other distributed energy resources.

Some of the challenges around aircraft electrification relate to current battery technology, its cost, and the lack of electrical infrastructure to support future growing needs. This is particularly the case as electric aircraft will require powerful and efficient charging infrastructure to support and maintain operational efficiency through optimised turnaround times and rotations.

Auckland Airport will likely need to upgrade its electrical systems to handle the increased demand for high-capacity charging stations and a reliable power supply.

### Hydrogen

Hydrogen-powered aircraft still are in the early stages of technological development and are expected to still require one or two more decades to mature into a viable concept.

There are a number of current challenges to widespread adoption of hydrogen as an aviation fuel in New Zealand, ranging from aircraft technology and green hydrogen generation facilities, to transport and storage solutions.

The first hydrogen-powered aircraft to be operated commercially will probably be smaller aircraft using very high-pressure gas. Manufacturers continue to undertake testing and trials and have various targets to bring commercial hydrogen-powered aircraft to market from the 2030s.

Longer term, larger commercial aircraft are likely to use liquid hydrogen in hybrid hydrogen-electric engines due to its improved energy density and performance.

## 3.5 Environment and sustainability

Auckland Airport is for the world we'll travel tomorrow – a world where we uplift the communities we connect, and protect the nature we explore.

This approach is embedded in Auckland Airport's operations and is a key consideration of the Master Plan. This is made even more important by the natural and cultural significance of our location on the Māngere peninsula and the shores of Te Manukanuka o Hoturoa (the Manukau Harbour), and our proximity to residential and business areas.

Auckland Airport's aspiration is to deliver best-in-class custodianship of natural assets.



### Environmental planning controls including aircraft noise

Auckland Airport’s activities and operations are governed by designations, resource consents and specific zone provisions in the Auckland Unitary Plan.

Designation 1100 covers most of the airport’s landholding and authorises the use of land for aircraft operations, including the construction and operation of the proposed northern runway, and a range of aeronautical functions, subject to conditions.

These conditions include restrictions on aircraft engine testing and noise levels off-site, reflecting that Auckland Airport cannot fully internalise its noise effects within its landholdings. The restrictions, include:

- Noise from aircraft operations shall not exceed 65dB Ldn anywhere outside the High Aircraft Noise Area (HANA) and 60dB Ldn anywhere outside the Moderate Aircraft Noise Area (MANA).
- Engine testing can occur only in defined areas and cannot exceed a seven-day rolling average of 55dB Ldn or 75dB LAmax between the hours of 22:00 and 07:00 at adjacent residential areas.

Additional noise conditions apply to the northern runway, namely:

- Jet and non-jet aircraft are not permitted to depart to or arrive from the east between 22:00 and 07:00 (except in a limited number of specified cases).
- For the first five years, noise from aircraft operations shall not exceed 58.5dBA Ldn at State Highway 20 and the southernmost part of Naylor’s Drive.
- For the first five years, wide-body jet (Code D, E, and F) aircraft shall not depart to the west between 22:00 and 07:00.

The noise controls in Designation 1100 work in tandem with overlays in the Auckland Unitary Plan to manage activities sensitive to aircraft noise in areas of high aircraft noise and potential reverse sensitivity effects on the airport.

Modelling indicates the forecast growth can be accommodated within the current aircraft noise overlay but Auckland Airport cannot rule out a need to alter the noise overlay in the future.

Designation 1101 authorises the use of land in the Renton Road area for aircraft operations and maintenance purposes, subject to conditions, but the range of activities is more restricted than under Designation 1100.

Figure 10: Aircraft noise contours



- High Aircraft Noise Area 65+ dBA Ldn
- Moderate Aircraft Noise Area 60-64 dBA Ldn

Designation 1102 contains a range of aeronautical safety restrictions, which include limits on:

- The height of obstacles through Obstacle Limitation Surfaces (OLS);
- The rate of air discharges through the aircraft final approach slopes;

- The location of buildings and the congregation of people in the Runway End Protection Areas; and
- Glare from non-aeronautical lighting.

Compliance with the designations is required on an ongoing basis, unless altered through the relevant regulatory process, and this is a consideration of aeronautical growth at Auckland Airport.

## Nature enhancement and water quality

Auckland Airport's landholdings drain to three main waterbodies – Oruarangi Creek to the north, Pūkaki Creek to the east, and the Manukau Harbour to the south and west.

Protecting the ecological value of the Manukau Harbour requires putting aside land to enable nature enhancement and stormwater treatment and retention ponds so any discharges to the harbour meet best-in-class environmental standards.

## Climate resilience

Auckland Airport is committed to being a climate-resilient, low-carbon gateway to New Zealand.

The physical effects of a changing climate are already being felt across New Zealand, and the Auckland Airport precinct is no exception. Physical inundation and flooding of assets, due to extreme weather events and, to a lesser extent rising sea level, is Auckland Airport's key physical climate-related risk.

As an inter-generational asset that is important to the region and the country, Auckland Airport is ensuring it is mitigating and adapting to these climate-related risks. Extensive modelling has provided a good understanding of the risks associated with stormwater, storm surges and sea-level rise, and comprehensive improvements to the airport's infrastructure are underway or planned to manage these risks.

Climate adaptation planning is also part of the airport's infrastructure development process to ensure identified solutions are adequate in future climate scenarios.

## Decarbonisation

Auckland Airport is taking proactive steps to reduce its direct carbon emissions and has publicly disclosed a decarbonisation pathway to achieve a 90% reduction of direct emissions by 2030 compared to the 2019 baseline. This pathway includes phasing out natural-gas boilers, electrifying the vehicle fleet, using low global warming potential refrigerants, and transitioning to renewable energy sources.

Additionally, Auckland Airport is working with its airline, ground handling and air-navigation partners to improve operational efficiency and reduce the environmental impact by:

- Providing electric vehicle (EV) chargers on the airfield to serve low-emission ground-support vehicles.
- Installing ground power units (GPUs) and pre-conditioned air (PCA) equipment so aircraft can connect to a low-carbon electricity supply instead of burning jet fuel while at the gate.
- Ongoing work with Airways and airlines to reduce aircraft fuel burn by setting fuel-saving flight paths, allocating taxiways to minimise aircraft taxi time, and just-in-time pushback allowing aircraft to delay engine use.

The most important role an airport can play in the decarbonisation of the wider aviation sector is to ensure the right ground infrastructure is in place to enable the adoption of future aircraft technologies and fuels as they become widely available, such as SAF, and electric and hydrogen-powered aircraft. So-called 'drop-in' SAF is already able to be delivered to aircraft via Auckland Airport's fuel hydrant system, and engagement is taking place with airline partners to understand their future requirements for alternative aircraft fuels and technologies.

Similarly, Auckland Airport is future-proofing its transport network to enhance connectivity and provide for low-emission transport modes. The Master Plan accommodates a variety of transport options and strategies, including active modes such as cycling and walking, rapid transit (bus and light rail), and the anticipated increase in EVs for both private and public transport.

Auckland Airport is also actively addressing 'whole of life' carbon emissions in the design and construction of infrastructure development projects.

These initiatives are part of a broader effort to reduce carbon emissions across the entire supply chain. They not only address the environmental challenges, but also set a precedent for innovation and leadership in sustainable aviation practices globally.

Auckland Airport progress to date to reduce direct carbon emissions and to support other airport users to reduce their emissions has been recognised with a Level 4 (Transformation) Airport Carbon Accreditation from Airports Council International (ACI), putting Auckland Airport among the world's leading airports in terms of sustainability.



## 3.6 Accessibility and inclusivity

The Auckland Airport Master Plan affirms a long-term commitment to creating an inclusive and accessible airport experience for all travellers.

It recognises the growing importance of responding to demographic shifts, particularly the needs of an aging population, while embracing a broader understanding of disability that includes physical, sensory, cognitive, and profound impairments.

Accessibility is approached as a foundational principle — not limited to mobility but encompassing the full spectrum of human diversity. The Master Plan promotes a culture of inclusion, ensuring that all travellers, regardless of ability, are supported with dignity and respect throughout their journey.

This commitment is already reflected in a number of initiatives that support travellers with diverse needs, such as:

- **The Hidden Disabilities Sunflower** programme, which enables discreet identification and support.
- **Low-sensory spaces** that offer calm environments for those who need them.

- **Changing Places** facilities that provide enhanced amenities for people with complex care requirements.
- **Transport Hub Assistance Buggy**, a 24-hour service, shuttles departing travellers from the Transport Hub to the terminal and arriving travellers from the arrivals hall back to the Transport Hub. The buggy operates continuously in a loop, with each round trip taking approximately 15–20 minutes depending on traffic conditions.

Building on these efforts, Auckland Airport is also rolling out new self-service kiosks featuring enhanced accessibility functions, further reinforcing its dedication to inclusive, future-focused travel experiences.

As the airport evolves, the Master Plan acknowledges that certain operational realities — such as increased walking distances — may arise. However, it emphasises that these challenges will be addressed through a people-first approach, ensuring that accessibility remains central to future planning and service delivery.

Ultimately, the Master Plan sets a strategic direction that embeds accessibility into Auckland Airport's identity — not as a feature, but as a value. It reflects a holistic understanding of inclusion, grounded in empathy, equity, and the belief that every journey should be possible and positive for everyone.



### 3.7 Digital and technology

This Master Plan recognises digital and technology as crucial factors in ensuring efficiency, security, and a seamless passenger experience.

As Auckland Airport expands to accommodate growing traveller volumes forecast to reach 38 million by late 2040s, integrating advanced digital solutions is vital for maintaining smooth operations while enhancing sustainability, revenue generation, and customer satisfaction.



#### Digital Infrastructure

Auckland Airport's Digital Strategy is built on three key principles:



To bring these principles to life several strategic digital infrastructure upgrades are required. One of the most significant is the installation of a new external communications cabinet that ensures reliable connectivity and serves as a key component of Auckland Airport's long-term expansion strategy, enabling future growth while maintaining seamless operations.

By integrating these digital advancements, Auckland Airport is not only enhancing operational efficiency and passenger experience, but also ensuring it remains adaptable to future technological breakthroughs.

## Technology as an enabler of seamless travel

Auckland Airport is making a major shift by integrating physical and digital systems across the entire precinct, rather than operating in silos, to drive a complete operational transformation.

At the core of this transformation are robust technology infrastructure, reliable networks, and devices that boost efficiency and seamlessly support the airport's critical functions. Cutting-edge data and analytics platforms will provide a comprehensive operational view, enabling smarter, faster decision-making and improved situational awareness.

One of the most significant advancements in modern airports is the implementation of biometric screening and e-gates. These systems enable faster and more secure passenger processing by integrating facial recognition, fingerprint, and iris scanning.

Auckland Airport is actively embracing this shift, aligning with industry initiatives such as IATA's New Experience Travel Technologies (NEXTT) and One ID programs, as well as ACI's Digital Transformation Handbook. These efforts are laying the groundwork for a fully connected and automated airport experience, where travellers move effortlessly through each touchpoint with minimal manual intervention.

The integration of smart digital tools, real-time wayfinding displays and Artificial Intelligence (AI)-powered decision-making platforms, further enhances situational awareness, allowing for a more responsive and adaptable airport environment.

As a result, travellers will benefit from an enhanced experience with real-time digital tools and intuitive wayfinding displays for effortless navigation. These displays and digital signage will also provide real-time updates on flights, gate changes and baggage claim belts.

Security and operational efficiency are also being enabled by AI-powered technologies. Smart baggage and body-scanning systems enhance threat detection, while predictive maintenance, powered by Internet of Things (IoT) sensors and AI analytics, ensures airport infrastructure remains in optimal condition, preventing downtime.



## Enabling smarter, data-driven airport operations

Auckland Airport is leveraging advanced traffic forecasting and data analytics to maximise runway and gate capacity. The integration of AI and IoT sensors enables airports to optimise operations, reduce delays, and proactively address maintenance needs.

By analysing real-time flight schedules, passenger flow and weather conditions, the airport can make smarter decisions to prevent congestion, reduce delays, and improve the allocation of resources.

Another critical application of technology is in predictive maintenance. By embedding IoT sensors throughout airport infrastructure—including runways, baggage systems, and Heating, Ventilation and Air Conditioning (HVAC) systems—Auckland Airport will be able to detect potential issues before they become critical failures. This proactive approach reduces downtime, extends asset lifespan, and improves operational resilience. Auckland Airport is incorporating these technologies to enhance situational awareness and streamline airport operations, ensuring infrastructure remains in peak condition while minimising disruptions to travellers.

Auckland Airport is also implementing AI-powered decision-making platforms to enhance situational awareness. These platforms aggregate data from various sources, including weather forecasts, security feeds, and passenger flow metrics, to provide a comprehensive view of airport operations. By enabling more accurate and data-driven decision-making, Auckland Airport is improving efficiency while ensuring a smoother experience for travellers, airline partners, and ground operators.

## Enabling security

Security is one of the most crucial aspects of airport management, and technology is playing an increasingly vital role in ensuring safe and efficient airport environments. AI-powered baggage and body scanning technologies improve threat detection while minimising wait times for travellers. These systems use machine-learning algorithms to analyse scanned images more accurately than traditional X-ray technology, reducing false alarms and expediting the

screening process.

Cybersecurity is another critical area where technology serves as an enabler. As airports become more connected, the risk of cyber threats increases. Auckland Airport's Digital Strategy prioritises cybersecurity by ensuring a robust and resilient technology infrastructure. Secure networks, encrypted data transmissions, and real-time threat monitoring help protect sensitive passenger information, operational systems, and digital assets from cyber attacks.

Physical security is also being enhanced through AI-powered surveillance and drone monitoring. These tools provide real-time threat detection and response capabilities, allowing security teams to proactively address potential risks before they escalate. By integrating AI-driven analytics with traditional security measures, Auckland Airport is setting new standards for safety and resilience.

## Enabling the future of air travel

Technology is a powerful enabler in the evolution of airports, driving efficiency, security and seamless travel experiences. Auckland Airport, through its strategic digital investments, is looking to set a high benchmark for innovation in airport operations.

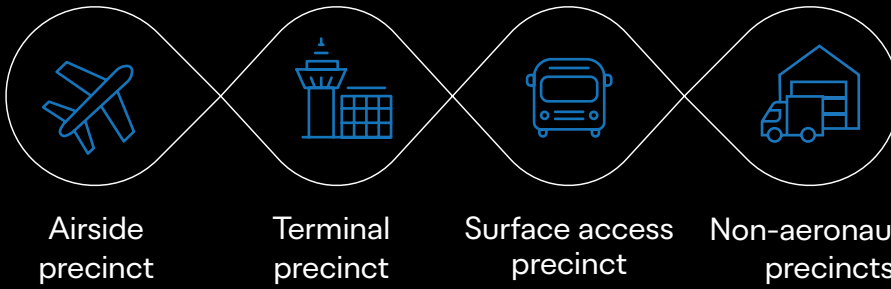
By embedding automation, AI, and advanced analytics into every aspect of its Master Plan, the airport is ensuring it remains agile, resilient, and capable of meeting the demands of the future.

By merging physical and digital infrastructure, investing in next-generation technologies, and prioritising seamless connectivity, Auckland Airport is redefining air travel. The ability to enable smooth operations, rapid decision-making, and customer-centric innovation ensures the airport is not just meeting today's demands but also shaping the future of aviation.

## Chapter 4

# Land use planning

- 4.1 Airside precinct
- 4.2 Terminal precinct
- 4.3 Surface access precinct
- 4.4 Non-aeronautical precincts (interim use of the land)
- 4.5 Land use plans



Auckland Airport serves as a complex network of activities with unique requirements. For this reason, the airport land is divided into four precincts with individual purposes, objectives and development strategies.

This Master Plan looks at these distinct precincts which are listed according to the airport hierarchy giving priority to aeronautical-related activities.

In the short term, the land use plans ensure immediate operational needs are met without compromising safety or regulatory compliance. This includes managing noise levels, preventing

the encroachment of incompatible structures, and safeguarding zones for potential expansion based on the approved controls and consents for the different zones within the airport.

For the medium term, the plans balance the growth of airport facilities with commercial interests, while maintaining alignment with environmental and community standards.

In the long term, the land use plans anticipate future aviation trends and technological advancements, laying the foundation for sustainable development that supports Auckland Airport's evolving role as a transportation hub and key economic driver.



# The existing site

Figure 11: Existing Precinct Map





AIRSIDE:

- 1.1 RWY05R/23L
- 1.4 NAVAIDS
- 1.7 PIER B APRON
- 1.8 PIER A APRON
- 1.13 TWY B
- 1.14 TWY A
- 1.16 TWY L
- 1.17 DTB APRON

TERMINAL:

- 2.3 PIER A
- 2.5 PIER B
- 2.10 INTERNATIONAL TERMINAL BUILDING
- 2.11 DOMESTIC TERMINAL BUILDING

GROUND TRANSPORT:

- 3.1 TRANSPORT HUB
- 3.5 EXISTING PARKING
- 3.6 PARK & RIDE NORTH
- 3.7 PARK & RIDE SOUTH
- 3.8 VALET STORAGE PARKING
- 3.9 CAR RENTAL PARKING
- 3.11 WESTERN FORECOURT
- 3.12 INNER TERMINAL ROAD
- 3.13 MANU TAPU DRIVE
- 3.14 GEORGE BOLT MEMORIAL DRIVE
- 3.15 PUHINUI ROAD
- 3.17 TOM PEARCE DRIVE
- 3.20 CHECKPOINT B
- 3.22 CHECKPOINT D
- 3.24 CHECKPOINT C

ANCILLARY AERO & NON-AERO:

- 4.3 ARFF FACILITIES
- 4.4 LIVESTOCK FACILITIES
- 4.5 HONEY POT AND INTERWASTE
- 4.6 AIRNZ BASE
- 4.7 MRO FACILITIES
- 4.8 CHARLIE 1 HANGARS
- 4.9 AIR CATERING ENGINEERING SERVICES
- 4.11 THE QUAD
- 4.12 THE QUAD
- 4.13 THE LANDING
- 4.14 MĀNAWA BAY
- 4.15 TE MANUKANUKA O HOTUROA MARAE
- 4.16 ABBEVILLE ESTATE
- 4.17 PULLMAN, NOVOTEL AND IBIS HOTELS
- 4.18 ATC FACILITIES
- 4.19 AIR NZ AMENITIES
- 4.20 CARGO AND FREIGHTER
- 4.21 SHOPPING CENTRE
- 4.22 GSE MAINTENANCE AND AMENITIES

UTILITIES:

- 5.1 JUHI LOCATION
- 5.5 PC INTAKE
- 5.6 STORMWATER PONDS
- 5.7 POTABLE WATER TANKS
- 5.9 POWER CENTRE
- /// CONSTRUCTION SITE

## 4.1 Airside precinct

### Purpose and activities

The airside precinct serves a critical role. Its primary purpose is to ensure the safe, efficient, and secure operation of the airside facilities and includes runways, taxiways, aprons, navigation aids and other aviation-related infrastructure. This precinct is further subdivided into airside land use, with limited access for non-authorised personnel, and ancillary land use including supporting functions for aeronautical activities often located landside.

Key activities in this precinct are essential to day-to-day operations including air traffic control, ground handling, Aviation Security, rescue and firefighting, fuel, aircraft maintenance, cargo, and catering. It also accommodates a range of utility networks and infrastructure including stormwater and energy.

### Development objectives

- Provide safe, efficient and secure aircraft landing, take-off and taxiing operations.
- Provide compliant airfield and apron infrastructure, with flexibility to accommodate future needs.
- Integrate technological and operational advancements.
- Provide adequate ground handling operations and storage areas.
- Provide adequate aviation support facilities such as (but not limited to) nav aids, radar and communications and air traffic control, as well as rescue and firefighting, wildlife management, and meteorological services.
- Safeguard for stormwater ponds and other flood-risk mitigations in alignment with Auckland Airport's climate resilience strategy.



## 4.2 Terminal precinct

### Purpose and activities

The terminal precinct serves as the critical interface between the airfield and surface access precincts, accommodating the terminal buildings and associated facilities and services. Its purpose is to process and streamline international, domestic and regional passenger flows, manage baggage, and provide a range of services to enhance the experience of the airport customers.

Key facilities and activities within the terminal precinct include check-in, inbound and outbound baggage handling systems, security screening, retail and dining outlets, and boarding gates, as well as border control, Customs and biosecurity facilities.

### Development objectives

- Provide safe, efficient and secure passenger, staff and baggage processing.
- Provide compliant terminal infrastructure, with flexibility to accommodate future needs.
- Act as the main physical gateway into New Zealand with a strong sense of place.
- Provide seamless, accessible and inclusive passenger journeys.
- Deliver a functional dwell and commercial experience.
- Integrate technological and operational advancements.
- Provide security and emergency services such as police and fire stations.



## 4.3 Surface access precinct

### Purpose and activities

This precinct encompasses all transport activities and infrastructure that provide connectivity to, from and across the airport site. It includes the terminal pick-up and drop-off (PUDO) areas, car parks, waiting zones and the road network. This precinct must also support the seamless connectivity between private and public transport modes.

### Development objectives

- Provide safe, efficient and secure vehicle flows, and processing for on-airport and off-airport traffic.
- Provide compliant ground transport infrastructure, with flexibility to accommodate future needs.
- Reinforce the airport's role as a multi-modal transport hub.
- Provide seamless, accessible and inclusive vehicle journeys.
- Integrate technological and operational advancements.



## 4.4 Non-aeronautical precincts (interim use of the land)

The non-aeronautical precincts are designated areas within airport land that accommodate a range of commercial activities that complement the core aeronautical operations, catering for both the travelling and non-travelling public.

Auckland Airport's commercial property portfolio comprises business and industrial parks, hotels and retail areas that are home to some of the world's leading businesses and brands. The main non-aeronautical precincts within the airport are The Landing and The Quad.

### The Landing

#### Purpose and activities

The Landing sits in the northern area of the airport and accommodates activities that benefit from an airport-proximate location due to operational, security or cost considerations. The Landing provides world-class environment for employees working on precinct and for the wider community to enjoy.

The predominant activities are related to the logistics, technology and light industrial sectors. These activities are located along strategic roads off the State Highway 20A, including Landing Drive, Te Kapua Drive and Verissimo Drive, which do not experience significant volumes of passenger-related road traffic. At the western end of The Landing, privileged airside frontage has been protected for key aeronautical businesses, such as air freighters and aircraft maintenance service providers.

#### Development objectives

- Capitalise on its direct road access and connectivity.
- Be activated in conjunction with the future northern runway.
- Accommodate large-scale industrial, business and logistics activities.
- Provide opportunities for employment-generating activities for the surrounding communities.
- Be compliant with aviation standards, local regulations and guidelines, particularly in terms of obstacle limitation surfaces.
- Serve logistics, freight-forward users, and activities that support the core airport functions.

### The Quad

#### Purpose and activities

The Quad is the "town-centre" of the precinct, where people-centred activities are concentrated. It is located at the heart of the airport, to the east of George Bolt Memorial Drive and north of Tom Pearce Drive. It is a pedestrian-friendly precinct offering close proximity to the passenger terminals. It accommodates low-impact business and commercial activities, some with extended operational hours.

#### Development objectives

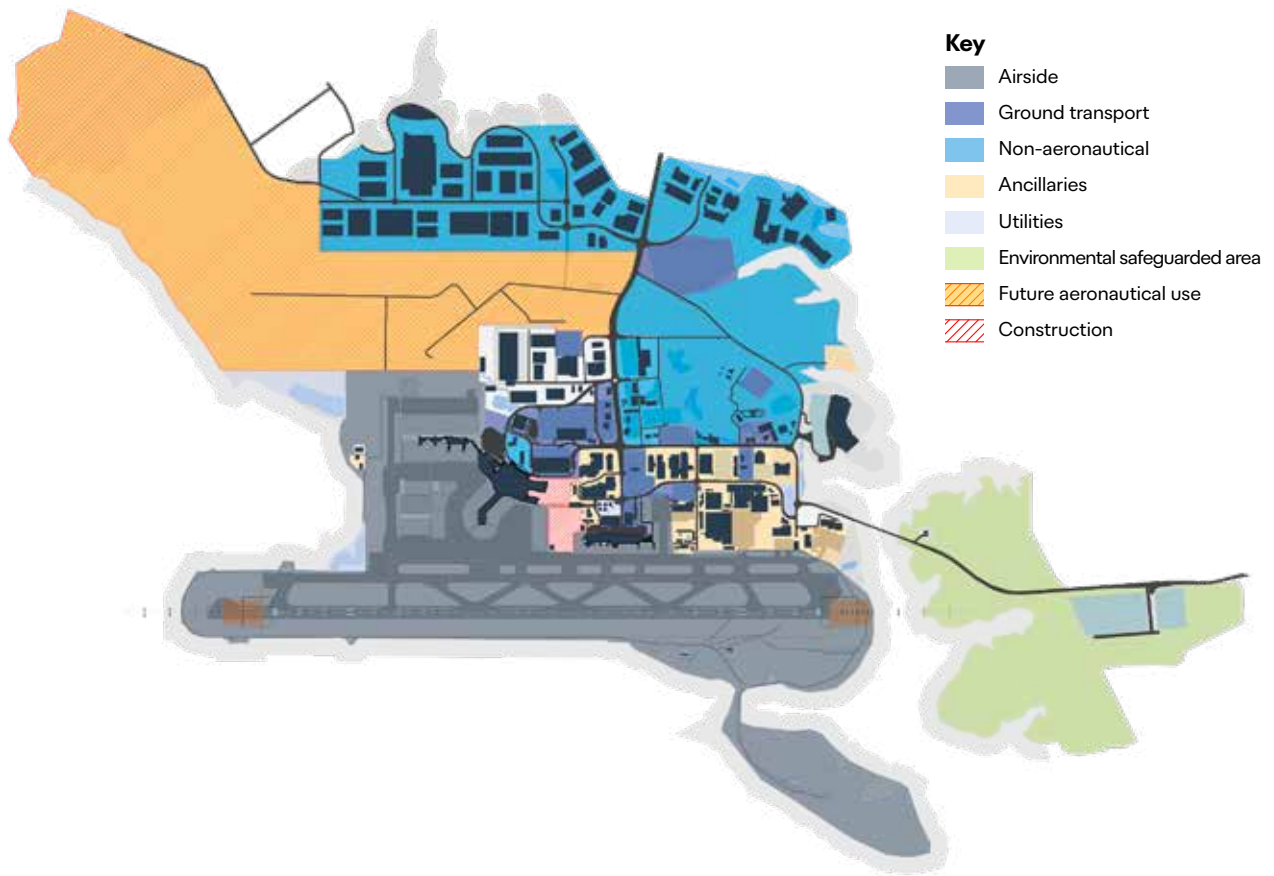
- Take advantage of its proximity to key airport activities and public transport networks.
- Protect existing recreational areas, and consider existing and future stormwater arrangements.
- Provide high-quality public spaces and landscaping, facilitating pedestrian and cycling pathways for connectivity across precincts.
- Centralise people and support functions for precinct workers.
- Enable Auckland Airport to support public services.
- Be compliant with aviation standards, local regulations and guidelines particularly in terms of obstacle limitation surfaces.

## 4.5 Land use plans

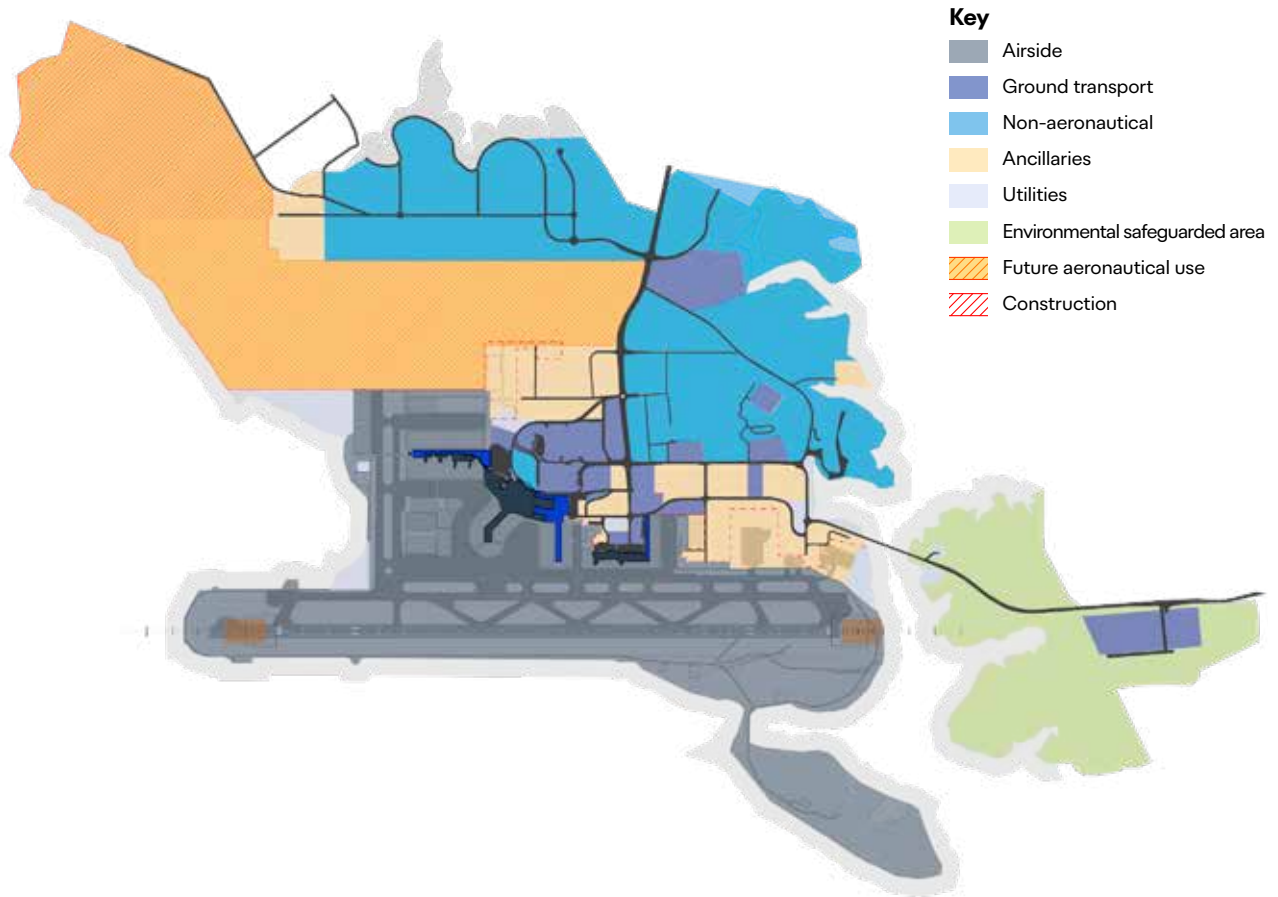
The following land use plans show the land use arrangement across the airport site as infrastructure is implemented and opportunities are unlocked across the precincts.

The land use plans ultimately provide the guidelines for a compatible and complementary development of the different airport activities at Auckland Airport across its four main precincts. All the non-aeronautical development area is safeguarded for aeronautical use.

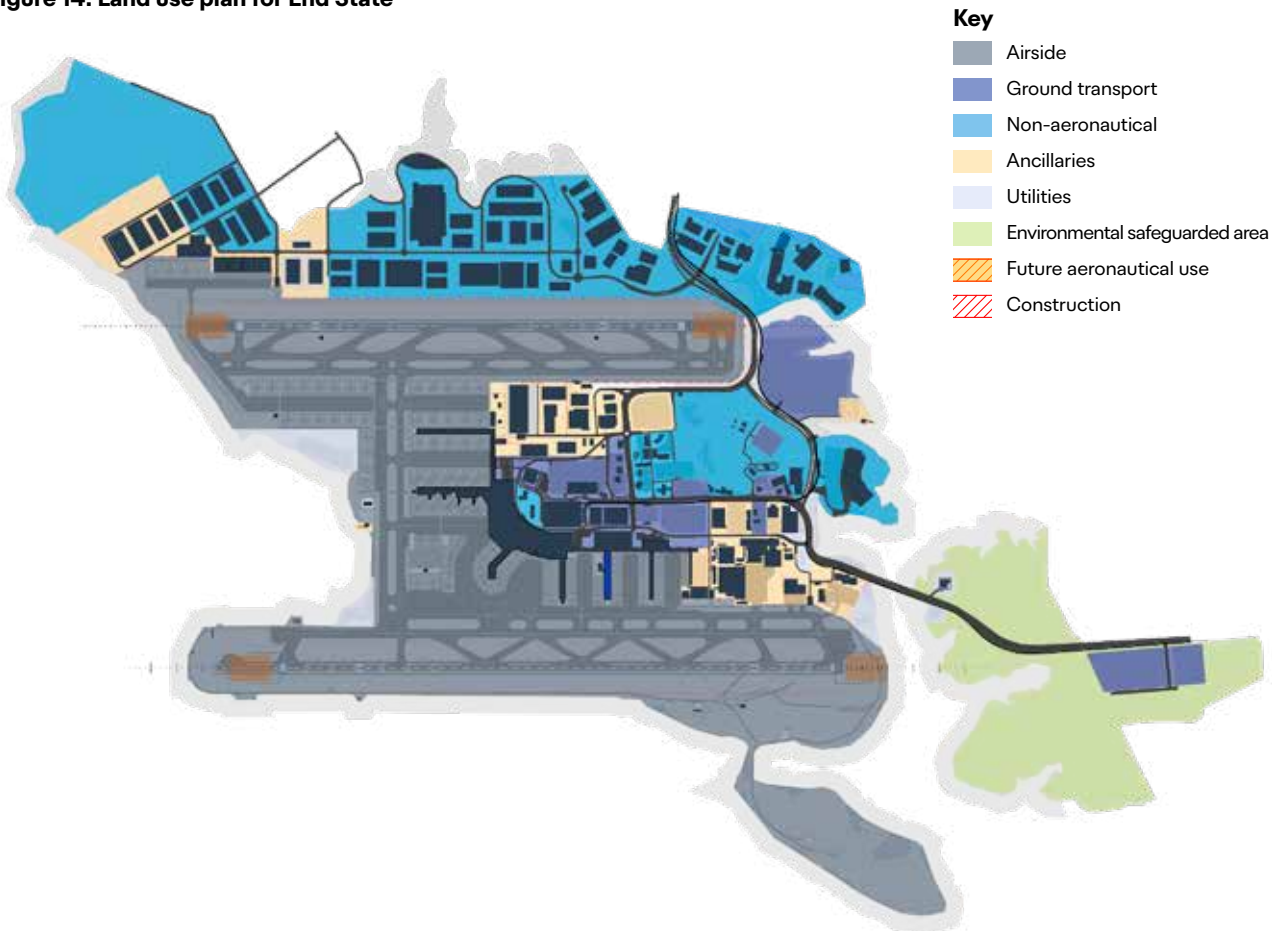
**Figure 12: Land use plan for horizon FY28**



**Figure 13: Land use plan for horizon FY33**



**Figure 14: Land use plan for End State**



## Chapter 5

# Airside precinct

- 5.1 Runway capacity
- 5.2 Transitioning towards a dual-runway airport
- 5.3 Runway performance
- 5.4 Navigation aids (navaids)
- 5.5 Taxiways
- 5.6 Apron
- 5.7 Ground support equipment
- 5.8 Cargo precinct
- 5.9 Support facilities
- 5.10 Aerodrome safeguarding

The airside precinct accommodates the infrastructure, systems and surfaces required for the safe and efficient movement and servicing of aircraft on the ground.

Key infrastructure includes runways, taxiways, aprons, helipads, navigational aids, and other aviation-related facilities.

### Guiding principles

Future airfield developments will adhere to the following key principles:

- Ensuring safe and efficient airport operations at all times.
- Incorporating aviation support facilities such as navigation systems, rescue and firefighting services, and ground service equipment areas.
- Safeguarding space for future innovations.
- Safeguarding for future expansions of aviation-related infrastructure.



### Current airfield system

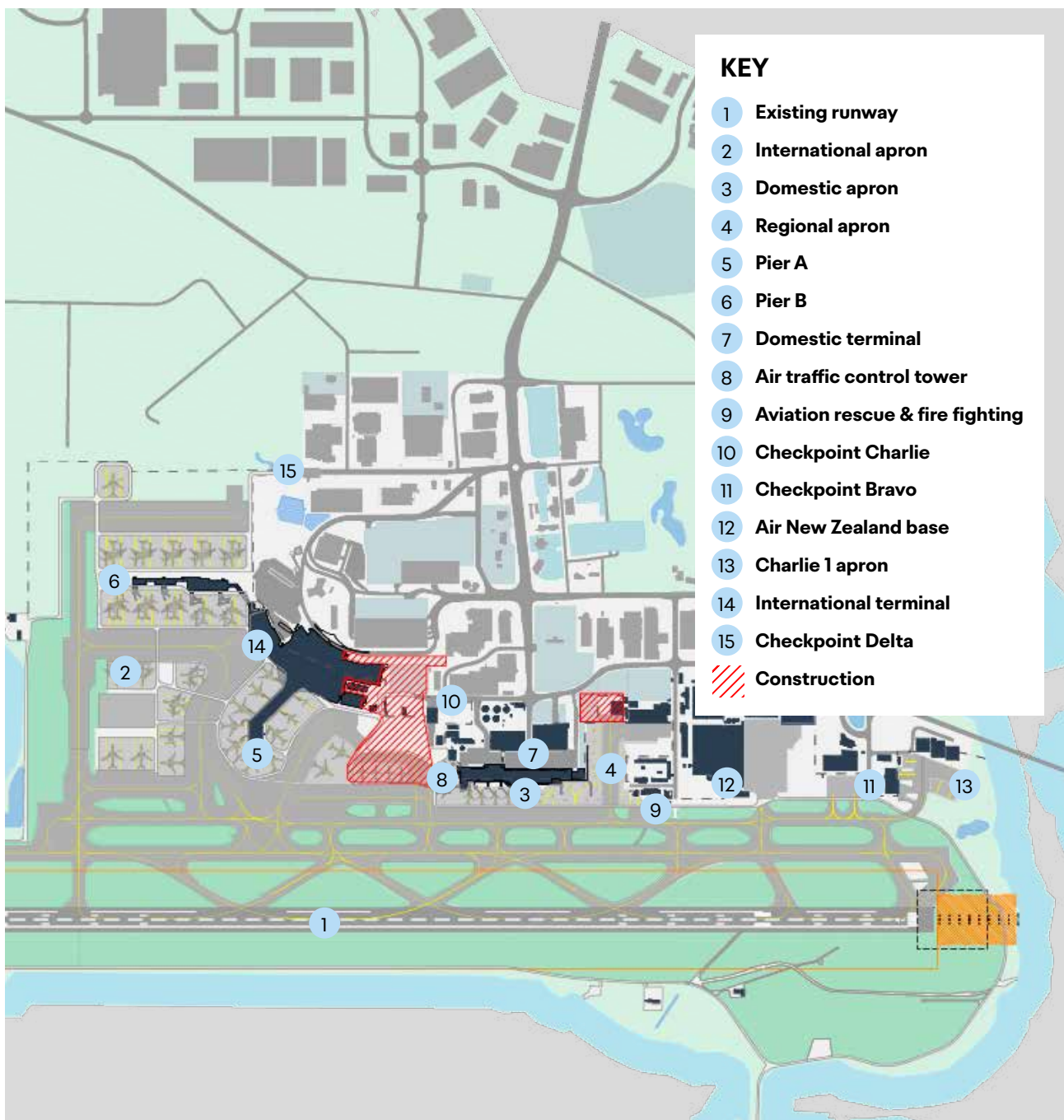
Auckland Airport includes a single runway, 05R/23L, which measures 3,535 metres by 75 metres (including shoulders) and is capable of handling Code F aircraft. The network of taxiways provides the airfield with access for a wide range of aircraft, from smaller eight-seaters to the A380.

The existing runway is served by TWY A, a full parallel taxiway that provides access to both the domestic and international aprons. The international apron is served by Pier A and Pier B, with the latter benefiting from the use of MARS stands, which can accommodate two narrow-body aircraft in the space of one wide-body aircraft.

Additionally, the international apron has non-contact parking positions served by bus lounges located at both Pier A and Pier B.

The domestic apron, located adjacent to the domestic terminal, provides parking positions for Code C jets and turboprop aircraft.

Figure 15: Current airfield map



## 5.1 Runway capacity

### Existing Runway 05R/23L capacity

Airways New Zealand, New Zealand’s air navigation service provider, advised that Auckland Airport’s runway capacity (05R/23L) is in line with the tables below:

**Table 6: RWY 05R/23L Optimum Capacity**

Air Traffic Management Flow Setting	Capacity (movements per hour)
MCA	48
MCB	40
FOG	24

*Note: Actual rates may at times be up to 10% lower depending on aircraft performance mix.*

**MCA** = Observed meteorological conditions where the cloud base is not below 2,000ft and visibility less than 8,000 meters.

**MCB** = Observed meteorological conditions where the cloud base is below 2,000ft and visibility less than 8,000 metres.

**FOG** = Observed meteorological conditions requiring the use of approved low visibility procedures.

Scheduled peak-hour demand is expected to reach 53 ATMs/h by the end of the Master Plan period.

It is expected the dual-runway configuration will be sufficient to accommodate the expected demand for all Master Plan horizons under normal operational mode.

The Master Plan is therefore exploring Auckland Airport’s airfield configuration as it transitions from a single-runway airport into a dual-runway airport.



### Existing runway capacity study

Auckland Airport has undertaken a number of assessments to determine the maximum number of movements the existing runway can accommodate.

Before the COVID-19 pandemic, Auckland Airport conducted an initial study in collaboration with airlines and Airways as part of the Airfield Enhancement Group. The study simulated the single-runway operations at Auckland Airport, analysing the delays caused by increasing flight demand, to inform the decision on the northern runway opening date.

The outcomes suggested the northern runway would be required by FY28. The study also explored various mitigations to optimise the use of the existing runway and potentially defer construction of the northern runway to FY32. This work was, however, paused due to the pandemic.

Since then, Auckland Airport has refreshed the traffic forecasts as described in the “Airport Growth Forecasts” chapter, and worked with Airways to update the existing runway capacity model to capture current operational modes and assess potential future changes that could enhance runway capacity.

After validating the baseline model, Auckland Airport tested both the FY33 and FY38 schedules in both runway directions to identify constraints. The goal was to maximise the throughput while keeping the runway holding delay and airborne holding delay below an established threshold: 10 minutes during peak periods and five minutes during the operational day.

The FY33 schedule was modelled using the Divergent Missed Approach Protection System (DMAPS) separation standards provided by Airways and implemented at Auckland Airport in late 2024. The results demonstrate the FY33 schedule can be accommodated, with the average runway holding delay consistently well within the 10-minute delay criteria.

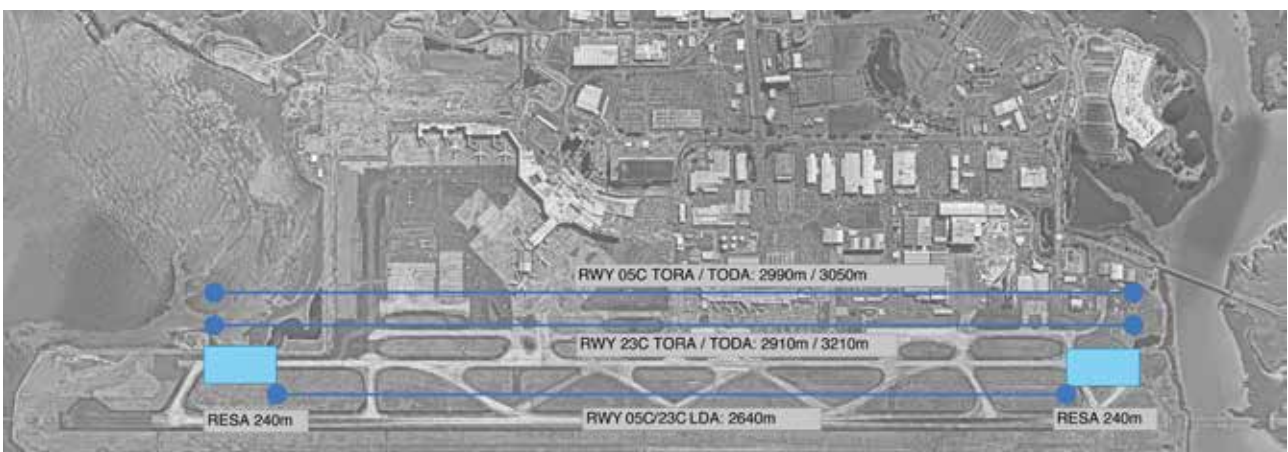
Beyond this horizon, the results indicate that continued growth in aircraft movements, if accommodated under the same mode of operations, would place increasing pressure on runway capacity. The timing at which additional runway capacity may be required will depend on a range of factors, including traffic growth, fleet mix, operational practices, and the effectiveness of future airfield and airspace enhancements.

Auckland Airport recognises the importance of stakeholder engagement to refine the northern runway trigger point and would welcome the opportunity to reconvene the Airfield Enhancement Group to collaborate on this.

### Runway configuration under contingent operations

TWY A is used as an operational runway named 05C/23C under contingent runway operations. The contingent runway is a non-precision approach runway, served by a combination of visual and non-visual aids for landing operations, and is restricted to aircraft up to Code E. This will be relevant while the airport continues to operate under a single-runway configuration, allowing for the safe landing and take-off of aircraft should RWY 05R/23L be unavailable. This operational contingency can be carried forward to the dual runway configuration to reduce the loss of runway capacity and provide extra resilience.

Figure 16: Contingent runway distances



**Table 7: Runway declared distances**

	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
RWY05R	3,230	3,443	3,230	3,292
RWY23L	3,535	3,710	3,535	3,292
RWY05C	2,990	3,050	2,990	2,640
RWY23C	2,910	3,210	2,910	2,640

**Table 8: Runway declared dimensions**

	Runway Dimensions (m)	Runway Shoulders (m)	Runway Strip (m)	SWY (m)	CWY (m)	RESA (m)
RWY05R	3,535 x 45	15	3,655 x 300	N/A	213 x 180	240 x 150
RWY23L	3,535 x 45	15	3,655 x 300	N/A	175 x 180	240 x 150
RWY05C	2,640 x 45	3*	2,760 x 150	N/A	60 x 180	240 x 90
RWY23C	2,640 x 45	3*	2,760 x 150	N/A	N/A	240 x 90

The Master Plan does not anticipate any changes to RWY 05R/23L infrastructure. During pavement renewals, the existing runway will be temporarily closed for maintenance necessitating the use of the contingent runway mode of operation.

To prevent aircraft taxiing conflicts during contingent runway operations, pavement renewal is anticipated only after the Domestic Jet Terminal opening and post-TWY Bravo realignment, and will occur when necessary, aligned with anticipated renewal timelines and operational considerations.

\* Auckland Airport to apply for exemption for shoulders

## 5.2 Transitioning towards a dual-runway airport

The northern runway 05L/23R will run in parallel to the existing runway 05R/23L.

The entry and exit taxiways, number of parallel taxiways, declared distances, safety areas, and precise locations have all been confirmed in the Auckland Unitary Plan. These details were previously discussed and agreed with both internal and external stakeholders.

### Runway configuration under normal operations

With a separation of 2,022m between centrelines, the future dual-runway configuration will provide Auckland Airport with segregated runway operations, capable of accommodating up to Code F aircraft under reduced visibility conditions (CAT III). This runway configuration will also allow simultaneous operations on both runways, without the need for increased aircraft separation or additional sequencing procedures.

Figure 17: Dual runway configuration under normal conditions

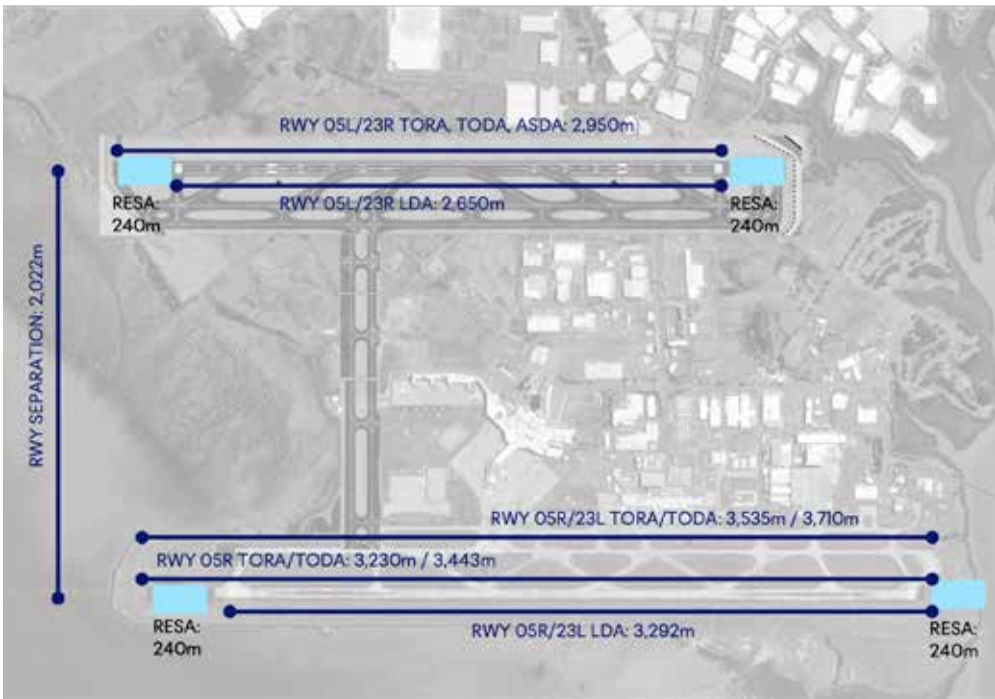


Table 9: Northern runway declared distances

	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
RWY05L	2,950	2,950	2,950	2,650
RWY23R	2,950	2,950	2,950	2,650

Table 10: Northern runway declared dimensions

	Runway Dimensions (m)	Runway Shoulders (m)	Runway Strip (m)	SWY (m)	CWY (m)	RESA (m)
RWY05L	3,250 x 45	15	2,760 x 280	N/A	N/A	240 x 120
RWY23R	3,250 x 45	15	2,760 x 280	N/A	N/A	240 x 120



## Planning the northern runway

Since early 2000s long-term planning for Auckland Airport has included provision for a northern runway as part of its future growth strategy.

The timing of the northern runway project has been revisited multiple times over the decades, reflecting the need to respond to shifting factors such as changes in aircraft fleet mix, updated passenger demand forecasts, and advances in aviation technology that have influenced the operational efficiency and utilisation of the existing runway.

Auckland Airport is fully aware of the scale and significance of the northern runway project, both in terms of its impact on the local community and its importance to New Zealand's long-term connectivity. To ensure the investment is made at the right time, further detailed analysis of existing runway capacity will be undertaken. This work will help identify the most appropriate trigger year for construction, ensuring that infrastructure delivery remains aligned with demand and future-proofed for growth. Collaboration with key stakeholders will be essential throughout this process.

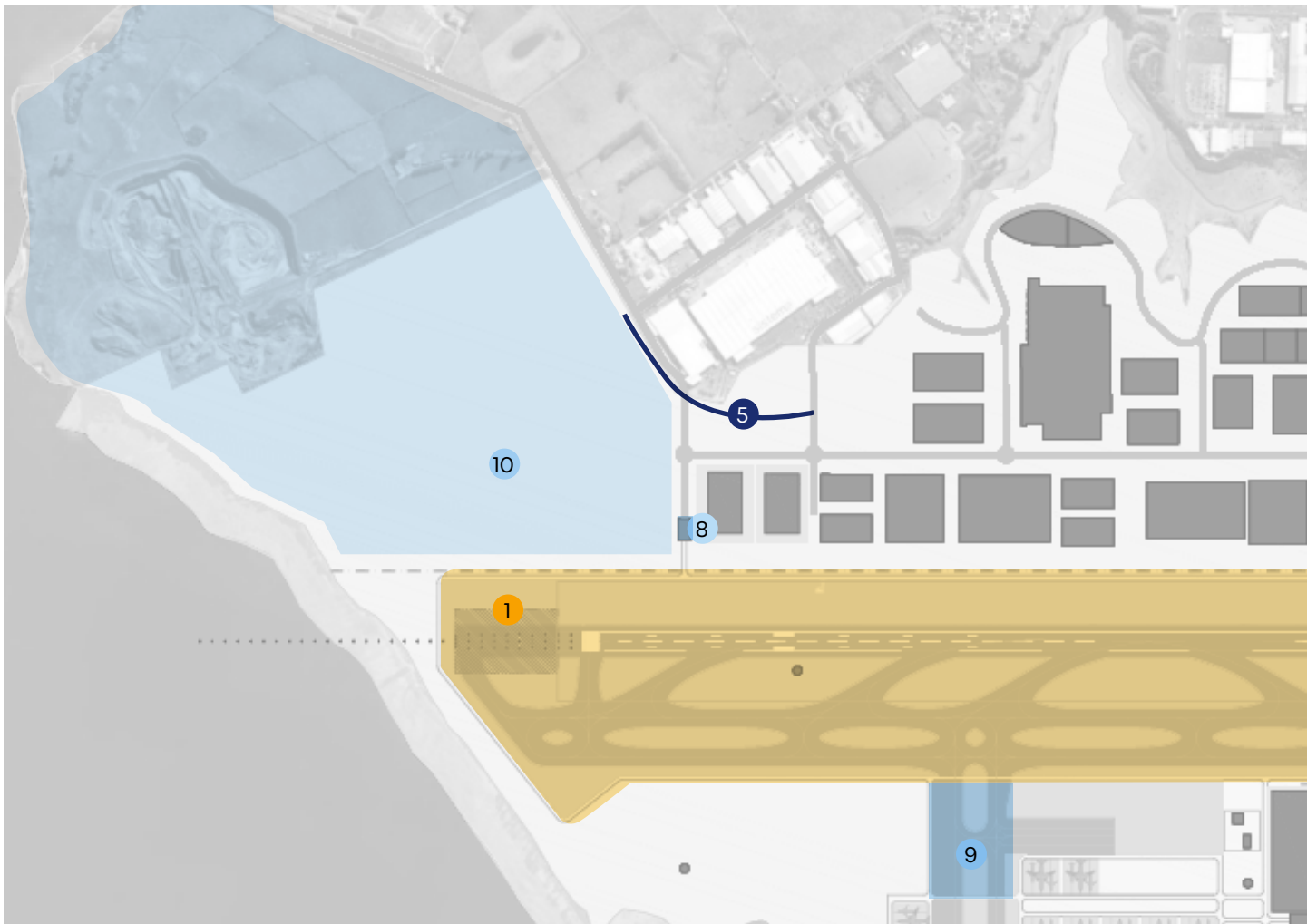
In 2020, an indicative construction sequencing plan for the northern runway was developed. This sequencing will be reviewed and updated to reflect changes in demand, operational requirements, and lessons learned from recent infrastructure projects both at Auckland Airport and abroad.

Careful phasing of works will be critical to manage impacts on the operating airport and to ensure continuity of service for travellers and airlines. Collaboration with key stakeholders will be essential throughout this process.

This Master Plan illustrates the full vision for the northern runway; however, a staged construction approach will be assessed to ensure only the infrastructure needed — such as the number of rapid exit taxiways and parallel taxiways — is delivered. Sequencing will also be designed to minimise the risk of future closures should staged delivery be adopted.

The northern runway is planned to be constructed entirely within the airport precinct. This approach avoids the need for land reclamation into the Manukau Harbour but does require substantial preparation of the site to create the platform on which the runway will sit. Several enabling projects and siteworks must be completed before construction of the runway itself can proceed.

**Figure 18: Map of the construction of the northern runway**



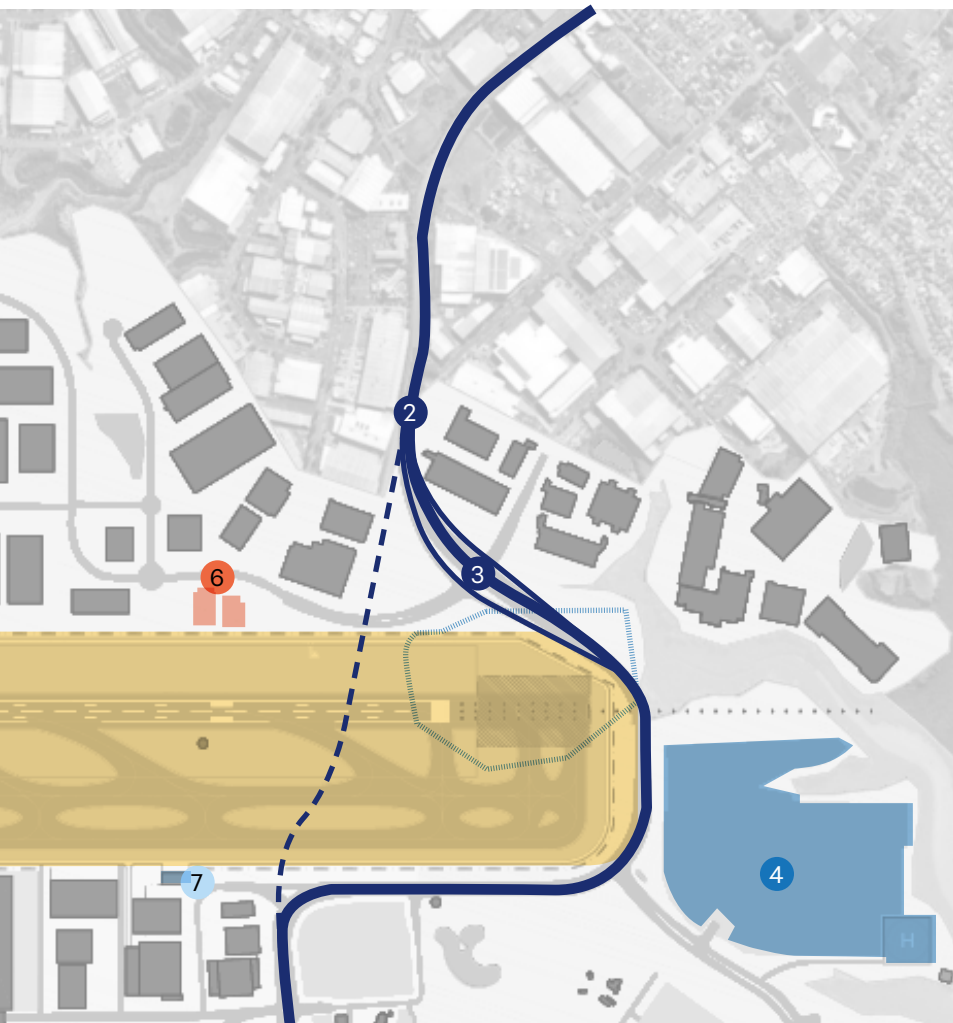
**Preparatory works include:**

- **Site preparation:** Earthworks will be required to shape and stabilise the runway platform. A mastergrading approach will be undertaken to minimise the creation of surplus material. If there is any surplus material, it will be fully removed prior to commissioning the runway.
- **Surface access and parking:** To accommodate the new runway alignment, George Bolt Memorial Drive (GBMD) the main connection from the north – will need to be realigned. A tunnelling option beneath the runway has been assessed but ultimately ruled out due to cost, complexity, and operational considerations. In addition, Park & Ride North will be relocated to its final site to make way for the platform works and ensure continuity of access for travellers.

**Supporting infrastructure requirements:**

Beyond site preparation, the development of the northern runway will also require several other critical pieces of infrastructure, including:

- A new taxiway system to integrate the runway with the existing airfield network. The number and geometry of the taxiways (entry/exit runway point, parallel taxiway) will be staged to align with demand. This Master Plan outlines the full extent of the development.
- An additional security checkpoint to unlock the northern side of the precinct.
- A new fire station to ensure compliance with international safety standards and provide rapid response capability for the expanded airfield.



- 1 Site preparation works including mastergrading and removal of surplus material
  - 2 GBMD realigned to form new Eastern Ring Road. Main access point from the north once the Northern Runway is developed
  - 3 Intersection upgraded, independent of Northern Runway
  - 4 Relocation of Park & Ride North
  - 5 Extension of Te Kapua Drive
  - 6 Buildings potentially impacted
  - 7 New fire station
  - 8 New checkpoint
  - 9 Taxiways extension
  - 10 Site safeguarded for future purposes
- Existing road layout
- Existing Park & Ride North

## 5.3 Runway performance

### Runway length and payload

Auckland Airport serves a range of destinations and markets. The ability to serve these destinations with direct, non-stop flights is strictly related to the aircraft’s payload-range performance and the runway distance available for take-off (TORA).

The existing runway 05R/23L features a TORA of 3,535m on its main RWY23L direction. This means long-haul destinations can be reached non-stop without any major payload restrictions, limited only by the aircraft’s design characteristics and range limitations.

However, due to physical constraints at Auckland Airport, the northern runway’s take-off distance available is 2,950m in each direction, which may translate into payload limitations for certain long-haul destinations.

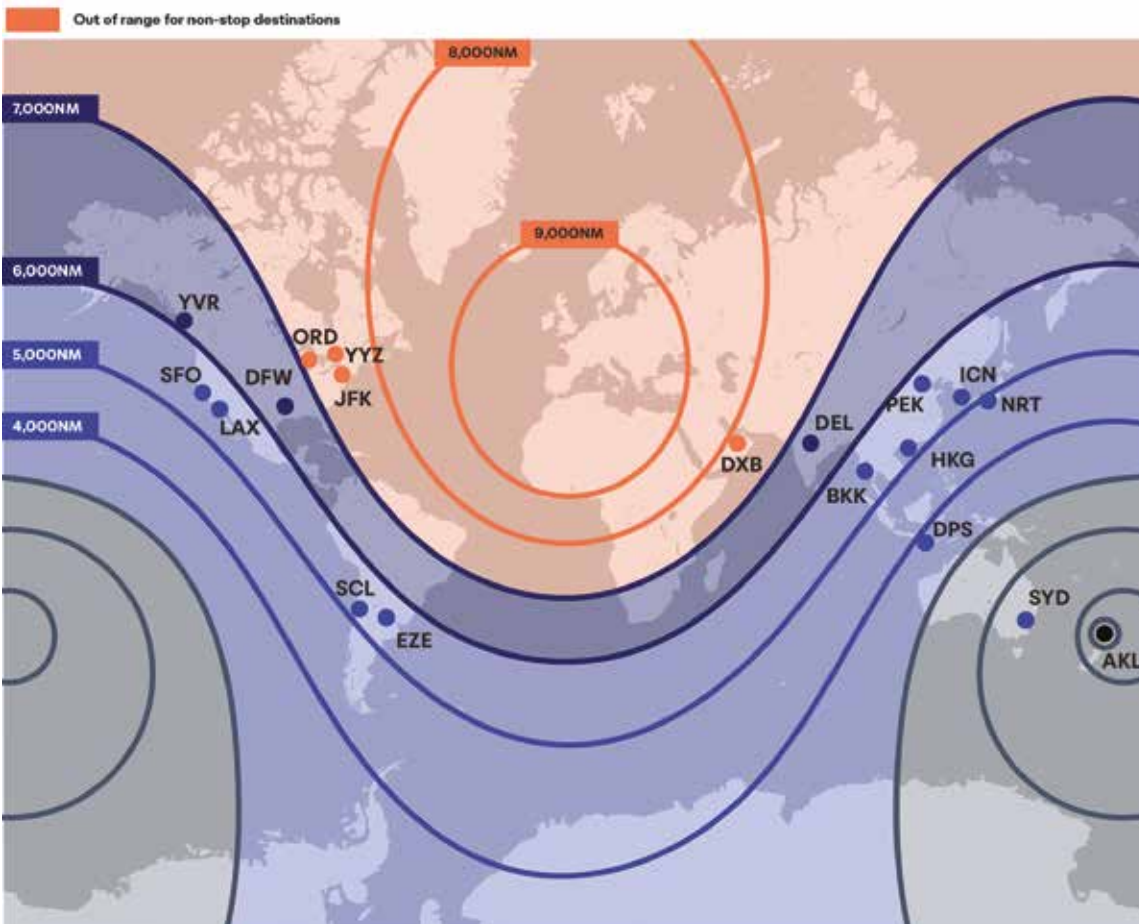
After a thorough assessment of various operational and economic factors, it has been determined the length of the present proposed northern runway is acceptable. Extending the runway further would not significantly reduce payload penalties.

The removal of payload penalties could only be achieved with substantial reclamation of the Manukau Harbour, which is not feasible from an environmental and cultural perspective.

When using the northern runway, main markets in the Tasman/Pacific Ocean and South-east Asia will be reached without payload restrictions while modern wide-body aircraft (e.g. A350-900, B787-900) will be able to reach key US West Coast destinations with slightly reduced payloads. Destinations beyond the 6,000 NM range may be assigned to depart from the existing runway to maximise performance.

**Figure 19: Achievable ranges from the northern runway**

90% passenger payload including baggage and 80% cargo payload. No runway slope, 15C° and 10% of headwind



## Runway allocation principles

Once the dual-runway configuration is implemented, and in an effort to reduce taxi times, emissions and taxi delays in the airfield, domestic and regional traffic will be assigned to the existing runway 05R/23L. International and cargo traffic, both long-haul and short-haul, will primarily be assigned to the northern runway 05L/23R. However, given the northern runway will have slightly shorter take-off distances compared to the existing runway, some long-haul flights may be assigned to the existing runway to maximise payload performance, depending on the flight range, payload, and aircraft model.

## Runway entry/exit taxiways

The existing runway features three rapid exit taxiways (RETs) in each direction, with no changes or upgrades anticipated. Aircraft will use these according to the take-off run and landing distance requirements.

The future northern runway will feature multiple entry points for the prevalent direction (RWY23R), reducing to two entry points for the opposite direction (RWY05L), to allow efficient aircraft sequencing while minimising runway occupancy times and aircraft departure queues. RWY 05L/23R will also feature three RETs in each direction, placed in line with ICAO's 'three-segment method'.

The aircraft size capability of each RET has been optimised in line with the landing distance available; the innermost RET will be Code C capable, while the remaining two will be Code F capable.

The number and location of the entry taxiways and RETs were agreed in 2020 with major airlines and the Board of Airline Representatives New Zealand as part of ongoing conversations regarding the development of the future runway.

## Northern runway landside/airside boundary

The airside/landside boundary for the northern part of the precinct will be modified to incorporate the development of the northern runway. A manned access gate will be installed on the perimeter fencing in the north, positioned in alignment with future airfield developments.

A perimeter intrusion detection system (PIDS) system will also be implemented and connected to the airport security control room. The PIDS will alert at an early stage when unauthorised individuals attempt to gain access through the perimeter fence.



## 5.4 Navigation aids (navaids)

Auckland Airport operates with a wide range of navigation aids and systems that ensure safe and efficient airspace and airfield operations under both precision and non-precision approaches.

Existing runway 23L operates with CAT II/III operation capability and CAT I capability for 05R runway direction. Direction 23L operates with Far Field and Near Field Localiser (LOC) monitors while direction 05R operates only with Near Field LOC monitors, both approaches operate with Instrument Landing System (ILS) GPS. In addition to the ILS system, RWY 05R/23L operates with a VOR/DME located in the Puhinui Peninsula and a DME directional antenna co-located with the ILS GP 23L.

Nav aids for the future northern runway RWY 05L/23R will be developed to enable CAT III operations under extremely low visibility conditions, with the western approach RWY 05L configured to CAT I settings.

Future technological advancements, in particular Advanced Surface Movement Guidance and Control System (A-SMGCS) and Ground Based Augmentation System (GBAS), have been safeguarded for in the Master Plan. Both systems will play a crucial role in Auckland Airport's strategy to maximise movements on the existing runway. Auckland Airport aims to trigger the northern runway only when infrastructure or operational changes can no longer accommodate the growing number of flights without causing unmanageable delays.

The Automated Weather Observing System (AWOS) currently in place at Auckland Airport will require an update when the northern runway is implemented. As part of the AWOS upgrade, the implementation of sensors for precipitation solar radiation, sun duration and runway surface condition are also recommended.

**Table 11: RWY 05L/23R Navaid and AWOS requirements**

	Item	Requirement
Nav aids	Localiser	(2x) For both runway directions
	Near Field Monitor LOC	(2x) For both runway directions
	Far Field Monitor LOC	(2x) For CATIII, course and sector
	Glide Path	(2x) For both runway directions
	Near Field Monitor GP	(2x) For both runway directions
	DME	(2x) For both runway directions. Directional antennas
AWOS	Central Data Unit	Update to include RWY 05L/23R
	Wind Sensor	(2x) For both runway directions
	Temperature Sensor	(1x) Single item for the northern runway
	Humidity	(1x) Single item for the northern runway
	Dew Point	(1x) Single item for the northern runway
	Pressure Sensor	(1x) Single item for the northern runway
	Cloud Height Sensor	(2x) For both runway directions
RVR Sensor	TMZ, MID, END	



## 5.5 Taxiways

### Taxiway configuration

Auckland Airport serves a mix of aircraft sizes, including a range of turboprop and narrow-body jet aircraft for regional and short-haul operations, and wide-body aircraft for long-haul services.

Wide-body aircraft are mostly represented by Code E aircraft (B787, A350, B777, A330), but certain long-haul routes are operated by the largest commercial aircraft, the A380 (Code F).

The airfield has been planned considering Code E as the design aircraft type. However, to safeguard for continued Code F operations and bidirectional flows between runways, TWY L & M will be Code F – capable along their full length. Full parallel taxiways serving the northern runway will replicate the configuration of the existing RWY 05R/23L, by providing a single Code F – capable parallel taxiway. This arrangement will provide a cost-effective solution that will still be in line with the expected aircraft mix. In case of taxiway downtime, Code F aircraft will be diverted to the runway with available Code F capability.

Taxilanes serving aprons with MARS stands will feature a multi-centrelines arrangement allowing for parallel and simultaneous taxiing of aircraft up to Code C, or single wide-body taxiing.

Wide-body aircraft centrelines will match the maximum aircraft stand size of the apron being served, either Code E or Code F. This dual-taxiway arrangement will be replicated at cul-de-sacs where only narrow-body aircraft are expected to operate.

To ensure efficient aircraft movements on the airfield, while maintaining infrastructure resilience and cost-effective developments, the following operational principles will guide the implementation of new taxiway infrastructure:

- Taxiways and taxilanes will be developed for the most restrictive aircraft type expected to operate in that area. No safeguarding will be provided for larger aircraft if not required.
- Cul-de-sac arrangements served with single taxilanes will be limited to a maximum of 10 stands to avoid aircraft delays at the entry or exit.
- Taxiways and taxilanes will encourage uni-directional aircraft flows to reduce the number of aircraft conflicts on the airfield and potential for opposed-flow occurrences.
- Resilience across the existing and future taxiway system will be a key driver to minimise operational disruption during infrastructure downtime.
- Taxiways and taxilanes will be in line with ICAO Annex 14 and Civil Aviation Authority (CAA) NZ-AC139-6 guidelines.

### Taxiing under normal operations

Once the northern runway is commissioned, and based on the normal runway mode of operation, international traffic generally will use the new RWY 05L/23R while domestic traffic will continue using the existing runway 05R/23L.

The resulting aircraft flows are described for westerly operations, the most prevalent, and for easterly operations:

- This arrangement will keep all international departures taxiing south to north along TWY L and onto the inner full parallel taxiway. Departing Code F aircraft will use the outer full parallel taxiway from TWY L towards the runway entry taxiways in the east (for westerly operations) or west (for easterly operations).
- Arriving international aircraft will exit through their available RET and onto the outer full parallel taxiway. Aircraft will taxi north to south along TWY M towards their corresponding apron. To avoid opposed flows around the Pier A and Pier B area, flows along TWY K will be kept as south to north, and east to west on TWY F. Flows in the north western non-contact stand apron will be kept as east to west both for arrivals and departures.
- Domestic arrivals will taxi west to east along TWY A into their corresponding cul-de-sac.
- Domestic departures under westerly operations will follow the same direction along TWY B. TWY A will keep a west to east flow for its full length, while TWY B will have an east to west flow between TWY J and TWY L to allow for international aircraft to reach the northern runway. On the other hand, for easterly operations, aircraft will taxi east to west along TWY B and into their corresponding taxiway entry, TWY A will keep a west to east flow for its full length, except for the segment between TWY M and TWY A10, while TWY B will keep its west to east flow along the full length.

No instances of opposed flows are expected for arriving and departing aircraft other than at the entrance of the international apron cul-de-sacs. Despite the proposed arrangement, opposed flows between active movements and towed aircraft may occur, which will be mitigated through operational solutions and active ground coordination.

The easterly mode of operation will keep taxiing flows along TWY L and TWY M unchanged between runway directions. Taxiing flows will also remain constant along TWY A and apron taxilanes. However, taxiing flows along TWY B and the RWY05L/23R full parallel taxiways will switch between runway directions. For those taxiways and taxilanes where aircraft flows are not expected to switch between runway directions, vertical and horizontal signalling can be provided to avoid instances of potential conflict.

Figure 20: Westerly operation aircraft flows. Combined ARR and DEP

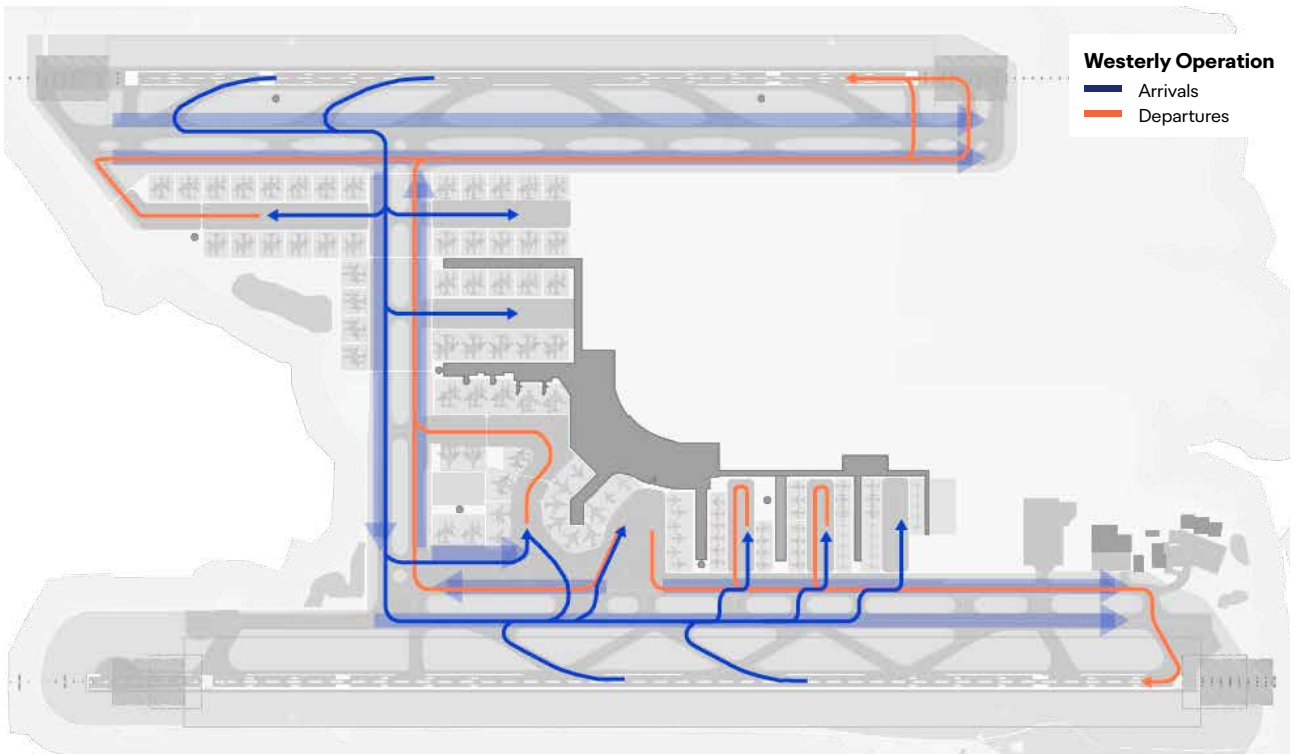
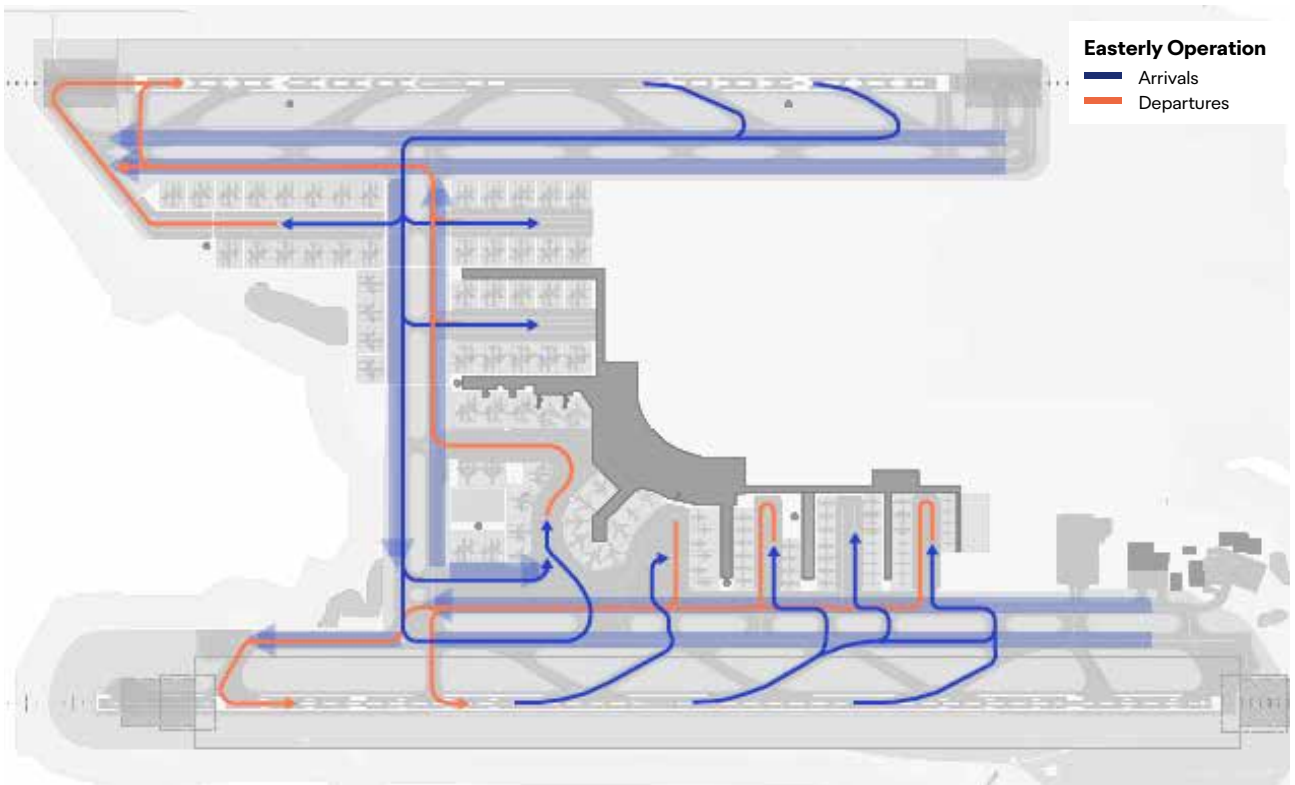


Figure 21: Easterly operation aircraft flows. Combined ARR and DEP



### TWY Bravo limitations

Existing taxiway clearances between TWY A and B do not allow for parallel wide-body taxi along TWY B and TWY A respectively. This also has implications on the contingent runway mode of operation, because it will not allow for concurrent parallel wide-body taxi along TWY B during active wide-body operations on RWY 05C/23C (TWY A). To mitigate this, TWY B will be fully realigned to allow full parallel processes during both normal taxi and contingent runway operations.

The construction of the Domestic Jet Terminal is the first step towards the realignment of TWY B ensuring stand capacity is preserved and to reduce delays during contingent runway operations.

### Taxiway development in alignment with other airfield projects

Taxiway infrastructure will be developed and enhanced in conjunction with other airfield infrastructure, primarily the new runway as well as the new apron and piers.

The new taxiways should enable simple and efficient aircraft movements on the ground, offering redundancy and resilience to avoid disrupting aircraft operations when taxiway maintenance is required.

Figure 22: Taxiway B realignment



**KEY**

-  Taxiway B
-  Taxiway B existing centre line
-  Taxiway B centre line after alignment

## 5.6 Apron

### Aircraft parking positions

To support efficient aircraft parking and facilitate safe operations for travellers, staff, baggage and ground vehicles, new apron infrastructure will adhere to the following principles:

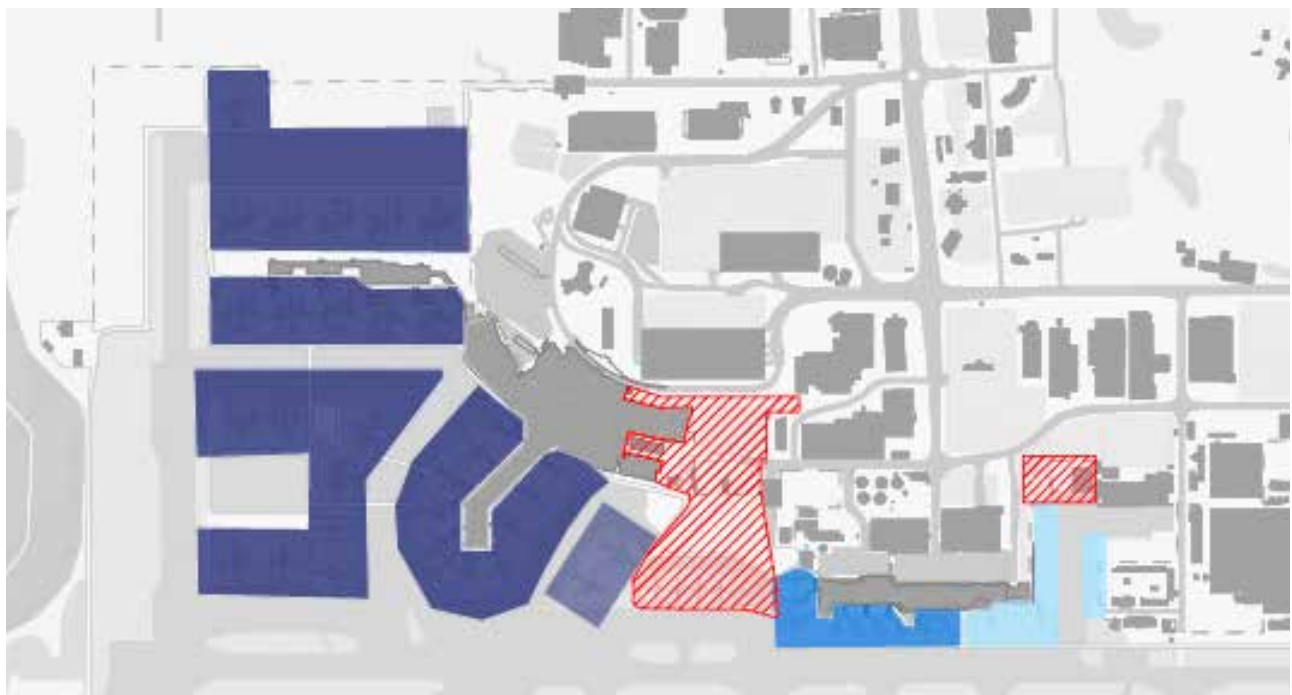
- Deliver a cost-effective apron expansion that maximises the use of existing infrastructure.
- Maximise traveller experience through adequate levels of pier-served operations and reduced distances for bus journeys to non-contact stands.
- Safeguard for future flexibility and infrastructure resilience.

### Apron allocation principles and configuration

Auckland Airport's apron is divided into three main areas linked to the traffic segment each terminal serves. With the opening of the new Domestic Jet Terminal and the eventual closure and demolition of the existing domestic terminal, the apron dynamics and allocation principles are set to change.

Aircraft parking positions are assigned to the apron matching the traffic segment of each flight, though some restrictions are applied across the apron based on operational or regulatory requirements. In the future, these will be lifted to improve efficiency. Cargo aircraft do not have a dedicated apron and are allocated to non-contact stands.

Figure 23: Existing apron arrangement



**KEY**

- International apron
- Domestic apron
- Regional apron
- Construction

As the infrastructure improves and new passenger processing methods are implemented in the terminal buildings, the apron allocation rules will be revisited in conjunction with the objective to continue delivering an outstanding passenger experience in a safe apron environment.

Flexibility and the ability to respond to changes remain two key principles of apron allocation. These principles ensure the management of apron space remains efficient and adaptable, allowing smooth operations even in the face of unexpected challenges.

If regional screening is introduced and segregation is required between Tier II and Tier III regional destinations, this will impose a hard rule in terms of allocating regional aircraft to specific apron stands, at least until the regulatory framework changes and such restrictions are lifted.

Each apron will be configured according to the expected traffic and the aircraft that are expected to operate the flights. The most prevalent aircraft types at Auckland Airport are Code C jets, such as the Airbus A320 family and Boeing B737 aircraft.

Apron stand dimensions are compliant with ICAO and CAA NZ design guidelines, facilitating safe and efficient ground operations. Flexibility has also been considered through the use of a MARS configuration, which features multiple centrelines enabling the parking of a wide-body aircraft or two narrow-body aircraft in parallel. This ultimately improves stand use and leads to cost-effective and optimised requirements.

## Engine testing

Aircraft engine testing is conducted at designated locations, which must be approved by the Apron Tower. The specific site used depends on the aircraft and the type of testing required, ensuring effective management of noise and jet-blast impacts. The locations of engine testing will be taken into consideration as the development of the airport progresses.

## Pier service level

The volume of operations served through contact stands is a key indicator of passenger experience and service quality at the airport, as pier-served stands offer improved accessibility and better protection against inclement weather for travellers and staff. This metric is referred to as pier service level (PSL).

As agreed with its airline partners, Auckland Airport is committed to guarantee a 90% annual PSL, meaning 90% of travellers will depart and arrive onto contact stands over the course of the year. All other operations will be handled through non-contact stands, whether for passenger flights via buses or for other uses such as cargo, towing or overnight parking.

To maintain the PSL, aircraft that remain on the ground for long periods will be towed across the apron to free up sought-after contact stands.



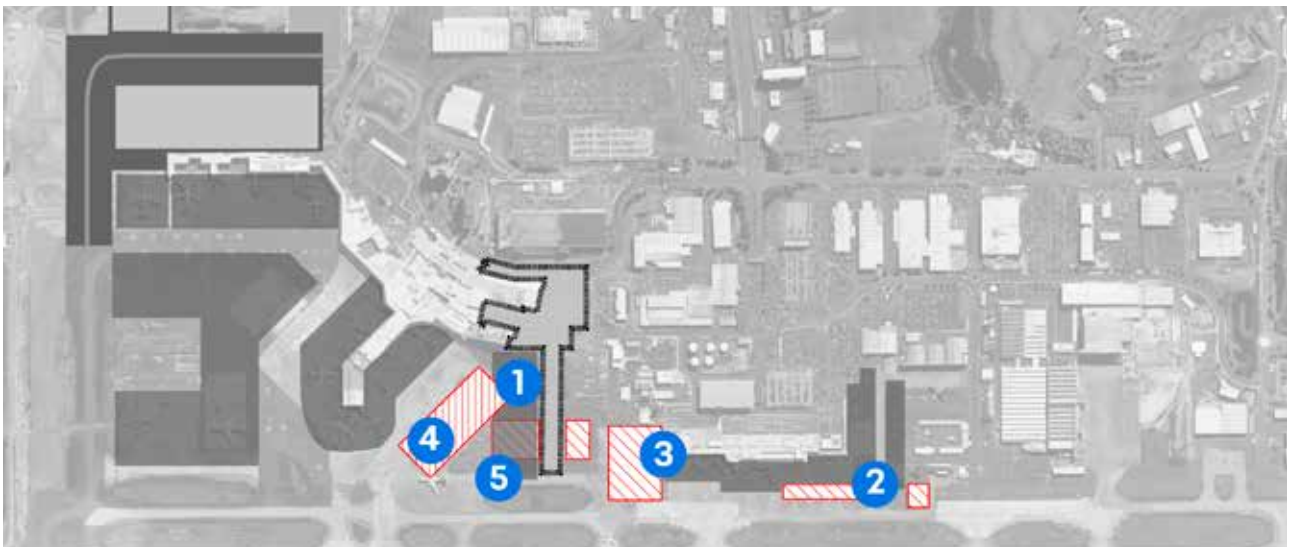
## Availability of apron stands in the short term

Aircraft parking requirements are the result of the evolving aircraft demand against the existing stand provision under the described allocation principles.

Ongoing and confirmed capital projects are factored in as part of the available base stand supply:

1. Five new Code C non-contact stands on Pier A1 West by FY28. To be turned into contact stands by FY29 together with Pier A1 East, totalling x12 Code C contact stands.
2. Permanent closure of stands 24, 40, 43, 45 in the DTB post Domestic Jet Terminal opening and TWY B realignment.
3. Temporary closure of stands 20-22 in the DTB during the construction for the Domestic Jet Terminal and Pier A1, available again in FY29 as non-contact stands.
4. Permanent closure of cargo stands 82, 83, and 84.
5. Permanent closure of domestic non-contact stands 70, 71, 72, and 73.

**Figure 24: Base stand supply**



## Future requirements for aircraft stands

Based on traffic forecasts, the future apron requirements will be planned with the following considerations:

**Regional stands:** Additional stands will be provided near TWY C5, aligned with Piers A3 and A4.

**Domestic stands:** Expansion will focus on the development of Pier A2.

**International stands:** Capacity will be enhanced through the development of Pier C and western non-contact stands.

Cargo operations will continue to be carried out from commercial parking positions in the vicinity of the cargo precinct, until the implementation of the northern runway 05L/23R unlocks the possibility of a dedicated apron adjacent to The Landing business park.

With regard to the 90% pier-service level, the requirements for contact stands will be met by gating existing non-contact positions in front of the terminal piers, as is the case in the international apron, or by triggering new infrastructure, as is the case in the regional apron.

MARS configuration will be used where appropriate to optimise the use of pavement areas.

On top of the base demand, additional aircraft parking positions will be required for contingency purposes to compensate for stand downtime events caused by maintenance, delays or other factors. One additional Code E position is considered as a requirement across all planning horizons.





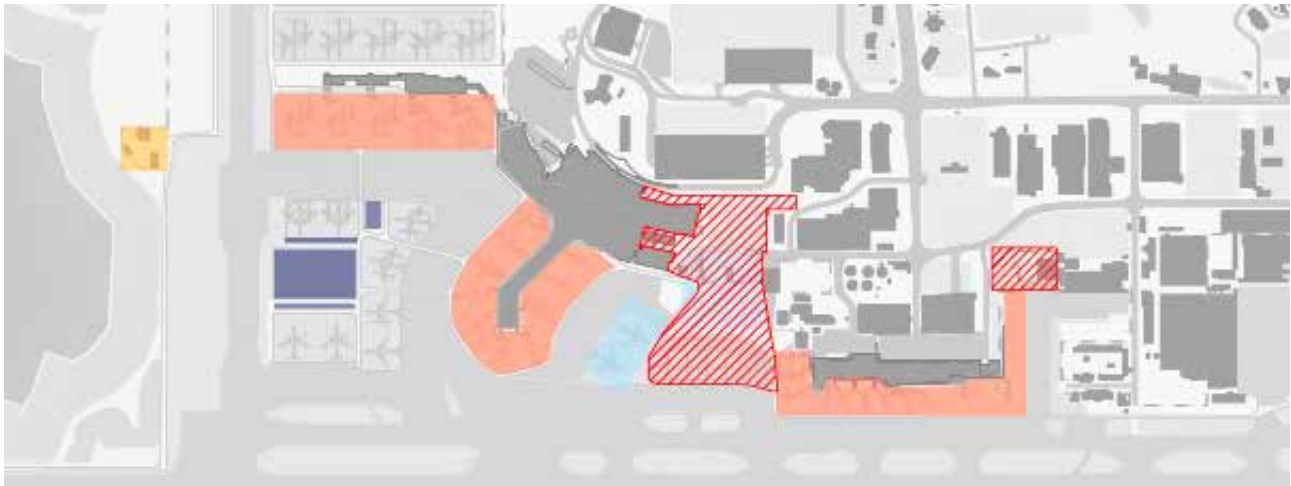
## 5.7 Ground support equipment

The availability of ground support equipment (GSE) storage and staging areas on the apron is critical to ensure sustainable, safe and efficient ground operations.

### Ground support location

Existing GSE areas will be affected during the construction of the new Domestic Jet Terminal building, which will trigger the relocation of GSE across multiple construction stages. However, this provides the opportunity to relocate these areas closer to commercial stands as the airfield expands towards the north.

**Figure 25: Existing GSE and ULD areas**



- GSE/ULD Storage areas
- GSE Storage/staging areas affected by developments
- GSE Staging areas (by the gates)
- GSE Maintenance areas
- Construction

Ongoing and planned construction work are requiring the relocation of the unit load device (ULD) storage area from the area adjacent to stands 82-84 and 70-73, to the land available between the international non-contact stands. This relocation will remain in effect until the airfield expands further north, at which point the space will be repurposed for GSE storage. The ULD storage area will be then moved closer to the new international stands.

The planned construction also necessitate relocating one of the ground handlers' GSE maintenance spaces located by the control tower, creating the opportunity to co-locate GSE maintenance in one area.

It is also proposed to relocate the Air New Zealand amenities base as soon as TWY L and M become operational to avoid crossing active taxiways. GSE storage and staging locations are safeguarded across all horizons as the airfield and apron infrastructure expand. GSE storage areas will be placed at locations that avoid the crossing of active taxiways, particularly as aircraft flows increase over time. A provision is also made for more GSE maintenance facilities, to be used by ground handling operators.

The new stands will feature dual-lane head and back-of-stand roads, ensuring fluid and safe circulation of GSE vehicles without interfering with aircraft operations.

## Ground support electrification

As part of Auckland Airport's drive for a low-carbon airfield and our aviation partners' decarbonisation strategies, electric GSE vehicles will gradually replace the existing GSE fleet.

A number of projects related to eGSE charging infrastructure are planned or have already been implemented to enable this transition.

Provision for eGSE charging infrastructure will be made as aprons expand in the future, allowing for two charging points per stand staging area, in line with long-term developments.

**Table 12: Existing and planned eGSE charging locations**

Location	Type of GSE	Charger Provision	Time frame	
Pier B	Gate 18	Small / Medium	14	Existing
	Gate 19	Pax Stairs	2	Existing
	Gate 15 & 16	Large / Medium	14	Existing
	Contact stands	Large	5	Existing
	Non-contact stands	Mixed	15	Existing
Pier A	Pier A undercroft	Small	8	Existing. Option to increase to 16 units.
	Gate 4	Large	2	Existing
	Pier A West	Small	2	Existing
Pier A1	Contact stands	Mixed	14	FY2029
	Terminal ground floor	Pax stairs/Small GSE	12	FY2029
	End of Pier	Small/Medium	27	FY2029
Pier A3	Pier A3 end	Mixed	9	FY2029



Figure 26: Apron staged development (FY28-End State)



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|--|--|
| <span style="color: blue;">■</span> INT Apron interventions                                  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">1</span> Pier B North Stands                     |
| <span style="color: darkblue;">■</span> DOM Apron interventions                              | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">2</span> Pier B North Stand - parking bay        |
| <span style="color: yellow;">■</span> REG Apron interventions                                | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">3</span> Code C non-contact in Pier A1 West      |
| <span style="color: orange;">■</span> GSE/ULD Storage areas                                  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">4</span> Code C/TP contacts at the end of TWY C5 |
| <span style="color: red; border-bottom: 1px dashed red;">/ / / / /</span> Under Construction | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">5</span> GSE/ULD Storage                         |
|  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">6</span> GSE Maintenance                         |
|  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">7</span> Livestock                               |



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|--|---|--|
| <span style="color: blue;">■</span> INT Apron interventions                                  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">1</span> Code F MARS made contact in Pier B   | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">7</span> All REG on C5 aligned to final location   |
| <span style="color: darkblue;">■</span> DOM Apron interventions                              | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">2</span> Code E MARS non-contact in Pier C South  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">8</span> Relocation of ULDs to the vicinity of Checkpoint D. Reconfiguration of ULD 1.0 & 2.0 into GSE storage |
| <span style="color: yellow;">■</span> REG Apron interventions                                | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">3</span> Code E MARS non-contact in TWY M West  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">9</span> GSE area locations  |
| <span style="color: orange;">■</span> GSE/ULD Storage areas                                  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">4</span> Pier A1 stands all contact   | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">10</span> Air New Zealand GSE and amenities relocates close to the Air New Zealand CTO area                    |
| <span style="color: red; border-bottom: 1px dashed red;">/ / / / /</span> Under Construction | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">5</span> Existing stands 20 21 22 (DTB) available as non-contact stands                     |  |
|  | <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">6</span> Domestic Terminal Building stands reconfigured into Code C turboprop power in/out. |  |



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| <span style="color: blue;">■</span> INT Apron interventions        | ① Code E MARS non-contact along RWY05L/23R inner full parallel |
| <span style="color: darkblue;">■</span> DOM Apron interventions    | ② Code E MARS non-contact in the northern bank                 |
| <span style="color: yellow;">■</span> REG Apron interventions      | ③ Code E MARS contact stands                                   |
| <span style="color: orange;">■</span> GSE/ULD Storage areas        | ④ Code C jet contact   |
| <span style="color: lightblue;">■</span> CARGO Apron interventions | ⑤ GSE storage  |
|  | ⑥ Contact stands   |
|  | ⑦ Stands by the Northern Cargo Precinct                        |





## 5.8 Cargo precinct

Cargo has been introduced as a new and foundational principle in the opening chapter of this Master Plan, highlighting its pivotal role in shaping the long-term future of Auckland Airport.

A key feature of this new approach is the integration of a dedicated cargo precinct area. This precinct is seen as essential to delivering best-practice planning outcomes – creating an environment that supports the safe, efficient, and sustainable handling of freight. Through strategic co-location, the precinct will reduce logistical complexity, minimise on-airport traffic movements, and enhance safety by clearly separating freight, aircraft maintenance and passenger operations.

The current cargo environment at Auckland Airport is characterised by a diverse range of operators, each with their own distinct infrastructure, processes, and future growth trajectories. This diversity, while a strength, also presents challenges in terms of coordination and scalability.

In response, this Master Plan outlines a cohesive, forward-looking strategy that aims to accommodate these requirements while aligning with the broader goals of operational efficiency, resilience, and capacity growth. By proactively planning for the changing nature of cargo – driven by e-commerce, time-sensitive goods, and emerging technologies – Auckland Airport reinforces its position as the third-biggest trade port behind Port of Auckland and Port of Tauranga.

This Master Plan caters for specific needs for these operators:

- Regulated air cargo agents (RACA) are certified organisations under CAA Part 109 that are responsible for examining, clearing and securing air cargo to be loaded onto an aircraft. A RACA is not responsible for physically moving freight to/from an aircraft but must ensure all cargo to be shipped is safely stored and not tampered with on its way to the cargo terminal operators (CTO). An approved RACA will need to comply with CAA requirements and processes, and will have Customs-controlled areas within their site, and can be based off the airport precinct.
- CTOs are responsible for handling cargo to and from the aircraft in compliance with Customs and Ministry for Primary Industries (MPI) requirements. This process includes the receipt, storing and transferring of air cargo through the import and export process. Existing CTOs at Auckland Airport include Air New Zealand and Menzies.
- All-cargo carriers, such as Texel Air and Airwork, offer scheduled airport-to-airport air cargo and freight services using container aircraft.
- Integrated-express carriers such as FedEx and DHL provide door-to-door shipment services including the collection of goods, transport via air/truck, and delivery. They operate a hub-and-spoke model using a dedicated fleet of freighter aircraft.

A centralised cargo location, with a dedicated cargo apron, would provide optimal operational synergies for all carrier types in the medium and long term. This setup would enhance operations and capitalise on economies of scale. However, certain short-term limitations require an interim cargo strategy.

### Consolidating operations in the cargo precinct

Manu Tapu Drive has been identified as the preferred location for a cargo precinct, and development plans are already underway to relocate cargo operations from their present locations on Cyril Kay Road and Ogilvie Crescent to the new designated cargo precinct.

The main benefits of the chosen location are:

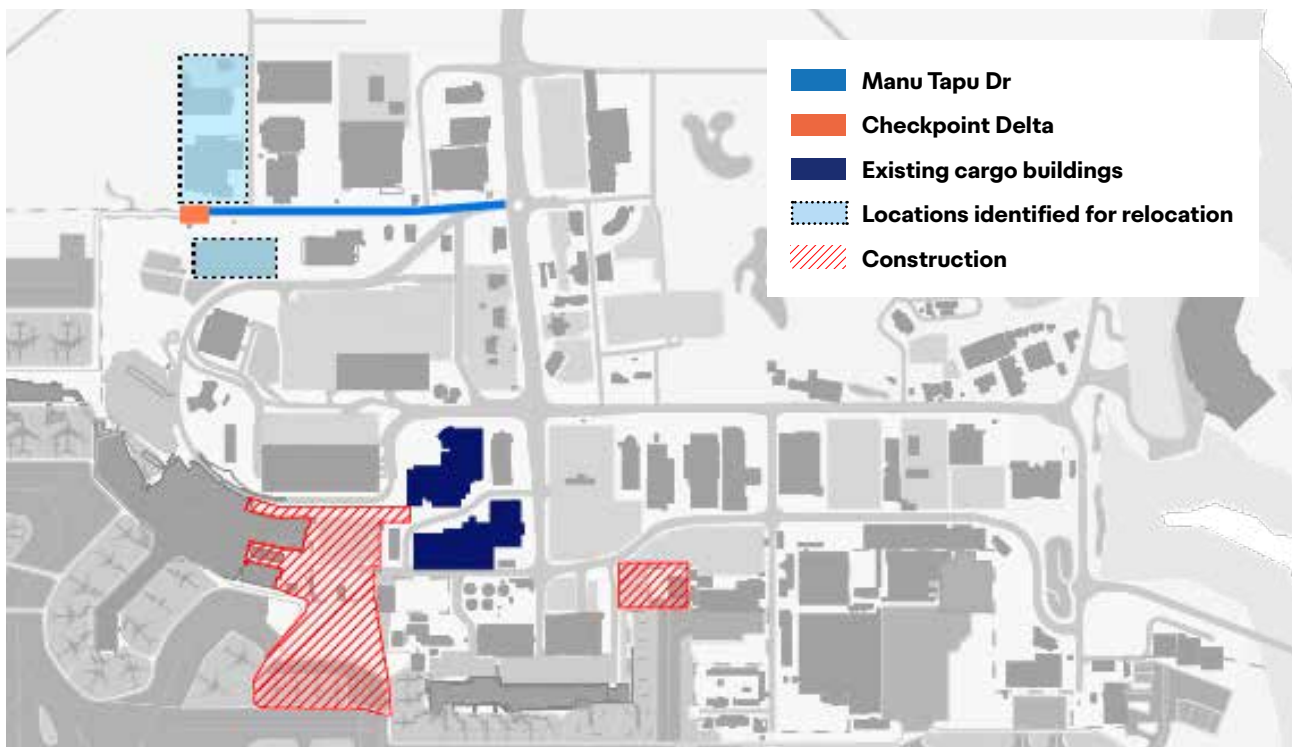
- Excellent connectivity with landside and airside
- Limited conflicts with passenger’s flow
- Possibility of expansion
- Well-positioned to cater to international and freight traffic
- Airside connectivity to the domestic apron
- Enhanced safety on the roading network.

This plan has undergone extensive consultation and has broad acceptance from the cargo operators. For the short-term, the cargo precinct will host a mix of belly-hold and integrated-express operations.

To facilitate airside operations, CTOs located along the boundary of the cargo precinct will benefit from direct airside access with an airside road network running along their façade. Other cargo handlers on the site will proceed through Checkpoint Delta at the western end of Manu Tapu Drive before accessing any restricted airside areas.

However, the cargo precinct area by Manu Tapu Drive will not be sufficient to relocate all cargo-related facilities located along Laurence Stevens Drive. As a result, these will remain in place until the construction of the northern runway unlocks the opportunity for relocation.

Figure 27: Short-term cargo strategy



### Long-term development of aeronautical activities in The Landing precinct

Once the northern runway 05L/23R is commissioned, the opportunity for a secondary cargo area and a dedicated cargo apron will be explored, noting that Auckland Airport is providing flexibility in this location. This precinct has the potential to serve integrated-express operators by providing a dedicated apron and co-location with already-established operators in the area. The benefits of this approach are twofold: it will remove aircraft with longer turnarounds from the commercial apron, and it will divert heavy-vehicle road traffic away from the central landside road network.

Auckland Airport planning allows for the flexibility to support air freighter operations if demand arises. The cargo precinct will be reconfigured to consolidate all belly-hold cargo operations, taking advantage of its proximity to both the domestic and international commercial aprons.

Figure 28: Long-term cargo strategy



### Future cargo area requirements

Historic cargo metrics at Auckland Airport indicate about 75% of the cargo is transported as belly-hold on passenger aircraft. The remainder is handled by Integrated-Express and All-Cargo carriers. This split drives the future cargo requirements for the two cargo sites identified within the short-term and the long-term strategy.

The sites and buildings identified as dedicated to cargo activities and located within the cargo precinct amount to a total area of 116,000sqm, sufficient to accommodate the total requirements for belly-hold cargo throughout the Master Plan period.

Integrated-express and all-cargo carriers may be relocated to The Landing, where sufficient space is reserved for activities such as a cargo apron, warehouses, truck parking and GSE storage areas.

It is important to note that ultimately, The Landing is reserved for aeronautical use, and all the buildings have been built with flexibility in mind.



## 5.9 Support facilities

Support facilities provide secondary aeronautical services complementary to commercial passenger operations.

These facilities include:

- Cargo
- Aircraft maintenance
- Fixed-base operators
- Heliport
- Air traffic control
- Rescue and firefighting
- Wildlife
- Air catering
- Airside access checkpoints.



## Maintenance, repair and overhaul

Auckland Airport currently does not provide a differentiated maintenance, repair and overhaul (MRO) service at the airport. Some carriers have their own dedicated facilities on site in which they service their fleet and offer the service to other operators.

Air New Zealand has the most significant maintenance base and holds a perpetual lease on the land where additional hangars will be built in the near future. Air Chathams, serving as a regional carrier, has a dedicated MRO area within the Charlie 1 apron.

However, there is a perceived potential for future developments and prospective markets prompting the need to safeguard infrastructure. This aligns with increased interest from existing and future MRO operators at Auckland Airport. The preference leans towards broad MRO service providers capable of catering for multiple operators, as opposed to dedicated facilities.

## Fixed-based operators

There are currently two Fixed Based Operators (FBO) at Auckland Airport, providing private jet services and light maintenance. ExecuJet and Swissport, operates from their respective facilities at Charlie 1 and Charlie 5. Common-use stands are available in front of both locations.

The Master Plan safeguards the use of the Charlie 1 Apron for FBO operations, and considers the possibility of activating and developing the area within The Landing precinct, which is designated for aeronautical purposes.

## Heliport

As a result of current development works, the heliport located at Ray Emery Drive ceased activities in June 2023. Auckland Airport recognises that there is a desire to continue helicopter operations at the airport in another location, if that location can be secured and operated safely in compliance with the airport's noise obligations, and does not affect other operations or uses.

A preliminary location has been identified on the eastern side of the airport land to accommodate future helicopter operations while ensuring instrument clearance requirements for the existing runway 05R/23L. High-level consideration has been made for the integration of the future northern runway 05L/23R.

The potential integration of helicopter and electric Vertical Take Off and Landing (eVTOL) operations using a hybrid heliport-vertiport, forms part of our planning, and future locations will be identified as required.



### Air traffic control

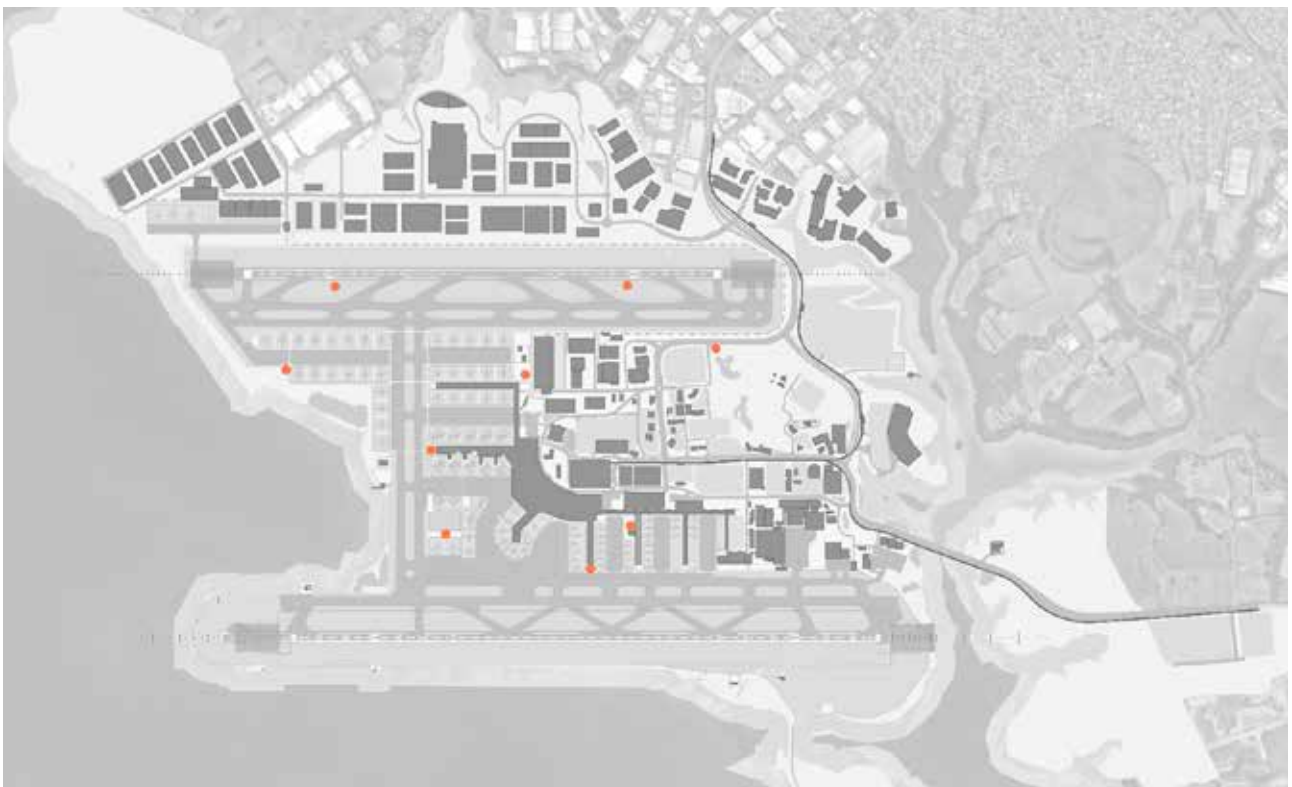
Airways New Zealand provides air traffic control services to ensure safe and efficient airspace operations and management. Standing at about 36m tall, the existing air traffic control tower (ATCT) is located towards the north-west of the existing domestic terminal. The tower is expected to be demolished by FY38 in preparation for future developments in the area such as the new domestic and regional terminals and piers.

Airways has been exploring digital air traffic control tower technologies for several years and recently confirmed its plan to implement a hybrid digital tower at Auckland Airport, supported by a digital contingency tower.

Auckland Airport’s Master Plan has safeguarded sites for the hybrid tower, the contingency tower, and for multiple camera masts across the airfield, which could be installed in the future to address any potential blind spots.

Mast characteristics will be compliant with obstacle limitation surface (OLS) requirements and other regulations.

**Figure 29: Indicative digital ATCT network (End State)**



## Aviation rescue and fire-fighting

As the airfield expands towards the north, the location of the existing aviation rescue and fire-fighting (ARFF) station will not meet the required response times to parts of the new non-contact stands and northern runway thresholds. To address this and ensure compliance, a new ARFF station will be developed to serve the northern part of the airport site and operate alongside the existing station in the south. The existing ARFF facility will be relocated because its current location will also be affected by airfield developments.

Besides its aeronautical response duties, Auckland Airport’s emergency services team is an Industry Fire Brigade and an Allied Emergency Service with Fire and Emergency New Zealand (FENZ) and St John Ambulance. This arrangement extends Auckland Airport’s areas of responsibility beyond the specific aviation response zones to include the following:

- Landside northbound: George Bolt Memorial Drive to Montgomery Road (not including).
- Landside eastbound: Puhinui Road to Prices Road (not including).
- Landside westbound: Ihumatao Road to Renton Road (not including).
- Airport crash zone: Involving an aircraft crash on the airfield or within 2km from either end of the runway and 2km to the north or south of the runway axis.
- Local crash zone: An aircraft crash outside the airport crash zone within a rectangular area 10km from either end of the runway and 4km north or south of the runway axis.
- Remote crash zone: An aircraft crash en-route to or from Auckland Airport but outside of the local crash zone.

These extended response zones require landside response capability from one of the ARFF stations. Additionally, boat/hovercraft ramps to meet crash zones will be required.

Future facilities will be in line with CAANZ AC139-6, CAANZ Part 139, ICAO Annex 14 and ICAO Doc 9137 Part 1 requirements. Due to the nature of traffic to be served from the airport, Auckland Airport’s ARFF facilities will be upgraded to cater for CAT 10 operations and extinguishing agents. This leads to the north and south ARFF to cater for the following:

- ARFF North: CAT 10 extinguishing agents, five HRET Panther 8x8 bays, one command and control vehicle and one people mover equating to 35m of building frontage.
- ARFF South: CAT 10 extinguishing agents, eight HRET Panther 8x8 bays equating to 60m of airside building frontage. An additional seven bays for landside response and support vehicles equating to a minimum of 76m of landside building frontage.

These two sites will operate with the required ground floor coverage of 1,600sqm in ARFF North and 1,900sqm in ARFF South, and the required airside frontage indicated above. These calculations are based on the capability to provide other building requirements on elevated floors.

As runway 05L/23R is introduced, two new hovercraft ramps will be introduced in the Pūkaki Creek area and west side of TWY M to attend any possible crash zone on the sea.

**Figure 30: New ARFF sites and response catchment areas**

- ARFF South
- ARFF North
- ARFF South Catchment
- ARFF North Catchment
- New ARFF hovercraft ramps





## Wildlife management

The wildlife management service will also require relocation so it can better service and monitor runway 05L/23R once it is developed. To deliver economies of scale and operational synergies, the wildlife ranger facility will be co-located with the new ARFF North station:

- About 15m of building frontage has been safeguarded for a safe room for firearms and ammunition, a workbench, a rest room, and covered parking for two ranger vehicles.
- Most functions of the wildlife ranger are linked to airside, removing the need for direct landside access.

## Air catering

Auckland Airport has two operators based on site: LSG Sky Chefs serving 80% of the market including carriers such as Air New Zealand, Qantas, Emirates, Singapore Airlines and Qatar Airways; and Gategourmet serving the remaining carriers. These facilities are approaching their operating capacity and will require relocation in the medium term to allow expansion or because of interfacing projects. No additional catering providers are expected.

It is planned that future catering operations will be through a consolidated facility with two operators, located in The Landing precinct with direct airside access connectivity to aircraft:

- Gategourmet will relocate to a new 22,900sqm facility in The Landing as the existing lease expires.
- LSG Sky Chefs are located on Air New Zealand's leased land, so any infrastructure expansion within the site will become a private negotiation between the parties. In any case, about 20,000sqm area is safeguarded in The Landing for LSG Sky Chefs in case expansion within the current site is not feasible or cannot be agreed upon.

All aircraft will be serviced from The Landing site using the airside road system once the northern runway 05L/23R is commissioned. Until then, catering providers and vehicles will use the landside road system and Checkpoint Delta as the main access route to the airfield.



### Airside access checkpoints and airside roading network

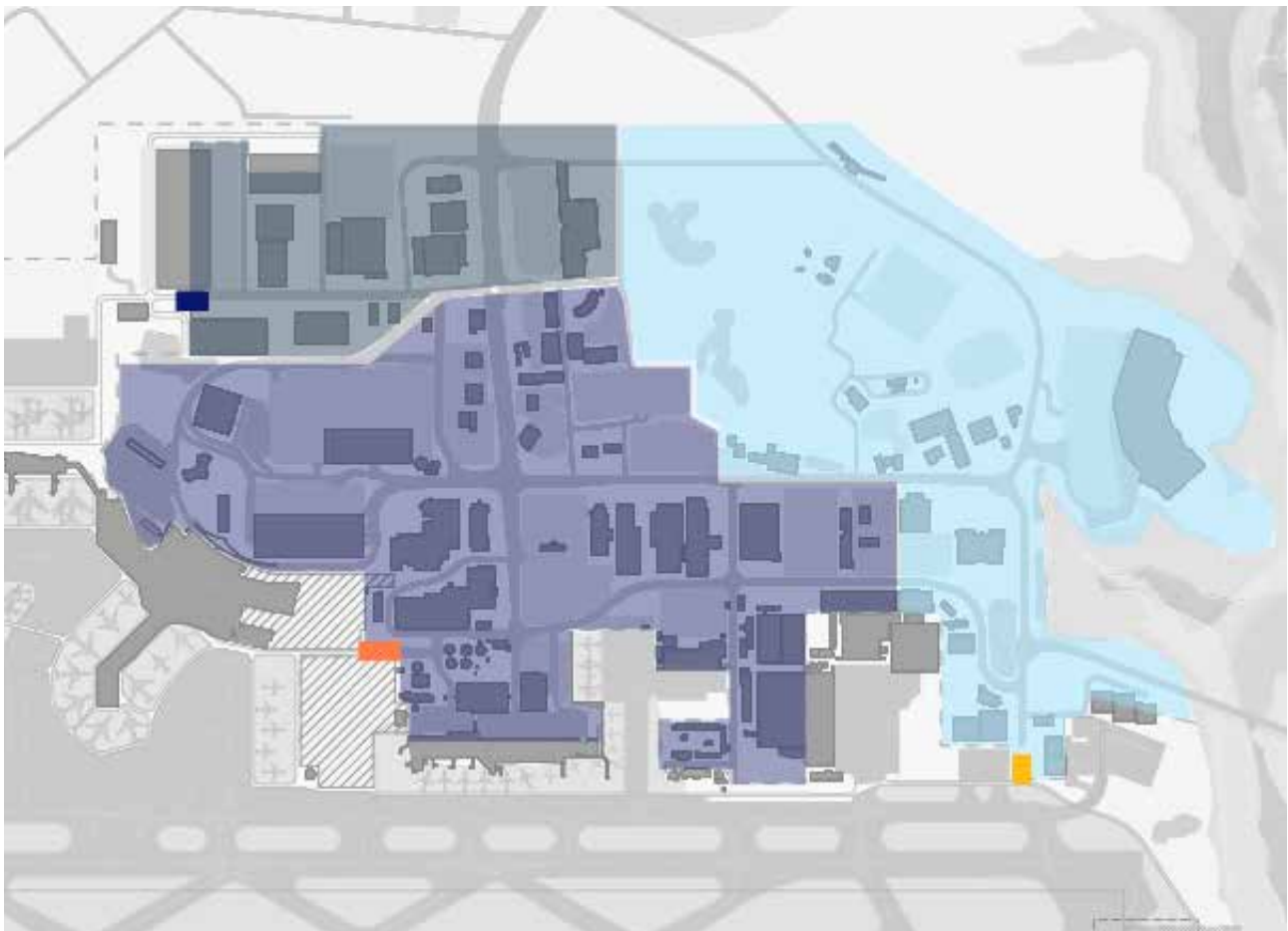
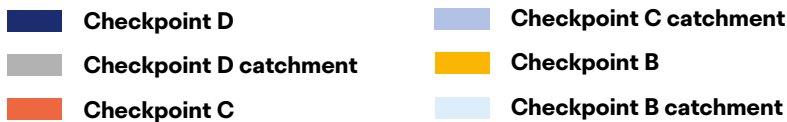
The location of airside checkpoint access will evolve over the years as they are displaced by interfacing infrastructure, and the operational strategy of ancillary services is optimised. It is expected the forecast growth in travellers and workers by late 2040s, as well as future airside works planned, will increase demand for airside/landside access.

Currently, Checkpoint Charlie, Checkpoint Delta and Checkpoint Bravo are regulated entrance points to the airside.

The relocation of the cargo precinct will result in increased activity along Percival Gull Place and the broader Manu Tapu Drive area. To support this, a new security checkpoint, Delta, was constructed at the end of Manu Tapu Drive, aligning with the development of the new cargo precinct.

The development of a new cargo apron along The Landing Drive, together with the relocation of Air Catering Services and potential future development of MRO facilities will require an additional checkpoint at this location.

**Figure 31: Access checkpoint locations and indicative catchment areas**



To support efficient airfield maintenance and the safe movement of ground service equipment between stands and storage areas, an integrated airside roading network has been planned. This network enables authorised vehicles to circulate safely around the aprons via head-of-stand roads and back-of-stands roads. On the international apron, the head-of-stand road already passes beneath Piers A and B.

For the Domestic Pier A1, now under construction, the existing head-of-stand road will be extended to run underneath, with Pier A2 following the same approach.

In addition, back-of-stand roads – complementing those already in place – are included in the plan to further improve vehicle circulation.

Planning for the regional Piers A3 and A4 will consider the operational needs of turboprop aircraft, which do not require boarding bridges, as well as the preference to keep travellers on the ground floor. The layout of the airside roads will therefore be tailored to the type of regional fleet these piers will serve. The Master Plan currently safeguards back-of-stand roads for both Pier A3 and A4.

**Figure 32: Airside roading network**



## 5.10 Aerodrome safeguarding

Long-term, effective safeguarding is critical to ensure safe and viable aeronautical operations, and to manage the impact of developments or activities taking place around the airport.

This is achieved by implementing a series of obstacle limitation surfaces (OLS) that define the limits to which physical objects interact with the airport's airspace and operational procedures.

OLS essentially establish a height restriction for any fixed obstacles or structures around the airport's vicinity, which otherwise would be a risk to safety. Exceptions may occur under specific circumstances and for the less-critical limitation surfaces, where fixed or temporary obstacles are allowed to penetrate the airport's OLS with adequate mitigations in place.

Obstacle limitation surfaces are defined in detail by CAA's NZ-AC139-6 regulations.

The two critical surfaces that determine the height restrictions of existing and future development on airport land or near it are the approach surface, and the transitional surface.

These have been revised for the confirmed runway arrangement for all Auckland Airport's existing and future runways: RWY 05L/23R, RWY 05C/23C and RWY 05R/23L.

- The most limiting will be a height restriction of 10m-15m on the southern side of The Landing Precinct, at its closest point to RWY 05L/23R. Developments on the northern side of The Landing will be largely unaffected, with height restrictions gradually increasing to about 40m. Buildings at the cargo precinct will be limited to 30m in their most restrictive northern end.
- Existing buildings in the Timberly Road subdivision may be affected by the RWY 05L/23R approach surface once it is implemented. This will be subject to terrain elevation differences.

- Limitations derived from RWY 05C/23C's transitional surface safeguarding will lead to a maximum height allowance of 10m for any buildings located along TWY B on its most restrictive line. This restriction will also apply to the southern ends of Piers A1, A2 and A3.
- Approach surfaces from RWY 05C/23C and RWY 05R/23L will impose height restrictions on any development between Park & Ride South and the Pūkaki Bridge, with increased restrictions due to the elevation differential between the Puhinui Peninsula and the runways.
- Buildings and structures not falling within the transitional and approach surfaces limitations, but still located within the airport site, should never exceed 45m in height as required by the inner horizontal surface unless agreed otherwise by a dedicated risk assessment study.

It must be noted that recent changes to ICAO Annex 14 allow for a reduced strip width of 280m for instrument approach runways, leading to less restrictive OLS limitations. CAA NZ has not yet captured these updates in its regulation, but they are expected to be introduced during the timeframe of this Master Plan. The latest international regulatory framework has been implemented in this Master Plan.

Where obstructions infringe OLS surfaces, an aeronautical safety study will be carried out to determine the need to remove, reduce in height, or mark and light infringements.

New infrastructure will incorporate OLS restrictions in its design, and aeronautical safety studies will apply to existing infrastructure only.

It is important to note that ICAO is developing a new concept for the OLS, which is expected to be implemented in the late 2020s. Auckland Airport will incorporate these changes once they are put into effect.

The maps overleaf identify buildings that have either already reached or have been planned to reach their maximum allowable height.

Figure 33: OLS affected buildings along TWY B

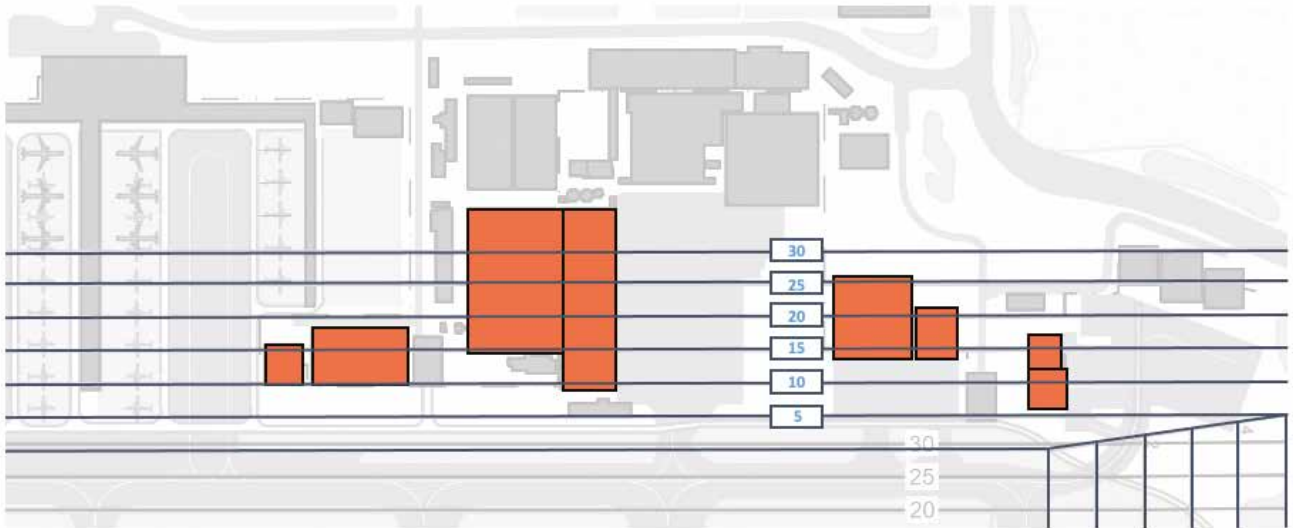


Figure 34: OLS impact on the Puhinui Peninsula

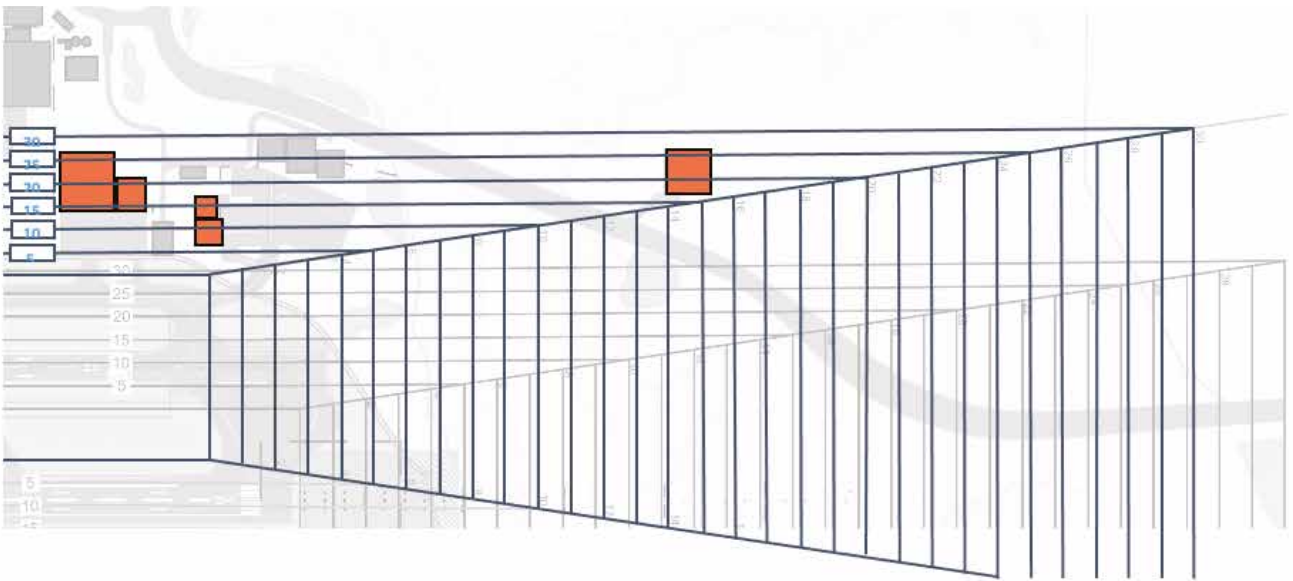
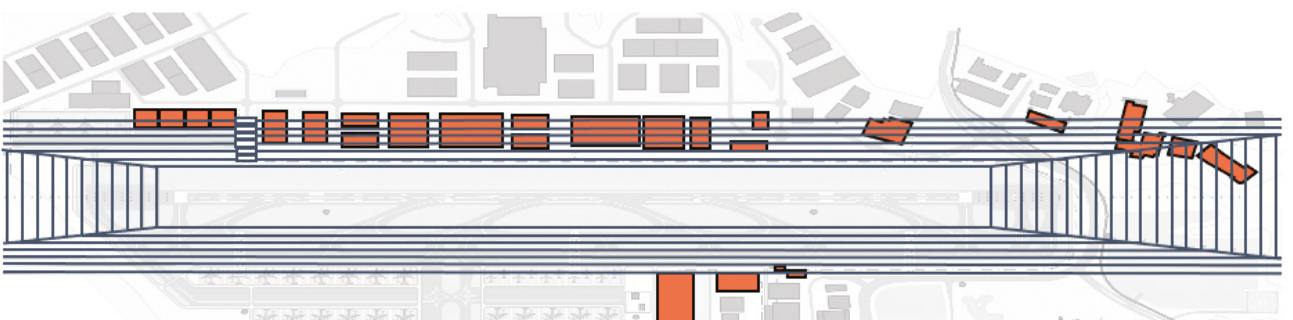


Figure 35: OLS affected buildings on The Landing and Cargo Precinct area





## Chapter 6

# Terminal precinct

- 6.1 The present dual-terminal system
- 6.2 Evolving the dual-terminal concept
- 6.3 Future trends and technologies
- 6.4 The integrated terminal
- 6.5 Improving transfer journeys
- 6.6 New regional terminal

The terminal precinct serves as the critical interface between the airfield and surface access precincts, accommodating the different passenger terminal buildings.

Its purpose is to process and streamline international, domestic and regional traveller flows, manage baggage, and provide a range of services to enhance the experience of airport customers.

### Guiding principles

Auckland Airport is New Zealand's main gateway and is a key hub connecting Australasia and the Pacific Rim, and the passenger terminals should deliver a uniquely New Zealand 'sense of place' while facilitating efficient departing, arriving and transfer journeys.

Future terminal developments will follow these key principles:

- Traveller experience will remain at the forefront of terminal developments by following IATA international level of service guidelines, and providing sufficient area and equipment to ensure a comfortable environment, while minimising waiting times at key processes.
- Reducing minimum connecting times will be a priority to strengthen and grow Auckland's position as an attractive hub ahead of other airports in the Pacific region.
- Implementing new technologies, with process automation at its core, leading to seamless traveller journeys with more efficient and less-intrusive processes.
- Providing a compelling and engaging retail experience that delivers the best of New Zealand and the world, and highlights Auckland Airport as an attractive destination and layover option.
- Introducing cost-effective infrastructure developments, favouring where possible operational efficiency, technology enhancements, and the repurposing of facilities over new infrastructure build.



## 6.1 The present dual-terminal system

Auckland Airport operates under a dual-terminal arrangement, with one building dedicated to international traffic and the other terminal catering to domestic and regional flights.

### International terminal

The international terminal is located near the centre and west of the airfield and is serviced by two international piers, Pier A and Pier B, as well as a number of non-contact stands. The stands can serve a range of international aircraft from Code C to Code F.

In FY25, the terminal facilitated 9.6m international travellers (10.5m in FY19) and 52,000 air traffic movements (57,000 in FY19).

Travellers check-in at ground level, using a mix of traditional check-in desks, self-service kiosks and automated bag drops. Departure processing is at Level 1 with Customs processing followed by Aviation Security screening to a computer tomography (CT) standard. Travellers then move through

to a high-quality retail and food and beverage offering that was delivered as part of the expansion of the international departures area in 2017.

Auckland Airport provides three dedicated airline lounges and one pay-per-use lounge.

Travellers then proceed to gate lounges on Pier A and Pier B to board their aircraft. Auckland Airport also provides bus lounges on both piers to facilitate bus services to non-contact stands during peak periods.

Arriving international travellers, complete primary-line immigration processes (via e-gates or manned booths) at Level 1 and then go down to baggage reclaim, before completing secondary processing for Biosecurity and Customs before exiting into the landside arrivals area. Secondary processing is risk-profiled and includes multiple pathways including express lane (low risk), x-ray (medium risk) and full search (high-risk).

For travellers transiting between international flights, an airside transit facility with CT screening is provided, which enables seamless connectivity into the main international airside area.



## Domestic terminal

Domestic and regional operations at Auckland Airport are handled through the domestic terminal, a legacy building that opened in 1966 and has served Auckland Airport well, but is approaching the end of its useful life.

In FY25, the domestic terminal facilitated 8.4 million travellers (9.6 million in FY19) and 105,200 air traffic movements (122,000 in FY19). Domestic jet travel represents about 70% of the terminal's travellers, but only 41% of its air traffic movements.

Air New Zealand and Jetstar operate domestic jet services from the terminal. Domestic jet operations are based in the centre and western end of the terminal, with Air New Zealand's operations located in the centre and Jetstar's at the western end, with separate check-in and baggage systems (inbound and outbound) for each airline.

Domestic jet operations are mainly serviced via contact stands and airbridges, with all travellers needing to complete Aviation Security processing before travel. There are 10 contact stands equipped with airbridges that can accommodate Code C jet aircraft.

Regional services operated by Air New Zealand, Air Chathams and Barrier Air and are based at the eastern end of the terminal. Regional services range from six-seat propeller aircraft to 68-seat turbo-prop aircraft. Regional services require a walk out to the aircraft via covered walkways. Travellers are not security screened for regional services.

Air New Zealand has two airline lounges: one airside for domestic jet customers and one landside for regional customers.

The majority of retail and food and beverage offerings at the domestic terminal are provided landside and are available to both domestic jet and regional customers. There is also a limited offering available airside for domestic jet customers.

Travellers connecting between regional and domestic jet services, can do so within the terminal. Regional and domestic travellers connecting to international services, must either walk the Green Line to the international terminal (a partially covered 800m walkway) or catch the inter-terminal bus.

This operation is expected to be in place for domestic jet and regional travel until the Domestic Jet Terminal is completed in FY29. At that point, the domestic terminal will convert to regional services only. Regional services are forecast to operate in the terminal until a purpose-built facility is available no earlier than late 2030s.



## 6.2 Evolving the dual-terminal concept

### Future terminals

While the existing terminal configuration has served Auckland Airport for many years, it hinders connecting journeys from secondary domestic cities to major international destinations, creating two different service standards, forcing the duplication of services and resources, and preventing a cohesive and balanced expansion strategy for the longer term.

The 2014 Master Plan introduced a clear terminal development strategy to integrate domestic and international *jet* operations under one roof. This ambition will be delivered through the new Domestic Jet Terminal, a landmark project that, once operational will transform the existing international terminal into the integrated terminal building.

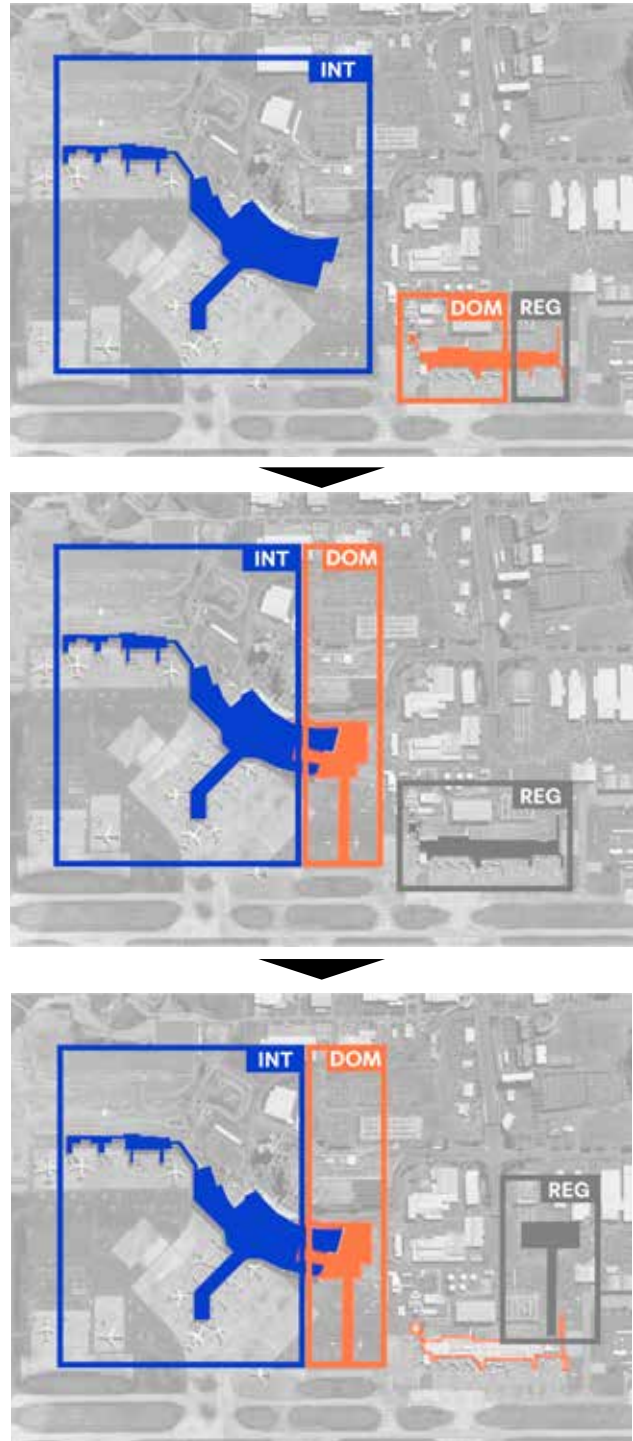
After domestic jets move to the integrated terminal, the existing domestic terminal will be reconfigured in the short term to serve regional operations. This will enable the staged development of future regional piers and a new fit-for-purpose terminal.

Regional operations will eventually move to the new, dedicated regional terminal for a streamlined process, reduced walking distances, and a cost-effective development.

This plan is captured under the 'Regional Traveller's Experience' project.

The adjacent plans highlight how terminal operations will evolve into a significantly improved offering that delivers valued outcomes for Auckland Airport and its customers, and enhances the overall traveller experience.

Figure 36: Dual-terminal concept evolution

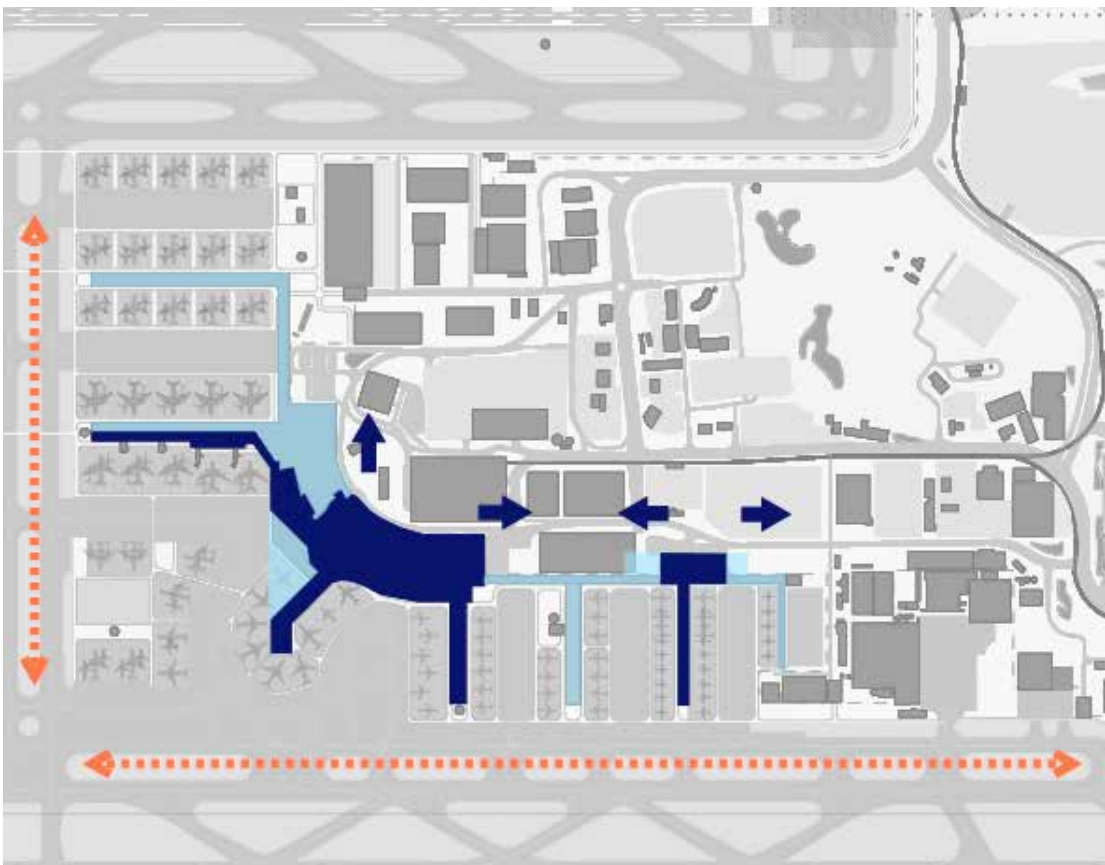


The future two-terminal configuration unlocks a more cohesive development path for expanding terminal facilities along the Laurence Stevens Drive–Ray Emery Drive axis. In doing so, increases in terminal footprint will also be minimised.

In its maximum planned extent, the integrated terminal will connect with the new regional terminal via an airside pedestrian bridge, allowing seamless airside connections between terminal buildings, for both travellers and baggage.

Expansion of international facilities will be northbound towards the future northern runway 05L/23R, including the development of the north-side of Pier B and a new Pier C, while domestic and regional operations will extend east and west, respectively to include a total of four domestic and regional piers.

**Figure 37: Key spatial moves**



- Terminal envelope
- Potential expansion
- Key spatial moves



## 6.3 Future trends and technologies

### Automation and robotics

Automation is redefining airport operations, enabling airports to function more efficiently while reducing the strain on human resources. Autonomous ground vehicles, including baggage tugs and shuttle systems, are improving logistics by streamlining baggage handling and traveller transport. AI-driven air traffic control support systems are helping optimise flight scheduling and minimise delays.

Robotics is another emerging technology enabler, with the potential to revolutionise various airport services. AI-powered robots are being explored for roles such as retail assistance, food and beverage delivery, and even sanitation. These robots enhance passenger convenience while reducing operational costs for airport vendors. Auckland Airport is closely monitoring these developments, recognising the role robotics could play in the future of airport service delivery.

The integration of immersive digital technologies, such as augmented reality (AR) and the metaverse, is also on the horizon. These innovations could allow travellers to virtually explore the airport, access interactive wayfinding assistance, and even experience virtual duty-free shopping before arrival. Auckland Airport is positioning itself to adapt to these advancements, ensuring it remains at the forefront of digital innovation.



CUSTOMER EXPERIENCE

- Improved airport navigation with **digital signage and real-time** flight information
- Proactive operations **minimise customer disruptions** and flight delays
- **Instant flight updates** transform customer support
- Retail and travel experiences are **tailored to customer preferences**
- **Contactless technology** enables more seamless check-in, security and boarding processes

PARTNER EXPERIENCE

- Provide partners with **accurate data** that fulfils their requirements
- **Integrated data platforms** enable partners to access information easily
- Seamless **data sharing**
- **Anticipate partner needs** using predictive data and analytics
- **Digital signage and communication tools** that improve the customers' experience of engaging with airline partners

STAFF EXPERIENCE

- **Automation of manual tasks** saves time
- **Culture of innovation** drives staff engagement
- **Task management applications** deliver improved productivity and efficiency
- Talent upskilling through interactive and engaging **digital training modules**
- Staff **communication tools** enable greater collaboration

Automation and self-service

Automation and self-service technologies have the power to revolutionise airport operations by reducing staff-dependent processes and optimising space requirements for facilities. The result is a more seamless, efficient, and hassle-free traveller experience. These innovations also allow airports to focus resources on helping travellers who require extra support.

From automated systems for bag drops and boarding pass control to streamlined Customs and boarding processes, the future of air travel is becoming increasingly user-friendly.

Auckland Airport is already embracing this shift with forward-thinking initiatives such as the Check-in Hall Extension and Reconfiguration Programme. This project is transforming the check-in process by replacing traditional equipment with state-of-the-art self-service kiosks (SSKs), *biometric-capable* SSDs and automated bag drops (ABDs), making the journey faster and more convenient for travellers.

## 6.4 The integrated terminal

The integrated terminal is a unified facility that accommodates both domestic and international jet travellers under one roof.

By consolidating services and facilities that would otherwise be spread across separate terminals, the concept of integration improves operational efficiency, enhances passenger convenience, and promotes long-term sustainability.

### Passenger processing areas

Key processes and areas in the integrated terminal include:

#### Departures journey

- Public departures hall
- Check-in and automated bag-drop
- Baggage handling system (outbound)
- Access and boarding pass control
- Passenger security screening
- Outbound border control (emigration)
- Departure lounges and dwell areas

#### Arrivals journey

- Inbound border control (immigration)
- Baggage reclaim
- MPI and Customs controls
- Public arrivals halls
- Transfer screening and controls.




## Departures journey

### Public departures hall

Auckland Airport provides space at Level 1 for friends and family to farewell travellers, as well as retail and food and beverage offerings for both travellers and farewellers. The footprint is not expected to change during the Master Plan period, but the layout may evolve.

Auckland Airport will encourage travellers to move through to airside areas as soon as they are ready, to improve on-time performance, enable efficient departures processing, and to use the world-class airside retail and food and beverage offerings that will be available in both the domestic and international dwell areas.

**Table 13: Public departures hall future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Farewell space including retail and food and beverage provided at Level 1	Farewell space including retail and food and beverage provided at Level 1		Farewell space including retail and food and beverage provided at Level 1
International travellers only	International and domestic jet travellers		International and domestic jet travellers



**Automation and self-service**

Automation and self-service have the potential to reduce the number of processes requiring airport staff and optimise area requirements for each facility. This will result in a less intrusive and more convenient traveller experience, and focus resources on airport users requiring enhanced assistance. This development includes automated systems and equipment for bag-drop, boarding-pass control, outbound and inbound Customs, and boarding processes.

How Auckland Airport is already considering this trend:

- The Check-in Hall Extension and Reconfiguration programme is replacing all check-in equipment with self service kiosks (SSKs) and automated bag drops (ABDs).

**Remote processing (off-site check-in)**

Off-airport and remote processing could allow travellers to carry out part of the necessary checks and processes ahead of their trip, which would reduce the time required for their processing at the airport. This includes online check-in and the use of digitalised boarding passes, bag tags on mobile devices and bag radio-frequency identification (RFID), off-airport baggage pick-up and collection, and border control.

Remote processing at the airport also includes activities such as virtual queueing and click-and-collect shopping from the airside retail units. This informs and empowers travellers that are supported with tools that support processing requirements while facilitating a more enhanced and streamlined traveller experience.

How Auckland Airport is already considering this trend:

- Off-site check-in and bag-drop across the airport precinct, including the Transport Hub and Park & Ride areas, is under consideration and may be implemented in the coming years.
- Auckland Airport welcomes new technologies to enhance traveller experience and deliver efficiency. Working with airlines and operators is crucial to provide the best outcome.

**Table 14: Check-In future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Centralised integrated check-in	Centralised integrated check-in	➔	Centralised integrated check-in with an expansion option to the west
Self-service kiosks and ABDs	Self-service kiosks and ABDs		Self-service kiosks and ABDs
	Off-site check-in	➔	Biometric & touchless travel
			Smart tags & permanent bag identification
			E-tag integrations



**Baggage handling system**

As part of the integrated terminal building project, the baggage handling system (BHS) will be upgraded to solve existing capacity constraints, achieve international security standard compliance, prepare the system for combined international-domestic operations, and enhance the airside baggage transfer capability for domestic-to-international connections.

The upgraded BHS system will feature: an integrated individual carrier system (ICS); a new early baggage store (EBS) system; hold baggage screening (HBS) Level 3 compliance; and inbound baggage offloads to feed the future domestic baggage reclaim hall. Work is already underway to implement the first stages of the planned BHS upgrade programme.

The existing international terminal layout provides a path to solve the capacity constraints identified in the EBS and the domestic reclaim subsystems. These will expand over the eastern truck dock and within the domestic reclaim hall, respectively.

As demand increases, the building envelope will expand to accommodate the western make-up area.


Additional BHS requirements will be aligned with the dual-terminal arrangement with the integrated terminal and new regional terminal buildings. For example, once the airside pedestrian bridge is developed, an ICS high-speed connector will be implemented to improve baggage transfers between the two terminal buildings. In addition, new piers may trigger localised make-up offloads for reduced delivery times to aircraft, and a westbound shift of operations. Any plans for integration for international arrivals would need to consider the biosecurity risks and border requirements.

IATA Resolution 753 is a significant mandate to enhance baggage tracking. It requires airlines to track baggage at four key points in the journey: check-in, loading onto the aircraft, transfer, and arrival. The importance of this resolution lies in its ability to reduce baggage mishandling, improve customer satisfaction, and lower the costs associated with lost or delayed baggage.

How Auckland Airport is already considering this trend:

- The implementation of an integrated ICS system as part of the BHS upgrade programme will include full sorting and EBS equipment, allowing for full-cycle baggage tracking.

**Table 15: Baggage handling system future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Integrated ICS baggage system	Integrated ICS baggage system		Integrated ICS baggage system  plus  western make-up area expansion

**Access and boarding pass control**

Boarding pass scanners will be provided at the entrance to international departures. These will be future-proofed for biometrics.

**Table 16: Boarding pass control future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Boarding pass scanners	Boarding pass scanners		Biometric access control
Biometrics under consideration	Biometric or similar		

**Passenger security screening**

The integrated terminal will reverse the order of Emigration (Customs) and Aviation Security. This will ensure all travellers have completed security checks before they reach Customs processing, and will also deliver a more efficient flow through departures with the slower process, Aviation Security, completed first.

A co-located security process will initially be implemented in the integrated terminal to facilitate side-by-side security screening of domestic jet and international travellers. It is possible that the New Zealand Government may harmonise the domestic and international screening standards in the future, through lifting the domestic standards up to international standards or if international standards reduce, however, until this happens, domestic and international travellers and their cabin baggage will need to be screened to different standards and have separate dwell spaces post screening. The departures design has retained the flexibility to convert the security screening space to a single harmonised screening facility if security harmonisation is approved and implemented.


This Master Plan suggests that harmonisation could be achieved by late 2030s. Next iteration of the Master Plan will review the timeline and capture any changes if required.

CT scanners will serve a crucial role in enhancing threat detection capabilities for carry-on baggage. This technology allows the automatic detection of explosives and other prohibited items without having to remove them from the hand luggage, therefore streamlining the security process and potentially reducing the need for manual inspections. The roll-out of this technology will also allow the eventual standardisation of screening requirements across traffic segments, which will in turn create the opportunity, if possible, to merge international and domestic flows and remove the need to screen transferring travellers on their arrival. Travellers will benefit from an expedited process and a less intrusive experience.

How Auckland Airport is already considering this trend:

- CT scanners have already been implemented for the international segment, and domestic scanners and non-passenger screening will also be replaced with CT.

**Table 17: Passenger security screening future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Centralised non-harmonised CT-CBS screening and body scanners	Centralised non-harmonised CT-CBS screening and body scanners		Centralised harmonised CT-CBS screening and body scanners
			Expansion under consideration to the east

**Outbound border control (emigration)**

Automated border control systems leverage the increased adoption of biometric passports.

They present a compelling case for enhancing security and streamlining passenger processing by significantly reducing wait times and improving the overall efficiency of border control operations. The mutual agreements between governments facilitate a more seamless integration of these systems, allowing a standardised approach to identity verification and a stronger collaborative effort in maintaining border integrity and international security standards.

E-Passports, Digital Traveller Credentials, and use of biometrics to reduce physical document interactions.


The main application is to integrate the travellers' travel details with their unique biometric features to expedite their processing through the airport for a more seamless journey.

Potential agreement between New Zealand and Australia will eventually see the reciprocal removal of inbound/outbound checks between these two countries. To be implemented, this arrangement may require improved biometric technology.

How Auckland Airport is already considering this trend:

- We will continue to work closely with government agencies who are committed to improving the border processing of all travellers to and from New Zealand from an end-to-end passenger journey perspective using new and existing technology, with a particular focus on supporting the New Zealand Customs' Service work on increasing eGate eligibility (outbound).
- Identifying opportunities to align the wayfinding experience of New Zealand and Australian travellers on trans-Tasman routes.

**Table 18: Outbound border control (emigration) future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Centralised passport control – e-gates and desks	Centralised passport control – e-gates and desks		Centralised passport control – e-gates and desks
Increase in e-gate eligibility	Increase in e-gate eligibility		Increase in e-gate eligibility
	Biometric/single token		Biometric/single token




**Departure lounge and dwell spaces**

International

International gate lounges and dwell spaces will grow to the north and the west, aligned to the development of the airfield. Gate lounge and dwell expansion will initially be delivered via the development of the north side of Pier B to connect the non-contact stands. This is forecast to be required in FY33, with Pier C forecast to be delivered to meet demand in late 2040s.

An expansion of the dwell spaces is forecast to be required to increase incremental baggage capacity and also provide the opportunity for additional airside dwell spaces in the area between Pier A and Pier B.

**Table 19: Future operational strategy - International**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Pier A and Pier B (south)	Pier A and Pier B (north & south)		Pier A, Pier B and Pier C


**Departure lounge and dwell spaces**

Domestic

Domestic jet operations are forecasted to move to the integrated terminal once commissioned, and will operate from 12 Code C contact stands on Pier A1.

Incremental domestic jet gate lounge capacity will be delivered via the development of Pier A2.

**Table 20: Future operational strategy - Domestic**

FY28-FY32	FY33-FY37	Pathway to End State	End State
DTB	DJT and Pier A1		DJT Pier A1 & Pier A2

**Retail and food & beverage (F&B)**

The variety in the retail and F&B offering, and the disposition and convenience of the dwell areas, play a critical role in enhancing the traveller experience both landside and airside.

Space requirements for each retail segment are driven by demand projections and the estimation of traveller spending, adjusted for economies of scale derived from the internal configuration of the integrated terminal. In addition, traveller occupancy at key dwell locations informs the requirements for additional seating and support functions, such as storage.

Retail and F&B are not only major contributors to the overall airport experience and its perceived quality, but they are also key differentiators in a competitive airport proposition. They aim to provide an outstanding traveller experience while creating a genuine ‘sense of place.’ At a high level, the retail offering is designed to deliver commercially successful, meaningful, and rewarding environments that connect with people and place, enhancing both passenger satisfaction and the airport’s commercial appeal. As a proposition, the retail & F&B offerings are to deliver the best of New Zealand and the world; delivering on both functional needs and emotive needs.

The retail proposition for international travellers aims to enhance the journey by providing a well-designed curated environment that inspires customers to make time to explore and engage, showcasing an effective arrangement of retail units/dwell areas and processes that smooths the way and enable participation through ease of access, time, knowledge, clarity and confidence.



Existing retail areas in the existing international terminal will be progressively adjusted as the integrated terminal expands in the future, to capture the new centre of gravity of the building.

Domestic and regional retail propositions will enable an intuitive, seamless and direct operation, that underpins a connection to Auckland and New Zealand, while providing essential travel needs and experiences that are interesting, distinctive and uplifting.

These propositions will be achieved using the following principles:

- Pier/satellite retail arrangements will be avoided, aiming for the consolidation of dwell, F&B, airline lounges and retail outlets in one primary zone for as many travellers as possible.
- Design of areas will enable travellers to seamlessly navigate through the terminal and always feel connected to the next step of their journey, meeting travellers’ needs as people move through spaces.
- The number of direction changes will be minimised, always keeping travellers moving forward whenever possible.
- Landside retail will be limited to travellers’ needs, because these areas will be designed to be functional and enable travellers to progress to airside quickly and intuitively. However, a curated offering for welcomers and farewellers will be available in the terminal buildings’ landside areas, namely the departures and arrivals halls, offering ample seating, selected food and beverage options, and easy access to essential travel services.

**Table 21: Future commercial strategy – international and domestic**

	FY28-FY32	FY33-FY37	Pathway to End State	End State
<b>Landside</b>	DTB (DOM and REG) INT departures (L1) INT arrivals	INT + DOM departures (L1) INT arrivals DOM arrivals		New regional terminal (REG) INT + DOM departures (L1) INT arrivals DOM arrivals
<b>Airside</b>	DTB departures (L1) INT departures INT arrivals	DOM departures INT departures INT arrivals		DOM departures INT departures INT arrivals



**Logistics and storage**

All activities within the airport environment necessitate careful logistics planning, so sufficient area in the back-of-house (BOH) must be provided for on-site storage, BOH operational offices, recycling and waste management. Retail and F&B logistics routes and BOH are both landside and airside.

Existing logistics operations require all waste and goods to be channelled through Checkpoint Charlie and the eastern truck dock. Only some goods are bonded-to-bonded (such as Customs-controlled products like duty-free); others are not bonded and need to be screened if going airside. As the terminal expands westward and with the addition of Checkpoint Delta in the cargo precinct, a

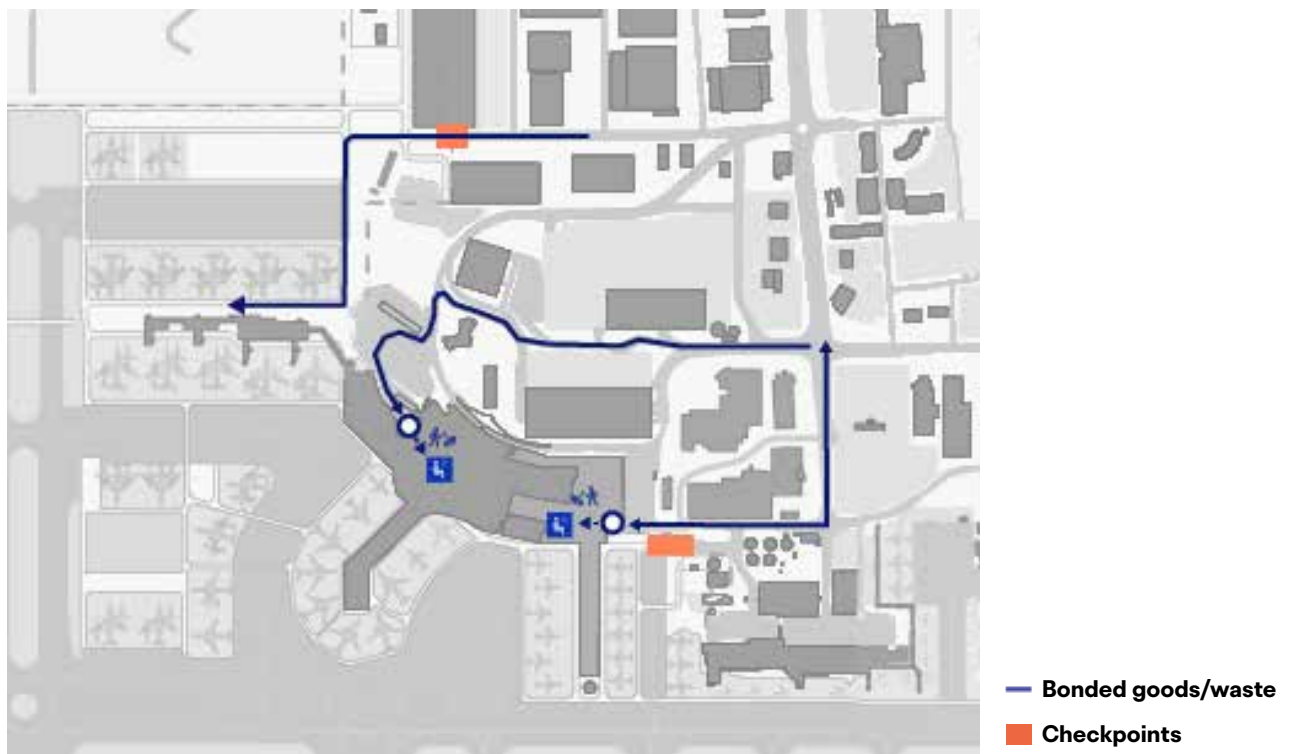
new western truck dock will be provided to allow reduced distances for goods deliveries inside the terminal building, and to facilitate a split of goods in/out operation between international and domestic traffic. The new regional terminal will also have a dedicated truck dock to serve airside deliveries once it enters into operation.

Moreover, the proximity of the future western truck dock to the cargo precinct creates an opportunity to provide off-site storage facilities and reduce the storage inside the terminal building's BOH areas. This could in turn generate more available space for front-of-house services, while allowing a secure space for bonded goods in the cargo precinct.

**Table 22: Logistics and storage future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Western truck dock	Western truck dock	➔	Western truck dock
Eastern truck dock (in construction – open when DJT is commissioned)	Eastern truck dock		Eastern truck dock

**Figure 38: Integrated terminal building logistics access points (post DJT opening)**



**Airline lounges**

Airline lounges cater for high-valued customers who represent around 8% to 18% of all departing travellers.


Key airlines at Auckland Airport already have lounge facilities in the existing domestic and international terminals, while the international terminal also includes Auckland Airport’s pay-for-use lounge that provides a lounge product for all departing travellers.

Under the proposed terminal development strategy, the existing airline lounges will be retained and, in some cases, expanded or even relocated, to reduce walking distances for an improved passenger experience. New airline lounges will be provided to meet requirements in line with terminal expansions, locating them on the upper floors and away from the main flows.

Airline lounges will also be provided for in the upper levels of the terminal building. As the terminal envelope grows, additional areas and relocation opportunities for these facilities may be unlocked.

For interested parties, space for domestic and international lounges will be provided facing the airfield on the second floor of the integrated terminal, while Strata will also benefit from a new dedicated lounge on the domestic side of the second floor.

**Table 23: Airline lounges future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
<p><b>International</b></p> <p>Four dedicated airline lounges</p> <p>One pay per use airline lounge</p> <p><b>Domestic and regionals (DTB)</b></p> <p>Two dedicated airline lounges (one airside, one landside)</p>	<p><b>International</b></p> <p>Four dedicated airline lounges*</p> <p>One pay per use airline lounge</p> <p><b>Domestic (DJT)</b></p> <p>One dedicated airline lounge*</p> <p><b>Regionals</b></p> <p>One dedicated airline lounge*</p>		<p><b>International</b></p> <p>Four dedicated airline lounges*</p> <p>One pay per use airline lounge</p> <p>Opportunity for lounge expansion at international dwell or Pier B</p> <p><b>Domestic (DJT)</b></p> <p>One dedicated airline lounge*</p> <p><b>Regionals</b></p> <p>One dedicated airline lounge*</p>

\*Subject to airline strategy



## Arrivals journey

### Automated border control - Inbound


A risk-based assessment (RBA) may be implemented at security, border and Customs controls taking into account the behaviour and characteristics of travellers, creating a unique risk profile for them based on a detailed risk-threat analysis. For instance, high-risk profiles may be subjected to more stringent checks, while lower-risk profiles might see a more streamlined process. This allows a more efficient allocation of staff, resources and technology, potentially reducing wait times for travellers without compromising operations.

Similar to the outbound journey, automated border control systems use the growing adoption of biometric passports. Agreements between governments enable a smoother integration of these systems, facilitating identity verification and strengthening collaboration to uphold border integrity and international security standards.

How Auckland Airport is already considering this trend (as per outbound journey):

- We will continue to work closely with government agencies who are committed to improving the border processing of all travellers to and from New Zealand from an end-to-end passenger journey perspective using new and existing technology, with a particular focus on supporting the New Zealand Customs' Service work on increasing eGate eligibility (inbound).
- Identifying opportunities to align the wayfinding experience of New Zealand and Australian travellers on trans-Tasman routes.

**Table 24: Inbound border control (Immigration) future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
E-gate and desks at Level 1 Increase in e-gate eligibility	E-gate and desks at Level 1 Increase in e-gate eligibility Biometric/single token		E-gate and desks at Level 1 Increase in e-gate eligibility Biometric/single token

**Baggage reclaims and inbound baggage**

The journey for arrivals bags differs for international and domestic/regional travellers. For domestic and regional travellers terminating their journey at Auckland or connecting on to another flight, without through-checked luggage, the traveller will collect their bags from dedicated baggage reclaim belts. For travellers connecting to flights with through-checked bags, the baggage transfer will be completed airside.

All arriving international travellers, including travellers transferring to domestic and regional flights, are required to collect their bags from international baggage reclaim and complete a risk assessment process to determine the need for any secondary screening. Secondary screening can include both Customs and biosecurity checks. New Zealand has a unique and delicate eco-system, with heavy economic reliance on its agriculture industry, so the secondary screening process, particularly the biosecurity processes required by the Ministry for Primary Industries (MPI), are stringent and can change rapidly in response to biosecurity threats.

Future arrivals spaces therefore need to be planned and designed to be flexible and accommodate both high and low-risk pathways. Pre-COVID, MPI was exploring a back-of-house screening solution for bags including the use of biometric algorithms. However, this solution was infrastructure and space-heavy and would likely require the development of an inbound baggage system at Auckland Airport. The airport would prefer the exploration of the pre-clearance of inbound bags at the originating port, but this would require commitments from other jurisdictions and is unlikely to be a viable option for all originating ports.

Detailed technical studies are being undertaken beyond the ongoing BHS upgrade programme to evaluate the implementation of these strategies and plans. This Master Plan is limited to identifying viable expansion pathways, aligned with future terminal area requirements, that can provide additional BHS capacity and safeguard for new operational arrangements.

**Table 25: Baggage reclaim and inbound baggage future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
<p><b>International</b> Back-to-wall belts</p>	<p><b>International</b> Back-to-wall belts</p>		<p><b>International</b> Back-to-wall belts</p>
<p><b>Domestic (DTB)</b> Back-to-wall belt (dedicated to airline)</p>	<p><b>Domestic (DJT)</b> Up-and-over belts (common use)</p>		<p><b>Domestic (DJT)</b> Up-and-over belts (common use)</p>
<p><b>Regional (DTB)</b> Back-to-wall belt</p>	<p><b>Regional (DTB)</b> Back-to-wall belt</p>		<p><b>Regional (New terminal)</b> Back-to-wall belt</p>

**Ministry for Primary Industry (MPI) and Customs – secondary screening**

The joint border agencies (JBA) area provides space for MPI and NZ Customs to carry out the processes necessary to ensure incoming travellers are fully screened before entering New Zealand. The hall is a flexible space able to accommodate changes in queuing requirements, screens and search processes.


JBA offices are a series of spaces that support front-of-house MPI and NZ Customs operations.

Auckland Airport continues to work closely with border agencies to develop the future concept of operations (CONOPS) for arrivals.

This could consider a number of initiatives and ongoing partnerships to support a joint approach to effective risk management within passenger processing systems.

Arrivals expansion space therefore needs to be flexible to be able to respond to change, including the risk of increased biosecurity control in response to a biosecurity threat (e.g. Queensland fruit fly).

**Table 26: MPI and Customs control future operational strategy**

FY28-FY32	FY33-FY37	Pathway to End State	End State
Ground floor processing including additional footprint delivered by the first stage of the arrivals expansion	Ground floor processing		Ground floor processing



### Public arrivals hall

Arrivals meet-and-greet is an area that allows special moments for travellers and meeters and greeters. While the area is important, Auckland Airport will encourage dwell in this space to be minimised with a curated offering for welcomers including ample seating, selected food and beverage options, and easy access to essential travel services. Travellers will be encouraged to follow intuitive wayfinding from arrivals to the next stage of their journey (car park, public transport, commercial transport, rental car).

### Further terminal expansions

The integrated terminal provides the airport, airlines, ground handlers and agencies sufficient space for operational support, as well as circulation, mechanical, plant and structural elements. For the purpose of this Master Plan, a 40%-60% increase has been factored into the sizing of future terminal requirements to avoid capacity shortfalls as the requirements adapt to future demand and changes in aviation trends. The 40%-60% mark-up is a typical international best practice planning approach to ensure the airport's facilities remain adequate and functional as traffic and operational needs grow, without requiring significant redevelopment.

A reconfiguration-first approach will be adopted for the short-term requirements (up to FY33) for the integrated terminal, focusing on optimising existing processes to meet expansion needs while using areas with adequate capacity. For the long-term expansion requirements (from FY33 onwards), the focus will shift to determining the range of processing facilities necessary to accommodate projected passenger volumes, in line with IATA's Optimum Level of Service standards. This will involve assessing the maximum number of required facilities—such as equipment, spaces and contingencies—without applying optimisation, reflecting a conservative scenario based on maintaining the current operational framework..





  
  
No trolleys  
or prams  
permitted  
on escalator  
A 12345

PLEASE  
BE CAREFUL  
NO LUGGAGE  
OR BAGGAGE  
IS TO BE  
USED  
ON ESCALATORS  
FOR YOUR  
SAFETY

## 6.5 Improving transfer journeys

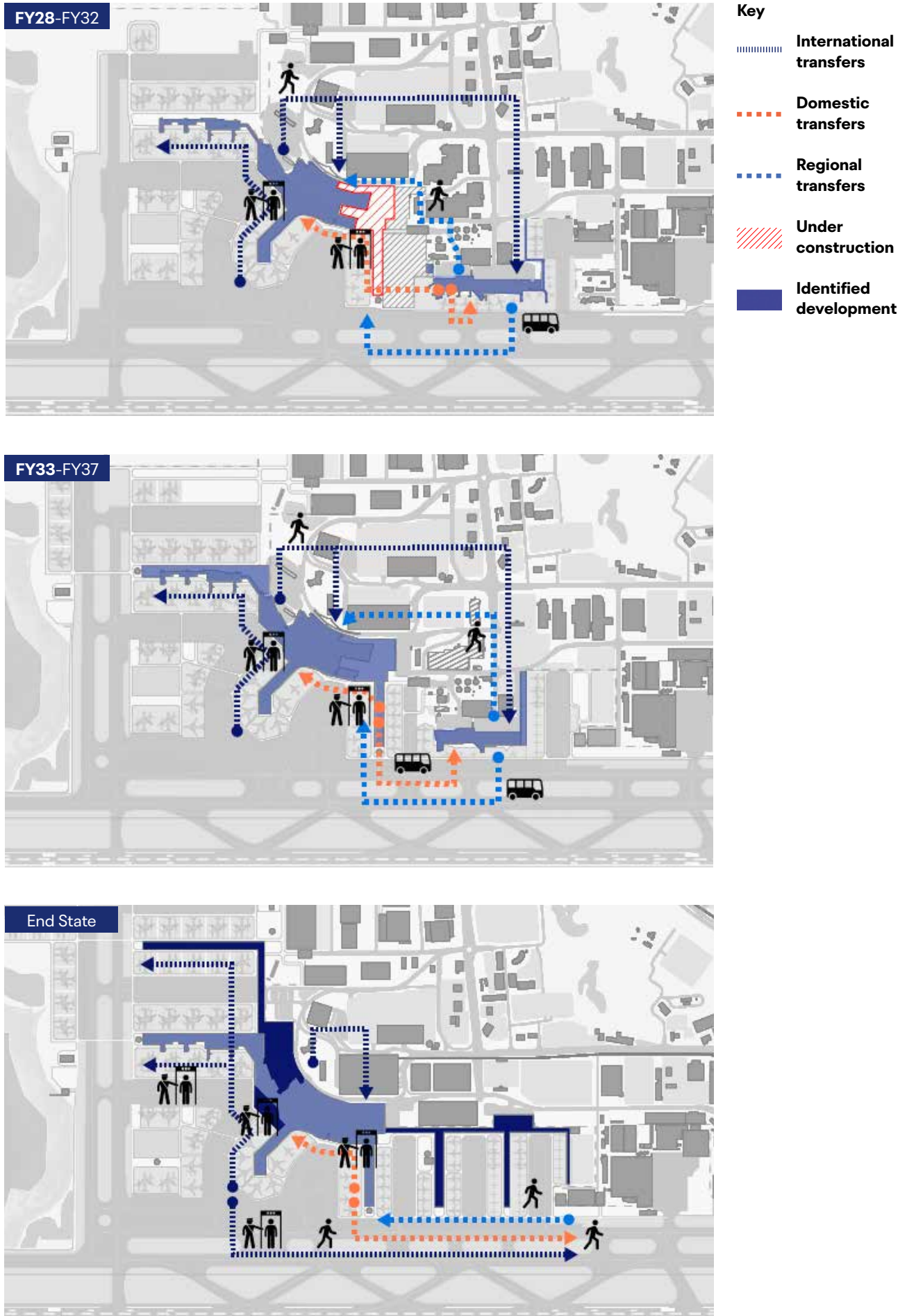
Reducing minimum connecting times (MCT) between all traffic segments remains a key objective for Auckland Airport and is a key driver for the updated two-terminal concept.

At present, all connections, except for international-to-international transfers, must be fully or partially carried out landside due to current regulations or the existing terminal and airfield layouts. This leads to higher connection times, longer walking distances, and a poorer traveller experience.

Auckland Airport's ambition is to reduce landside transfer journeys to a minimum. While there is no assurance regulatory changes in this space will occur, the Master Plan considers a number of scenarios that could unfold if current checks and processes for connecting travellers are progressively simplified or eliminated. The implementation of the integrated terminal is a critical first step towards fulfilling that ambition, with more upgrades planned beyond FY28 that will significantly improve the transfer journeys at Auckland Airport in the future.



Figure 39: Proposed transfer products for each traffic segment



**Table 27: Transfer journey summary – International**

Transfer journeys	Description and ambition
<b>International to international</b>	<ul style="list-style-type: none"> <li>INT-INT transfers will remain unchanged with travellers having to go through security screening on arrival at Auckland Airport. Additional secondary screening locations may be introduced as the existing facility reaches capacity and additional international piers are required.</li> <li>The future implementation of the one-stop security (OSS) framework could potentially eliminate the need for extra security screenings for travellers arriving at Auckland Airport from certain destinations. This will effectively allow international connecting travellers to be treated as part of the domestic flow.</li> </ul>
<b>International to domestic</b>	<ul style="list-style-type: none"> <li>INT-DOM transfers will continue collecting their baggage for MPI screening until Customs and biosecurity processes are integrated with the BHS for back-of-house screening. This shift remains an aspiration and it will be introduced only when agreement with MPI is reached.</li> <li>Auckland Airport is open to explore the introduction of an MPI screening point for INT-DOM transfers at departures level that will remove the need for travellers to retrieve and recheck their luggage.</li> </ul>
<b>International to regional</b>	<ul style="list-style-type: none"> <li>INT-REG connections are expected to follow a similar process as INT-DOM transfers, involving the full international arrivals cycle to complete MPI checks and then travel to another terminal via landside. This process is not expected to change until the dedicated transfers MPI screening process and the pedestrian bridge linking both terminals are implemented.</li> </ul>

**Table 28: Transfer journey summary – Domestic**

Transfer journeys	Description and ambition
<b>Domestic to domestic</b>	<ul style="list-style-type: none"> <li>DOM-DOM through-checked transfers do not require any additional screening or process, therefore, travellers are able to connect to their secondary flight directly airside.</li> </ul>
<b>Domestic to international</b>	<ul style="list-style-type: none"> <li>DOM-INT travellers will no longer be required to carry out the full landside circuit as they do today once the Domestic Jet Terminal is completed in FY29.</li> <li>Once DJT opens, DOM-INT travellers with through-checked baggage will use a transfer screening process located at level 1 of the DJT, followed by an outbound Customs check, before entering the international departures lounge area. DOM-INT travellers without through-checked luggage will need to collect their baggage in the DJT arrivals area and transfer internally at the ground floor level to re-check baggage in the integrated check-in area. This process is anticipated to remain unchanged throughout the Master Plan period.</li> </ul>
<b>Domestic to regional</b>	<ul style="list-style-type: none"> <li><b>Short term (FY26-FY29):</b> DOM-REG travellers will continue to be processed as per today's operations.</li> <li>Post DJT opening: Travellers will transfer from the new Domestic Jet Terminal. A shuttle bus service will be provided until the pedestrian bridge is built.</li> </ul>

**Table 29: Transfer journey summary – Regional**

Transfer journeys	Description and ambition
<b>Regional to regional</b>	<ul style="list-style-type: none"> <li>• <b>Short-term (FY26-FY29):</b> transfers will continue to be processed landside as per today's usual operations.</li> <li>• <b>Medium to long term:</b> Connections between regional flights will depend on the security settings. If regional screening is introduced for Tier II airports, customers will follow two different flows depending on their airport of origin. Arriving travellers from Tier II airports will not need to be rescreened on arrival, whereas transfers from Tier III airports will need to go landside and be security screened before departing.</li> <li>• The differentiation between Tier II and Tier III will be removed if passenger screening standards are harmonised. This is subject to regulatory change.</li> </ul>
<b>Regional to international</b>	<ul style="list-style-type: none"> <li>• <b>Short-term (FY26-FY29):</b> REG-INT transfers will continue to be processed landside as per today's usual operations. This includes retrieving their luggage and rejoining the international departure processes in the integrated terminal.</li> <li>• Post DJT opening: This will eventually provide the option for an airside bus connection from the existing domestic terminal.</li> <li>• Once the new regional terminal is implemented: If a distinction between Tier II and Tier III is requested, Tier II connections could benefit from an airside shuttle bus to connect to Pier A1, from which they will follow the same process as DOM-INT transfers. Tier III connections will follow the departure security screening in the new regional terminal and then rejoin the Tier II REG-INT transfer flows as described. These flows will be reviewed once more clarity on the process is available.</li> </ul> <p>If the harmonisation of passenger screening standards eventuates, both regional tiers will use an airside shuttle to rejoin the DOM-INT flow, without the need for additional security screening.</p> <ul style="list-style-type: none"> <li>• <b>Long-term:</b> the airside shuttle service will be replaced with the pedestrian bridge linking Piers A1, A2, A3 and A4.</li> </ul>
<b>Regional to domestic</b>	<ul style="list-style-type: none"> <li>• <b>Short-term (FY26-FY29):</b> REG-DOM connections will follow the present process within the domestic terminal until the Domestic Jet Terminal is completed in FY29. However, similar to the REG-INT journey described above, the opening of DJT will eventually provide the option for airside connection.</li> <li>• If the harmonisation of passenger screening eventuates, REG connecting travellers could benefit from a direct airside connection from the new regional terminal to the integrated terminal without any additional processes, either by shuttle or via the pedestrian bridge.</li> </ul>

## 6.6 New regional terminal

The limited remaining useful life of the domestic terminal, forecasted demand, and the desire to progressively develop the pier and terminal infrastructure to align with the Master Plan, will see the expected requirement for the new regional terminal to cater for regional services.

Designs for this new terminal are still preliminary and subject to review in line with the outcomes of this Master Plan.

The operational model the new terminal will operate is still unclear; the main complexity is whether screening will be introduced for regional services in the short-medium term.

For planning purposes, Auckland Airport has assumed regional screening will be introduced at all Tier II regional airports by FY33, and the design for the new regional terminal will be developed on this basis, but with the flexibility to operate as an unscreened facility if regional screening is not introduced, or if it is introduced at a later date.

It is assumed all outbound regional travellers and baggage will be screened at Auckland Airport. However, regional

arrivals will need to be separated, because only regional travellers from Tier II airports are expected to have been screened at their port of origin.

Travellers travelling to/from Tier II airports are expected to operate from Pier A3, whereas travellers traveling to/from Tier III airports are expected to operate from Pier A4.

Future regional terminal requirements have not been fully developed, therefore the following section provides a high-level description of each processing area based on current assumptions.

### Passenger processing areas

Processes in the new regional terminal will include:

- Public departures hall
- Check-in and automated bag-drop
- Baggage handling system (outbound)
- Access and boarding pass control
- Passenger security screening
- Departure lounges and dwell areas
- Baggage reclaim.



### Public hall (combined)

Landside dwell will be minimised, because these areas will be designed to be functional and enable travellers to progress to airside quickly and intuitively. However, a curated offering for welcomers and farewellers will be available in the terminal buildings' landside areas, namely the departures and arrivals halls, offering ample seating, selected food and beverage options, and easy access to essential travel services.

### Check-in and automated bag-drop

Check-in is expected to use self-service kiosks and automated bag drops where valued biometric technology may be considered. A full common-use check-in will provide the most efficiency, however this is yet to be discussed with regional airlines.

### Baggage handling system

The baggage handling system is expected to be a simple conveyor-based system. It is assumed regional screening of bags will be required from when the facility opens, so all design will be based on the provision of hold-stow screening. It is also assumed all outbound bags will be security screened at Auckland Airport (i.e. there will be no differentiation between Tier II and Tier III regional destinations).

### Access and border pass control

Access to airside areas will be controlled by boarding pass scanners or biometric checks. Only travellers with a valid boarding pass will be able to travel airside.

### Passenger security screening

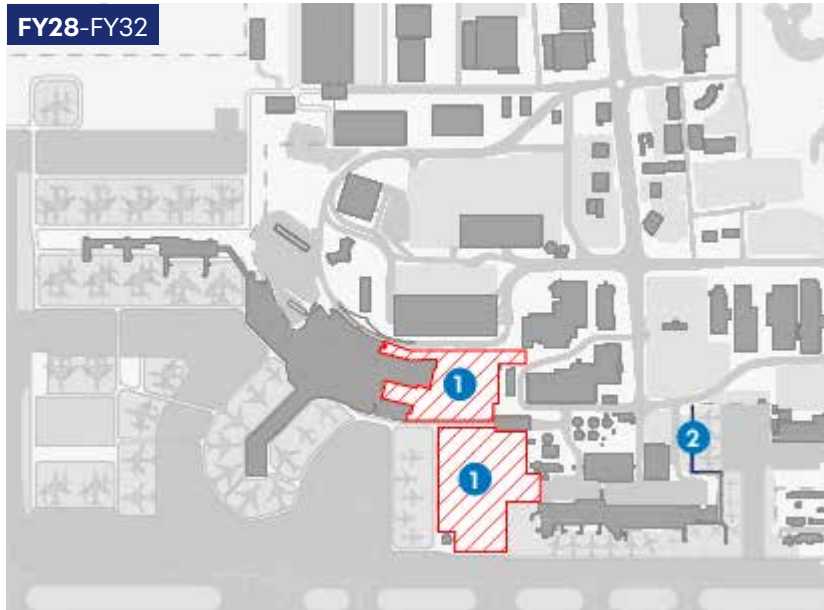
It is assumed that regional screening of travellers and cabin baggage will be required from opening. It is assumed that all regional travellers will be screened outbound at Auckland, including the provision of body scanners and full-length screening lanes with CT-CBS equipment.

### Departure lounge, dwell and piers

Regional operations are expected to be based on a call-to-gate operation from the new regional facility headhouse. Flights to/from Tier II regional airports will operate from Pier A3, and flights to/from Tier III airports will operate from Pier A4. Pier A3 is expected to be a narrow pier with some seating and amenities, whereas Pier A4 is expected to be a simple covered walkway.



Figure 40: Terminal precinct evolution throughout the Master Plan period



- 1 Domestic Jet Terminal construction site.
- 2 Pedestrian walkways for walk-out contact operation to the new regional stands.




- 1 Pier B widened to serve contact positions.
- 2 Domestic Jet Terminal completed in FY29.
- 3 Pier A3.
- 4 DTB internal reconfiguration and stands reconfigured as power-out turbo prop.



- 1 Pier C.
- 2 Northbound extension of the integrated terminal (implemented in stages).
- 3 Terminal expansion to accommodate for baggage make-up area.
- 4 Pier A2.
- 5 Inter-terminal walkway.
- 6 Terminal 2
- 7 Pier A4

**Table 30: Terminal precinct evolution throughout the Master Plan period**

FY28-FY32	FY33-FY37	Pathway to End State	End State
<p>DJT in progress.</p> <p>DTB south apron reconfigured for turboprop operations.</p>	<p>Pier B expanded to increase number of international contact stands.</p> <p>Pier A3 developed to enhance regional operations.</p>		<p>Terminal expanded as required to increase international reclaim belt length, MPI and international arrivals hall.</p> <p>DTB decommissioned in time. Regional terminal and piers to accommodate domestic and regional demand developed as required.</p> <p>Pedestrian bridge developed to link the Integrated and new regional terminals. It will include horizontal transport to facilitate transfer travellers and ICS for baggage transfer.</p>



## Chapter 7

# Surface access

- 7.1 Today's surface access network
- 7.2 Public transport network
- 7.3 Approach to planning the surface access network
- 7.4 Proposed surface access improvements through the Master Plan period

As the Auckland region’s third road controlling authority, Auckland Airport owns and operates about 24km of roads accommodating more than 80,000 vehicle movements a day.

Within the precinct, surface access encompasses:

- Active mode (cycling / walking) infrastructure
- Parking
- Public transport infrastructure
- Roads
- Terminal forecourts.

Auckland Airport’s overarching vision for surface access is to ‘connect people and places through seamless journeys’.

### Guiding principles

Auckland Airport takes a ‘terminal-first’ approach to planning its roads, parking, forecourts, and sustainable transport, guided by the following principles:

- Setting the foundation for an accessible and well-connected airport, supporting its role as a key regional and international transport hub.
- Creating a robust, efficient and sustainable transport network that meets the needs of air travellers, employees, businesses on the precinct and in the wider community.
- Managing surface access in and around Auckland Airport to ensure people and freight travelling to/from the airport precinct reach destinations on time and safely.
- Being able to accommodate the growth in travellers, freight and commuter movements expected over the Master Plan horizon.

The movement of people and goods on the Airport’s surface access network helps to facilitate\*:



Auckland Airport being New Zealand’s gateway airport, welcoming 18.7 million air passengers



Auckland Airport supporting 25,000 jobs



Auckland Airport being the second busiest import channel by value (\$21.7 billion), behind the Port of Auckland



Auckland Airport being the second most valuable export channel (\$10 billion) behind the Port of Tauranga



\* Auckland Airport Economic Impact Analysis (October 2025)

## 7.1 Today's surface access network



### Accessing the airport precinct

The primary access routes to the Auckland Airport precincts are via George Bolt Memorial Drive (from the north) and Puhinui Road from the south-east.

Beyond these roads, the airport is served by the New Zealand Transport Agency's State Highway network. The South-West Motorway (SH20) connecting to SH20A from the north, catering for about 62% of vehicle movements, and SH20B from the east, carrying about 38% of vehicle movements. These routes form the primary vehicle corridors supporting travellers, workforce, and freight access to the airport.



### Parking

Air travellers can choose from a variety of parking options (premium, standard and valet) near the terminals. Additionally, two Park & Ride facilities are available, offering free, regular shuttle services to the terminals.



### Active mode infrastructure

Most public areas across the precinct are served by footpaths, with a dedicated inter-terminal walkway known as the *Green Line*, for travellers moving between domestic/regional and international terminals who prefer not to use the inter-terminal bus.

For cyclists, shared paths connect the Quad Office Campus with SH20A, while additional paths in The Landing link the Auckland Airport precinct to Māngere.



### Roads

Auckland Airport sees more than 80,000 vehicle movements per day on its 24 km of roads. These trips are largely made up of air travellers, cargo, freight, through-traffic avoiding congestion on the State Highway, and workers.

Together, SH20A and SH20B connect Auckland Airport and surrounding areas to the wider region, supporting economic growth and productivity, and providing local access to employment, social and other opportunities.



### Terminal forecourts

International pick-up and drop-off facilities are located within the Transport Hub, providing the public with a fully covered experience. Domestic and regional travellers can access pick-up and drop-off facilities directly in front of the domestic terminal.

Dedicated ground transport facilities are also provided at both terminals for Auckland Transport buses, SkyDrive (Auckland Airport–CBD), the hotel (yellow) shuttle, inter-terminal and Park & Ride shuttles, Park & Fly shuttles, taxis, Uber, tour coaches, and general public use.

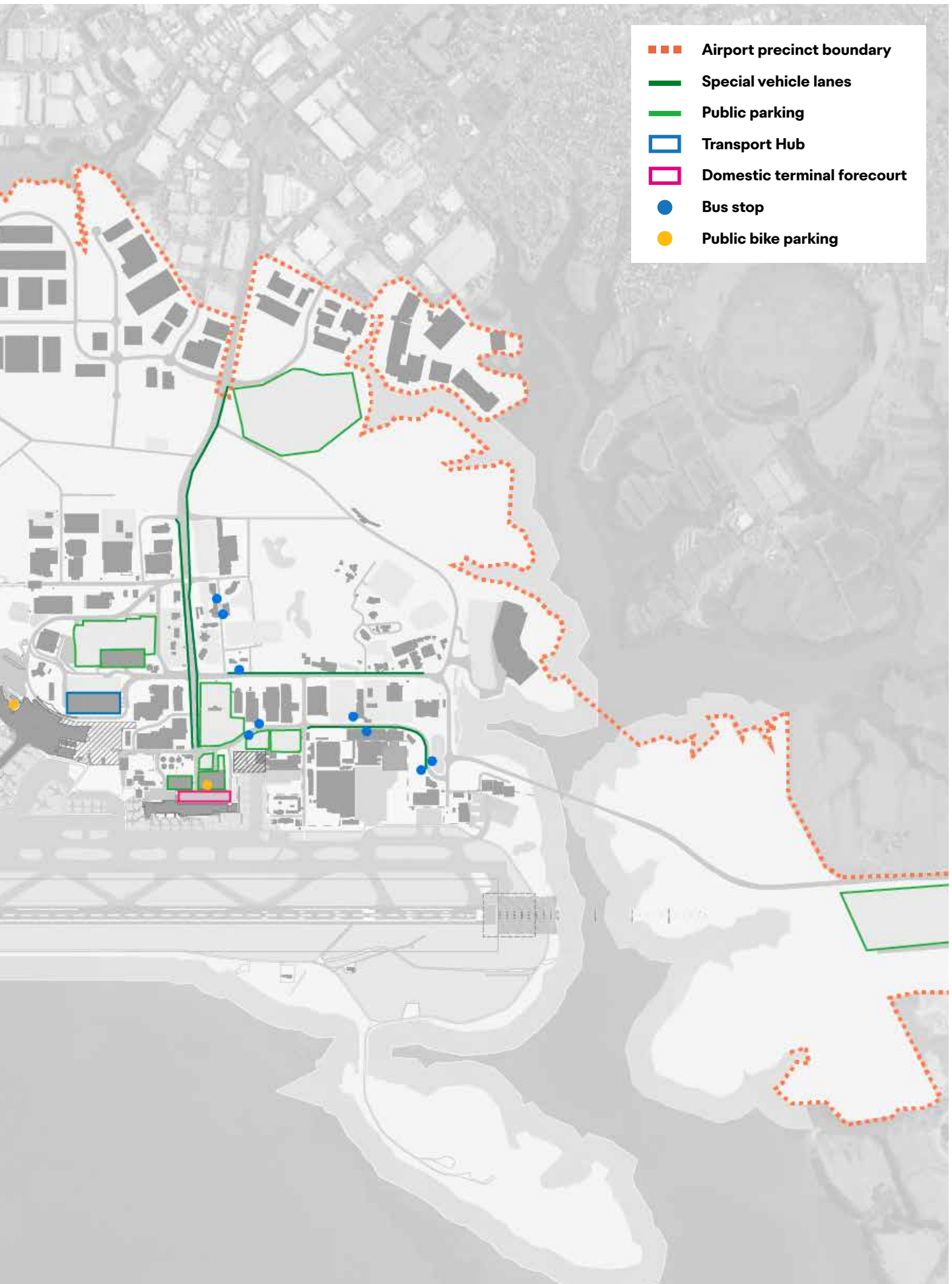


### Public transport infrastructure

The Airport supplies precinct infrastructure (bus stops, signs etc.) to support Auckland Transport services: AirportLink (Airport - Manukau, via Puhinui Station) and Route 38 (Airport - Onehunga, via Māngere).

### Existing network





## 7.2 Public transport network

Auckland Airport is New Zealand’s largest airport, connecting travellers to a wide range of domestic, regional, and international destinations.

The precinct is also an expanding hub for businesses that drive both local and regional travel. However, despite this growth—fuelled by air travellers and precinct’s workforce—public transport access to the airport remains limited.

Two public transport routes serve Auckland Airport, both operated by Auckland Transport:

- **The AirportLink** to/from Manukau City Centre, via Puhinui Station. This connects to both the Eastern (Waitematā Britomart - Manukau) and Southern (Waitematā Britomart - Pukekohe) rail lines (every 10 minutes from 4.30am to 12.40am, 7 days a week).
- **Route 38** to/from Onehunga Town Centre, via Māngere (every 15 to 20 minutes, 7 days a week, 365 days a year, during the day).

Enhancing public transport connectivity is a key objective for Auckland Airport and will be crucial in supporting the sustainable growth of the precinct over the Master Plan period.

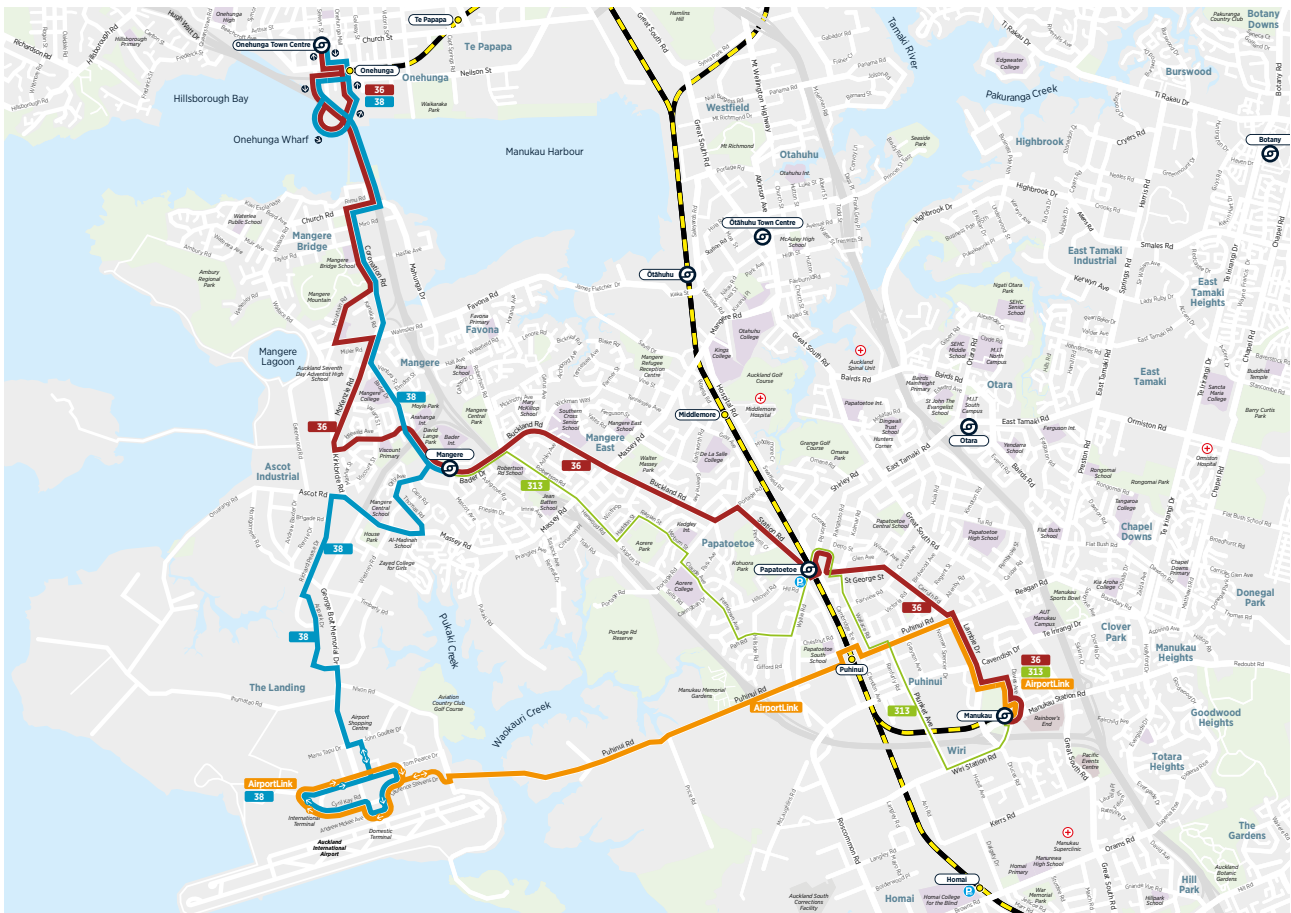
Auckland Airport caters for a variety of services transferring people across the precinct to and from destinations in the region. These include:

- **SkyDrive:** A direct coach service operating between the airport and the Auckland City Centre (every 30 minutes from 5.00am to 10.30pm).
- **Shuttle operators:** Providing services between the Airport and off-precinct Park & Fly providers, hotels and direct door-to-door services.
- **Tour coaches** transferring travellers between the airport and tourist destinations.
- **The Yellow Bus** (every 25 minutes, 24h/7 between hotels within the precinct, international terminal and domestic terminal).

Complimentary transfer bus routes service the terminals. A fleet of electric buses service these routes which include:

- **Terminal Transfer** (every 15 minutes between 5.00am and 11.00pm).
- **Park & Ride** (every 10 to 12 minutes, 24h/7 for international terminal, 3.00am – 11.30pm for domestic connections).

Figure 42: Map of local services to Auckland Airport



Source: aucklandairport.co.nz



## Mode share

An analysis has been undertaken to understand the preferred modes of travel to and from the airport for both travellers and the precinct's workforce. The findings show that private vehicles — including cars using airport parking facilities, taxis, and ride-share services—account for the large majority of the trips.

This heavy reliance on private vehicles is largely a result of the limited public transport services currently available to the airport precinct.

In the absence of viable alternatives, private vehicle use continues to dominate, creating ongoing pressures on the road network, terminal forecourts, and parking infrastructure. Addressing this imbalance is a key priority to support more sustainable growth in airport access.

The higher use of buses and shuttles for travellers reflects the competition and variety of services on offer that cater for the needs of travellers. However, the mode share of non-private vehicle travel for workers is low, and is reasonably consistent with the outer urban areas of Auckland and reflects that the alternatives on offer do not meet the needs of the workforce.

This in turn affects the ability for Auckland Airport and surrounding destinations to be 'first choice' for prospective

employees, making it more difficult to attract and retain the workforce.

A number of precinct stakeholders provide incentives to encourage sustainable mode use; uptake remains minimal due to service limitations.

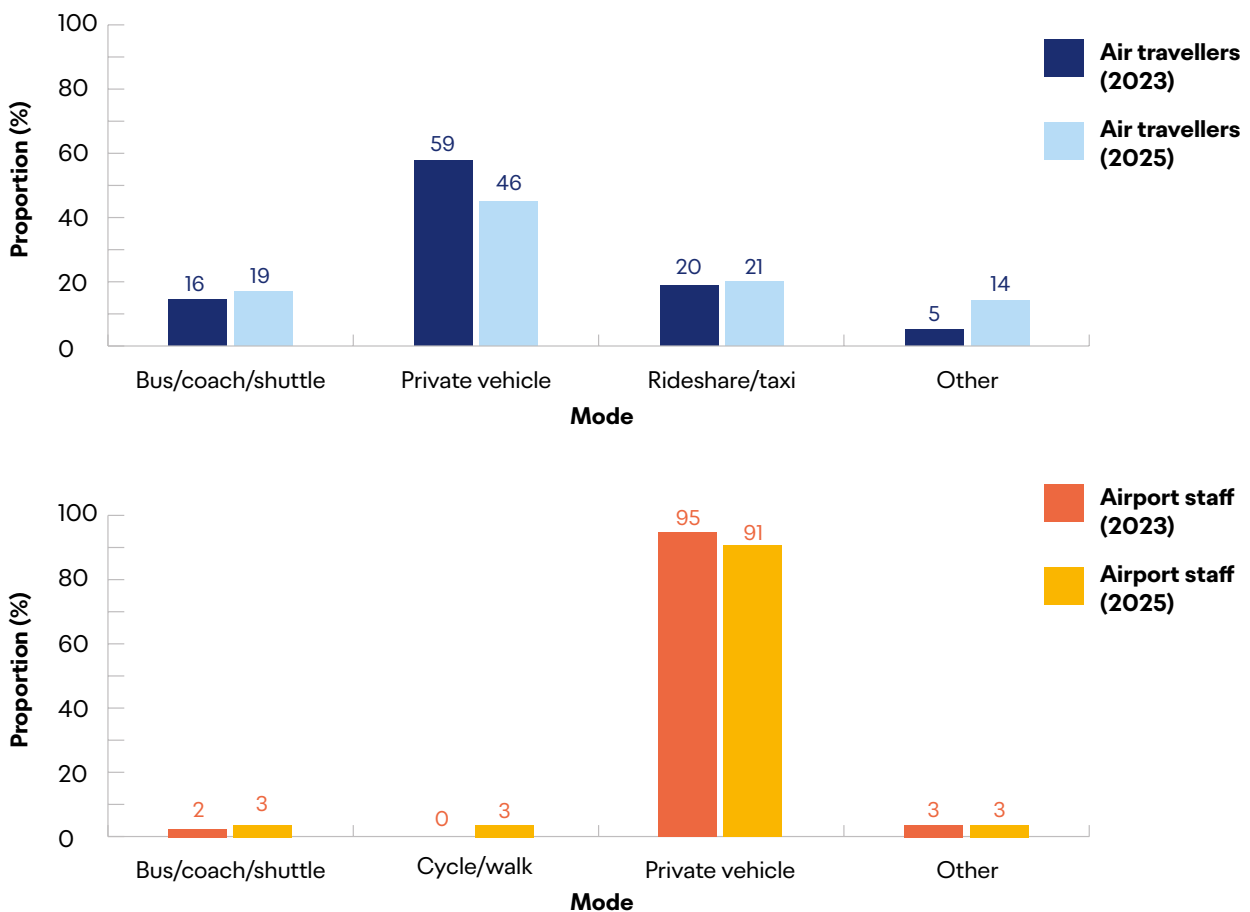
The round-the-clock nature of aviation operations underscores the broader requirement for enhanced public transport frequency, extended service hours, and improved reliability to support the entire airport workforce.

With 24/7 operational requirements and variable roster patterns, current public transport services cannot provide viable alternatives for the majority of shift workers.

This is evidenced by members of the workforce reporting attempts to use train and bus services but reverting to private vehicles due to unreliable connections, a pattern that highlights how even workers working standard business hours struggle with the current service offering.

Auckland Airport wants to see better transport options provided, particularly for the workforce, while also ensuring those who must access the airport using a private vehicle are able to do so in an efficient manner.

**Figure 43: the proportion of air passengers and workers travelling to Auckland Airport by transport mode\*.**



\* Airports Council International Airport Service Quality Data (August 2023), Auckland Airport Staff Commuting Survey 2025 (April 2023), Airports Council International Airport Service Quality Data (August 2025), Auckland Airport Staff Commuting Survey 2025 (April 2025)

### Sustainable transport

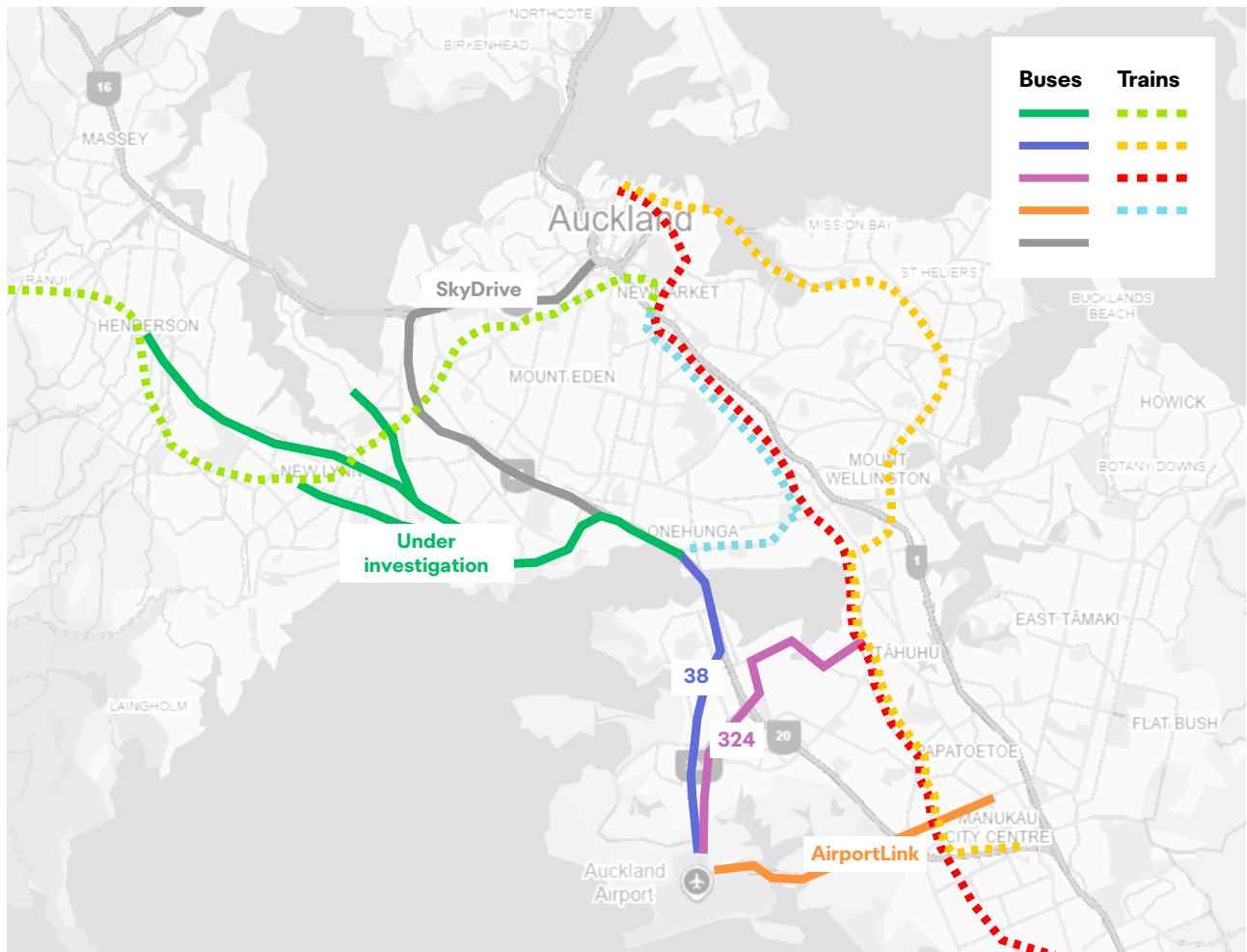
Auckland Airport is committed to reducing surface access emissions over the Master Plan period as part of its broader sustainability objectives. A key focus is encouraging a shift away from single-occupancy private vehicles towards more sustainable travel choices. To support this, Auckland Airport has introduced a Sustainable Transport Package for staff, which includes incentives for cycling and public transport use.

Building on this, Auckland Airport has recently joined Auckland Transport’s FareShare initiative. This programme allows employers to subsidise staff commuting costs on Auckland Transport services, making public transport more

affordable and accessible for the Airport workforce. These initiatives are designed to provide practical alternatives to car travel, support wellbeing, and contribute to the Airport’s long-term goal of reducing emissions from ground transport.

In parallel, Auckland Airport is also promoting WorkRide, a salary sacrifice scheme enabling Airport staff to purchase a bicycle, e-bicycle or e-scooter for commuting, making active transport options more financially accessible. Together with FareShare, WorkRide forms part of Auckland Airport’s commitment to providing practical, cost-effective alternatives to single-occupancy vehicle travel.

Figure 44: Existing rail, shuttle and bus services



## 7.3 Approach to planning the surface access network

### A growing airport precinct

Passenger numbers through Auckland Airport are forecast to double over the next 20 years, reaching 38 million air travellers annually by late 2040s.

Across the same period, the precinct workforce is also expected to exceed 30,000 people\*. This is projected to generate circa 135,000 vehicle movements a day, taking into account investment in rapid transit from the north and the east.

This places significant additional demand on the surface access network. To manage this growth, Auckland Airport is prioritising enhanced connectivity, greater transport choice, and a seamless journey for both travellers and employees.

Changes to surface access within the airport precinct directly affect the wider regional transport network – and vice versa. This interdependency makes it essential that any staged improvements are carefully planned, appropriately timed, and coordinated to maximise benefits.

As the three road controlling authorities in the region, Auckland Airport, Auckland Transport and the New Zealand Transport Agency will continue to work alongside each other to deliver interconnected surface access networks.

This collaborative approach is critical to ensuring that the transport system supports airport growth, facilitates regional mobility, and provides long-term benefits for the travelling public and the wider community.

### Accessible surface access

Ensuring that Auckland Airport's surface access network is accessible to all users is a key planning consideration. Nationally, one in six New Zealanders are disabled<sup>^</sup> while internationally, 16% of the global population "experience significant disability."<sup>†</sup> Accessibility considerations also extend to people with temporary impairments or changes in circumstance, such as individuals with broken bones, those who are pregnant, or others that are experiencing short-term mobility challenges.

Inclusive surface access planning aims to help remove both actual and perceived barriers to travel. These include physical barriers, such as inadequate physical infrastructure, and social barriers such as attitudes toward visible and non-visible disabilities or impairments. Removing these barriers not only makes Auckland Airport more accessible for disabled people, but also for other travellers, for instance, providing a suitable ramp for manual and power wheelchair users can also benefit people travelling with older people, prams, or luggage.



\* EY Auckland Airport Economic Analysis October 2025. <sup>^</sup> Whaihaka Ministry of Disabled People (August 2025)

<sup>†</sup> World Health Organisation Disability and Health Factsheet (March 2025)

## Parking

Auckland Airport offers a range of public parking options, including:

- **Park & Ride:** uncovered parking with a free transfer bus to both terminals.
- **Premium:** covered parking that is located next to both terminals.
- **Short Stay:** covered parking available for up to 180 minutes, located in the Transport Hub.
- **Standard:** covered and uncovered parking in walking distance to both terminals.
- **Valet:** concierge parking located opposite both terminals.

Air travellers have the chance to either drive-up or pre-book parking online and mobility parking (including a mobility valet service) is available to holders of a Mobility Parking Permit, issued by CSS Disability Action. Airport staff, construction workers, crew, and tenant parking is also available at sites across the precinct however, this is not accessible to the general public.

To-date, Auckland Airport’s focused approach to planning parking provision has been two-fold; meeting demand while also considering the differing needs of its customers.

Going forward, decisions about parking capacity, choices and location will also need to interplay with mode shift targets, for instance; if public transport and/or rapid transit interventions to the airport are not provided by external partners, then additional parking provision on the precinct - both private and public - may have to be delivered in order to meet expected demand.

## Challenges to overcome

### Increasing the capacity of the network in the short term

Forecasted growth in travellers and workforce combined with potential external zoning changes that could drive significant development near Auckland Airport, is expected to substantially increase vehicle movements to and from the precinct.

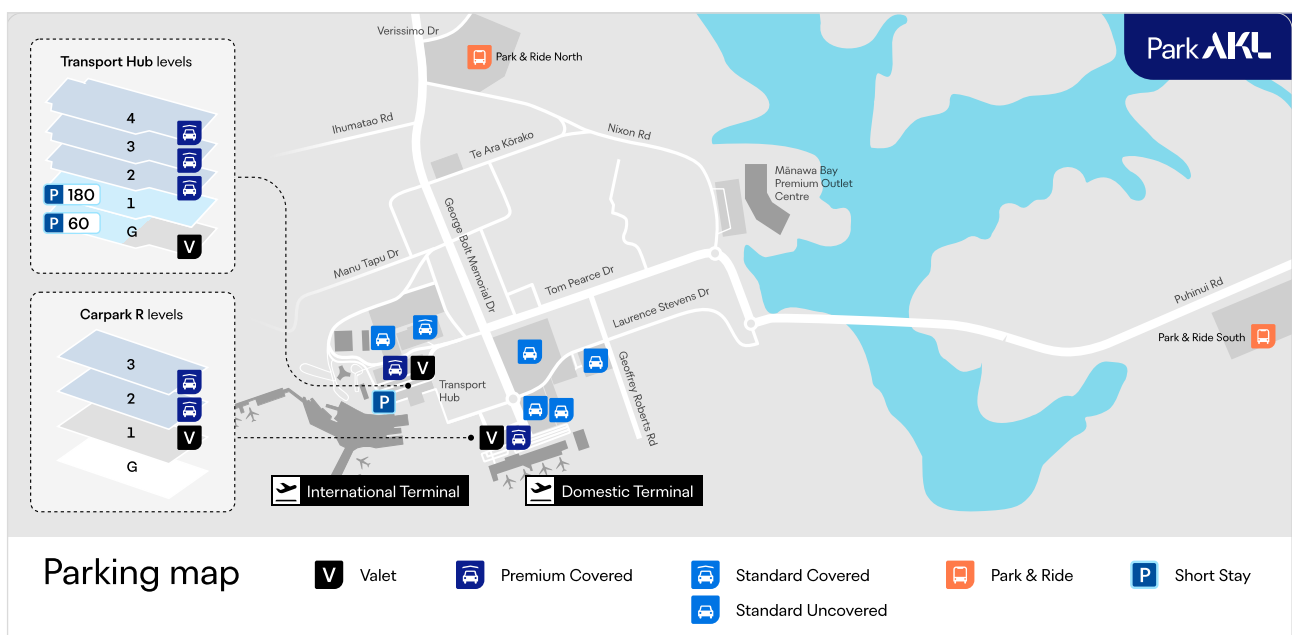
This is likely to place additional pressure on the surface access network and the surrounding State Highway network. To address this, further investment in both Auckland Airport’s surface access network and the wider transport network is required to increase capacity.

In response, Auckland Airport is already committed to enhancing the capacity of Puhinui Road through the implementation of dynamic lanes to better manage peak-period traffic. This approach is not new to the Auckland region, having been successfully applied in several locations to alleviate congestion.

### Planning for the long term

Auckland Airport will adopt a long-term approach to planning its access roads to ensure that future growth can be supported in a safe, reliable, and efficient way. This work will examine the performance of both the internal road network and the wider connections to the surrounding transport system, recognising that traffic demand will continue to increase as aviation activity and precinct development expand. The analysis will identify where capacity constraints may emerge and will test the performance of planned road network upgrades under a range of forecast scenarios. This approach will ensure that investment in the road network is sequenced and prioritised to meet future demand, while also maintaining resilience, improving journey times, and supporting wider regional transport objectives.

Figure 45: Public parking options available at Auckland Airport (2026)



Source: Auckland Airport

**Availability of public transport services**

Investment in the surface access network and surrounding transport network will contribute to accommodating demand. However, a significant uplift in active modes and public transport/rapid transit patronage will be required to move people and goods more efficiently over the Master Plan period.

As a 24-hour operation, Auckland Airport requires continuous coverage. Current public transport services face challenges with route frequency and start/end times, especially during off-peak periods.

These gaps make it difficult for both air travellers and airport workers to rely on public transport as a viable alternative to private vehicles.

**Uncertainty over rapid transit solutions**

Auckland Airport strongly supports the delivery of rapid transit to the precinct, recognising its importance for efficient and sustainable travel for air passengers and for the movement of workers and freight across the airport precinct. While Auckland Airport is not itself a public transport or rapid transit operator, we work in partnership with government agencies to enable the delivery of the infrastructure and services that complete the network.

Auckland Airport is committed to ensuring the airport is fully connected from every direction (east, west, and north) so the precinct becomes a genuinely accessible part of Auckland’s wider transport network. Achieving this requires coordinated delivery from government agencies, and Auckland Airport working closely with them to help shape and support the solutions that complete the network.

From the east

The **Southwest Gateway Programme**, a collaborative partnership between Auckland Airport, Auckland Transport, and the New Zealand Transport Agency established through a Memorandum of Understanding in 2024, focuses on delivery capacity improvements to and from the east.

The **Airport to Botany Rapid Transit Project (A2B)** has been identified in Auckland Transport’s Regional Land Transport Plan (2024–2034) as a priority corridor that would provide a dedicated connection between the airport, Botany, and surrounding growth areas. The 2025 Auckland Rapid Transit Pathway continues to identify the A2B corridor as a key component of the future rapid transit network.

Staged investment has enhanced access to and from the airport precinct, including:

- **Airport Link:** a frequent bus service running between Auckland Airport, Puhinui Station Interchange and Manukau Station (Auckland Transport led). Auckland Transport is currently progressing A2B Stage 2, extending the AirportLink bus service onwards to Botany Town Centre, expected to be operational by FY28/29.
- **Puhinui Station Stage 1:** upgrade to an interchange to allow for easy connections between bus and train (Auckland Transport led). Puhinui Station serves as a critical interchange in this eastern network, with substantial passenger transfer between rail and bus services.
- **SH20B improvements:** introduction of priority lanes, improved cycling and walking connections and upgraded intersections (New Zealand Transport Agency led).

The figure below provides an overview of the proposed Airport to Botany Rapid Transit Project.

**Figure 46: Overview of the proposed airport to Botany Rapid Transit Project**



In September 2025, an agreement was reached between the three road controlling authorities and Te Ākitai Waiohū Settlement Trust confirming arrangements for an additional Puhinui Creek Bridge to accommodate both general traffic capacity and the A2B corridor.

The three road controlling authorities meet regularly to progress this complex, multi-staged programme collaboratively reaffirming the importance of the rapid transit solution.

Further information on the proposed Airport to Botany Rapid Transit Project can be found on Auckland Transport’s website. [<https://at.govt.nz/projects-initiatives/south-auckland-projects-and-initiatives/airport-to-botany-rapid-transit-project>]

While the project is acknowledged as important to addressing long-term transport needs, a confirmed funding source has not yet been secured. This creates uncertainty around when planning, design, and construction will proceed, and whether the project will align with forecasted passenger growth and employment demand within the precinct.

From the north

A rapid transit solution from the north, potentially connecting the airport to central Auckland and major employment hubs, has not yet been identified or progressed through planning following the disestablishment of the Auckland Light Rail Project in early 2024, which had been investigating the delivery of a rapid transit project on the City Centre to Mangere corridor (CC2M). Current transport strategies acknowledge the need for improved access but a preferred mode (such as bus rapid transit, light rail, or heavy rail) has not been confirmed through current planning and business case processes. The timing, scope, and sequencing of any future northern rapid transit initiative remain subject to future decision on time, scope and sequencing.

Auckland Airport is actively monitoring the CC2M and other northern corridor projects, recognising that meeting travellers future demand will require additional capacity from the north in the form of a rapid transit solution. Roothing optimisation alone will not be sufficient, and Auckland Airport sees this as a key element of a broader integrated 'one network' transport approach.



From the west

As the precinct is particularly underserved by public transport from the west, initial work to determine the feasibility of a direct, Auckland Transport operated bus service from this area is already underway by Auckland Transport, in partnership with Auckland Airport. If practical, then any new route would complement existing rail, shuttle and bus services. Note that this proposed solution is still under investigation and delivery would be subject to multiple factors and approvals.

Resilience planning

Uncertainty around the timing of rapid transit delivery is a key consideration for long term airport operations and investment planning.

Scenario-planning approaches would consider a range of possible delivery outcomes from external rapid transit initiatives, supporting the airport's ability to maintain operational effectiveness and accommodate growth regardless of external project timescales. For each scenario, Auckland Airport would identify appropriate network responses, including parking capacity requirements, prioritisation of road network upgrades, and demand management measures during peak periods. Trigger points would be established to activate contingency planning if key external projects do not progress as anticipated.

Figure 47: Current Auckland Rapid Transit Network.





# Bus Information

Ngā Pitopito Kōrero o ngā Pahi  
巴士信息

↑  **A** Public Transport Buses  
Ngā Pahi ā-Hapori 公交巴士

↑  **B** Terminal Transfer Bus  
Ngā Pahi ki te Taunga Rere 航站楼摆渡车

↑  **C** Free Bus to Park & Ride  
Ngā Pahi ki te Park & Ride 巴士换乘车站

↑  **D** Hotel Bus  
Te Pahi ki ngā Hōtāra 酒店巴士

←  **E** Bus to City  
Ngā Pahi ki te Tāone 城市巴士

←  **F** Super Shuttle Drop-off

## Finding a solution

To support the development of appropriate and timely surface access initiatives over the Master Plan period, Auckland Airport undertook extensive data analysis, market research, stakeholder engagement and traffic modelling based on traffic forecasts. This work has provided a robust understanding of current travel patterns, projected demand, and the pressures on both the airport precinct and the wider transport network.

This work highlighted the importance of progressing a 'one network' approach, through continued collaboration with key stakeholders, such as Auckland Council, Auckland Transport, central government and the New Zealand Transport Agency. This collaborative approach is reinforced through the Auckland Deal (City and Regional Deal), which recognises Auckland Airport as a priority growth area and emphasises the need for coordinated planning and investment across transport networks.

By working together, these partners can ensure that surface access improvements are coordinated, efficient, and aligned with regional transport objectives, supporting both airport growth and broader connectivity outcomes.

Demonstrating its commitment to rapid transit solutions, Auckland Airport has safeguarded corridors and, reserved land for future stations, and safeguarded area for a terminus adjacent to the integrated terminal, in close proximity to the existing Transport Hub, ensuring that any future rapid transit solution can be seamlessly integrated with the airport's operations and surface access network.

This work also identified the need for a structured approach towards achieving Auckland Airport's surface access vision - 'to connect people and places through seamless journeys'. In response, four frameworks were developed to guide delivery of this vision.





### Planning a network suitable for the future

This approach focuses on designing and managing the airport's surface access network to meet both current and future demand. Combining the use of data, modelling, and stakeholder collaboration, Auckland Airport aims to ensure that road, pedestrian, cycling, and public transport networks are integrated, resilient, and able to accommodate projected growth in passenger numbers, staff, and freight. The goal is a cohesive "one network" approach that aligns airport access with regional transport objectives.

Through the promotion of public transport, active travel, and shared mobility, Auckland Airport's vision also aims to reduce emissions, ease congestion, and minimise the environmental impacts of surface transport.



### Making it easier to cycle and walk

Auckland Airport is committed to enabling safe cycling access to its terminals and wider precincts areas. This will be achieved by ensuring that appropriate cycling infrastructure is provided along key routes.

Delivering safe cycling connections will require addressing gaps in both the on-airport and off-airport cycling networks. Progressive improvements to on-airport cycling infrastructure will be made in conjunction with wider road and precinct upgrades.

Auckland Airport's design standards also prioritise safe and accessible pedestrian pathways, with clear wayfinding, well-lit routes, safe crossings, and accessibility features for all users, including those with reduced mobility. This ensures that walking is a practical option for connections between terminals, parking areas, transport hubs, and nearby businesses.



### Securing and enabling rapid transit

Auckland Airport will continue to work with Auckland Transport and the New Zealand Transport Agency to secure rapid transit services to the airport from the north and the east. Land corridors within the airport precinct have been identified to accommodate the Airport-to Botany Rapid Transit project and future rapid transit from the north.

To support delivery of rapid transit, Auckland Airport will:

- Provide and protect land corridor(s) for rapid transit.
- Future-proof the next stage of the Transport Hub to accommodate an integrated rapid transit station connecting with the international terminal.
- Provide and protect land for a station near the Quad that will also provide access to the future regional terminal.
- Continue working with Auckland Transport and NZTA to identify if they need to protect more land for additional stations across the airport precinct.



### Making it easier to take public transport

Auckland Airport focuses on improving accessibility, reliability, and convenience of public transport options to and from the precinct by actively collaborating with Auckland Transport.

This includes working to enhance the frequency, coverage, and operational efficiency of bus services, and ensuring seamless connections to terminals, parking areas, and key precinct destinations.

Auckland Airport also supports initiatives such as fare subsidies, real-time information systems, and infrastructure improvements at bus stops, aiming to make public transport a practical and attractive option for both travellers and workers.

## 7.4 Proposed surface access improvements throughout the Master Plan period

- 1 **George Bolt Memorial Drive/Landing Drive/Verissimo Drive Intersection:** addition of a second southbound right-turn lane into Landing Drive from George Bolt Memorial Drive (subject to external agreements with Auckland Transport and the New Zealand Transport Agency).
- 2 **Inner Terminal Road:** realignment of Inner Terminal Road to accommodate the expanded International Terminal check-in area.
- 3 **Pūkaki Bridge (Puhinui Road):** reconfiguration of the existing Pūkaki Bridge deck (through re-laning and the introduction of new signs and gantries) to allow three general traffic lanes in a dynamic lane configuration, and designation of a shared use path across the bridge.
- 4 **Domestic Terminal forecourt:** trialling line and sign improvements within the public pick-up/drop-off area of the Domestic Terminal forecourt.
- 5 **Terminal Car Parking:** creation of two new at-grade terminal car parks once the existing cargo operators at the site are relocated to Manu Tapu Drive.
- 6 **324 Bus Route:** extension of the existing 324 bus service through to the western extent of The Landing Business Park (led and operated by Auckland Transport).





- 1 **George Bolt Memorial Drive/John Goulter Drive intersection:** optimisation.
- 2 **George Bolt Memorial Drive/Tom Pearce Drive intersection:** optimisation.
- 3 **Pūkaki Bridge (Puhinui Road):** Introduction of a new adjacent bridge structure. Associated corridor widening east and west of the bridges to prevent a traffic bottleneck either side.
- 4 **George Bolt Memorial Drive:** introduction of a shared use path between the George Bolt Memorial Drive/Tom Pearce Drive Intersection and the Cyril Kay Road/George Bolt Memorial Drive/Laurence Stevens Drive roundabout.
- 5 **Domestic Jet Terminal Truck Dock:** a new goods delivery facility at the Domestic Jet Terminal.

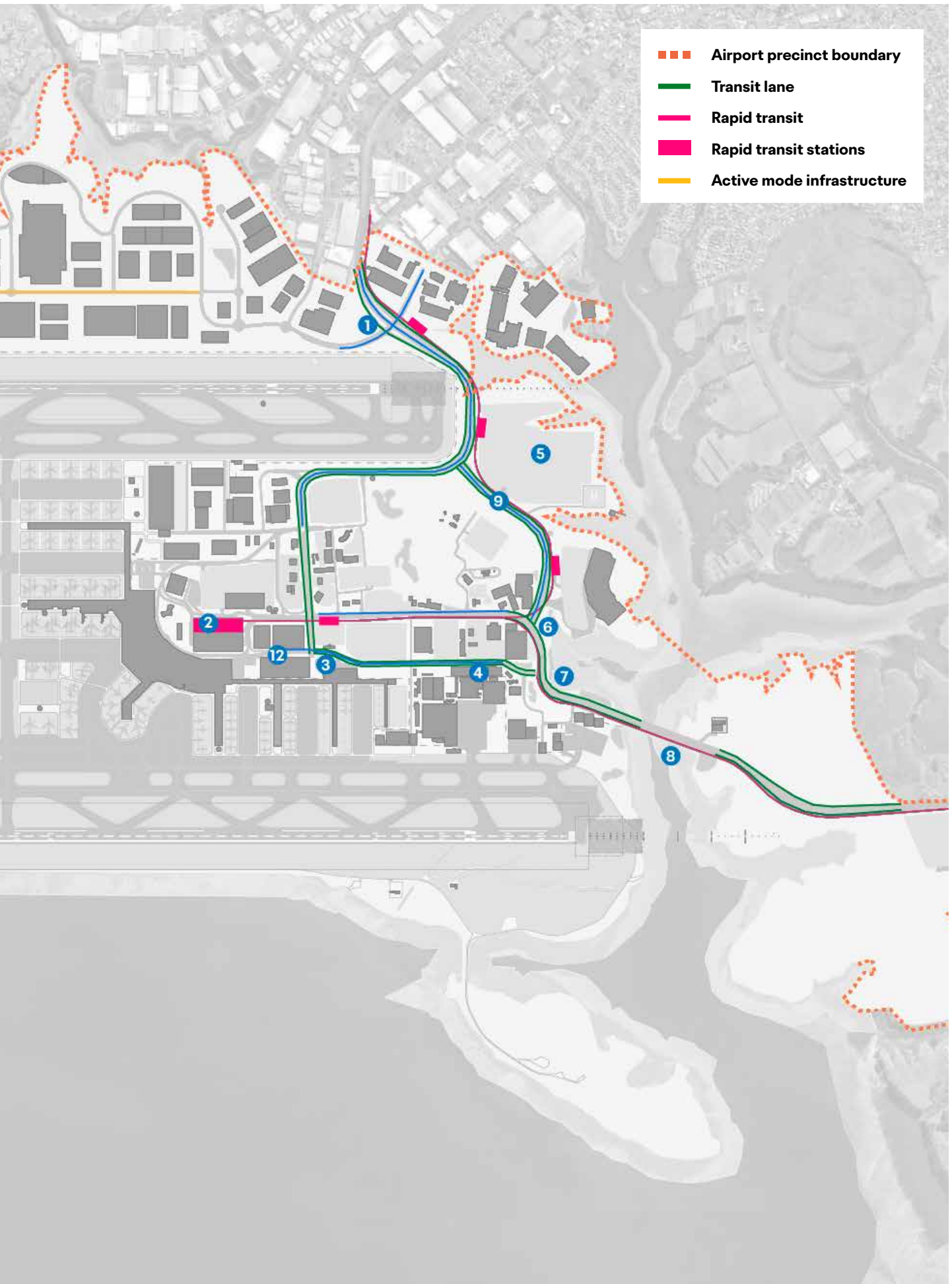




- 1 **Eastern Ring Road:** realignment and widening of the northern extent of George Bolt Memorial Drive (including a shared use path and Transit Lanes), and the creation of a new interchange at the George Bolt Memorial Drive/Landing Drive/Verissimo Drive intersection.
- 2 **Rapid Transit Terminus:** delivery of a rapid transit terminus station adjacent to the existing Transport Hub site.
- 3 **Laurence Stevens Drive (western extent):** realignment of the eastern extent of Cyril Kay Road and upgrade of the existing Cyril Kay Road/George Bolt Memorial Drive/Laurence Stevens Drive roundabout into a signalised intersection.
- 4 **Laurence Stevens Drive (eastern extent):** realignment and widening of Laurence Stevens Drive to establish an eastbound Transit Lane between Geoffrey Roberts Road to Hape Drive, and the introduction of a signalised intersection at the Hape Drive/Puhinui Road roundabout.
- 5 **Park & Ride North:** relocation (adjacent to the existing Mānawa Bay Outlet Centre) and expansion of the Park & Ride North site.
- 6 **Tom Pearce Drive:** widening of Tom Pearce Drive to accommodate and the introduction of new northbound and southbound Transit Lanes on Tom Pearce Drive, between the Jimmy Ward Crescent and Hape Drive roundabouts.
- 7 **Tom Pearce Drive:** widening the extent of Tom Pearce Drive (including shared use paths) and upgrade to the Tom Pearce Drive/Jimmy Ward Crescent roundabout to accommodate two dedicated at-grade lanes up to Orrs Road (the Airport's boundary) for the proposed Airport to Botany Bus Rapid Transit corridor.
- 8 **Pūkaki Bridge (Puhinui Road):** introduction of rapid transit lanes from George Bolt Memorial Drive to the Puhinui Road / Orrs Road intersection, including build out of Pūkaki Bridge structure to the south to accommodate the rapid transit lanes (in partnership with Auckland Transport and the New Zealand Transport Agency).
- 9 **Rapid Transit Corridor:** delivery of an elevated rapid transit corridor from SH20A to the Transport Hub (via Nixon Road and Tom Pearce Drive) (subject to the delivery of a rapid transit solution from the north).
- 10 **Te Kapua Drive:** improvements to the existing cycle lanes along Te Kapua Drive.
- 11 **The Landing Business Park:** introduction of new shared use paths as part of the proposed build-out of the western extent of The Landing Business Park.
- 12 **Inner terminal walkway:** final layout.

*Note: Developments associated with the A2B project are subject to the delivery of the rapid transit project in partnership with AT and NZTA. Locations of the rapid transit stations are indicative only.*





## Chapter 8

# Utilities and services

- 8.1 Aircraft fuel distribution network plan
- 8.2 Electrical distribution network
- 8.3 Stormwater
- 8.4 Wastewater
- 8.5 Digital and fibre
- 8.6 Outlook to the future

Utilities and services are distributed across the airport site, providing essential support to existing infrastructure and future developments. Utility upgrades are key to building climate resilience and are an integral part of Auckland Airport's decarbonisation strategy.

### Current context

Auckland Airport owns the main utilities and networks serving the key assets across the airfield, terminals, ground transport and support facilities at the airport, including:

- Aircraft fuel
- Electricity and power (high voltage network only)
- Information and communication technology
- Gas
- Potable water, wastewater and recycled water
- Stormwater.

Auckland Airport actively monitors, enhances and upgrades its utility infrastructure to ensure it remains resilient and capable of adapting to evolving needs and challenges, and provides a robust foundation for sustained growth and reliability.

The staged development of Auckland Airport's land and infrastructure, as outlined in this Master Plan, is reflected in the utilities development plan (UDP), aligning the required services with future infrastructure needs.

The UDP also provides safeguards for future technology transitions, while avoiding redundant infrastructure provision. This alignment avoids constraining the development of critical airport infrastructure, while safeguarding and catering for the organic growth of the airport.

A number of projects in the UDP are referenced in this Master Plan given their advanced design stage. These projects have been considered as hard spatial constraints in the development of infrastructure for the different Master Plan horizons.



## 8.1 Aircraft fuel distribution network plan

The existing joint user hydrant installation (JUHI) features five tanks for Jet A1 fuel, with fuel transported to the aircraft via an underground hydrant system or in tankers.

A hydrant pipeline services international stands, while the domestic aircraft stands are tanker-fed.

Sustainable aviation fuel (SAF) can be transported using the existing pipelines, hydrant systems and/or refueller tankers, and used in existing fleets without modifications. This is possible because SAF is a 'drop-in' fuel manufactured to the same standards as conventional Jet A1 fuel, which means it can be blended with kerosene-based fuel. As a result, handling SAF does not require any extra infrastructure. Pre-blended SAF parcels, arranged by individual airlines and their fuel suppliers, have already been delivered to aircraft via the existing hydrant system. Airlines are also not precluded from arranging their own SAF refuelling with their fuel supplier by road tanker deliveries.

The lease period of the existing JUHI is set to expire in FY35, allowing for its relocation away from the central airport area.

Its relocation will allow future terminal expansion and the eventual introduction of Pier A2. The relocation process will also enable the expansion of the JUHI thus improving system flexibility and resilience, and resolving

the vulnerability of the existing hydrant system due to the single supply line feeding every aircraft stand.

Future apron developments will expand the hydrant network to domestic parking positions; but tanker capabilities will be retained to service regional traffic. A new fueller facility has also been identified as part of the relocation process.

The relocation of the JUHI will require the selection of a new site with sufficient area to host long-term fuel requirements and provide a safety buffer away from areas of public and staff occupancy. This will lead to significant area requirements and spatial limitations that may constrain developments of interfacing infrastructure.

Two alternative locations are under consideration for the new JUHI:

- **Option 1:** Located between Tom Pearce Drive and Laurence Stevens Drive.
- **Option 2:** Located on the Puhinui Peninsula at the end of Orrs Road, adjacent to Pūkaki Creek.

The final site selection is still under discussion.

Space is also allocated for a bridger and a fueller near the airside/landside boundary, adjacent to the future Pier A4. This location provides for aircraft refuelling via tankers, reducing road movements to and from the new JUHI site.



## 8.2 Electrical distribution network

### Auckland Airport's electricity requirements are sourced via Vector's 33kV electricity network to the north of the airport precinct.

Power Centre Intake (PC Intake), located in The Quad precinct, is the demarcation point between Vector's electricity network and the Auckland Airport 11kV embedded network. Vector owns and manages the two existing 25MVA transformers on the site. Supply from the two transformers is transferred to two 11kV switchboards (PCI-A and PCI-B) owned by Auckland Airport.

Due to projected organic electricity demand and the delivery of new infrastructure projects, Auckland Airport forecasts the electrical load at PC Intake will reach the capacity of the transformers in 2028-29 to coinciding with the Domestic Jet Terminal opening.

Planned network capacity expansion is underway to increase the capacity with more transformers to be completed in 2027. This is set to provide sufficient capacity to the network for the whole Master Plan period, including the allowance required for ongoing capital projects such as the Domestic Jet Terminal and electrically powered ground-support equipment (eGSE), electric vehicle charging, and other commercial building developments.

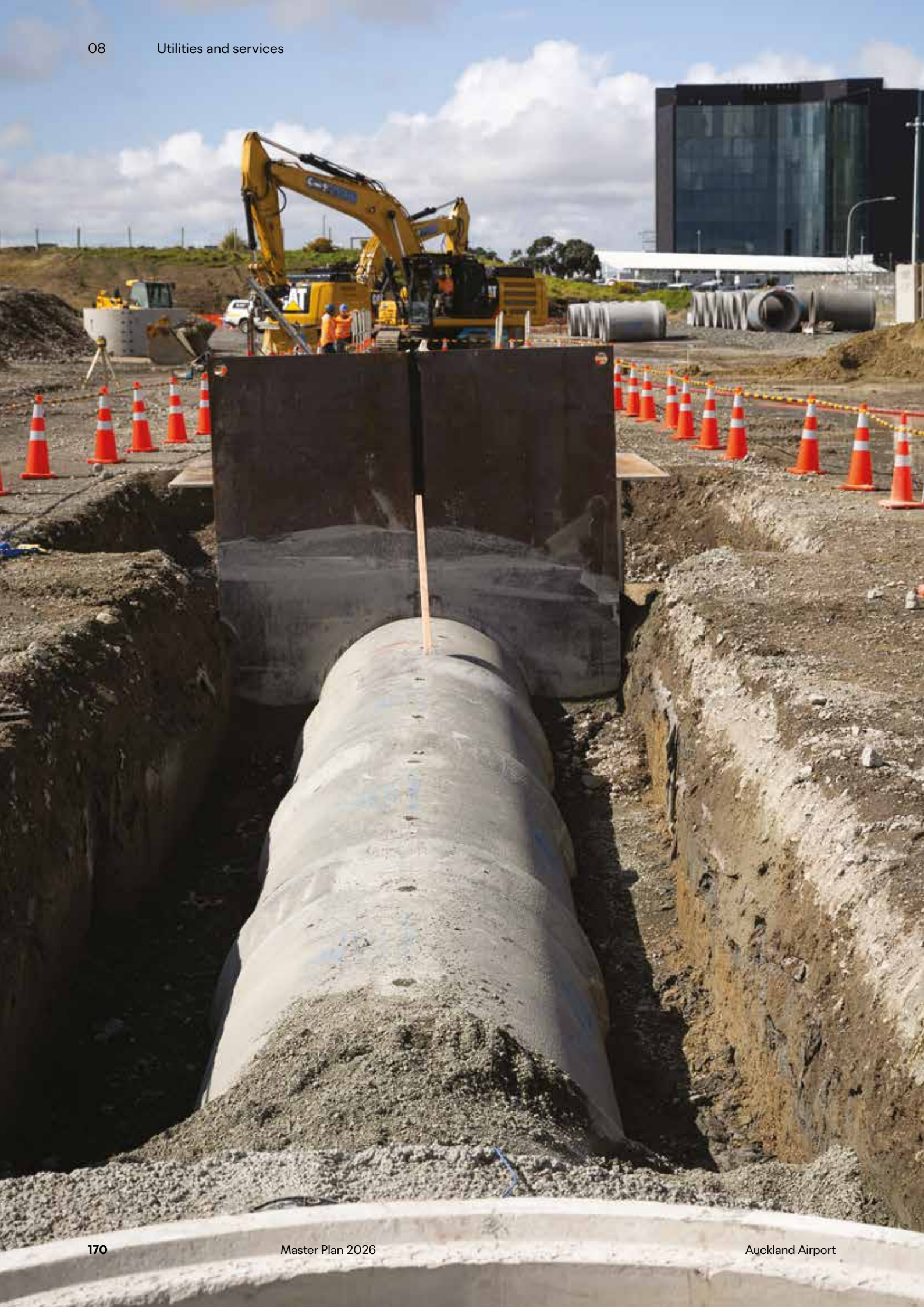
In addition, Auckland Airport's decarbonisation strategy will increase the reliance on electricity away from fossil fuel use for various services. These include:

### Ground support equipment transition to eGSE

- Gradually replacing the existing diesel GSE fleet with electric vehicles will require multiple charging points on existing and future aprons, as well as upgrades to the underground cabling network.
- The total power requirement once fully implemented is expected to reach 2MVAs.

### Electric vehicle charging locations for private passenger vehicles, car rental, staff and public transport

- A centralised private vehicle charging hub is planned for the commercial area in The Quad by The Warehouse, initially with 10 charging bays. More bays could be added as a second stage. Private-vehicle charging is being installed at Mānawa Bay and charging points are available in the Transport Hub. It is estimated the total power demand precinct wide for EV charging could reach 2 MVA.
- Bespoke solutions are provided at car rental locations. At present individual charging points are provided at tenant locations but as the car rental offering evolves, outlets will be centralised to a single location in a centralised charging location.
- Staff will also be able to use the centralised passenger charging hub, with the potential for secondary chargers in each tenant's precinct.
- Charging locations for public bus transport have been provided for.



## 8.3 Stormwater

Upgrades to Auckland Airport's stormwater infrastructure will provide extra capacity for stormwater treatment and management, and additional resilience during times of extreme weather.

Stormwater ponds, both new and existing will use coupled wetland biofilter technology, a water treatment system new to New Zealand that uses an innovative method to treat up to three-times the volume of water compared to traditional stormwater ponds. A native-plant wetland works to remove contaminants through natural processes like sedimentation

and plant uptake, with a small stormwater pond biofiltration system providing additional treatment and temporary storage during heavier rain. The biofilter pond will be covered with bird-proof netting to ensure it doesn't become a habitat for wetland birds, which could pose a risk to aircraft. The expansion of the airfield commissioned in October 2025 to add non-contact stands includes New Zealand's first coupled wetland biofilter system.

The Master Plan layouts display the final stormwater pond and biofilter network given these act as hard constraints for infrastructure expansion.

**Figure 49: Stormwater pond and biofilter network at the end of the Master Plan period**



## 8.4 Wastewater

The upgrade plans for the wastewater network across the airport involve the expansion, upsizing and upgrading of the existing network to cater for growth in demand, and the construction of new pumping stations to facilitate the expansion of the network.

This will involve the decommissioning and removal of sections of the network across the airport site, as follows:

- Pipework around Ray Emery Drive, Laurence Stevens Drive, Cyril Kay Road and within the airfield at the location of the new regional and domestic piers.
- Decommissioning of pump stations in the Pier B area, in an airside location and in the Pullman Hotel area.

The removal of these pump stations and rearrangement of the network will ease future terminal expansion towards the north. Despite this, some limitations for infrastructure development remain. The existing pump station by Car Park K has been safeguarded within the network, because it provides a four-day storage capacity for waste coming from the terminal buildings. Developments in this area will avoid any interference with the infrastructure.



## 8.5 Digital and fibre

As discussed in the Master Plan considerations chapter, Auckland Airport's digital strategy is grounded in three key principles - building resilient technology, developing an experience led mindset, and modernising infrastructure.

Auckland Airport has developed and constantly reviews the utilities development plan, which outlines several strategic interventions required to maintain the overall precinct system, while ensuring resilience and capacity for future growth.

These interventions include the addition of new distribution points, pathways, and communication cabinets.

One of the most significant upgrades is the installation of the external communications cabinet PC-63 on the western side of the future TWY M. This critical placement not only supports the airport's ICT infrastructure but also guides future development, limiting southbound expansion of the western non-contact stands for TWY M and paving the way for the creation of the north-western non-contact apron instead.





## 8.6 Outlook to the future

### Aircraft electrification

Air New Zealand has embarked on a journey called Flight NZO with the commitment to reach net-zero carbon emissions by 2050. The technology is still in development, and it is assumed its application will be limited to regional and domestic traffic. Consequently, Auckland Airport's strategy is to plan for future developments with flexibility and future-proofing in mind, ensuring the airport can adapt to these emerging technologies and sustainability goals.

Independent studies suggest a secondary power centre will be required exclusively for supplying aircraft electrification. In addition, appropriate ducting and cabling will need to be provided on the apron to reach the transformer charging equipment on the head of stand.

Two potential locations have been safeguarded in the Master Plan for the power centre required to cater for electric aircraft energy requirements. Additionally, PC12 located in the old cargo building in Car Park K will be retained, making the location a hard constraint for future developments.



## Hydrogen

Because hydrogen cannot be combined with existing aviation fuel, its implementation will require separate transport and storage infrastructure, triggering major developments at Auckland Airport. Onsite hydrogen production or liquification has not been considered at this stage.

A high-level hydrogen storage study has been completed to calculate hydrogen demand under three scenarios: low, base and high. This study was purely theoretical and aimed to identify the area required for hydrogen storage in the Master Plan, should this need arise.

With regard to aircraft technology and potential fleet replacements:

- No significant replacements are expected before 2035 for the current turboprop aircraft fleet such as DH8C and ATR72. This technology will allow for ranges between 300-1,000km.
- Until 2035, hydrogen technology is likely to be deployed only for nine-seat aircraft and below in the form of test flights with ranges between 200-400km. Larger aircraft (30-50 seats) before 2035 may involve hybrid gas turbine and electric concepts.

It is considered the only airline capable of this technology transition will be Air New Zealand, due to its comparative size in relation to the other domestic carriers and its significant presence at Auckland Airport. Within Air New Zealand's network served by aircraft susceptible to replacement, only a few domestic destinations (Wellington, Christchurch, Invercargill, Dunedin, Queenstown, Palmerston North, Nelson, Napier, Blenheim and Gisborne) are deemed as viable destinations.

By late 2040s, it is assumed any flight within Air New Zealand's domestic and regional network will be able to be served by hydrogen aircraft regardless of aircraft size, due to widespread improvements. This can potentially be extended to short-haul international flights if similar technologies are available at the destination airport.

Based on the above considerations, two main scenarios have been defined:

- **Initial transition period** (short to medium term)
  - Aircraft powered with compressed hydrogen using fuel cell technology (GH2).
  - Implementation of hydrogen in test flights of the future nine-seat C208 aircraft.
  - Hydrogen generated and compressed off-site, supplied by road tankers to the airport.
- **Consolidation period** (long term)
  - Aircraft powered with liquid hydrogen (LH2).
  - An estimated hydrogen demand for each year is considered for turboprop-type replacement aircraft for 300km range flights.
  - Hydrogen generated and liquefied off-site, supplied by road tankers to the airport using direct combustion technology.

### Potential hydrogen demand scenarios at Auckland Airport

Considering GH2 demand and the lower number of flights, the simple distribution scenario for GH2 refuelling is to have a stationary refuelling station. To avoid unnecessary expenditure, this facility will be located landside with the refuelling process carried out by trucks, making future upgrades for new hydrogen technologies easier.

For LH2, the stored hydrogen will supply the distribution system and is sized to meet airport demand. A refuelling truck could be used to refuel the aircraft, the same as the jet fuel refuelling method, with an updated distribution network to maintain the cryogenic temperature. The actual hydrogen buffer storage will depend on the certainty and resilience of supply, together with the risk analysis of the impact of fuel disruption.

Truck refuelling is likely to be the preferred delivery option in the initial years of hydrogen aircraft operation due to the lower capital cost, regardless of the state hydrogen is transported in. However, when bowser operations begin a dedicated H2 hydrant system may be required to minimise congestion at the refuelling point and on the internal airport road network.



## Chapter 9

# Non-aeronautical precincts

9.1 Overview

9.2 The Quad

9.3 Hotels

9.4 The Landing

The non-aeronautical (interim use) precincts support the airport's growth by delivering financial sustainability through the diversification of revenue streams, while enhancing the economic impact of the airport at a local, regional and national level.

This entails leveraging airport-owned property for commercial activities that are generally unrelated to serving travellers or aeronautical operations. It acts as a gateway for freight forwarders entering New Zealand.

### Guiding principles

Auckland Airport's property portfolio encompasses a diverse range of commercial ventures that support all aviation services for travellers and employees, serve neighbouring residents, and facilitate logistics.

Moreover, Auckland Airport continually explores new partnerships and business models to support future developments. This initiative is driven by the need to accommodate new business partners and to develop facilities for established partners who now prefer an on-airport location.

As airports continue to evolve into multifaceted businesses, the role of non-aeronautical land development will be crucial in shaping Auckland Airport's future, contributing to a more robust and resilient airport business model for New Zealand's premier hub.

The development of the non-aero precinct will adhere to the following key principles:

- Guarantee the possibility of future expansions of aviation-related infrastructure, which will encompass aviation infrastructure, support facilities, and various aviation related land uses such as logistics, bulky goods, and warehousing activities.
- Safeguard space for future innovations.
- Protect the airport's long-term viability.
- Locate activities that do not require terminal location.
- Provide diversify stream of revenue sources.



## 9.1 Overview

The Quad and The Landing are non-aeronautical precincts that combine one of New Zealand's newest sought-after mixed-use business precincts, offering world-class facilities set in a stunningly landscaped environment as part of a rapidly growing commercial and recreational precinct.

With the advent of new technologies and business models, opportunities may also emerge for new types of developments that support economic and employment growth at local, regional and national levels.

To maintain market relevance and reinforce flexibility in the medium and long term, the type of potential developments and activities for each precinct should not be interpreted as exclusive or limiting.

Auckland Airport may also consider interim land uses that meet specific criteria and are compliant with applicable regulations and consents.

Interim uses will be planned in a manner that ensures the locations are available when required, limited to short-term leases or developments, to be renewed only if the area is not immediately required for aeronautical or other intended long-term land use. Interim uses will also focus on activities requiring minimal infrastructure support and with rapid decommissioning.



## 9.2 The Quad

**This office campus is ideally suited for private organisations looking to locate adjacent to the airport land and benefit from the synergies and enhanced connectivity.**

The Quad has been planned to follow a town-centre concept to create a vibrant, mixed-use hub that integrates retail, commercial, and public spaces to encourage activity and engagement. It prioritises walkability, accessibility and public transport, promoting a diverse range of activities.

Central to the office campus strategy for The Quad are the Quad 5 and Quad 7 office buildings. Located in the heart of the precinct, they provide excellent location, proximity and good profile exposure, as well as connectivity to Auckland Airport's terminal buildings.

The Quad currently accommodates Auckland Airport's corporate offices and is home to various companies including Jetconnect, Ministry of Business Innovation and Employment, Regus, Airways New Zealand and Panasonic. The retail district within The Quad also features well-recognised brands including Woolworths, Chemist Warehouse, The Warehouse, KFC and Taco Bell, as well as a variety of cafés and restaurants.

The Quad also includes the Te Manukanuka o Hoturoa Marae and the Abbeville Estate heritage area.

Development opportunities are available within The Quad, should the decentralised Auckland Airport-based businesses consider relocating within the vicinity of Auckland Airport's corporate offices.

At its opposite end, the Mānawa Bay shopping centre has been built with a strong emphasis on sustainable design principles and robust, long-lasting materials with minimal energy requirements. Auckland Airport is deemed to be the first custom-built 5 Green star retail development and includes the country's largest rooftop solar array.

The name Mānawa Bay reflects the airport's unique location on the Māngere Peninsula and the historical and cultural significance of this area to tangata whenua. In te reo Māori, Mānawa means mangroves – a coastal plant species that have long featured in the waterways surrounding the land Auckland Airport sits on, and provides a habitat for native birds and fish.

Mānawa Bay offers premium fashion, athleisure, lifestyle and homeware brands as well as contemporary food and dining options, which supports Auckland Airport as a destination over time. The facility features a 37,000sqm building and 100,000sqm of land, which includes an allowance for 1,400 car park spaces, recreational and outdoor areas, and a waterfront edge.





## 9.3 Hotels

**Auckland Airport houses three hotels on precinct, the Pullman, Novotel and the ibis for a total of about 950 rooms.**

The Te Arikini Pullman Auckland Airport is the most-recent addition to Auckland's hospitality scene, and is the only 5-star hotel in the precinct. It is designed to meet the growing demand for upscale accommodations near the airport. Its history is tied to the expansion of Auckland Airport as a global gateway and reflects a commitment to blending modern luxury with local cultural significance.

The hotel is named Te Arikini in honour of Dame Te Atairangikaahu, the first Māori Queen, reflecting the commitment to acknowledging and celebrating New Zealand's Māori heritage.

The design and ethos of Te Arikini Pullman Auckland Airport incorporates Māori elements to create a sense of place for guests. Art, décor, and storytelling within the hotel reflect New Zealand's unique heritage, creating an environment that is both globally sophisticated and locally grounded.

The Novotel, opened in 2011, is a 4.5-star hotel, with a modern restaurant and bar, and meeting and conference room facilities. Located just a short walk from the international terminal and next to the Te Arikini Pullman, it makes it incredibly convenient for early-morning flights, layovers, or business meetings.

The ibis Budget Auckland Airport is located further from the terminal building, near the Quad 7 area. Auckland Airport's development includes another hotel that was under construction before the COVID-19 pandemic. Work will recommence as soon as it is deemed viable.





## 9.4 The Landing

The Landing is an expansive 146ha business park located north of the proposed northern runway, about 10km (14 minutes) from Manukau City Centre to the south and 21km (30 minutes) to the heart of Auckland City to the north.

The Landing is home to a number of the world's largest third-party logistics (3PL) and logistics companies including Hellmann Worldwide Logistics, Toll, DHL, Fonterra, Fuji Xerox, CEVA DSV, Bunnings, Foodstuffs North Island, and EBOS. The IKEA New Zealand External Warehouse, is the latest addition to the business park.

Since 2012, Auckland Airport has undertaken new developments in The Landing at an average of 35,000sqm a year. About 63ha is already in use or under construction and a further 41ha of future development land is already divided into a range of variably sized sites, contingent on the extension of Te Kapua Drive.

This precinct will be further developed, driven by specific market opportunities for light industrial activities from private businesses and parties, including:

- Logistics
- Warehouses and distribution
- Aeronautical support function (Government Agencies Offices)
- Temperature-controlled facilities
- Technology
- Light manufacturing
- Other interim uses.

At the beginning of 2026, Auckland Airport acquired an additional 81 hectares of land, with the intention of developing portions of the site into an industrial business park in the future, including air cargo and logistics uses. The key benefits are expected to include improved operational efficiencies, alignment with broader development plans, job creation and enabling public access through the development of a coastal path.

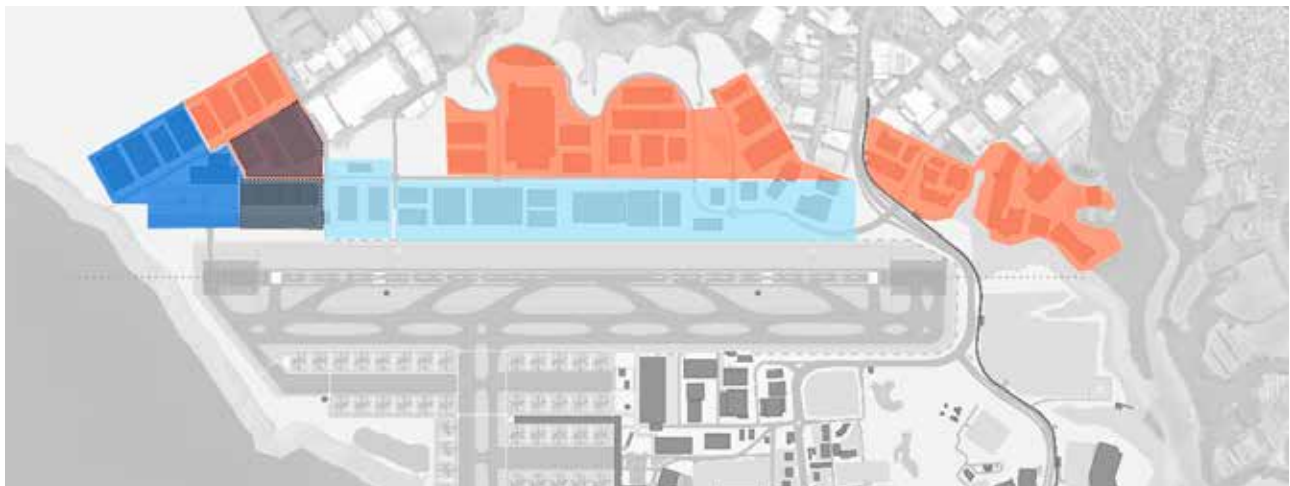


In addition to the non-aeronautical development in The Landing, 20ha of land is safeguarded for aeronautical use.

Future aeronautical activities based in The Landing will benefit from the significant airside frontage once the new runway 05L/23R is implemented, as well as the synergies resulting from the co-location of air freight services and the already-established 3PL and logistic companies.

Permitted aeronautical activities in two specific locations are aircraft maintenance, cargo freight, and aeronautical support functions.

**Figure 50: The Landing future development plan and uses**



- Aeronautical - cargo activities**
- Aeronautical - support activities**
- Aeronautical - MRO activities**
- Property development**



## Chapter 10

# Consolidated airport development





**FY25-FY27**





FY28-FY32





FY33-FY37





# End state



# Abbreviations & glossary

## Abbreviations

A2B	Auckland to Botany	CT	Computer tomography
AAM	Advanced Air Mobility	CTO	Cargo Terminal Operators
AANA	Aircraft Noise Notification Area	CWY	Clearway
ABD	Automated Bag Drops	DJT	Domestic Jet Terminal
ACI	Airports Council International	DMAPS	Divergent Missed Approach Protection System
AI	Artificial Intelligence	DME	Distance Measuring Equipment
ARFF	Aviation Rescue and Firefighting	DOM	Domestic
ASAN	Airport Surface Access Network	DOM-REG	Domestic to Regional
ASDA	Accelerate-Stop Distance Available	DOM-DOM	Domestic to Domestic
A-SMGSC	Advanced Surface Movement Guidance Control System	DOM-INT	Domestic to International
AT	Auckland Transport	DTB	Domestic Terminal Building
ATC	Air Traffic Control	DUD	Dunedin Airport
ATCT	Air Traffic Control Tower	EBS	Early Baggage Store
ATM	Air Traffic Movements	eGSE	Electrically powered Ground Support Equipment
AUP	Auckland Unitary Plan	EV	Electric Vehicle
AVSEC	Aviation Security	eVTOL	Electric Vertical Take-Off and Landing
AWOS	Automated Weather Observing System	F & B	Food and Beverage
B2B	Business to Business	FBO	Fixed-Base Operator
BARNZ	Board of Airline Representatives New Zealand	FENZ	Fire and Emergency New Zealand
BHE	Blenheim Airport	FY	Financial Year
BHS	Baggage Handling System	GBAS	Ground-Based Augmentation System
BOH	Back of house	GBMD	George Bolt Memorial Drive
CAA	Civil Aviation Authority	GDP	Gross Domestic Product
CAT I	Category I instrument landing systems	GH	Ground Handling
CAT II	Category II instrument landing systems	GH2	Compressed Hydrogen
CAT III	Category III instrument landing systems allowing landing in low visibility conditions.	GIS	Gisborne Airport
CC2M	City Centre to Manukau	GPU	Ground Power Unit
CHC	Christchurch Airport	GSE	Ground Support Equipment
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation	H2	Hydrogen gas
		HANA	High Aircraft Noise Area

## Abbreviations & glossary

HBS	Hold Baggage Screening	NSN	Nelson Airport
HRET Panther	Rosenbauer Panther 8x8 HRET (High Reach Extendible Turret) fire truck	NZTA	New Zealand Transport Agency
HVAC	Heating, Ventilation and Air Conditioning	OLS	Obstacle Limitation Surfaces
IATA	International Air Transport Association	OSS	One Stop Security
ICAO	International Civil Aviation Organization	PC Intake (PCIA/PCIB)	Power Centre Intake
ICS	Individual Carrier System	PCA	Pre-Conditioned Air
ICT	Information and Communication Technology	PIDS	Perimeter Intrusion Detection System
ILS GP	Instrument Landing System Glide Path	PMR	Palmerston North
ILS	Instrument Landing System	PPE	Personal Protective Equipment
INT	International	PS	Pump Stations
INT-DOM	International to Domestic	PSL	Pier Service Level
INT-INT	International to International	PUDO	Pick-Up and Drop-Off
INT CON	International Contact stand	RACA	Regulated Air Cargo Agents
INT-REG	International to Regional	RBA	Risk-based assessment
IOT	Internet of Things	REG	Regional flight
ITB	International Terminal Building	REG-DOM	Regional to Domestic
IVC	Invercargill Airport	REG-INT	Regional to International
JET A1	Aviation Jet Fuel	REG-REG	Regional to Regional
JUHI	Joint User Hydrant Installation	REG CON	Regional Contact stand
LDA	Landing Distance Available	RESA	Runway End Safety Area
LH2	Liquid Hydrogen	RETs	Rapid Exit Taxiways
LOC	Localiser	RFID	Radio-frequency identification
LOS	Level Of Service	RMA	Resource Management Act
MANA	Moderate Aircraft Noise Area	RVR Sensor	Runway Visual Range Sensor
MARS	Multiple Aircraft Ramp System	RWY	Runway
MCT	Minimum connecting time	SAF	Sustainable Aviation Fuel
MPI	Ministry for Primary Industries	SH	State Highway
MRO	Maintenance, Repair, and Overhaul	SSKs	Self Service Kiosks
MVA	Megavolt-Amperes	SWY	Stopway
Nav aids	Navigational Aids	T2	Terminal 2
NEXTT	New Experience Travel Technologies	TH	Transport Hub
NPE	Napier Airport	TODA	Take-Off Distance Available

## Abbreviations & glossary

TORA	Take-Off Run Available	TWY L	Taxiway L
TP	Turboprop	TWY M	Taxiway M
TTTA	Trans-Tasman Travel Arrangement	UDP	Utilities Development Plan
TWY A	Taxiway A	ULD	Unit Load Device
TWY B	Taxiway B	VFR	Visual Flight Rules
TWY C5	Taxiway C5	VOR/DME	VHF Omnidirectional Range /Distance Measuring Equipment
TWY D1	Taxiway D1	WLG	Wellington Airport
TWY J1	Taxiway J1	ZQN	Queenstown Airport
TWY J2	Taxiway J2	3PL	Third-Party Logistics



## Glossary

Air catering .....	Services providing food and beverages for flights
Airfield .....	The area encompassing runways, taxiways, aprons, and related facilities at an airport.
Approach Surface.....	A defined area leading to a runway where obstructions are controlled to ensure safe landings
Aprons .....	Areas where aircraft are parked and service, loaded/unloaded, boarded/disembarked
Belly-hold.....	The cargo area in aircraft underneath the passenger cabin used for storing luggage, cargo, and freight during flights.
Busy-day .....	The second-busiest day in an average week of the busiest month of the year (IATA).
Busy-hour .....	The clock hour with the 30th-highest-ranked number of passengers
CAT 10 .....	Level of protection provided at an aerodrome for rescue and firefighting
Contact stands.....	Gates where aircraft can park with a jet bridge for passenger boarding
Crash Zones.....	Areas designated for emergency landings or crashes
Cul-de-sac .....	Dead-end taxiway or area
dB .....	Decibel. The unit of sound level.
Displaced threshold.....	A threshold not located at the extremity of a runway
Drop-in SAF .....	A type of sustainable aviation fuel (SAF) that can be used without modification to aircraft or infrastructure
Far Field LOC monitors.....	Monitors the localiser signal from a distance
Headwind .....	Wind blowing directly against the direction of flight
Heliport .....	Area intended to be used for the arrival, departure and surface movement of helicopters
HRET Panther.....	Rosenbauer Panther 8x8 HRET (High Reach Extendible Turret) fire truck
IATA's NEXTT .....	International Air Transport Association's New Experience in Travel and Technologies initiative.
IATA's One ID.....	International Air Transport Association's One ID initiative
Intervention .....	The specific actions or integrated programmes of actions enabled by one or more strategic drivers
Landing Area .....	Part of a movement area intended for the landing or take-off of aircraft
LaMax .....	The maximum sound level recorded during a measurement period modified by a filter (A weighted) so as to more closely approximate the frequency bias of the human ear.
Ldn .....	The day-night weighted average sound level over a 24 hour period. For Auckland Airport, a 10dB penalty applies to noise from aircraft events at night (10pm and 7am).
Low visibility conditions.....	Weather conditions where visibility is reduced
Mode shift.....	Increasing the share of travel by public transport, walking and cycling in order to deliver a more accessible, safe and sustainable transport system
Narrow-body aircraft.....	Type of commercial aircraft designed with a fuselage wide enough to accommodate one passenger aisle
Navigational aids (navaids).....	Systems or devices aiding in the navigation of aircraft

## Abbreviations & glossary

Near Field LOC monitors.....	Monitors the localiser signal close to the runway
Net Zero .....	Zero-net emissions
Non-jet aircraft .....	Aircraft that use propellers rather than jet engines
Non-visual aids .....	Navigational aids not relying on visual cues.
PC Intake (PCIA/PCIB).....	Power Centre Intake
Non-contact stands.....	Parking areas for aircraft that do not have direct access to terminal buildings
Rapid Transit.....	Type of high-capacity public transport that is generally built in urban areas
Runways.....	Area on a land aerodrome prepared for the landing and take-off of aircraft
RVR Sensor.....	Runway Visual Range
Take off .....	The phase of flight where an aircraft accelerates down the runway to become airborne
Taxiing.....	The movement of an aircraft on the ground under its own power
Taxiways.....	Area used for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another
Contingent runway .....	An operational mode for an auxiliary runway
Tier II .....	Regional airports that connect to domestic hubs
Tier III .....	Aerodrome or airstrip privately or council owned
Transitional Surface.....	A surface along the sides of the approach and take-off climb surfaces to prevent obstructions
Wide-body aircraft .....	Type of commercial aircraft designed with a fuselage wide enough to accommodate two passenger aisles
ZEROe Project.....	An initiative by Airbus to develop hydrogen-powered aircraft, aiming for zero carbon emissions in aviation.





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