Sunshine Coast AIRPORT®

Master Plan 2040

SUNSHINE COAST AIRPORT

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The first inhabitants of the Maroochy district were the Aboriginal people of the Gubbi Gubbi/Kabi Kabi language group, whose lands stretched from Burrum River in the north to Pine River in the south, and west to the Conondale Ranges. For over 20,000 years, the Kabi Kabi people hunted in the surrounding ranges, fished the rivers and gathered seafood from the ocean.

Sunshine Coast Airport Pty Ltd (SCAPL) respectfully acknowledges the Traditional Owners and custodians of this land, the Kabi Kabi First Nation People. We pay our respects to local Indigenous Elders past, present and emerging, and recognise the strength, resilience and capacity of all Aboriginal and Torres Strait Islander people.

The operators of Sunshine Coast Airport have had a long and positive relationship with the Kabi Kabi people. SCAPL will continue to engage with the Kabi Kabi people to build on relationships and initiatives developed during Sunshine Coast Council's management of the Airport. As we navigate growth to 2040, SCAPL acknowledges the importance of protecting Aboriginal cultural heritage, and will fulfil its commitments to the Kabi Kabi people under the Airport lease agreement and cultural heritage management plans with all due respect and understanding for the significant value of this heritage in the region.

CEO Foreword

Sunshine Coast Airport Pty Ltd (SCAPL) is proud to be an Australian-owned and locally managed business. As SCAPL enters a new phase in the development of the Airport, it is fitting to reflect on the words written in 1958 by the Chairman of the Maroochy Shire Council, Councillor David Low, about the proposed Maroochy Aerodrome.

"The purpose of the aerodrome is to provide facilities for the purpose of encouraging and promoting the Tourist Industry and assisting in the development of the fruit and vegetable industries in the Shire and the near North Coast".

In the 61 years since Cr Low set out his vision for the Airport, many aspects of life on the Sunshine Coast have changed. However, the people who have guided the development of Sunshine Coast Airport over the intervening years have stayed true to the original vision. Today, the Airport plays a crucial role in supporting the Sunshine Coast's tourism industry and broader economy as the gateway to the region and South East Queensland.

Sunshine Coast Airport has grown with the community it serves. In 2018, four airlines and over 1.2 million passengers used Sunshine Coast Airport to connect to three domestic destinations and one international destination. The Airport also plays an important role in supporting services related to the mining industry, aviation training and rescue operations. More than 500 people work at the Airport each day. By 2040, it is forecast that eight airlines will carry approximately 3 million passengers to eight destinations, while the on-Airport workforce will grow to over 1,550 positions.

With the new runway opening in 2020, Sunshine Coast Airport will be the catalyst for significant economic growth in South East Queensland. SCAPL will establish strategic partnerships with existing and new airlines to link this region to the world and create new jobs. These initiatives will open opportunities for Sunshine Coast businesses to grow both domestically and internationally while staying true to the essence of the Sunshine Coast by developing a first-class 'sense of place'.

Opportunities for regular public transport are growing, and general aviation has been part of the fabric at Sunshine Coast Airport since its inception. Although the Airport is changing, the strategies presented in this Airport Master Plan 2040 have been devised with both existing and future users in mind.

This Airport Master Plan outlines the future for Sunshine Coast Airport to 2040 and lays the foundations to further strengthen its role as a regional facilitator of economic growth and diversity. As we deliver on this plan and expand our markets throughout Australasia and beyond, we will continue to honour the original vision that inspired the establishment of the Airport all those years ago.

Andrew Brodie
Chief Executive Officer

First plane (Pacific Paradise) airstrip, 14 August 1959.


Sunshine
Check in
Departures
Arrivals

Introduction

Introduction

Sunshine Coast Airport has been serving the Sunshine Coast region and South East Queensland for nearly 60 years. The Airport is located in the heart of the Sunshine Coast, playing an important role in the growth of both business and tourism over that period.

Sunshine Coast Airport Pty Ltd (SCAPL) operates and manages Sunshine Coast Airport, including the airside, terminal and landside precincts. SCAPL is proud to be a locally-based, Australian-owned business supporting the local community and wider region.

Sunshine Coast Airport is the gateway to the Sunshine Coast region and a pivotal point of access to South East Queensland. The Airport welcomed over 1.2 million passengers in 2018, with a compound annual growth rate of 4% over the past nine years. Sunshine Coast Airport is one of the fastest-growing airports in Australia and is ranked as the nation's 14th busiest airport for passenger movements for the year ended January 2019, according to airport traffic data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE).

Population trends indicate the region will continue to grow. Census data from 2016 established the population of the Sunshine Coast at 346,522 and nearly 735,000 people in the wider catchment from Caboolture to Wide Bay. The Sunshine Coast's population is expected to grow to approximately 500,000 by 2040, and the wider catchment is also expected to grow significantly. The Airport Master Plan 2040 (Master Plan) provides the strategic blueprint for the Airport to meet the needs of a thriving region.

Sunshine Coast Airport is experiencing a major transition with the development of the new runway under the Sunshine Coast Airport Expansion Project (SCAEP), being delivered by Sunshine Coast Council. This project will enable development of new domestic and international routes, providing greater access and trade opportunities for South East Queensland. The new runway will provide significantly higher usability due to its optimal alignment with prevailing wind conditions, enabling the Airport to meet the needs of the region for decades to come.

General aviation will remain a crucial component of Sunshine Coast Airport's operations. Over time, general aviation activities will be relocated to the Aerospace Precinct, further away from residential areas consistent with the conditions of approval for the SCAEP environmental impact statement (EIS). The precinct will include expanded fixed-wing aircraft parking and distinct, dedicated areas for fixed-wing and helicopter operations. The Aerospace Precinct will provide general aviation users with direct, safe and efficient access to the airfield.

In addition to the SCAEP, the Master Plan outlines strategies for other growth projects at Sunshine Coast Airport, including terminal expansion, improved ground transport access and economic development. The Master Plan has been prepared to guide the staged development of Sunshine Coast Airport over the next 20 years and presents a strategy for growth to convert opportunities into genuine outcomes for the region. It illustrates how Sunshine Coast Airport will meet future demands in line with the long-term planning objectives.

The Queensland Government's current South East Queensland Regional Plan 2017, *Shaping SEQ*, identifies Sunshine Coast Airport as 'enabling infrastructure' within the Northern Gateway Regional Economic Cluster. This underscores the pivotal role of the Airport in supporting economic development on the Sunshine Coast now and into the future. With this Master Plan, SCAPL is positioning the Airport to continue empowering the region to develop to its fullest potential.

Master Plan Vision

MASTER PLAN VISION

The Master Plan vision will be achieved through staged, strategic development

COLLABORATION IS KEY

Stakeholder engagement has played a pivotal role in the development of the Master Plan

GATEWAY TO THE REGION

Locals, business people and tourists all benefit from the connectivity provided by the Airport

Sunshine Coast Airport will be a world-class airport and a catalyst for economic growth in the region, becoming a preferred choice for passengers, airlines and business.

Objectives

SCAPL's vision for the Master Plan is supported by three key Airport Objectives. These objectives were developed in conjunction with Sunshine Coast Council and form part of the lease framework to guide planning, development and operations at the Airport:

1. Maximise the economic benefit to the Airport, Sunshine Coast Council and the Sunshine Coast region in accordance with good business practice.
2. Maximise revenue opportunities for the Airport in accordance with good business practice.
3. Increase the capacity and develop and expand the operations of the Airport where feasible through:
    a. developing the Airport as an inter-modal cargo, passenger and logistics centre for the Sunshine Coast region
    b. developing associated infrastructure that supports the Airport (including roads, transport systems and other public infrastructure that add value to the Airport)
    c. expanding domestic and international passenger routes (including through-passenger numbers, existing routes and the development of new routes)
    d. enhancing the user experience of the Airport
    e. ensuring that the Airport is maintained and operated in accordance with good aviation industry practice.

In support of the Airport Objectives, the following Development Objectives support the vision and drive development at the Airport:

1. Prioritise the safety and security of all Airport users as paramount.
2. Strive to operate sustainably and minimise the Airport's environmental footprint.
3. Support general aviation through investment in new infrastructure.
4. Responsibly diversify the Airport's aviation and ancillary developments to support regional economic growth and employment.
5. Develop the Airport to drive tourism and leverage aviation-related opportunities.
6. Minimise the impact of Airport operations on neighbouring communities.
7. Continue building on relationships and engagement with Traditional Owners associated with the land on which the Airport is located.
8. Engage effectively on economic and environmental issues as a principal community partner.
9. Deliver an exceptional customer experience consistent with the Sunshine Coast 'sense of place'.

Sunshine Coast Airport is the gateway to the region.

Master Plan Process

SCAPL has prepared the Master Plan with the support of professional consultants with expertise in specific fields.

SCAPL is committed to producing a Master Plan that takes into account the views of stakeholders including government, business and the neighbouring community. These stakeholders all play an integral role in the success and ongoing operations of the Airport. Genuine engagement and clear communication are critical components of the master planning process. As part of the preparation of the Master Plan, SCAPL has actively engaged with the community through its Community and Aviation Forum, as well as airline partners, airport tenants, state and federal agencies and Sunshine Coast Council.

One critical element to prepare the Master Plan was the public consultation phase, where the Preliminary Draft Master Plan was on display for 50 business days. During that period, all stakeholders had the opportunity to express their views on the Preliminary Draft Master Plan and all submissions received during the period were recorded, considered and addressed. A public submissions report has been prepared and submitted to Sunshine Coast Council with the Final Draft Master Plan.

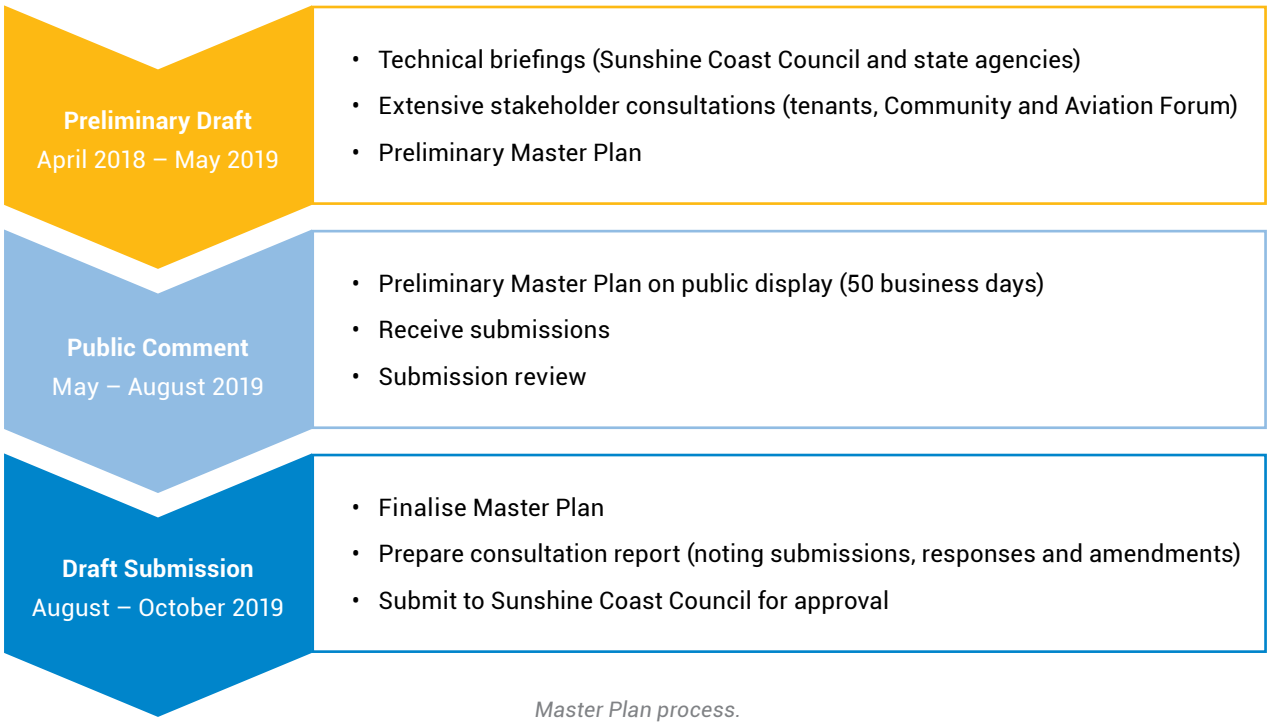
Master Plan Implementation

The Master Plan serves to inform the community of SCAPL's vision, objectives and strategies to facilitate future growth and economic activity in the Sunshine Coast region.

The adoption of the Master Plan by Sunshine Coast Council does not automatically grant SCAPL development approvals. Many of the proposed land uses within this Master Plan will require SCAPL to seek further approvals from Sunshine Coast Council, assessed against the Sunshine Coast Planning Scheme.

Following the approval of the Master Plan by Sunshine Coast Council, SCAPL may seek amendments to the planning scheme to improve certainty for stakeholders and users of the Airport; to support Sunshine Coast Council's enforcement of safeguarding procedures; and facilitate effective implementation of the Master Plan.

The Airport Master Plan 2040 will be reviewed at least every eight years to enable SCAPL to respond to the continually evolving needs of the community, the aviation industry and the region.



Master Plan process.

Master Plan at a Glance

Airport Context

Sunshine Coast Airport has a long and prosperous history as part of the Sunshine Coast fabric. The Airport today services three domestic destinations and one international destination, facilitating over 1.2 million passengers annually and is a significant contributor to economic growth and employment.

On-Airport employers will directly contribute approximately $62 million to gross domestic product (GDP) in FY2019. This is forecast to grow to approximately $141 million by 2040. Over 500 people were directly employed on-Airport in 2018, and this is predicted to grow to more than 1,550 direct jobs by 2040. The infrastructure planned for the Airport has the potential to facilitate air freight for a region as far north as Mackay and as far west as Longreach.

SCAPL will build upon the esteemed environmental strategies which saw the Airport become Australia's first carbon neutral airport in 2017 and is committed to playing a pivotal role in Sunshine Coast Council's vision for regional economic development propelled by the opening of the new runway in 2020.

Forecast

The forecast for passenger, aircraft and general aviation operations at the Airport shows steady and promising growth for the Airport. Future staged expansion of the Airport, including airfield infrastructure and terminal development will be driven by forecast demand.

By 2040, Sunshine Coast Airport is forecast to facilitate approximately 3 million passengers per annum and 2,300 passengers during the terminal's busy hour.

Airfield and Aviation Support

The SCAEP will result in significant change to the airfield at Sunshine Coast Airport by 2020. The SCAEP includes construction of the new runway, repurposing part of the existing runway as a taxiway and expanding the aircraft parking areas. Aviation support infrastructure and facilities will be accommodated within airfield expansion plans to facilitate the ongoing safe operation of the Airport. The airfield and aviation support upgrades will allow the Airport to grow into the future to service domestic and international destinations and provide expanded connectivity for the Sunshine Coast and wider catchment areas.

Airport Safeguarding

Safeguarding of Sunshine Coast Airport is integral to its safe operation into the future. Safeguarding is facilitated through various measures determined by airfield layout, airspace design and noise management strategies.

Safeguarding the operations of the Airport is an ongoing and shared responsibility between all levels of government and SCAPL. The Master Plan safeguarding strategy builds on the National Airport Safeguarding Framework, which aims to:

- improve community amenity by minimising aircraft noise-sensitive developments near airports through the use of additional noise metrics and improved noise-disclosure mechanisms
- improve safety outcomes by ensuring that aviation safety requirements are recognised in land-use planning decisions, which will be achieved by incorporating guidelines on various safety-related issues into land use planning instruments.

This Master Plan illustrates the forecast impact of aircraft noise on areas surrounding the Airport and the strategies undertaken by SCAPL to manage this impact as much as practical. The relocation of general aviation operations to the dedicated new Aerospace Precinct will significantly improve the amenity for surrounding residential communities. SCAPL will also continue to provide transparent information on aircraft noise impacts to surrounding communities.

SCAPL will work closely with the Queensland Government and Sunshine Coast Council to facilitate an integrated planning approach to developments and operations both within and outside the Airport to deliver a high level of operational safety for Airport users and the surrounding community.

Terminal Plan

As Sunshine Coast Airport grows to service the needs of an increasing number of passengers, the terminal will be a key area of development. The Master Plan includes the incremental development strategy for the terminal building. The terminal is the first impression of the Sunshine Coast for many visitors, and the expansion of the terminal should reflect the identity of the region in its design and provisions. The development of the terminal will happen in stages over the Master Plan period, in response to forecast growth and designed in a manner that is flexible and can accommodate future technological advances. Terminal improvements will include security upgrades, retail, baggage reclaim, departure lounges and facilitation of expanded international services.

Land Use Plan

Sunshine Coast Airport is within the planning scheme implemented by Sunshine Coast Council. SCAPL has developed a land use plan, outlined in this Master Plan, to guide all on-Airport development considering:

- integration with the local planning scheme
- planning for long-term aviation growth
- recognition of the Airport as one of the region's key activity centres.

The land use plan proposes five precincts for both aviation and ancillary development:

1. Aviation Precinct
2. Gateway Precinct
3. Aerospace Precinct
4. Airport North Precinct
5. Airport West Precinct.

The precincts included in the land use plan allow for the staged development of the Airport by clustering complementary uses together for the benefit of Airport users and the community.

Ground Transport Plan

Growth at the Airport will be supported by a flexible ground transport plan. SCAPL will continue to work with the Queensland Government and Sunshine Coast Council to plan and implement effective transport solutions that support the growth of the Airport within the environment of a fast-growing regional population. This will translate to tangible outcomes at the Airport, such as increased car parking areas and improved public transport accessibility, including the provision for future rail access directly to the Airport. SCAPL will remain aware of developments and innovation in ground transport, such as autonomous vehicles, to continue to accommodate passenger transport preferences.

Master Plan at a Glance

Utilities and Communication Plan

SCAPL will work with utility and communication providers to facilitate appropriate provision of services for future development of the Airport. The exploration of renewable energy sources and strategies to limit energy consumption will remain important to Airport operations, cementing the Airport's carbon neutrality status into the future.

Environment Strategy

Following Sunshine Coast Airport's certification in 2017 as the nation's first carbon neutral airport, SCAPL is committed to building on this leadership in sustainability. SCAPL will continually strive to minimise, mitigate or offset sources of environmental impact through implementation of its environmental management plan (EMP), and go further to reduce the Airport's environmental footprint through development of a solar array to generate renewable energy. Other initiatives, such as electric vehicles, LED airfield lighting and total water cycle management, will be investigated and implemented where feasible.

Implementation Plan

SCAPL is committed to developing a world-class operation which is safe, secure and efficient, with investments, upgrades and development occurring in a planned and timely manner. Implementation of the Master Plan is proposed in four key stages: short term (2019 to 2024); medium term (2025 to 2030); long term (2031 to 2040); and ultimate (beyond 2040).

To remain adaptable to the changing needs of the region, SCAPL maintains a flexible outlook when considering uses at the Airport. SCAPL will regularly review the staging proposed in consultation with stakeholders to assess whether it remains relevant, achievable and supportive of the core Airport Objectives.

SCAPL is committed to developing a world-class operation which is safe, secure and efficient, with investments, upgrades and development occurring in a planned and timely manner.


Baggage Claim
Car Rentals
Coaches
Car Park

1 Airport Context

1. Airport Context – Chapter Essentials

This Master Plan sets the foundation for Sunshine Coast Airport to develop as a resilient, sustainable gateway to the region, providing new employment and economic opportunities in accordance with one of the fastest growing airports in Australia.

The Master Plan will provide new leisure and business opportunities.

CONNECTIVITY

The Sunshine Coast is growing, with the population forecast to reach approximately

500,000 by 2040

Sunshine Coast Airport is the gateway that will connect the region's population and businesses with Australia and the world. Sunshine Coast's 'game-changer' projects, including the Sunshine Coast Airport Expansion Project and Bruce Highway upgrades, will facilitate this growth and connectivity in the region.

TOURISM

The Sunshine Coast continues to attract domestic and international visitors each year, with more than

8.5 million people

visiting the region in 2017 and contributing $2.5 billion to gross regional product (GRP). New airlines and routes made possible by the new runway will bring greater capacity for tourist dollars to the local economy.

ECONOMY

Sunshine Coast Airport's total direct and indirect economic contribution to the Australian economy is forecast to grow to approximately

$209 million

in the final year of the Master Plan horizon, reflecting a compound annual growth rate of approximately 4.6%.

EMPLOYMENT GROWTH

Direct employment at Sunshine Coast Airport is expected to grow to approximately

1,550 employees

– a threefold increase – at the Master Plan horizon. This will be achieved through the growth of more than 30 on-Airport business enterprises, providing both aviation and ancillary services.

FREIGHT

The ability for larger aircraft to access the Sunshine Coast via the new runway will allow for facilitation of

increased export

through the Airport as belly freight. New routes will mean broader potential for Sunshine Coast businesses to reach Australian and international markets.

KEY MILESTONES TIMELINE

1958
Fred Murray, Fred Charles and Stewey Cook survey the site for the Maroochy Airport.

1959
Maroochy Aeroclub founded.

First flight lands at Maroochy Satellite Aerodrome.

1961
Airport officially opened under the name **Maroochy Airport**.

1962
First hangar built at the Airport.

1965
First flying school – Sunland Aviation School – begins giving lessons at the Airport.

1971
East-West Airlines markets package deals to the Sunshine Coast for Sydney tourists, opening up a new era of tourism for the region.

1983
Construction commences on air traffic control tower.

1984
First passenger jet aircraft, an Air New South Wales Fokker Fellowship F-28, lands at Maroochy Airport.

1989
Airport terminal upgraded to include a VIP lounge and increased capacity.

1994
Sunshine Coast Airport trials direct flights to and from Hamilton, New Zealand.

1997
Current terminal building constructed at a cost of approximately $11 million.

2002
Virgin Blue begins flying into Sunshine Coast Airport.

Qantas begins flying direct into Melbourne, increasing traffic to and from Sunshine Coast Airport.

2004
Jetstar replaces Qantas flights into Sunshine Coast Airport.

2007
Current Airport Master Plan adopted by Sunshine Coast Council.

2008
New airport entrance road officially opened.

2009
Airport officially renamed **Sunshine Coast Airport**.

2010
Airport terminal redevelopment officially opened.

2012
The new runway Environmental Impact Statement (EIS) terms of reference are issued.

2016
The EIS is approved.

2017
Sunshine Coast Airport becomes the first carbon neutral airport in Australia.

Preliminary work commences on the new runway.

2018
Runway 12/30 is decommissioned.

Sand pumping is completed for the new runway project.

The Airport transitions to a private operator under a 99-year lease agreement between Council and Palisade Investment Partners.

Sunshine Coast Airport in the 1970s.

Sunshine Coast Airport in the 1990s.

Your Airport

SCAPL is a private company owned by mum and dad investors through their stake in Australian superannuation funds. Since December 2017, SCAPL has been operating and managing Sunshine Coast Airport under a 99-year lease from Sunshine Coast Council.

As the operator of the Airport, SCAPL is continually striving to achieve its mission to deliver value to you – its customers, shareholders and the region.

The vision of SCAPL is to be the best regional airport business in Australia, in order to deliver an exceptional airport for the community.

Consistent with its core values, SCAPL is a collaborative and customer-centric organisation, connected and accountable to its stakeholders and agile in adapting to change as it builds a better airport for the Sunshine Coast, for Queensland and Australia.

A Jetstar flight takes off from the Airport.

The Airport Today

Sunshine Coast Airport is located four kilometres north of the Maroochy River mouth, approximately nine kilometres from the centre of Maroochydore. The Airport was constructed between 1959 and 1961, predating most of the surrounding development. It is bounded to the west by the Sunshine Motorway, and David Low Way to the south and east.

A mix of land uses has developed around the Airport, the most prominent being low-density detached residential developments at Marcoola, Mudjimba, Twin Waters and Pacific Paradise.

Immediately west of the existing terminal precinct, the Airport is adjoined by a light industrial area on Runway Drive. North and south of the new runway alignment are the two separate portions of the Mt Coolum National Park.

Sunshine Coast Airport is conveniently located near the emerging Maroochydore city centre, the Mooloolaba Marina, the agricultural hinterland and renowned tourism destinations to the north and south, including Noosa and Caloundra. It is a key domestic and international gateway to the region, which supports the economic growth targeted by Sunshine Coast Council.

Sunshine Coast Airport has traditionally served the needs of the tourism market. However, as the region has grown, so has the demand for business travel to Sydney, Melbourne and Adelaide. These factors have been critical in the Airport achieving record growth in passenger numbers in recent years. According to SCAPL's 2019 passenger survey, 40% of Airport users indicated holiday and leisure as their reason for travel: 37% were visiting friends or relatives; 21% indicated their travel was for business purposes; and the remaining 2% were attending a convention, conference or seminar. Airport users are somewhat evenly split between visitors (55%) and local residents (45%).

The Airport is currently serviced by four major airlines and provides direct access to three Australian capitals (Sydney, Melbourne, Adelaide) and one international destination (Auckland, New Zealand).

SCAPL seeks to leverage the Airport's potential international opportunities through upgraded infrastructure developments and ongoing aviation business development. These efforts are focused on providing choice in destinations, employment opportunities, export freight opportunities and convenience for the wider region.

The Airport is centrally located to service a large region.

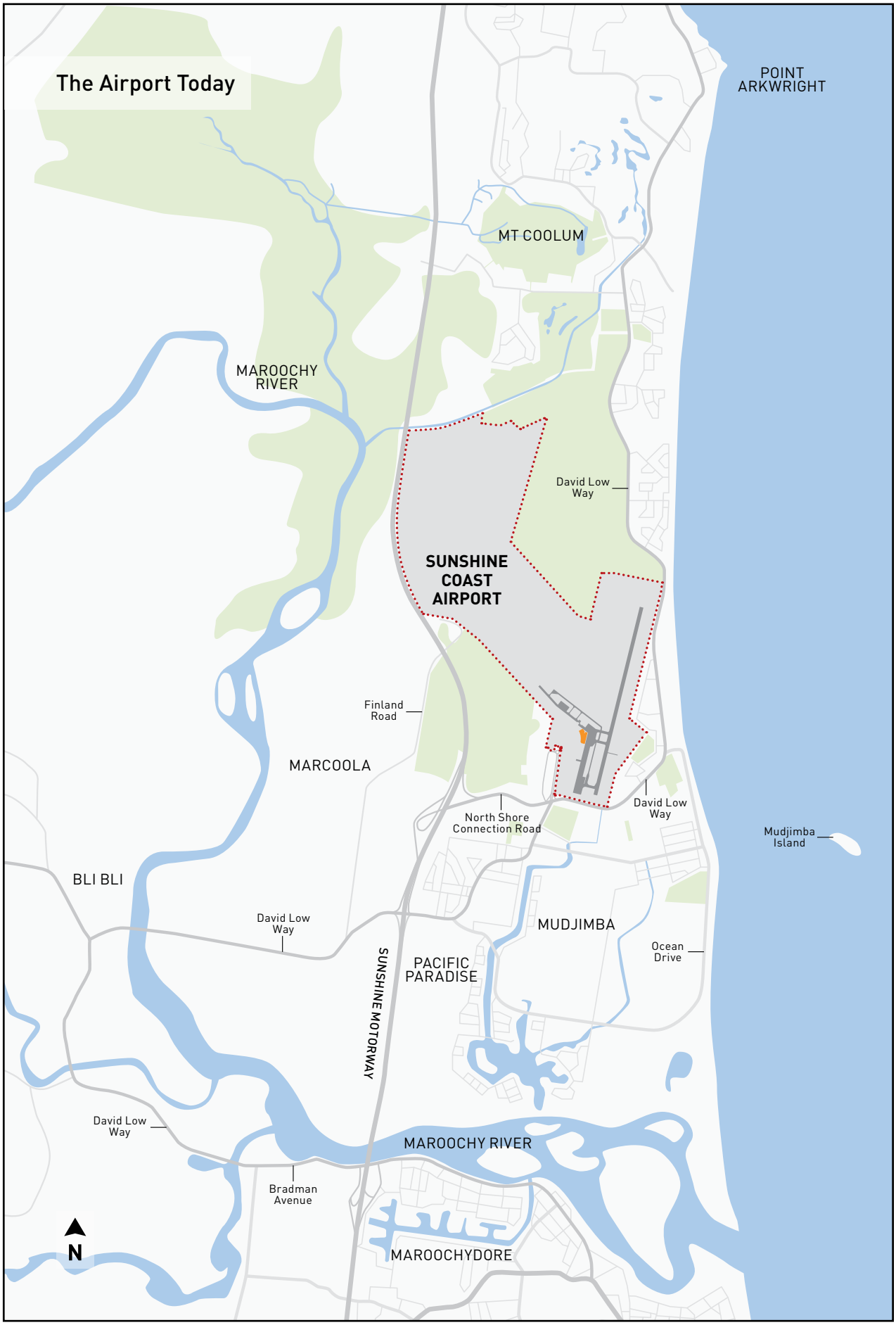


Figure 1.1: Sunshine Coast Airport today.

The Sunshine Coast Region

The Sunshine Coast is the 10th largest urban area in Australia, with a population of nearly 350,000 at the 2016 census and forecast to grow to approximately 500,000 by 2040.

The Sunshine Coast economy is in a strong position, with key indicators showing growth rates higher than the Queensland average in areas such as population, employment and housing prices. Major infrastructure and private investment in the region exceeds $12.5 billion for projects already underway or in the pipeline.

The Sunshine Coast attracted 311,000 international overnight visitors and 3.68 million domestic overnight visitors in the year ending December 2018. Tourism contributes $2.5 billion annually to the Sunshine Coast economy.

The Role of the Airport in the Region

Sunshine Coast Airport is a critical piece of infrastructure providing essential services to the region, vital in facilitating social and economic opportunities for the residents and businesses of the Sunshine Coast.

The new runway will significantly enhance the capacity of Sunshine Coast Airport, opening new doors for passenger travel, local exports and promoting local tourism growth. Whether it is a direct flight to Sydney or a connecting flight to places further afield, residents can live on the Sunshine Coast and work or play almost anywhere.

This Master Plan sets out the evolution of the Airport and its great potential to deliver significant economic and social contributions for the region. It demonstrates SCAPL's commitment to continued investment in the capacity and delivery of a world-class regional airport to enhance the lifestyle and commerce on the Sunshine Coast.

Sunshine Coast Airport is both passionate about, and active in, its local community. SCAPL is the proud sponsor of back-to-back Australian champion netball team, Sunshine Coast Lightning.

A Shared Vision for Regional Economic Development

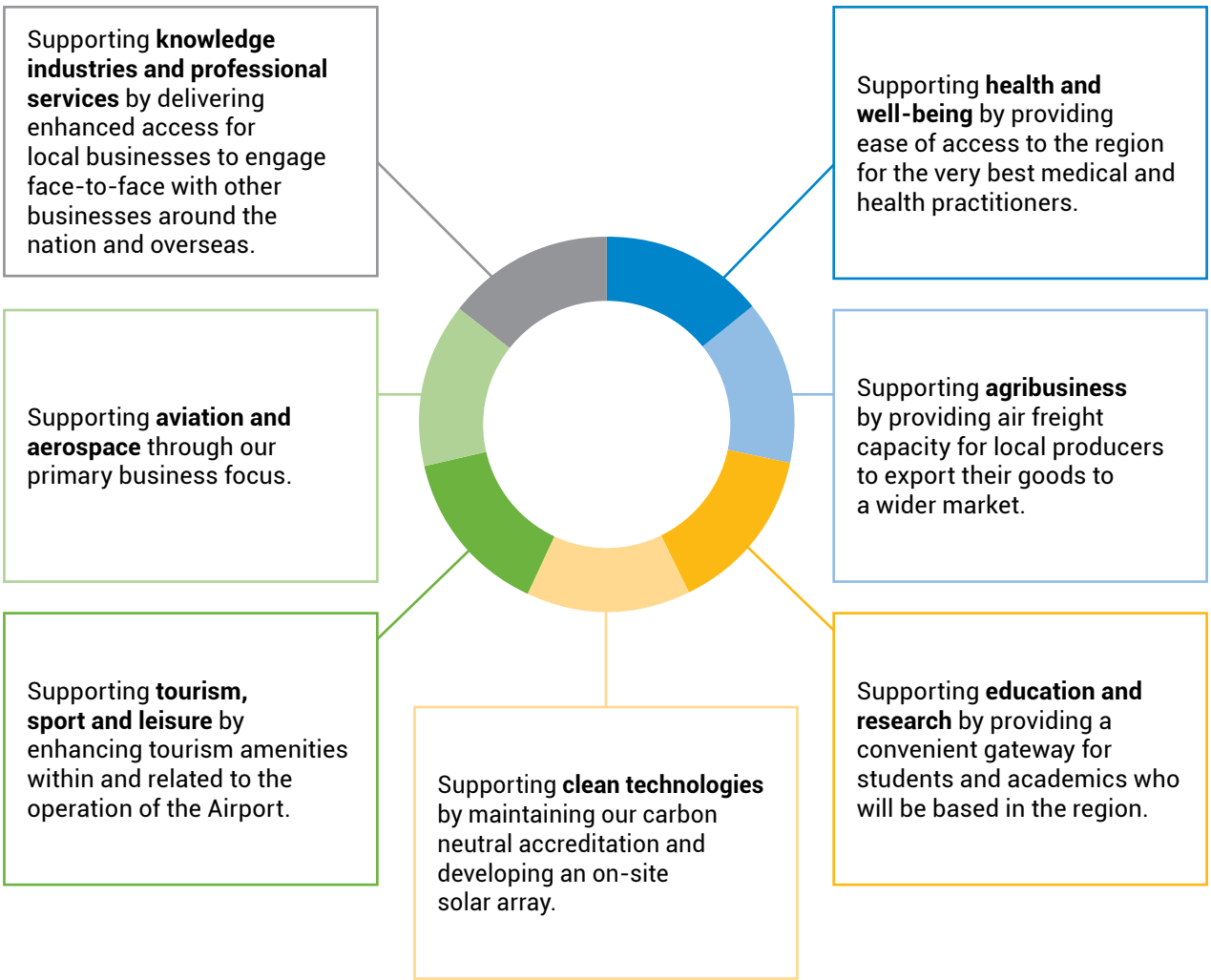
The Sunshine Coast region is home to a growing and diversified economy. Sunshine Coast Council's 20-year economic vision, set out in its development strategy *The Natural Advantage*, endeavours to grow the local economy to $33 billion by 2033. This regional economic development strategy details Sunshine Coast Council's plan for growing regional investment and employment in seven high-value industries which are inherently more resilient to economic fluctuations.

Aviation and aerospace are included in these industries, and SCAPL acknowledges the Airport's vital role in shaping the region's future economy.

SCAPL will build upon the aviation focus of the Airport and is uniquely positioned to extend the Airport's economic contribution in support of the other integral industries outlined in the strategy, as depicted in the Figure below.

The expansion of Sunshine Coast Airport is identified in *The Natural Advantage* economic strategy as one of five 'game changer' projects for the region, representing the transformational effect the development will have on the region's businesses, employment, investment and overall economy. The Airport is intrinsically linked to other key initiatives in the economic development strategy.

Figure 1.2: Sunshine Coast Airport's extended contribution to the regional economy.



Sunshine Coast University Hospital Expansion

The expansion of the Sunshine Coast University Hospital brings with it an increased workforce. Doctors, nurses and specialised practitioners will rely upon convenient and user-friendly access to the region, which will be facilitated by the Airport. Sunshine Coast Airport is also home to LifeFlight, which utilises the Airport as a base for specialist recruitment, training, and provision of critical care doctors and nurses to work onboard its helicopters transporting patients to medical facilities including the Sunshine Coast University Hospital.

Maroochydore City Centre Redevelopment

Maroochydore is a hub of business, social and tourist activity on the Sunshine Coast. The new Maroochydore city centre will bolster the area's attraction to entrepreneurs, locals and visitors alike and the Airport will be the gateway to this development. A prospective light rail service would provide seamless connections between Maroochydore and the Airport, accessing direct flights to domestic and international destinations.

University of the Sunshine Coast Expansion

The region's education programs are renowned for their exceptional standard, and the expansion of the University of the Sunshine Coast will only enhance this reputation by attracting high-calibre academics from around the world. Most of these newcomers will draw their first impressions of the region through their arrival at the Airport and will appreciate the number of research destinations easily accessible from Sunshine Coast Airport.

Bruce Highway Upgrades

Ease of access is of paramount importance for the efficiency of the Airport. As a main transport artery in South East Queensland, the Bruce Highway upgrades serve to enhance accessibility to the Airport, providing connectivity for the catchment area spanning from Caboolture to Wide Bay. These upgrades also improve connectivity for transporting local products to the Airport, unlocking further opportunities for freight and export from the Sunshine Coast.

Sunshine Coast is home to a growing and diversified economy.

Sunshine Coast Airport's Role in the Regional Economy

Sunshine Coast Airport contributes to the regional economy in many ways, enabling tourism, facilitating air freight, supporting direct and indirect employment, and connecting Sunshine Coast businesses with the world.

Contribution to Tourism

Airports underpin a range of industries, and Sunshine Coast Airport has a direct role in supporting the local tourism industry.

The Sunshine Coast and Noosa local government areas attracted more than 8.5 million visitors in 2017. The contribution of tourism to the Sunshine Coast's GRP was $2.5 billion in FY2017, up 25% when compared to FY2007.

Based on current spend by domestic and international visitors, it is estimated that the Airport's role as a facilitator of visitors to the region supports an additional $150 million in gross value add (GVA) to Sunshine Coast tourism. This equates to around 6% of tourism's total contribution to the region's GRP in 2017, or approximately 1% of the Sunshine Coast's total GRP in 2017.

With the expansion of airfield capacity and improvements to terminal and ground transport facilities, the Airport will continue to play an important role in future tourism growth on the Sunshine Coast.

Facilitation of Freight

The Master Plan addresses the need for on-airport freight facilities to offer an alternative means of distributing high-value, low-volume exports both domestically and internationally. These facilities will need to efficiently integrate with airfield infrastructure and transport networks.

The new runway addresses the limitations of the existing runway by virtue of its significantly greater length and greater reach, particularly with respect to international markets and the introduction of wide-body aircraft.

These larger aircraft represent a step change in terms of the Airport's capability, with the potential to further increase the volume of freight moved through the Airport. With the removal of weight restrictions related to the length of the existing runway, passenger aircraft will be able to carry substantial volumes of cargo not previously possible. Each international flight therefore provides a significant opportunity for freight export.

Sunshine Coast Airport has a direct role in supporting the local tourism industry.

Provision of Employment

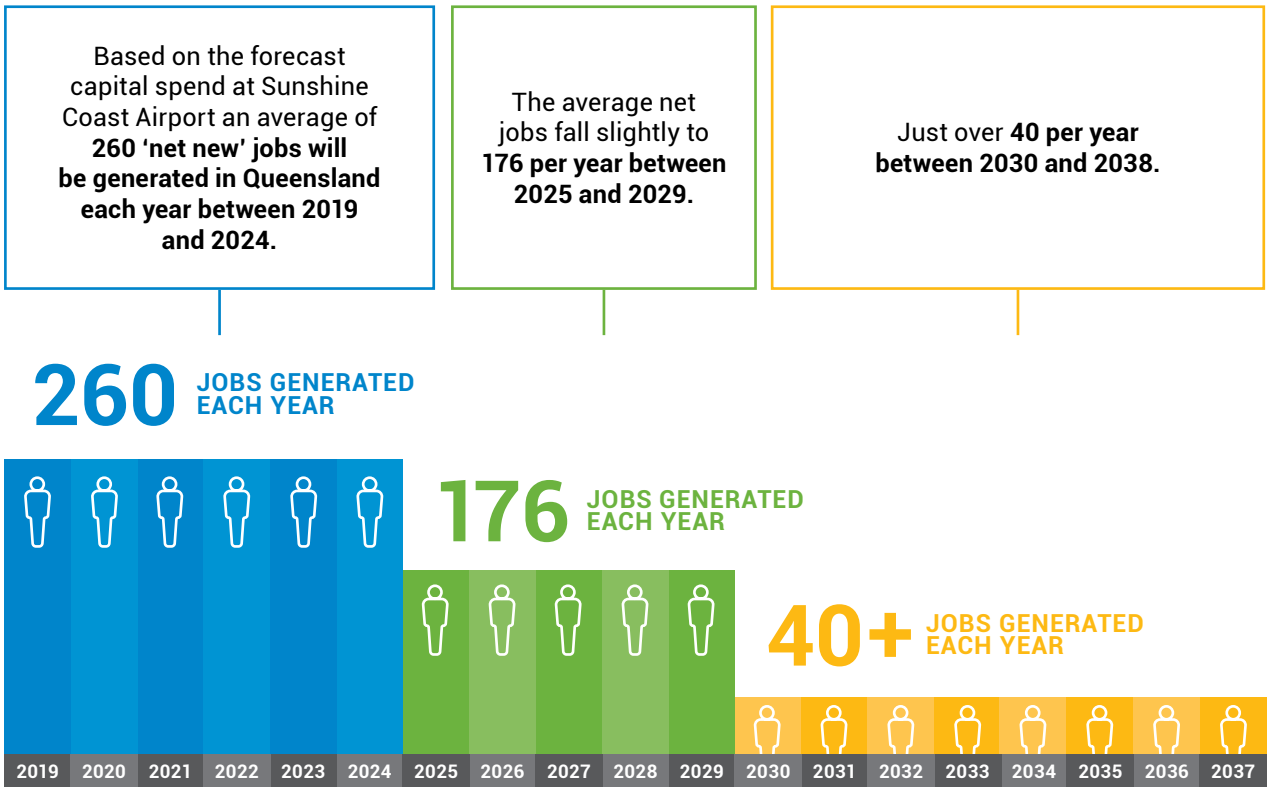


Figure 1.3: Employment growth over the Master Plan period.

The Master Plan sets the strategic blueprint for the development of the core infrastructure at the Airport, and the capital investment associated with the Master Plan will stimulate economic activity, creating jobs in construction and supporting services.

Sunshine Coast Airport is a major hub for employment opportunities on the Sunshine Coast and a sought-after place of employment. Operations at the Airport involve more than 30 enterprises, which provide commercial aviation and associated support services, general aviation services, retail (including rental cars and food and beverage) and infrastructure services. More than 500 people are directly employed at the Airport, which is expected to grow to approximately 1,550 people by FY2040.

Sunshine Coast Airport also supports indirect employment in the supply chain industries that provide goods and services to companies operating at the Airport. This indirect impact is estimated to employ approximately 220 people, forecast to grow to approximately 530 by FY2039. Almost 80% of the direct and indirect jobs resulting from the operation of Sunshine Coast Airport will be realised in the Sunshine Coast region by FY2039.

In FY2019, Sunshine Coast Airport will support more than 720 direct and indirect jobs and contribute approximately $91 million to gross domestic product (GDP).

Operations at Sunshine Coast Airport will contribute $75 million to the Sunshine Coast's GRP in FY2019. This is predicted to rise to $124 million in FY2030 and $170 million in FY2039. The Airport's total direct and indirect economic contribution to Australia is forecast to grow to approximately $209 million by FY2039.

Future Economic Impacts of the Airport

In preparing the Master Plan, consideration has been given to diversifying the commercial activities at the Airport. In addition to traditional aviation operations, on-Airport activities may also include ancillary opportunities geared to support and grow the region's capabilities and contribute to all levels of the economy.

The Master Plan identifies five distinct precincts that seek to diversify and enhance economic activity on the Airport site. It is envisaged that the precincts will complement one another through staged development, ease of access and economic synergies. The planned precincts are intended to strategically align with the region's capabilities and aspirations.

The Gateway Precinct will be developed with particular economic priorities. It is planned within the southern area of the Airport to establish a diverse and compatible cluster of aeronautical, retail and commercial business offerings with a targeted approach to attract business and industry that stimulates a sustainable local micro-economy.

The development of freight capability at Sunshine Coast Airport is intended to build economic supply chains that complement other on-Airport commercial activities where possible.

Figure 1.4: Sunshine Coast Airport is a hub of economic activity.

Social Context

The Airport is a critical element of social infrastructure on the Sunshine Coast, as it facilitates convenient access to support the social networks of those who choose to live and work in the region.

Sunshine Coast Airport stimulates activity across a range of industry sectors and supports community endeavours beyond the more visible tourism sector.

The connectivity provided by Sunshine Coast Airport will be an important factor for those seeking to move to the Sunshine Coast. The importance of these linkages is reflected in the fact that 37% of travellers using the Airport in 2019 indicated they were visiting friends and relatives.

SCAPL acknowledges the Airport's pivotal role in connecting people and builds upon it in this Master Plan, taking into account the various social, cultural and economic considerations of the region.

Australia's First Carbon Neutral Airport

Sunshine Coast Airport was the first airport in Australia to achieve carbon neutrality in 2017. The Airport's first carbon management plan was prepared in 2011, undertaking a voluntary program to achieve carbon neutrality under the auspices of the Airports Council International (ACI) Airport Carbon Accreditation Scheme. The Airport's greenhouse gas emissions were mapped, and a plan was developed for reducing and offsetting Airport emissions as well as engaging with third parties related to the Airport to reduce their carbon footprint.

Sunshine Coast Airport's top-level carbon neutral accreditation was successfully renewed in 2018 and its renewal application for 2019 has been submitted. SCAPL intends to maintain this status into the future, and this achievement has occurred at the same time the Airport has seen record growth in passenger numbers.

SCAPL will continue this leadership going forward through key commitments and initiatives identified in the Environment Strategy.

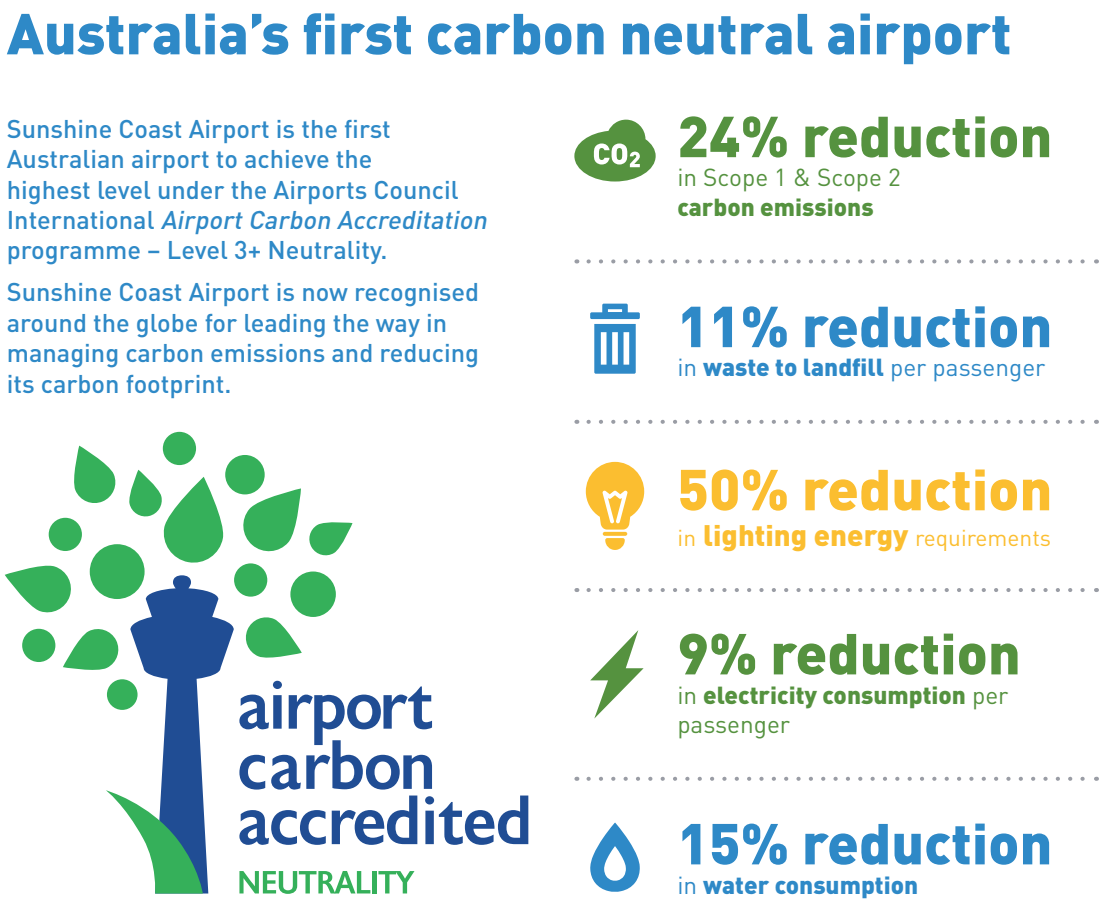


Figure 1.5: Australia's first carbon neutral airport fact sheet.

General Aviation at Sunshine Coast Airport

General aviation on the Sunshine Coast is diverse and contributes economically and socially to the local region. General aviation businesses employ approximately 200 people at the Airport. General aviation has been a feature of the Airport since its inception, with the Sunshine Coast Aero Club being a particularly long-standing member of the Airport community.

The general aviation sector on the Sunshine Coast is recognised for its professionalism and high skill levels, with a number of the Airport-based businesses operating in markets beyond Australia. The general aviation sector plays an important role in Sunshine Coast Council's strategies for diversifying the economy and providing employment opportunities on the Sunshine Coast.

SCAPL recognises the value of general aviation businesses to the regional community and economy. This Master Plan allows for continued growth of general aviation operations at Sunshine Coast Airport through the development of the Aerospace Precinct, which increases the land area dedicated to general aviation from approximately 6 hectares to 29 hectares.

Sunshine Coast Airport's New Runway

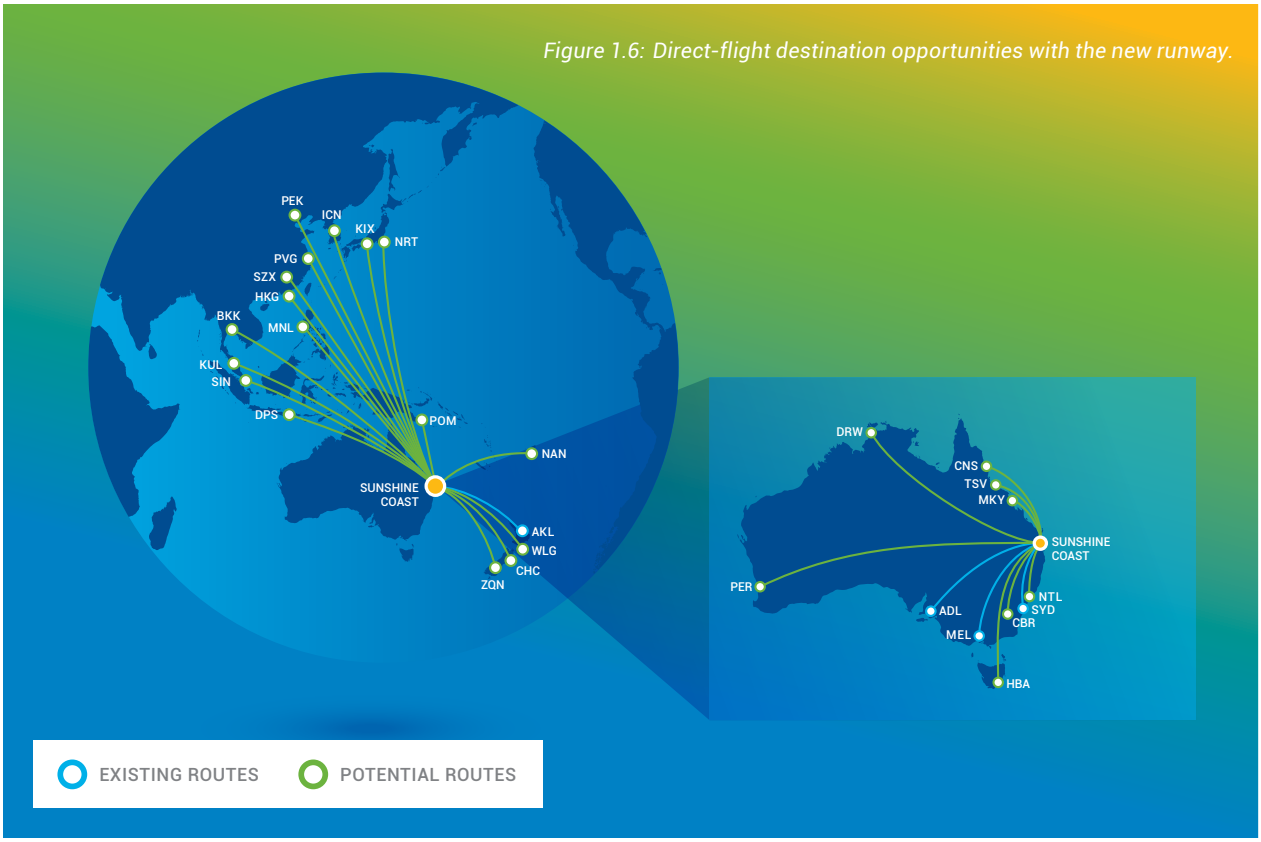
Sunshine Coast Airport's new runway will be operational in 2020. The design and construction of the new Runway 13/31 is being undertaken by Sunshine Coast Council, with the support of SCAPL.

The decision to construct the new runway opens opportunities for the Airport and the region as a whole and will benefit the aviation community by providing a runway that is optimally aligned with prevailing wind conditions.

The evolution of the new runway's design addresses flooding, airspace protection and accommodation of wide-body aircraft parking, and the parallel taxiway system provides enhanced access to the new runway for airport tenants.

The capacity of the new runway will open the Sunshine Coast region to increased domestic and international destinations.

Figure 1.6: Direct-flight destination opportunities with the new runway.

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2 Forecast

2. Forecast – Chapter Essentials

Sunshine Coast Airport is positioned for a bright future, with a promising forecast underpinning its staged expansion to service the region's growth.

PASSENGER NUMBERS

Sunshine Coast Airport is forecast to facilitate

3 million

international and domestic passengers per annum by 2040.

DESTINATIONS

It is anticipated that travellers coming and going from the Sunshine Coast will have

direct access

to eight destinations by 2040.

TERMINAL

Within the terminal, the busy hour in 2018 accommodated approximately 1,300 passengers through the Airport. This is forecast to increase to approximately

2,300 passengers

in the busy hour in 2040.

AIRCRAFT MOVEMENTS

General aviation movements are expected to continue to grow, particularly fixed-wing operations. The current proportion of helicopter operations (63%) is expected to decrease significantly, contributing only 26% of movements by 2040. Commercial aviation movements will increase from 12 commercial aircraft per day in FY2018 to

24 by 2040.

Forecast Context

Sunshine Coast Airport currently facilitates direct services to Sydney, Melbourne and Adelaide. Seasonal Trans-Tasman services also operate to Auckland from the Airport.

Sunshine Coast Airport has experienced consistently positive growth in passenger and aircraft movements since FY2015.

With the new runway opening, airlines will be able to offer long-haul flights to and from the Sunshine Coast, growing existing international and domestic markets.

Forecasting the Airport's passenger and aircraft traffic is a vital part of the planning process, with many key operational and infrastructure developments influenced by predicted passenger and aircraft demands.

Aircraft movement forecasts comprise regular public transport (RPT) activity by commercial passenger airlines, and general aviation activity, which includes non-scheduled commercial traffic.

The passenger forecast was developed taking into account:

- projected population growth within the Airport catchment area
- trends in domestic and international air travel
- the local region's international visitor markets
- local demographics
- current and prospective airline networks
- comparisons and trends of similar airports with shared characteristics
- a review of previously developed forecasts
- current and future infrastructure.

SCAPL remains committed to working with the local tourism industry, businesses, education facilities and government agencies in achieving its forecast.

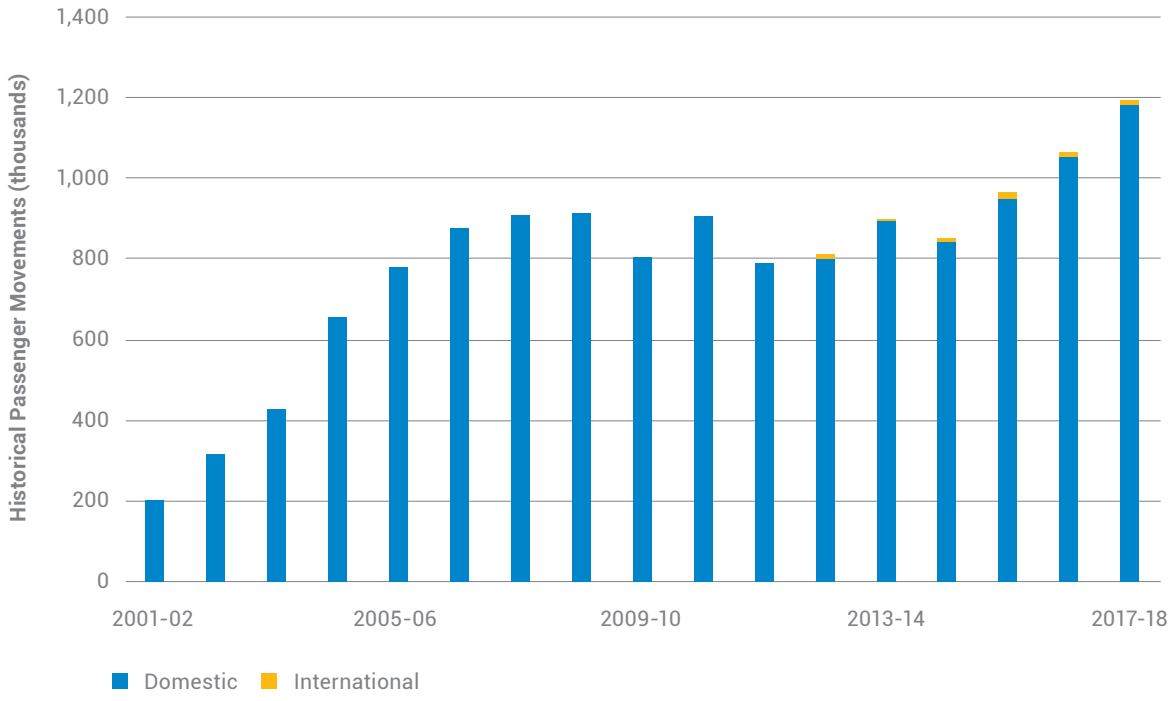

Figure 2.1: Historical passenger movements at Sunshine Coast Airport.

Passenger Movement Forecast

Sunshine Coast Airport has consistently been ranked as one of the fastest growing airports in Australia according to airport traffic data published by the BITRE.

It is predicted that Sunshine Coast Airport will see nearly 3 million annual domestic and international passengers through the Airport by 2040.

The proportion of international passengers at Sunshine Coast Airport is expected to grow steadily into the future, however, forecast passenger movements will remain predominantly domestic.

Terminal Busy Hour Forecast

At an airport, peak periods develop throughout the day as a result of flight schedules. These peak periods create the highest demand for capacity within the terminal, which informs airport planning and design.

Peak periods within the terminal are referred to as the 'busy hour'. In order to maintain or enhance operational service performance for passengers, it is vital to determine the busy hour of the forecast schedule to appropriately plan for future terminal facilities.

At Sunshine Coast Airport, the current busy hour throughput is 1,300 passengers. This is forecast to grow to approximately 2,300 passengers in the busy hour in 2040. The Terminal Plan included in this Master Plan illustrates how SCAPL will respond to this forecast growth in the terminal.

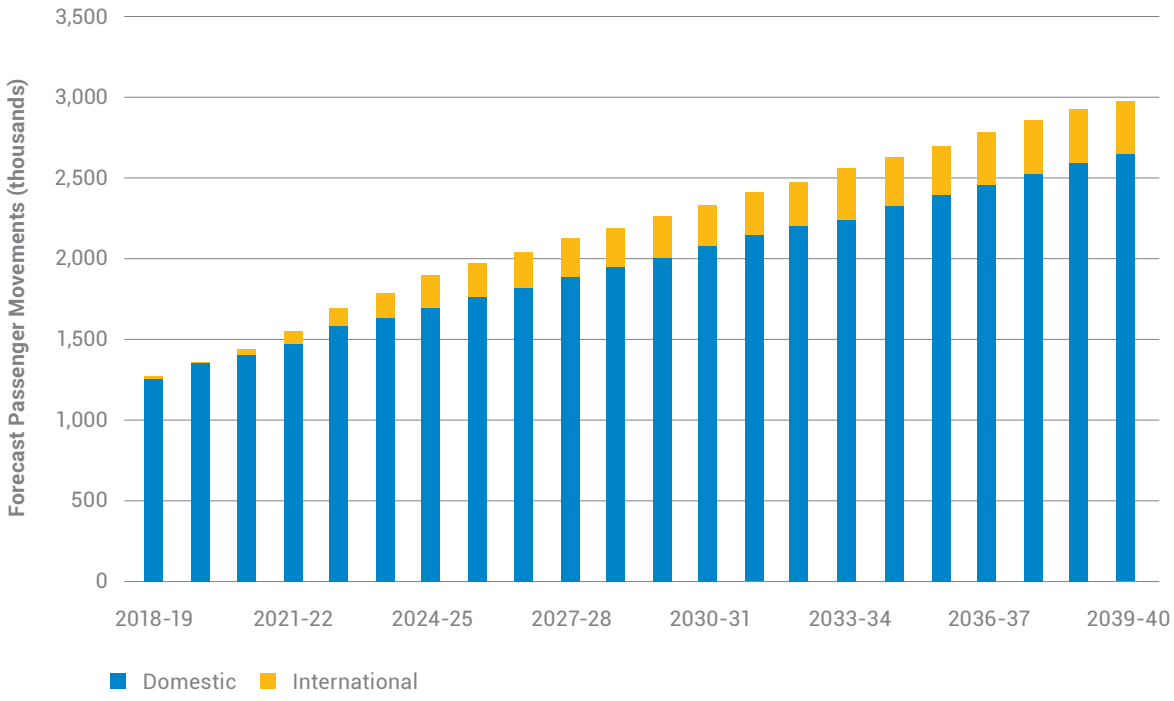

Figure 2.2: Forecast passenger movements to 2040.

Aircraft Movement Forecast

Aircraft movements at Sunshine Coast Airport encompass both commercial passenger aircraft and general aviation (both fixed-wing and helicopter) aircraft. Each individual aircraft accounts for two movements at an airport – taking off and landing.

Commercial Aircraft Movement Forecast

In FY2018, there were just over 8,600 commercial aircraft movements. This equates to approximately 24 movements per day, or 12 aircraft taking off and landing. For comparison, Brisbane Airport had 191,135 aircraft movements in FY2018. This equates to approximately 522 daily movements, or 261 aircraft taking off and landing.

The commercial aircraft movement forecast at Sunshine Coast Airport shows consistent growth for the future, reaching approximately 17,800 movements per annum by 2040. This equates to approximately 48 movements per day, or 24 aircraft taking off and landing in 20 years' time.

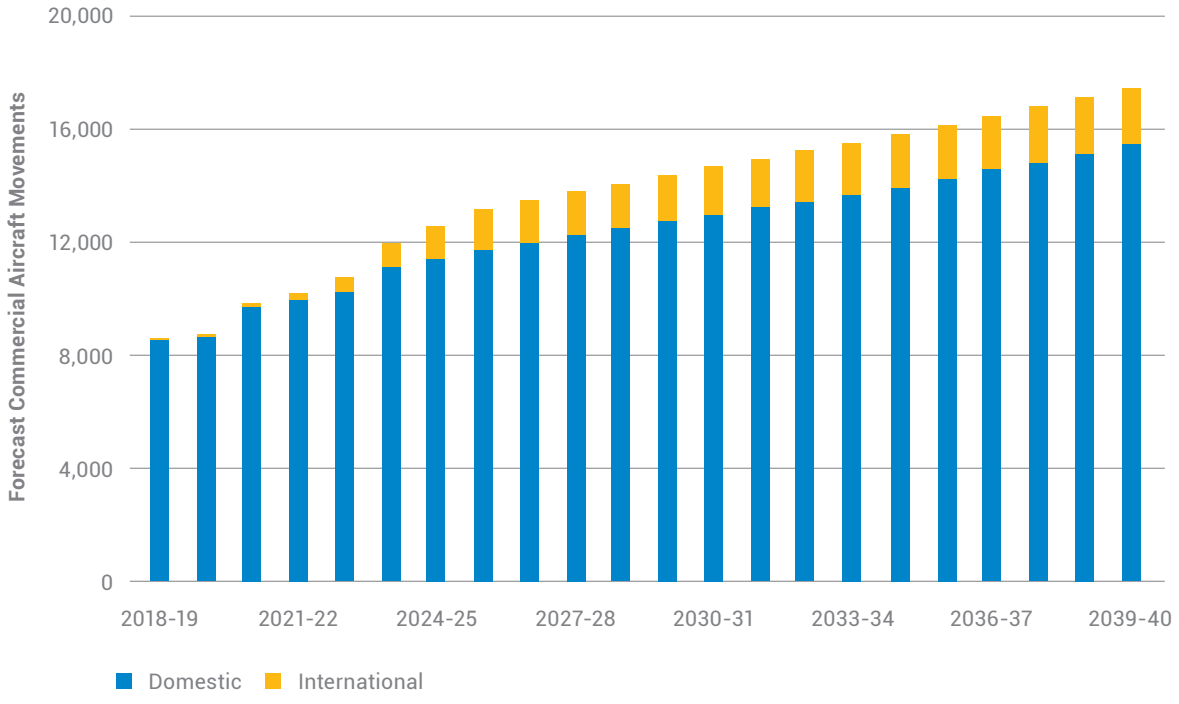

Figure 2.3: Forecast commercial aircraft movements to 2040.

General Aviation Aircraft Movement Forecast

General aviation includes a wide range of fixed-wing and helicopter operations, including flight training, commercial charter flights, emergency services, maintenance and repair organisations and private recreational flying.

The profile of general aviation traffic is anticipated to evolve over time to include a higher proportion of corporate and business aircraft as a result of enhanced connectivity afforded by the new runway. Consequently, an increase in demand for fixed-base operator services, aircraft maintenance, Air Transport Pilot Licence (ATPL) training, simulator training and aircraft maintenance is expected.

Fixed-wing general aviation traffic is expected to grow from the recorded movement volume of 25,150 in FY2018 to over 32,000 in 2040.

Helicopter traffic at Sunshine Coast Airport is expected to significantly reduce in the near future. Currently, the largest contributor to helicopter operations is an established helicopter training organisation. This organisation has announced the relocation of operations, which is expected to result in a reduction in forecast helicopter movements at Sunshine Coast Airport, from 43,474 in FY2018 to approximately 9,000. Following this decline, helicopter movements are forecast to grow in line with fixed-wing general aviation traffic. By 2040, helicopter movements at Sunshine Coast Airport are forecast to reach approximately 11,000 per annum.

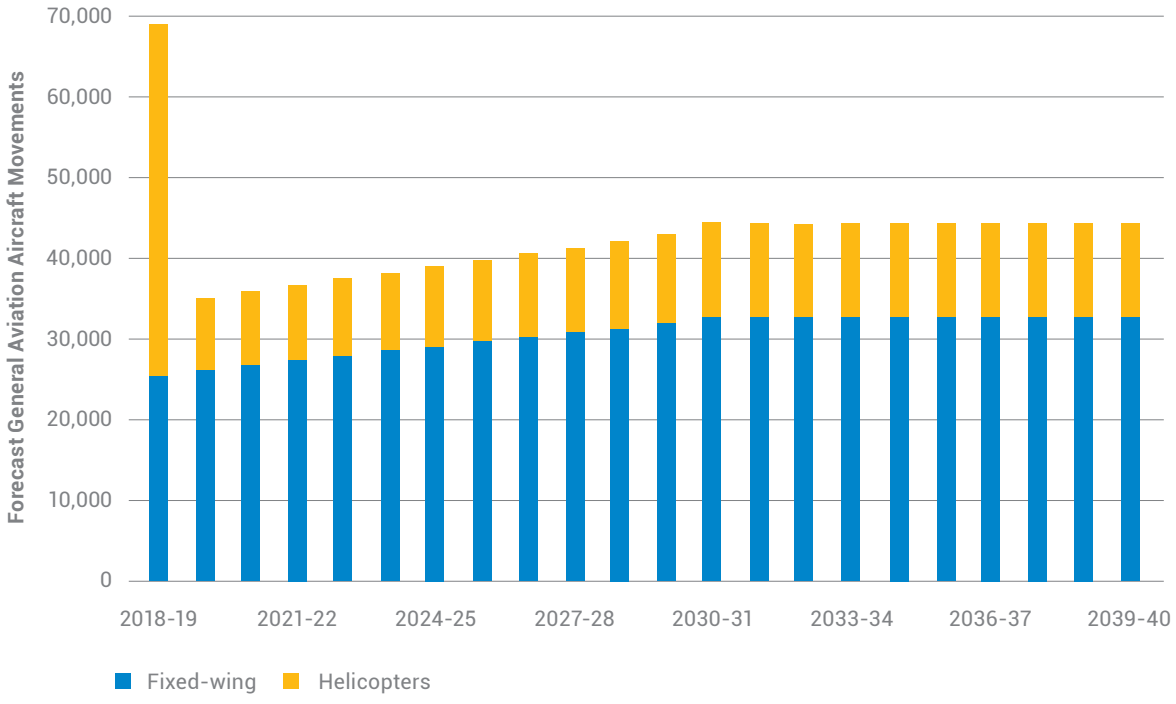

Figure 2.4: Forecast general aviation aircraft movements to 2040.

Air Freight Forecast

International air freight represents less than 0.1% of Australia's merchandise trade by volume, but it equates to more than 21% of trade by value. The majority of goods are low-density, high-value and time-sensitive. This can include commodities such as e-commerce parcels, food products, medical items and courier packages. The bulk of air freight is carried in the belly of commercial passenger aircraft.

International air freight moving through Australian airports was worth AUD $110 billion in FY2012. SCAPL has a great opportunity to promote and build this market to support local business and assist in attracting international and domestic carriers.

Current air freight capacity at Sunshine Coast Airport is limited to small quantities as an adjunct to domestic passenger services, with small amounts carried on commercial flights. The limitations of the existing runway have resulted in narrow-body aircraft weight restrictions on certain routes. This has reduced the potential freight market to the destinations currently serviced by commercial airlines from the Airport.

The new runway has the potential to address the limitations of the existing runway due to its greater length and reach. This is particularly the case with respect to international markets and the introduction of larger wide-body aircraft, which represent a step change in terms of the Airport's capability. Wide-body passenger aircraft have considerable cargo volume that is not used to support passenger operations, and therefore each long-haul flight provides a significant opportunity for freight export.

Artist's Impression

The future of freight at the Airport will depend largely on the alignment of the destinations with their demand for high-value exports from the Sunshine Coast region. Agriculture and fishing are among the main international exports from the Sunshine Coast region. Sunshine Coast Airport will enable local businesses to access overseas markets.

While the key focus will be on existing and potential exports in the greater Sunshine Coast region, the Airport could service exporters from as far north as Mackay and as far west as Longreach.

The forecast for Sunshine Coast Airport suggests that Asian hub airports such as Singapore are potential early international destinations. An analysis of the likely demand for local products in prospective Asian markets will need to be carried out; however, the Queensland Government's Trade and Investment Strategy 2017-2022 highlights the growing appetite of large Asian markets for premium food and wine. With the Sunshine Coast's abundance of high-quality dairy products, seafood, fresh fruit and wine, the region is poised to capitalise on these key export opportunities.

Initial research has shown that local businesses list exports as their biggest opportunity to expand sales over the next five years, and they would consider utilising Sunshine Coast Airport provided it is commercially viable. A good opportunity exists to provide on-Airport processing facilities to these businesses to reach their overseas markets.

Air freight capacity stands to grow in line with the Airport.


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3 Airfield and Aviation Support

3. Airfield and Aviation Support – Chapter Essentials

The airfield and aviation support elements at Sunshine Coast Airport will enable an efficient operation to support forecast growth in passenger services and deliver enhanced infrastructure for the broader aviation community.

NEW RUNWAY

The new runway will

accommodate

up to wide-body A330 and B787 aircraft.

RUNWAY ALIGNMENT

The new runway is

optimally aligned

with prevailing winds.

AVIATION SUPPORT

Infrastructure and

services to support

aviation activities at the airport.

FUEL FACILITIES

Ideally located

fuel facilities for both commercial and general aviation aircraft.

Sunshine Coast Airport Expansion Project (SCAEP)

The airfield infrastructure at the Airport is currently undergoing significant transformation as part of the Sunshine Coast Airport Expansion Project (SCAEP). The SCAEP includes:

- decommissioning of the existing 650 metre Runway 12/30, completed in February 2018
- decommissioning of the existing 1,797 metre Runway 18/36, to occur in 2020
- construction of the new 2,450 metre Runway 13/31, to be completed in 2020
- construction of a 1,300 metre partial parallel taxiway to service Runway 13/31 to be completed in 2020
- construction of aircraft parking stands accommodating a combination of narrow and wide-body aircraft parking positions, to be completed in 2020.

Runway Operations

Sunshine Coast Airport has been a single-runway configuration airport (operating on the existing Runway 18/36 only) since February 2018, when Runway 12/30 was permanently decommissioned.

The existing runway is 1,797 metres long and 30 metres wide with a runway strip of 150 metres.

The runway is capable of servicing narrow-body aircraft (e.g. B737/A320) under narrow runway operating conditions. The length of the runway results in restrictions on aircraft capacity by weight.

The design and construction of the new runway is being delivered by Sunshine Coast Council, with the support of SCAPL. The new runway is aligned to take advantage of the prevailing wind conditions and has been designed to accommodate wide-body aircraft (e.g. A330/B787). The new runway is designed to be 2,450 metres long and 45 metres wide, with a runway strip of 300 metres.

Decommissioning of Runway 18/36

Refinement of the SCAEP infrastructure design requires wide-body aircraft parking to be positioned on the southern portion of the main apron. Development of parking for wide-body aircraft in this location, including provision of an apron access taxiway, compromises the regulated separation distances between the aircraft parking positions, apron taxiways and runways. Infringements of the obstacle limitation surfaces (OLS) and the minimum taxiway/runway separation distances result in the inability to maintain Runway 18/36 in compliance with Civil Aviation Safety Authority (CASA) aviation safety regulations. The southern 1,000 metres of Runway 18/36 will be repurposed as Taxiway F (Foxtrot), providing access to the southern portion of the main apron. A diagrammatic depiction of safety issues with the location of wide-body aircraft parking positions, access taxiway and the existing runway after commissioning of the new runway is shown at Figure 3.1.

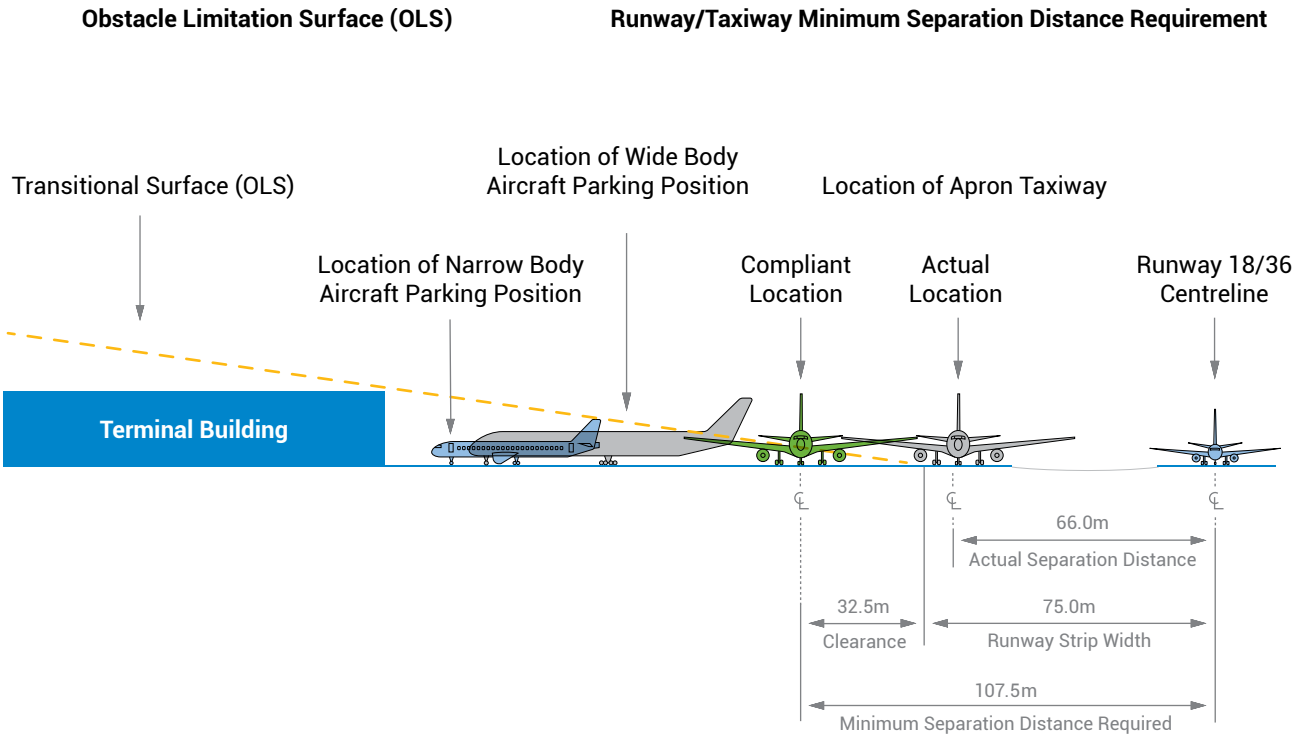


Figure 3.1: Diagram showing separation distance requirements.

The Future of Runway 18/36

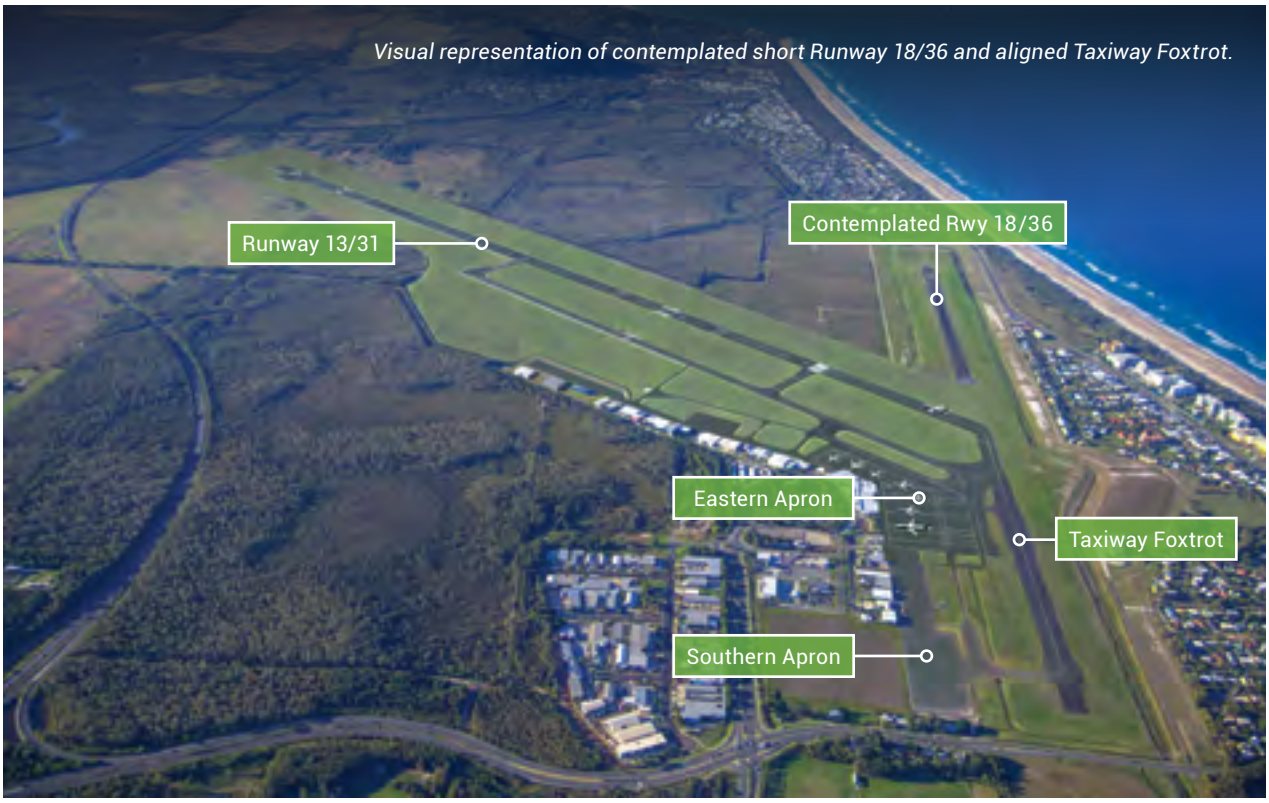
Consideration was given to retaining the pavement of the remaining northern portion of Runway 18/36 in order to establish a new short Runway 18/36 (approximately 800 metres) as an alternative for a small percentage of general aviation aircraft.

Detailed safety analysis determined that the introduction of a short Runway 18/36 on the same alignment as Taxiway F would introduce a number of safety and operational risks.

Supported by a global aviation specialist, SCAPL has undertaken a comprehensive safety assessment and risk analysis of the short Runway 18/36 concept as part of its safety management system. Research of similar arrangements globally and regulatory reference material was also undertaken to validate the analysis, confirming the apparently unprecedented nature of an aligned taxiway and runway.

SCAPL's safety assessment determined that commissioning a short Runway 18/36 on the same alignment as Taxiway F would introduce a number of unacceptable aviation safety and operational outcomes.

In particular, the taxiway/runway alignment increases the potential for misalignment incidents, where aircraft have attempted to, or have, landed or taken off from a taxiway rather than a runway or have



Visual representation of contemplated short Runway 18/36 and aligned Taxiway Foxtrot.

inadvertently accessed a runway (runway incursion) for intended taxi operations. Due to the geometry of the airfield layout and the proximity of Taxiway F and the proposed short Runway 18/36, there is a risk that, as a result of perceived appearance from an airborne perspective and on the ground, the two pieces of infrastructure would appear as one.

This risk of potential misalignment resulting from an aligned runway and taxiway is illustrated in the image showing the visual perspective from an aircraft on approach to Runway 18 (from the north).

A large number of misalignment incidents have occurred globally, some of which had the potential to result in catastrophic outcomes.

When assessing safety risks, the aviation safety regulator in Australia, CASA, recommends that airport operators refer to global regulatory reference documentation in the absence of any specific Australian guidance material. The aviation safety regulator in the United States, the Federal Aviation Administration (FAA), published an advisory document on airport design referencing the safety risks associated with airfield geometry involving aligned taxiways. An aligned taxiway is one whose centreline coincides with a runway centreline. The FAA reference material highlights the potential loss of situational awareness by a pilot, precluding the design of aligned taxiway/runway configurations. This is the precise situation that would be created with the establishment of a short Runway 18/36. The document also goes on to note that existing aligned taxiways should be removed as soon as practical.

Safety issue – Potential misalignment risk due to the aligned runway and taxiway

Further Safety and Operational Considerations

Outside of air traffic control (ATC) hours, pilots use a common traffic advisory frequency (CTAF) to communicate their intentions. During this time, there is inherently an increased risk based on the nature of converging runway operations and complex taxiway layout if a short Runway 18/36 were to be commissioned. The two-runway configuration would potentially result in landing and departure conflicts for aircraft using the runways concurrently under CTAF operations.

Safety hazards were also identified associated with complex aircraft ground movement routes in providing access to the proposed short Runway 18/36. These hazards are exacerbated during CTAF operations when there is no ATC service in operation to provide traffic management and separation.

An excerpt from the Airports Council International Runway Safety Handbook 2014 states the following:

The primary focus of the design of the runway areas of an airport should be safety and efficiency of operation. Clearly, the reduction of potential runway incursions is an integral part of this goal and so incursion prevention measures should be a part of the design of new runways and taxiways.

Key elements to eliminate incursion risk airport design [include]…Cross Runways and Converging Runways should be avoided because they usually require complicated connecting taxiways and also restrict flight operations. But crosswind is one of the most important factors of the runway layout. Aerodrome operators should perform a careful study analysing prevailing winds and the performance of the aircraft that will be accommodated on the new runways. If cross or converging runways are inevitable, aerodrome operators should prepare prevention measures for runway incursion. Such runways usually are no longer proposed in new runway master plans, since current aircraft can tolerate higher crosswind components.

The risk of runway incursion is increased with multiple runways. Aircraft accessing a short Runway 18/36 would need to cross Runway 13/31. With any runway crossing requirement, the risk of incursion is increased.

Arrival and departure paths associated with the proposed converging runway design would result in potential conflict zones where the two paths cross. Due to the geometry of the layout and the proximity of the runway thresholds, the crossing point also coincides vertically with the two paths at similar altitudes.

Requirement for Runway 18/36

The introduction of a short Runway 18/36 for general aviation traffic provides little benefit from a runway usability perspective. The runway would only be suitable for a very limited number of smaller aircraft and based on the high availability of Runway 13/31, a short Runway 18/36 would very rarely be required as a result of incompatible wind conditions on the new runway.

Analysis of wind direction and strength data over a ten-year reference period shows that a short Runway 18/36 would only be required by 0.24% of all operations currently at the Airport. Runway 13/31 provides a higher percentage of availability (in time) in all cross-wind component categories.

Noise Management

In a situation where a short Runway 18/36 was in use, residents of Marcoola and Coolum Beach would continue to experience some aircraft noise. Figure 3.2 provides an indicative altitude comparison for departing light aircraft from the full-length (1,797 metre) existing Runway 36 on the left, and full-length (800 metre) contemplated short Runway 36 on the right. This figure illustrates how aircraft departing a short Runway 36 (to the north) would be at lower altitude over the suburbs to the north of the Airport than those departing the existing 1,797 metre Runway 36.

Circuit traffic of general aviation aircraft including helicopter training activities on a short Runway 18/36 would continue to impact residents of Marcoola, Coolum Beach, Mudjimba and Twin Waters.

Outcome of Runway Configuration Assessment

Maintaining safety is of paramount importance to SCAPL. The significant aviation safety risks identified through the comprehensive safety assessment of a new short Runway 18/36 outweigh any potential benefit.

Runway 18/36 will be decommissioned in May 2020 as part of the SCAEP. The southern portion of Runway 18/36 (approximately 1,000 metres) will be repurposed as a taxiway, providing access from the southern and main aprons to Runway 13/31.

Taxiway System

The existing runway is served by three taxiways (B1, B2 and C) for narrow-body (e.g. B737/A320) operations. An additional five taxiways (D, E, G, H and M) support general aviation operations.

Future Taxiway Operations

The future 1,300 metre parallel Taxiway A will support the operational capability of the new runway. Operations on the existing runway lack suitable parallel taxiways, resulting in the need for aircraft to backtrack along the runway. With the construction of a parallel taxiway to support the new runway, backtracking will be minimised, resulting in operational efficiencies for future users of Sunshine Coast Airport. Beyond the planning horizon of this Master Plan, it is anticipated that extension of Taxiway A to the full length of Runway 13/31 will be required.

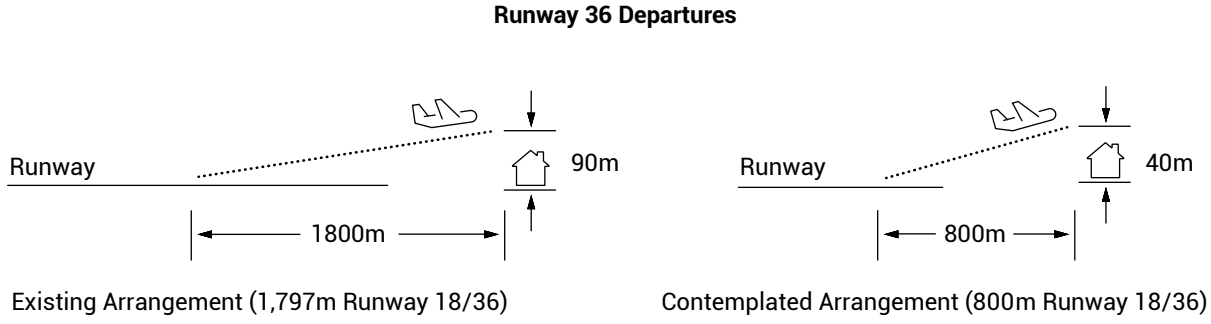


Figure 3.2: Departure elevation for existing and contemplated short Runway 36.

Apron Areas

A view of the main apron at the Airport.

Commercial Aircraft Aprons

The main apron is located adjacent to the terminal building and provides aircraft parking for four narrow-body aircraft (e.g. B737/A320). These are designated as Bays 1, 2, 3 and 4. In December 2018, aircraft parking operations were converted from free-moving to a more space efficient 'power-in/push-back' operation. This type of operation involves arriving aircraft parking under power and departing aircraft being pushed back via tractor to a specific location on the apron for engine start-up and departure. This operating model forms the basis of the geometric design of the aircraft parking apron, minimising the apron space required to facilitate safe and efficient aircraft operations.

Located adjacent to the southern end of the existing runway, the southern apron provides parking for narrow-body aircraft. Three aircraft parking bays have been designated in this area (Bays 11, 12 and 13). Bays 11 and 12 can accommodate narrow-body aircraft and Bay 13 can accommodate small business aircraft.

General Aviation Aircraft Aprons

Adjoining the area in the south and west of the existing terminal precinct is an apron area for general aviation aircraft. The southern general aviation apron provides access to seven airport tenant sites including an aircraft parking apron allocation. Both fixed-wing and helicopter aircraft are currently accommodated on the southern general aviation apron. In line with the information contained in the SCAEP EIS, these operations will be progressively relocated to the Aerospace Precinct.

The western general aviation apron provides access to 10 airport tenant sites including an aircraft parking apron allocation.

There is a helicopter landing site (HLS), located within the western general aviation apron (HLS J). This landing site is the designated arrival and departure point for helicopters at Sunshine Coast Airport, suitable for both daytime and night operations.

Future Apron Development

The continued increase in commercial aircraft movements, including additional trans-Tasman services and potential long-haul international services from Australasia, will require expansion of the apron capacity. As part of the SCEAP, the main parking apron will be expanded from four to eight positions for narrow-body aircraft. The southern-most positions will also be suitable for larger wide-body aircraft, with one wide-body aircraft over two narrow-body positions.

Aviation Support Services and Infrastructure

In support of forecast growth, provision for aviation support facilities has been accommodated within the Master Plan.

Airservices Australia

Airservices Australia owns and operates facilities across Sunshine Coast Airport, including the air traffic control tower, aviation rescue and firefighting service and navigational aids.

Airservices Australia will continue to manage the airspace and assign ground movement procedures on a day-to-day basis to assist in the safe and efficient operation of the Airport.

Air Traffic Control

Sunshine Coast Airport is operated under ATC services during tower operating hours provided from a locally situated control tower immediately west of the terminal building. From the ATC tower, a visual control service is provided for aircraft arriving and departing the Airport. The tower staff also process flight plans and clearances for aircraft operating under instrument flight rules to and from the Airport.

With the introduction of operations on the new runway, the current location of the ATC tower is subject to review. As the provider of air navigation services, Airservices Australia will undertake assessments of the current tower location and facility to determine whether it remains suitable and if modifications or relocation must be implemented. A potential new tower location is identified in this Master Plan to the north of the new runway should the need arise, as shown in Figure 3.5.

SCAPL will continue to work with Airservices Australia to determine the most appropriate solutions for the ATC tower to support the future operational requirements of the Airport.

Aviation Rescue Fire Fighting Service

It is a legislative requirement for Sunshine Coast Airport to have an Aviation Rescue Fire Fighting Service (ARFFS) facility. The current ARFFS facility at the Airport was constructed in 2011 and is located to the east of the existing runway.

Regulations mandate a minimum response time for the ARFFS response vehicles to be able to reach the runway ends at an airport. SCAPL will continue to engage with Airservices Australia with regard to maintaining minimum response times.

Safety is paramount at Sunshine Coast Airport, and a site on the north side of the new runway has been safeguarded by SCAPL in the event that a new ARFFS facility is required.

Navigational Aids

The Airport is equipped with two ground-based air navigation facilities: a non-directional beacon (NDB) located north and west of the existing runway, and a VHF omni-directional range with distance measuring equipment (VOR/DME) facility is located immediately north of the alignment of the new runway and west of the existing runway.

Global navigation satellite systems (GNSS) and area navigation (RNAV) guidance are provided at the Airport through Airservices Australia, which operates and maintains this equipment and provides all related published procedures.

For the operation of the new runway, locations have been safeguarded for potential future navigational aids to be installed, such as high intensity approach lighting, an instrument landing system and ground-based augmentation systems.

Evolving technology and the demands of aircraft operating on long-haul routes will require continual consideration of the type of navigation aids owned and operated by Airservices Australia at Sunshine Coast Airport. In support of Airservices Australia's role, SCAPL will remain aware of advances in technology and will plan with flexibility to be able to respond to the operational needs of the Airport.

Meteorological Services

Meteorological information for Sunshine Coast Airport is provided by an automatic weather station operated by the Bureau of Meteorology (BOM). The automated BOM observation equipment is located north of the alignment of the new runway and west of the existing runway. It is anticipated that this location will remain suitable once operations transition to the new runway.

Aviation Fuel

The continuous and guaranteed supply of aviation fuel is fundamental to on-time performance for all aviation operations.

Jet A-1 and Avgas fuels are currently provided at the Airport through a lease arrangement with a fuel supplier. Jet A-1 fuel is delivered to commercial aircraft on the main apron via tanker trucks. A bowser is available for the supply of Avgas to general aviation aircraft located on the southern general aviation apron. The on-site fuel facility south of the terminal building holds 160,000 litres of Jet A-1 fuel and 10,000 litres of Avgas in tanks which are partially-buried below ground. The volume of the current fuel facility is not sufficient for the long-term needs and forecast growth of the Airport.

Current demand for Jet A-1 fuel is in the order of 12 to 13 million litres per annum. With the introduction of long-haul operations and larger aircraft, forecast fuel demand is expected to grow significantly.

To address the future capacity limitations of the current fuel facility, a new site has been identified in this Master Plan in the southern area of the Airport, adjacent to David Low Way. Access arrangements from David Low Way will facilitate the safe and efficient movement of road fuel tankers into the Airport.

Given the significant movements associated with general aviation, planning for general aviation refuelling is also an important consideration for Airport operations. The provision of dedicated Avgas facilities is planned within the Aerospace Precinct, where general aviation operations will be located.

This will remove the need for general aviation operators to taxi to the existing Avgas bowser located south of the terminal, which will not only provide a safer environment with reduced crossing of aprons and taxiways but will also provide convenient fuel facilities for general aviation operators to operate efficiently and effectively.

Aircraft Maintenance

Facilities and services for aircraft line maintenance will be accommodated within the Aerospace Precinct or at other locations as required, as reflected in the Land Use Plan within this Master Plan.

Ground Service Equipment

Currently one ground handling company services the needs of all commercial aircraft operations at Sunshine Coast Airport. It is possible that multiple ground handling organisations will operate at the Airport in the future. These needs will be assessed, and plans adjusted as required.

The SCAEP design provides for additional ground service equipment (GSE) storage and parking facilities on the main apron. These facilities will accommodate the GSE requirements to service both narrow-body and wide-body aircraft through the Master Plan horizon.

Run-Up Bay

A site for an engine run-up bay has been identified at the Airport for aircraft maintenance test running, located at the western end of the parallel taxiway.

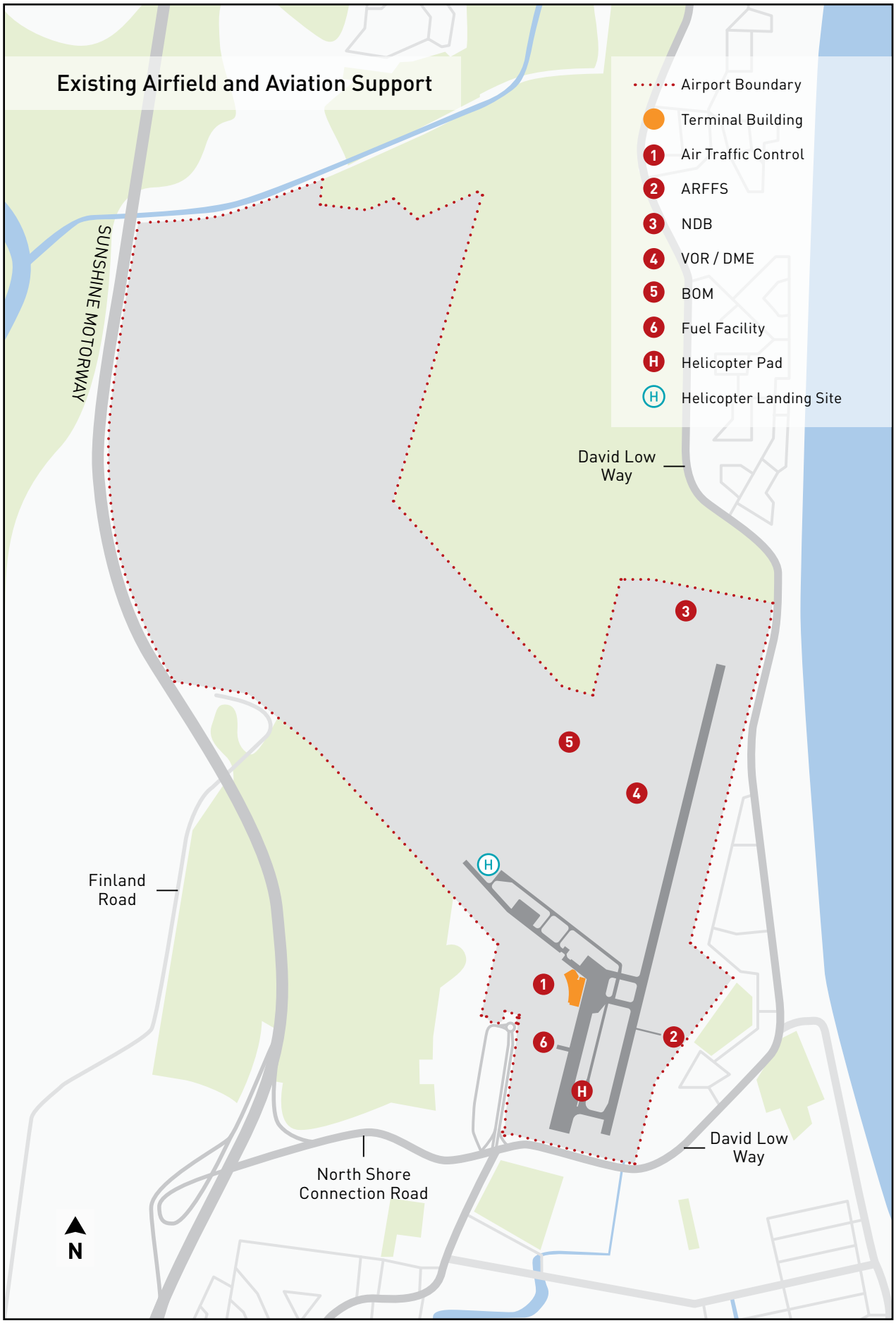


Figure 3.3: Existing airfield and aviation support (see Appendix 2 for list of acronyms).

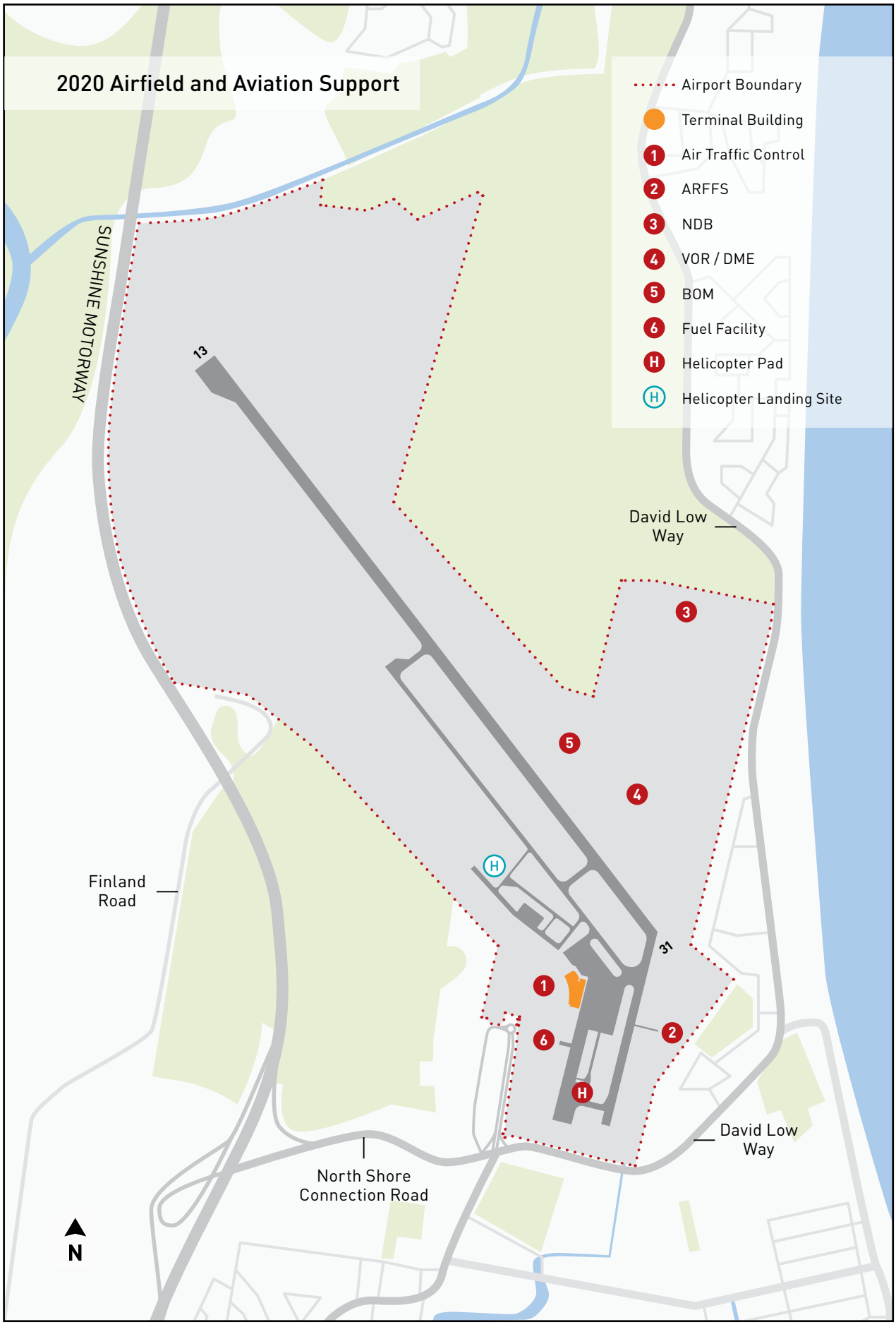


Figure 3.4: 2020 airfield and aviation support (see Appendix 2 for list of acronyms).

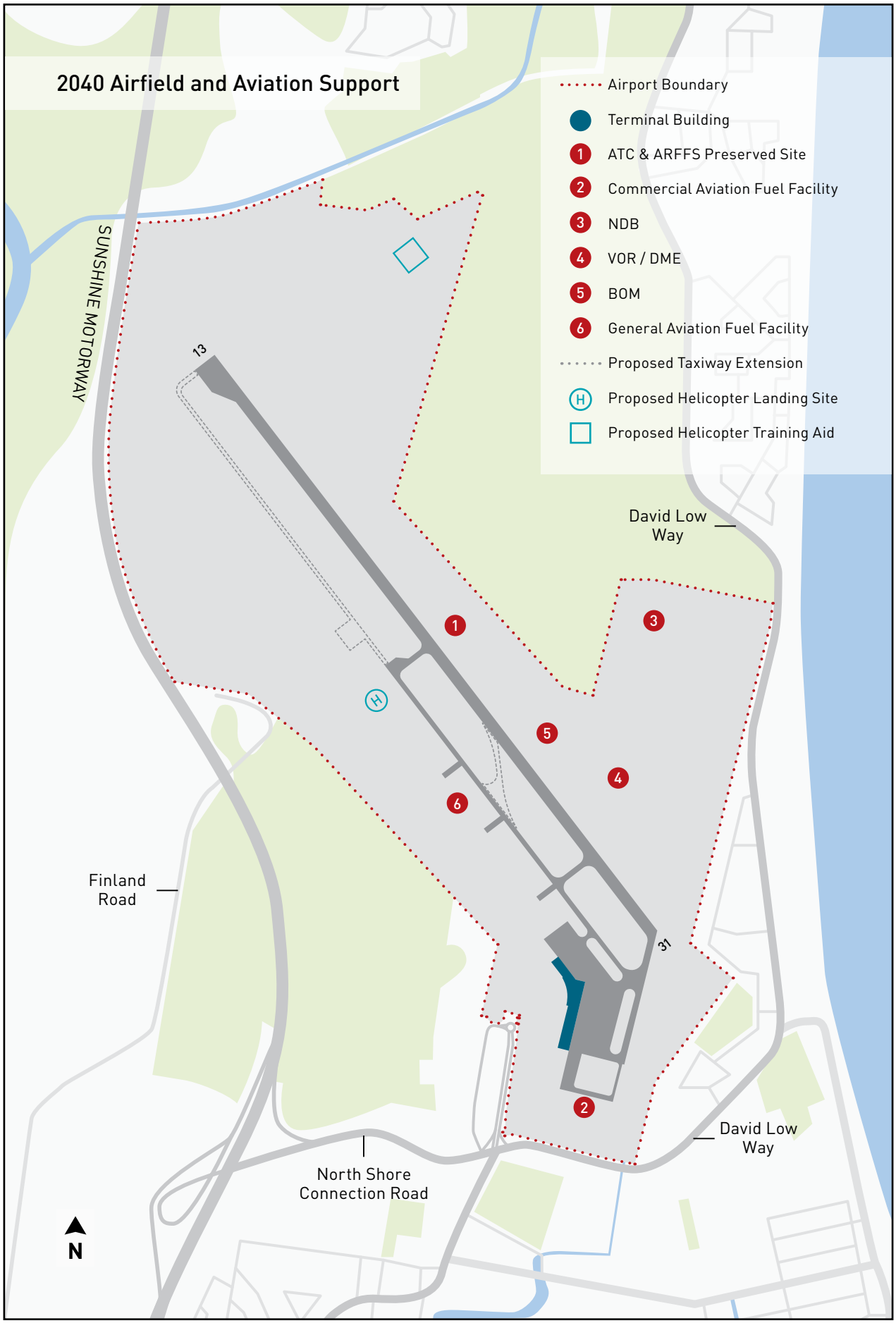


Figure 3.5: 2040 airfield and aviation support (see Appendix 2 for list of acronyms).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4 Airport Safeguarding

4. Airport Safeguarding – Chapter Essentials

Airport safeguarding is integral for the safe and effective operation of the Airport now and into the future, allowing it to evolve to its full potential and meet the needs of the Sunshine Coast region.

NOISE MANAGEMENT

SCAPL maintains its

Fly Neighbourly Policy

to facilitate operations that are considerate to neighbouring communities.

COMPATIBLE DEVELOPMENT

Safeguarding

informs development on and around the Airport to minimise risks to aircraft and provide relevant noise information.

NEW RUNWAY

On opening in 2020, the new runway and part-parallel taxiway are expected to have sufficient

operational capacity

to meet forecast aircraft movements through 2040.

Airfield Development at Sunshine Coast Airport

Sunshine Coast Airport is a critical piece of transport infrastructure. The current and future viability of airport operations can be compromised by incompatible development. Airport safeguarding encompasses the management of aircraft noise and minimisation of obstacles that could pose operational risk to aircraft using the Airport. To maintain a safe airport operation, safeguarding strategies are employed and outlined in this Master Plan.

Sunshine Coast Airport Airfield Capacity

All aviation and ancillary developments at the Airport will be implemented in a manner which does not constrain or otherwise impinge the operation of the airfield.

On opening in 2020, the new runway and associated partial parallel taxiway configuration delivered in the SCAEP is expected to have adequate operational capacity to meet forecast peak hour aircraft movements through the Master Plan horizon.

Beyond 2040 or as peak period demand grows, runway capacity may need to be enhanced through extension of the parallel taxiway to full-length.

Accordingly, safeguarding has been included for taxiway enhancements as part of the development of the Airport beyond 2040. Apron areas may also be expanded to accommodate additional aircraft parking bays in response to future requirements.

The growth of Sunshine Coast Airport will continue beyond the Master Plan horizon. Any further expansion would be driven in response to demand, following thorough investigations and after all potential operational improvement measures have been explored.

Airspace Protection at Sunshine Coast Airport

To achieve the highest level of aviation safety at Sunshine Coast Airport, the airspace surrounding the Airport must be protected. There are various guidelines and regulatory frameworks established to protect the airspace around airports.

National Airports Safeguarding Framework

The National Airports Safeguarding Advisory Group is comprised of Commonwealth, State and Territory Government planning and transport officials, the Australian Government Department of Defence, the CASA, Airservices Australia and the Australian Local Government Association, which together have developed the National Airports Safeguarding Framework (NASF). The Australian Government recognises that responsibility for land use planning rests primarily with state, territory and local governments, but that a national approach can assist in improving planning outcomes on and near airports, and under flight paths.

The intent of the framework is to improve:

- safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions
- community amenity by minimising noise-sensitive developments near airports, including through the use of noise metrics
- aircraft noise disclosure mechanisms.

The framework applies at all airports in Australia and guides planning and development around airports, including development activity that might penetrate operational airspace and/or affect navigational procedures for aircraft.

The table in Appendix 1 identifies the various guidelines of the NASF and identified roles and responsibilities for the implementation of these. As the guidelines are related to considerations that are largely off the Airport site, the implementation of these will be the subject of continued collaboration between SCAPL and Sunshine Coast Council.

Protection Surfaces

All hazards need to be controlled and prevented from affecting aircraft safety, with most of these being governed through municipal by-laws and local enforcement. However, particular attention must be paid to controlling development of buildings and temporary or permanent built structures under flight paths that could constitute obstacles to aircraft operations.

There are two forms of obstacle protection required. The first is OLS, established under CASA regulations, which identify airspace that should not be penetrated by any new obstacles, including buildings and construction cranes. The second concerns protection of the Airport's instrument operations by protecting the instrument obstacle assessment surfaces (OAS), established under Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS), from violation by any new obstacles.

For the major airports in Australia, airspace protection is provided through declaration of prescribed airspace, however, this does not apply to Sunshine Coast Airport. Consequently, protection of the Airport's OLS and PANS-OPS OAS relies upon the vigilance of SCAPL to monitor development applications for lands around the Airport, and upon Sunshine Coast Council planning officers to refer planning applications to SCAPL for assessment and advice where these affect lands within 15 kilometres of the Airport in the case of the OLS, and out to nearly 30 kilometres in the case of the OAS.

Where necessary and appropriate, the advice of CASA will be sought regarding the effects of a planning application on Airport certification, and of Airservices Australia regarding the implications for the Airport's instrument approach and departure procedures.

The OLS for the new runway is presented in Figure 4.1. The OAS for the PANS-OPS surfaces reflecting the new runway will be defined following the consideration and refinement of procedures currently underway through the Airservices Australia airspace change process.

Airspace surrounding the Airport must be protected.

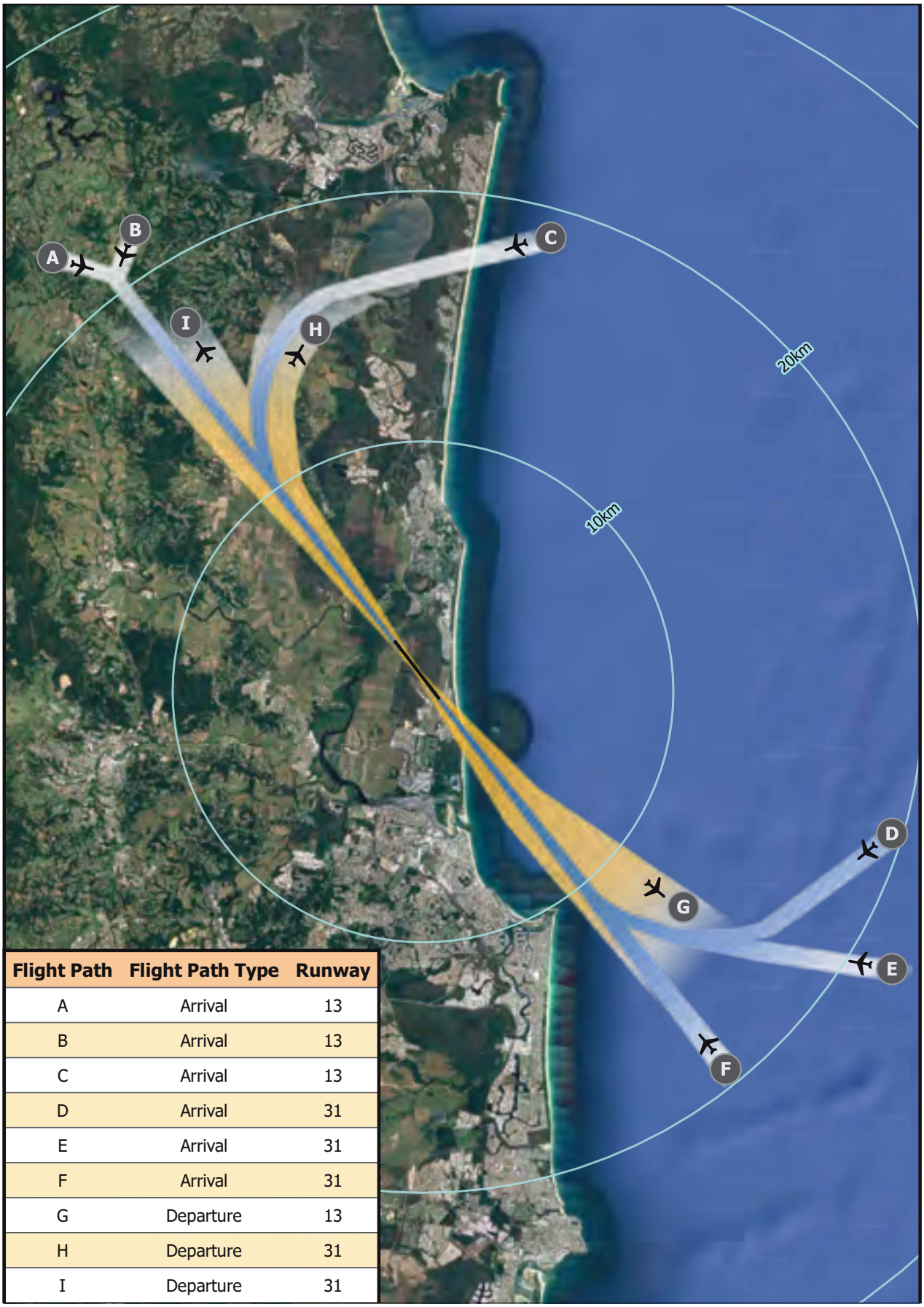
Figure 4.1: OLS for the new runway.

Proposed Future Flight Paths at Sunshine Coast Airport

The proposed flight paths depicted in the Master Plan have been developed by Airservices Australia to support the operation of the new runway based on the design concept described in the SCAEP EIS. Figure 4.2 shows the modes in which the new runway can be used, dependent on wind conditions. Most of the time, aircraft will use Runway 13, arriving over land from the north-west and departing over the ocean to the south-east. When the wind prevails from the west, aircraft will use Runway 31 to arrive over the ocean and take off over land to the north-west.

In undertaking the flight path design process, Airservices Australia identified some minor variations from the EIS in order to improve environmental outcomes and direct aircraft over less populated areas. These variations are incorporated into Airservices Australia's airspace change proposal and the associated public consultation process, which concluded on 30 April 2019. This consultation process provided a forum for feedback on the proposed airspace design. Airservices Australia received a significant number of submissions, which are being assessed as at the date of this Master Plan. Updates are available at **www.airservicesaustralia.com**

Safety is paramount at Sunshine Coast Airport.



Flight Path	Flight Path Type	Runway
A	Arrival	13
B	Arrival	13
C	Arrival	13
D	Arrival	31
E	Arrival	31
F	Arrival	31
G	Departure	13
H	Departure	31
I	Departure	31

Figure 4.2: Proposed flight paths for Runway 13/31.

Noise Management at Sunshine Coast Airport

SCAPL recognises the noise impact of the Airport's operation on its surrounding communities. Developments in the vicinity of Sunshine Coast Airport include residences, some which date from the mid 1970s to the mid 1990s. There are also areas of rural development, light industrial development and National Park areas nearby. Managing aircraft noise impacts through appropriate land use or built form decisions is critical.

SCAPL has implemented a *Fly Neighbourly Policy*, which seeks to manage Airport-based operations likely to cause noise disturbance. Airservices Australia has also published noise abatement procedures for the Airport, and the NASF encompasses a guideline for the management of aircraft noise as well.

Consistent with the conditions of approval for the SCAEP EIS, SCAPL will relocate general aviation activities (including helicopter operations) further away from adjacent residences to the future Aerospace Precinct in the Airport's west.

Aircraft noise management at the Airport is a shared responsibility between SCAPL, airlines and aircraft operators, Airservices Australia, federal agencies, the Queensland Government and Sunshine Coast Council. SCAPL also engages its Community and Aviation Forum (CAF) for community members and organisations, governments and other relevant stakeholders to discuss important topics related to the Airport's operation and development, including noise.

SCAPL will continue to work with each of these stakeholders to make aircraft noise information available to residents and prospective residents. SCAPL will specifically work with Sunshine Coast Council to reduce the proliferation of noise-sensitive developments within critical noise contours and emphasise the need for developments near the Airport to adhere to Australian Standard AS2021. SCAPL will also continue to implement its *Fly Neighbourly Policy*.

Aerial view of the Airport and surrounds in 1984.

Australian Noise Exposure Forecast

The system in use in Australia for managing aircraft noise emissions was originally developed by the FAA to provide a means of determining the expected level of aircraft noise complaints from residents of lands exposed to aircraft noise around airports. Known as the Noise Exposure Forecast (NEF), this was applied in North America to place a numerical value on the expected level of noise disturbance within bands of exposure to aircraft noise. These numerical values were then adopted by local authorities when determining the suitability of lands for certain types of use. Although superseded by other noise metrics in North America, the FAA's NEF system remains in use in Australia. It was modified for Australian application, with lower threshold levels for acceptable noise exposure adopted for land use control and impact assessment purposes. This is referred to as the Australian Noise Exposure Forecast (ANEF).

The ANEF is not a direct measure of noise emissions. It identifies contours of forecast noise exposure impact around an airport. These contours are modelled using the future aircraft flight schedule, types of aircraft, flight paths and frequency of aircraft operations occurring during the daytime, evening and at night.

Australian Standard 2021:2015 incorporates the ANEF, providing guidance on the types of development and levels of acceptability within a range of noise contours. The building site acceptability table from the Australian Standard is presented below.

The ANEF is largely a land use planning mechanism that will ultimately be incorporated within the Sunshine Coast Council Planning Scheme.

An ANEF drawing depicts a set of noise contours which has been formally endorsed by Airservices Australia. Contours which are calculated using the same methods as the ANEF but have not yet been formally endorsed are known as Australian Noise Exposure Concept (ANEC) contours.

An ANEC drawing has been produced for future operations on Sunshine Coast Airport's new runway based on forecast aircraft movements to 2040 and depicts a direct comparison with the ANEF contours produced as part of the SCAEP EIS, approved by the Queensland Coordinator-General in 2016.

Type of development	ANEF Zone		
	Acceptable	Conditionally Acceptable	Unacceptable
House, Home Unit, Flat, Caravan Park	< 20 ANEF	20 to 25 ANEF	> 25 ANEF
Hotel, Motel, Hostel	< 25 ANEF	25 to 30 ANEF	> 30 ANEF
School, University	< 20 ANEF	20 to 25 ANEF	> 25 ANEF
Hospital, Nursing Home	< 20 ANEF	20 to 25 ANEF	> 25 ANEF
Public Building	< 20 ANEF	20 to 30 ANEF	> 30 ANEF
Commercial Building	< 25 ANEF	25 to 35 ANEF	> 35 ANEF
Light Industrial	< 30 ANEF	30 to 40 ANEF	> 40 ANEF
Other Industrial	Acceptable in all ANEF Zones		

Table 4.1: Building site acceptability based on ANEF zones – AS2021:2015.

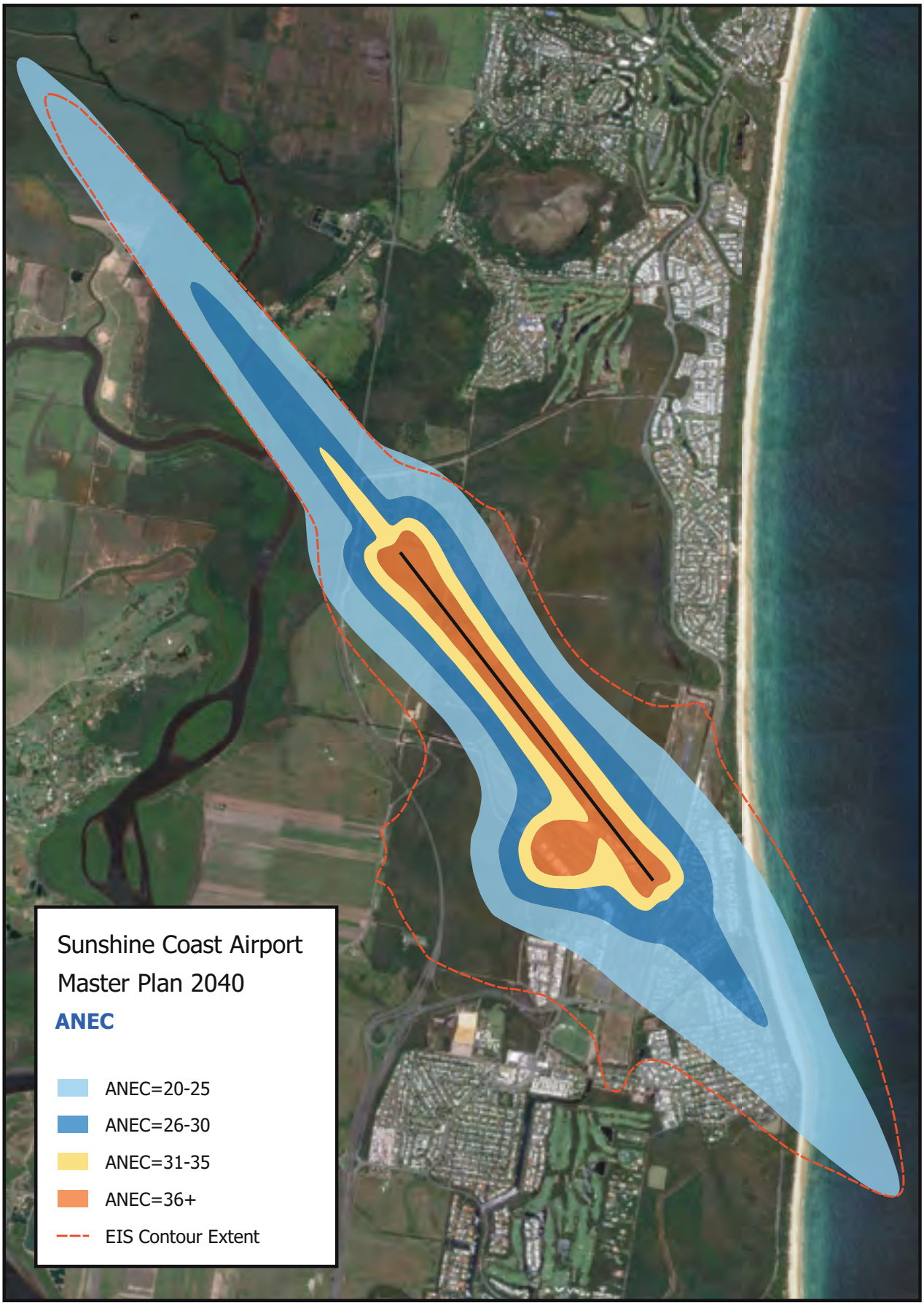


Figure 4.3: 2040 ANEC contours with EIS ANEF comparison.

'Number Above' Contours

In addition to the ANEF, a complementary system to measure aircraft noise was developed and is described within the Federal Government discussion paper *Expanding Ways to Describe and Assess Aircraft Noise*. The purpose of this complementary system is to illustrate the impact of noise in a format that can be more easily understood by focussing on the number of noise 'events' predicted to occur, rather than the ANEF's focus on land uses.

'Number Above' or 'N' contours represent the potential number of singular aircraft noise events forecast to occur above a certain decibel level within a given area. N70 values describe the number of noise events per day that exceed 70 dB(A); a level of noise which would be enough to disturb conversation. N60 values describe the number of events exceeding 60 dB(A); a level of noise considered to reasonably describe the number of events which may, in some circumstances, cause a sleeping person to wake up.

Based on the forecasts for Sunshine Coast Airport to 2040, N70 and N60 contours have been produced. Notably, the SCAEP EIS affirms that the overall noise impact on nearby communities will be reduced with the new runway configuration, with over 5,000 fewer dwellings impacted in 2040 compared to the current runway configuration.

Sunshine Coast Airport has a Fly Neighbourly Policy in place.

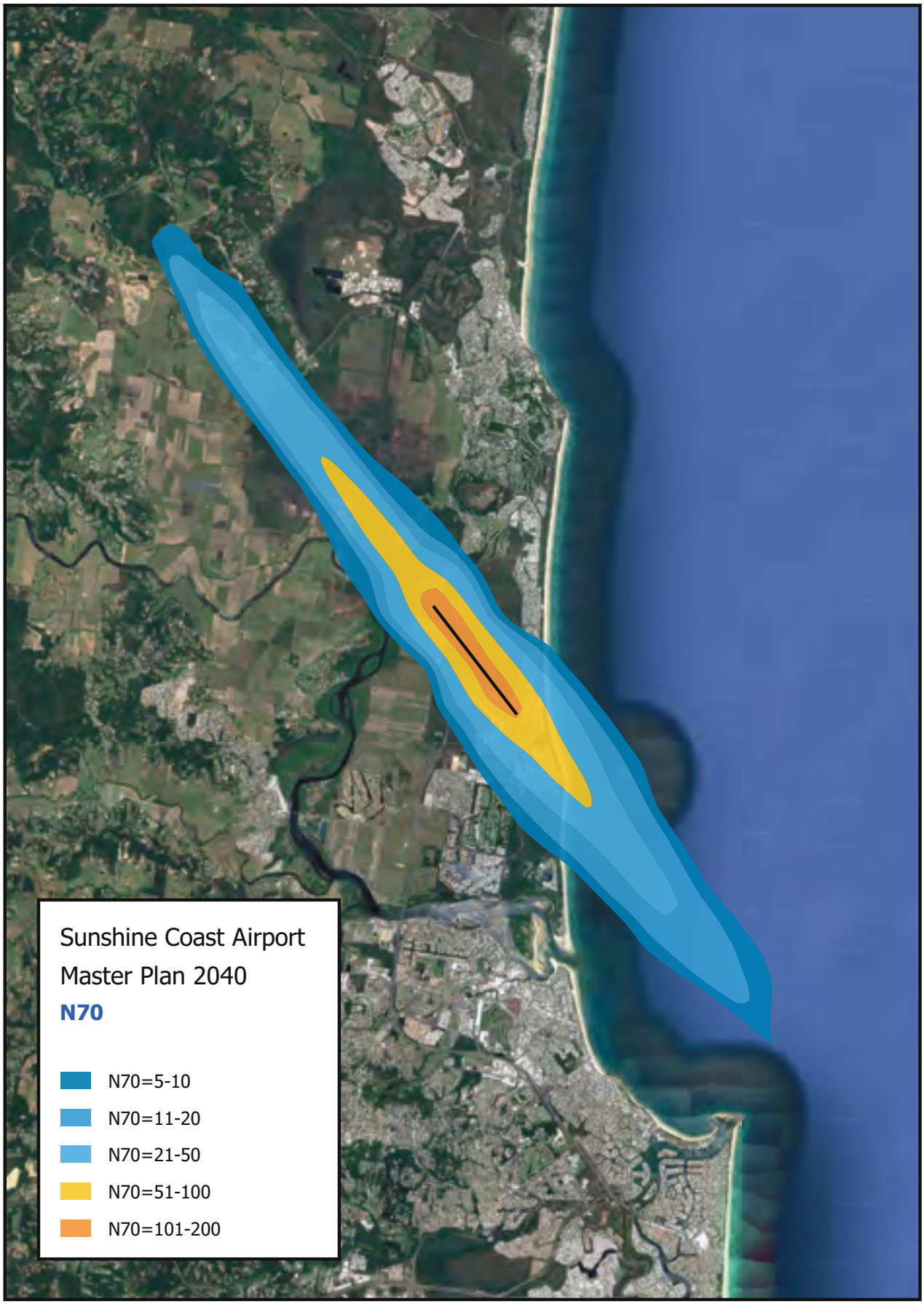


Figure 4.4: 2040 N70 contours.

Figure 4.5: 2040 N60 contours.


Not flying today?
Not flying today?

5 Terminal Plan

5. Terminal Plan – Chapter Essentials

With a visionary strategy, SCAPL will develop the terminal with the flexibility to respond to growth in the region and to reflect the identity of the Sunshine Coast.

TERMINAL EXPANSION

The Airport is the gateway to the Sunshine Coast, and the

terminal is the first impression

for many travellers. The design of the terminal will reflect the nature of the Sunshine Coast to visitors and provide a sense of homecoming to returning residents. The terminal will expand to meet forecast capacity demands.

READY FOR GROWTH

Internal refurbishments are planned to occur within the short term and will include an

upgraded domestic lounge

and security screening checkpoint, additional facilities to meet international requirements, as well as enhanced food and beverage and retail elements.

SENSE OF PLACE

The terminal's architecture and its various amenities and services will be

inspired by the region

and showcase the world-class food and beverages and other locally-produced merchandise the Sunshine Coast has to offer.

CHECKED BAGGAGE

Provision has been made to accommodate foreseeable expansion needs for the terminal building and associated infrastructure to 2040 and beyond. The period from

2025-2040 will see the terminal expand

to include additional departure lounge space, improved facilities for baggage handling and airline support services, and additional aircraft parking stands and aprons.

Existing Terminal Facilities

The current terminal building is located on the south-western side of the new runway and predominantly caters for domestic operations, with a 'swing gate' arrangement for seasonal international operations to and from New Zealand.

The Master Plan includes forecast capacity requirements for the terminal, factoring passenger volumes at peak times, and passenger flows through the terminal from check-in to security screening to the departure lounge.

Future Terminal Development Strategy

The Master Plan identifies the terminal and associated supporting infrastructure as a distinct area within the Airport site called the Gateway Precinct. The infrastructure, services and amenities needed to meet Airport user demands will be consolidated into a convenient and easily accessible location.

Corridors to the north and south of the current facility will be strategically preserved for expansion of the terminal, which will be developed in time and in accordance with forecast demand. Ground transport and car parking networks will be consolidated to allow for ease of access to the terminal.

The main objectives of the terminal development strategy are to provide:

- a safe, secure and reliable facility for end-to-end passenger facilitation in a convenient manner for all users
- an integrated and connected complete service offering, including retail, food and beverage and commercial needs that delivers a high-level passenger experience
- necessary infrastructure facilities in an operationally efficient manner for airlines and aviation support providers
- facilities that can be expanded in a flexible manner to meet forecast demand and passenger requirements
- efficient access to all transport modes for access in and out of the Airport
- sustainable and renewable initiatives that minimise the Airport's environmental impact wherever possible
- architecture, landscaping and wayfinding treatments that maintain the quality of the passenger experience and capture the Sunshine Coast look and feel.

Future Terminal Requirements

In determining capacity requirements for future terminal development, forecast passenger and aircraft movements have been correlated to the International Air Transport Association (IATA) Airport Development Reference Manual (ADRM). The IATA ADRM is widely adopted as a guideline for terminal development at airports globally and defines 'Level of Service' (LOS) based on busy period activity.

LOS is a framework for monitoring operational service performance of existing facilities and for planning terminal facilities using airport growth forecasts. It measures a range of factors including minimum service requirements such as space provision and waiting times. SCAPL has adopted the 'optimum' LOS standard for planning the Airport terminal development.

The requirement for expansion and investment in the terminal will be continually reviewed in response to forecast passenger and aircraft demand and will align with the objectives of the terminal development strategy.

Artist impression of terminal frontage.

Short-Term Development – 2019 to 2024

The immediate expansion plans for the terminal will develop in a southerly direction to address the forecast capacity demands of short-term passenger growth. Development will include:

- facilities to meet international requirements including border control
- improved domestic passenger facilities
- upgraded domestic security screening
- food and beverage outlet refurbishments
- upgraded retail offerings
- improved arrival hall and expanded baggage reclaim facilities
- improved wayfinding and customer service interface.

The short-term expansion to the south will align the terminal building with the wide-body aircraft parking bays being constructed as part of the SCAEP.

Medium-Term Development – 2025 to 2030

To meet forecast passenger demand of approximately 2.3 million people by 2030, it is proposed to expand the terminal in a northerly direction.

This will provide:

- enhanced passenger check-in facilities
- additional domestic departure lounge space
- improved airline ground handling support services
- expanded airline offices
- expansion of the dedicated baggage area.

The medium-term expansion to the north will align the terminal building with the narrow-body aircraft parking bays being constructed as part of the SCAEP.

Long-Term Development – 2031 to 2040

Expansion in the long term will continue in a southerly direction as passenger numbers grow from a forecast 2.3 million in 2030 to 3 million passengers in 2040.

The commercial aircraft apron is expected to provide sufficient capacity for peak period aircraft demand through the Master Plan horizon.

Ultimate Development – Beyond 2040

For the long-term sustainability of Sunshine Coast Airport, it is important to consider development at the Airport beyond the period of this Master Plan. Beyond 2040, the forecast suggests additional aircraft parking stands and aprons may be required.

Beyond 2040, the expansion of the terminal will continue in both the preserved northern and southern corridors. These areas have been identified in order to safeguard the land for terminal expansion and are subject to future planning exercises to determine the size and staging of this ultimate development.

The terminal will be inspired by the region.

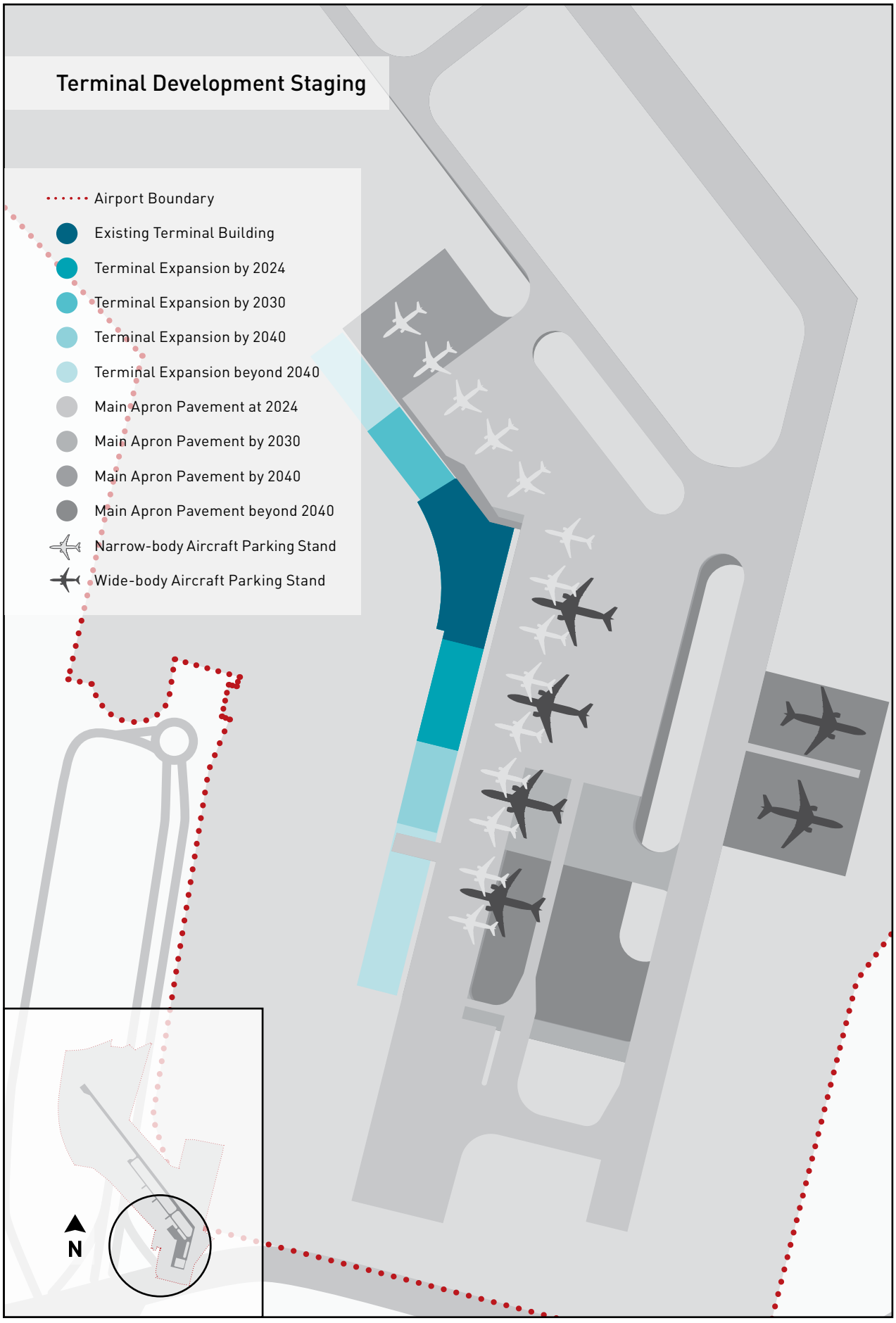


Figure 5.1: Staged terminal development plan.

6 Land Use Plan

6. Land Use Plan – Chapter Essentials

Land use planning strategies within the Master Plan support the vision for the Airport to be a catalyst for economic growth, attracting complementary businesses and employment to enhance the aviation operations at the Airport.

DEDICATED PRECINCTS

The Master Plan presents a land use strategy for the whole Airport site through the

creation of five dedicated precincts,

and utilises land not required for aviation purposes with ancillary businesses which contribute to the overall Airport business and regional economy.

AVIATION PRECINCT

The Aviation Precinct incorporates the areas required for provision of

key airfield services and infrastructure

at Sunshine Coast Airport.

GATEWAY PRECINCT

The Gateway Precinct encompasses the

expanded terminal complex,

as well as car parking and a range of relevant commercial users. The long-term outlook for this precinct may include complementary retail and office space, hotel accommodation, rental car servicing yards and a new jet fuel facility.

AEROSPACE PRECINCT

The Aerospace Precinct will be the new home for general aviation operations at Sunshine Coast Airport, with

more efficient access to the airfield

via direct connections to the new parallel taxiway. The development of this precinct demonstrates SCAPL's commitment to general aviation on the Sunshine Coast, providing significantly more land area to service general aviation operations and facilitate growth.

NORTH PRECINCT

The Airport North Precinct is situated on the north-eastern portion of the Airport site and offers potential for

ancillary developments

that complement the location, with proposed direct access off David Low Way.

WEST PRECINCT

The Airport West Precinct presents

considerable land use potential,

leveraging its proximity to the Sunshine Motorway and opportunities for development, including renewable energy generation.

Existing Airport Land Uses

Existing commercial developments at the Airport are accommodated in two main areas of the site: to the south of the terminal building between the general aviation apron and the Airport's main access road; and to the north-west of the passenger terminal building.

Immediately south of the terminal building, there are several aviation businesses with airside access. These include the fuel facility, an aircraft hangarage and maintenance business and flight training businesses. Other aviation-related businesses and utilities are located off Airport Drive. These include a skydiving operator, flight training academy, ride share holding areas and the storage and servicing yards for rental car businesses. The management office for SCAPL is located in the area adjacent to the Airport's main access road.

To the north-west of the terminal building there are several aviation businesses. These include aircraft maintenance, flight training, aircraft charter operations, fixed-base operator services, medical evacuation services and helicopter maintenance.

Future Land Use Plan Strategy

SCAPL has considered the Airport site in its entirety to determine the most appropriate use for the land. The Master Plan land use plan encompasses not only the aviation related areas of the Airport, but also the areas that are either not suitable for, or have limited benefit to, aviation operations. In the latter case, ancillary developments will have synergies that benefit and complement the traditional aviation activities of the Airport.

While the Master Plan identifies specific land areas for various uses, it is intended to be flexible with regard to the range of land uses and the timing of their development. This allows staged development to occur in an appropriate manner and demands for development to be met when required.

Land Use Precincts

The Master Plan outlines new precincts at Sunshine Coast Airport. This land use plan details potential activities within each precinct which will facilitate growth, shaping the Airport into the future.

The Master Plan outlines five dedicated precincts.

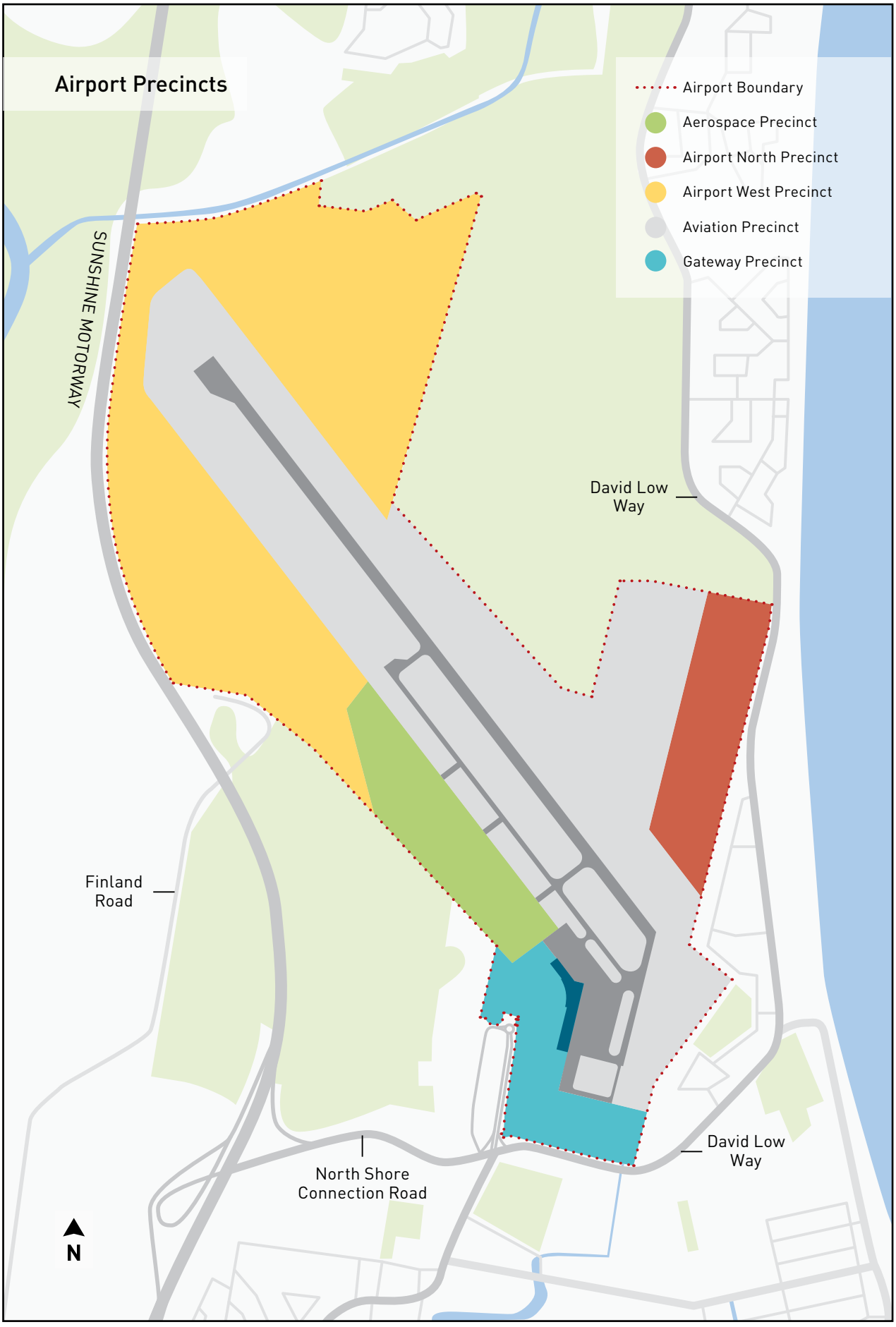


Figure 6.1: Sunshine Coast Airport land use precincts.

Aviation Precinct

The Aviation Precinct (212 ha) provides the core aviation and airside infrastructure to enable a safe, compliant and effective airport.

Development within the Aviation Precinct will be reserved specifically for air services as defined by the Sunshine Coast Council Planning Scheme. Land uses/activities within this precinct may include but are not limited to:

Aviation Precinct Land Use / Activity
Runway
Taxiways
Aprons
Navigational aids
Airfield lighting
Bureau of Meteorology facilities
Airport operational buildings
Air traffic control tower
Aviation rescue firefighting service (ARFFS)
Ground service equipment storage
Ground handling operations
Aircraft maintenance
Aircraft run-up bays
Airport and airfield security
Airside access roads
Elements of the drainage network
Conservation and vegetation corridors
Airfield buffer zones
Advertising

Table 6.1: Aviation Precinct land use/activities table.

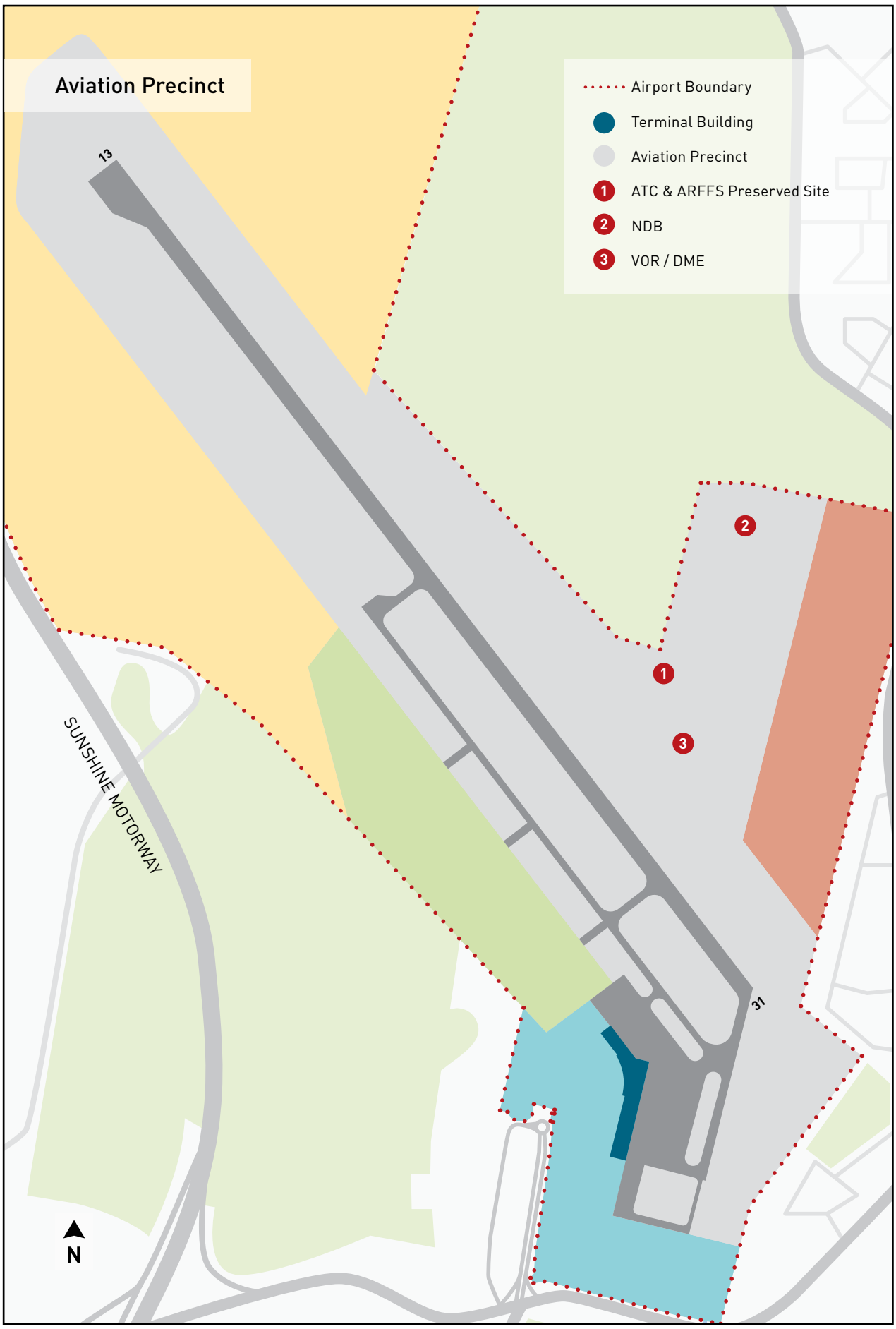


Figure 6.2: Aviation Precinct (see Appendix 2 for list of acronyms).

Gateway Precinct

The Gateway Precinct (30 ha) is the focal point of the Airport and will be the primary public access point. The precinct provides space for the terminal, associated car parking and a range of commercial uses aligned to enhance the activities that take place in the Aviation Precinct.

The Master Plan safeguards future development of the terminal by identifying growth corridors to the south and north of its current extent. The safeguarding of these corridors will facilitate the staged relocation of existing general aviation businesses to the Aerospace Precinct. The Jet A1 fuel facility will be relocated to the southern portion of the Gateway Precinct.

The Gateway Precinct will be used for a mix of aviation and ancillary purposes. It is anticipated that freight and logistics facilities will be located in the Gateway Precinct initially, but may need to be relocated to the Airport North or Airport West precincts if demand grows significantly.

Land uses/activities within this precinct may include but are not limited to the following:

Gateway Precinct Land Use/Activity
Access roads to the Airport
Public staff and tenant car parking
Public transport facilities
Passenger terminal
Car rental bays, storage and wash down areas
Food and beverage
Retail
Hangars
Office space
Childcare
Short-term accommodation
Tourism activities
Commercial
Airport fuel infrastructure
Service centre
Aviation support
Solar array
Freight and logistics facilities
Airline catering and food preparation
Motor vehicle and equipment sales yards
Ancillary uses adjoining Airport Drive and David Low Way
Advertising

Table 6.2: Gateway Precinct land use/activities table.

Figure 6.3: Gateway Precinct.

Aerospace Precinct

The Aerospace Precinct (29 ha) will accommodate fixed-wing and helicopter operations at the Airport, with improved infrastructure and airside access to provide greater opportunity for general aviation businesses to grow and prosper. This will address the requirement in the SCAEP EIS to migrate helicopter activities from the current southern general aviation area to the existing western general aviation area, which will be encompassed within the future Aerospace Precinct.

The consolidation of general aviation within this precinct will present several benefits, including:

- enhanced general aviation access to the new runway and parallel taxiway
- increased space available for future terminal expansion to the south
- relocation of helicopter operations away from adjoining residential development
- dedicated provision of a general aviation refuelling facility.

The Aerospace Precinct is also designed to achieve separation between fixed-wing and helicopter operations including:

- general aviation and small charter operations
- aircraft maintenance and narrow-body development (e.g. maintenance and hangarage)
- helicopter operations.

Land uses/activities within this precinct may include but are not limited to the following:

Aerospace Precinct Land Use/Activity
General aviation fixed-wing operations
General aviation helicopter operations
Aircraft maintenance
Aircraft hangarage
Workshops
Laboratories
Aviation-related businesses
Aviation support
Warehousing
General aviation fuelling facility
Medical evacuation/rescue base facilities
Car parking
Commercial

Table 6.3: Aerospace Precinct land use/activities table.

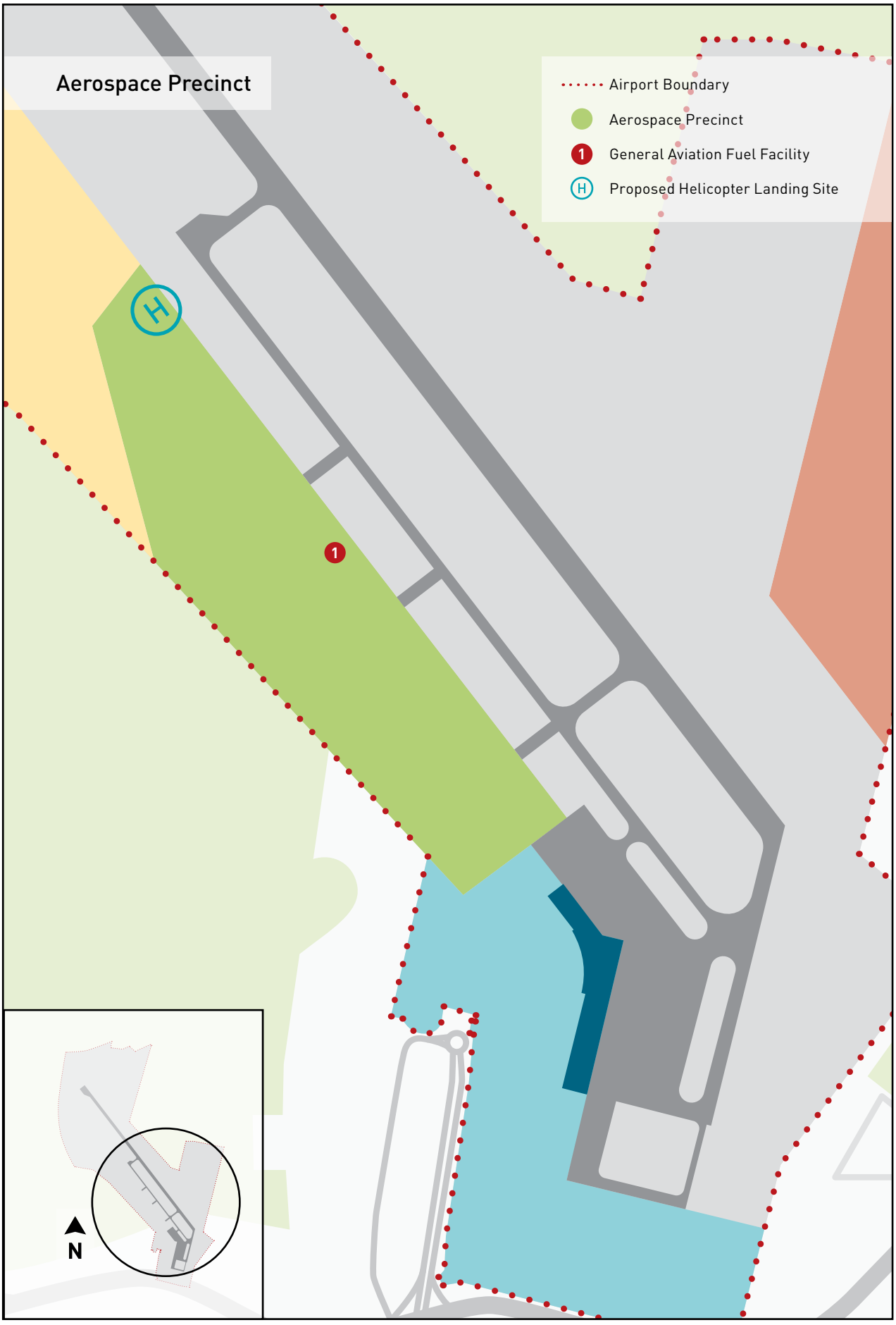


Figure 6.4: Aerospace Precinct.

Airport North Precinct

The Airport North Precinct (28 ha) is ideally located with efficient access to David Low Way and the Sunshine Motorway.

It is also well positioned to take advantage of its proximity to the beach and nearby tourist facilities.

Land use, activity and developments should complement the natural amenity of this location and demonstrate harmonious urban design and an appropriate scale.

Future ancillary activities have been identified including high-quality public domain areas, retail and food and beverage outlets near Marcoola Beach consistent with existing and proposed tourism development in the immediate locality.

Initially, freight and logistics facilities will be established in the Gateway Precinct but may be moved to either the Airport North or Airport West precincts in the medium to long term if there is a significant growth in demand for freight.

If a move is required, additional assessment will be undertaken to determine whether freight facilities would be best positioned in the Airport West or Airport North Precinct.

While detailed traffic analysis would need to be undertaken, SCAPL has identified an option for articulated vehicles to use a dedicated network of internal Airport roads via the Gateway Precinct, reducing impacts on the north east section of David Low Way.

Land uses/activities within this precinct may include but are not limited to the following:

Airport North Precinct Land Use/Activity
Logistics
Cold storage
Warehousing and distribution
Showrooms and workshops
Food and beverage
Minor complementary retail
Public domain/open space
Freight facilities
Storage facilities
Vehicle storage
Commercial
Car parking
Solar array
Advertising

Table 6.4: Airport North Precinct land use/activities table.

Figure 6.5: Airport North Precinct.

Airport West Precinct

The Airport West Precinct (158 ha) is an important land parcel within the Airport site which has significant frontage and high visibility from the Sunshine Motorway. It is in the north-west of the Airport site and wraps around the western end of the new runway. Approximately one-third of the precinct is dedicated to a vegetation corridor and environmental offset areas required under the SCAEP EIS approval.

The existing Finland Road overpass presents opportunities for direct access to the site, with potential to leverage proximity to the Sunshine Motorway. The precinct has the capacity to provide numerous development opportunities, subject to resolution of existing flooding challenges. In the short term, the site is suitable for several flood-resilient activities. In the medium to longer term, the precinct may be suitable for freight and logistics activities, subject to further analysis.

Land uses/activities within this precinct may include but not be limited to the following:

Airport West Precinct Land Use/Activity
Mixed use
Commercial
Conservation and vegetation corridors
Maintenance/workshop
Freight
Logistics
Laboratory
Storage
Solar array
Car parking
Aviation support
Advertising

Table 6.5: Airport West Precinct land use/activities table.

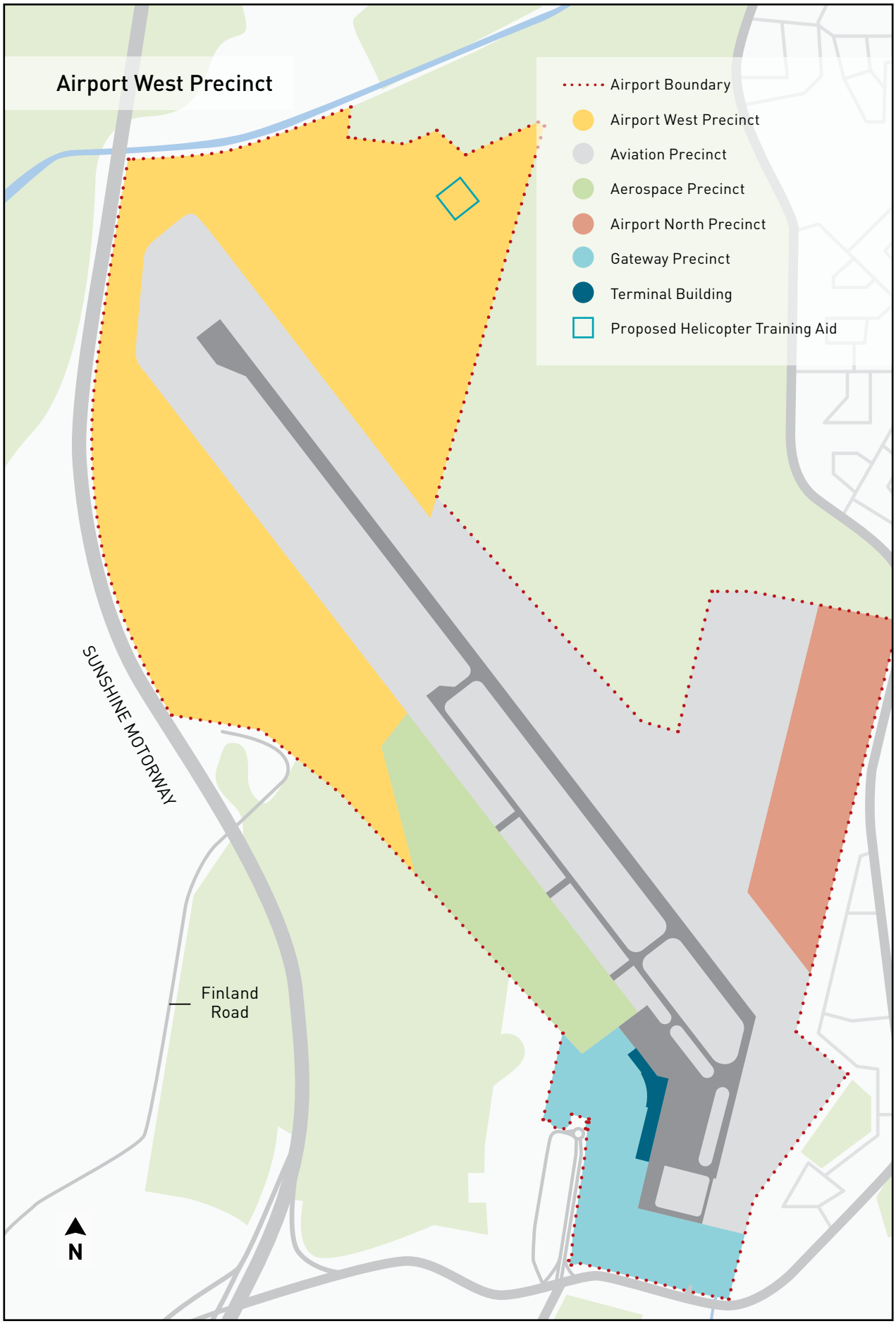


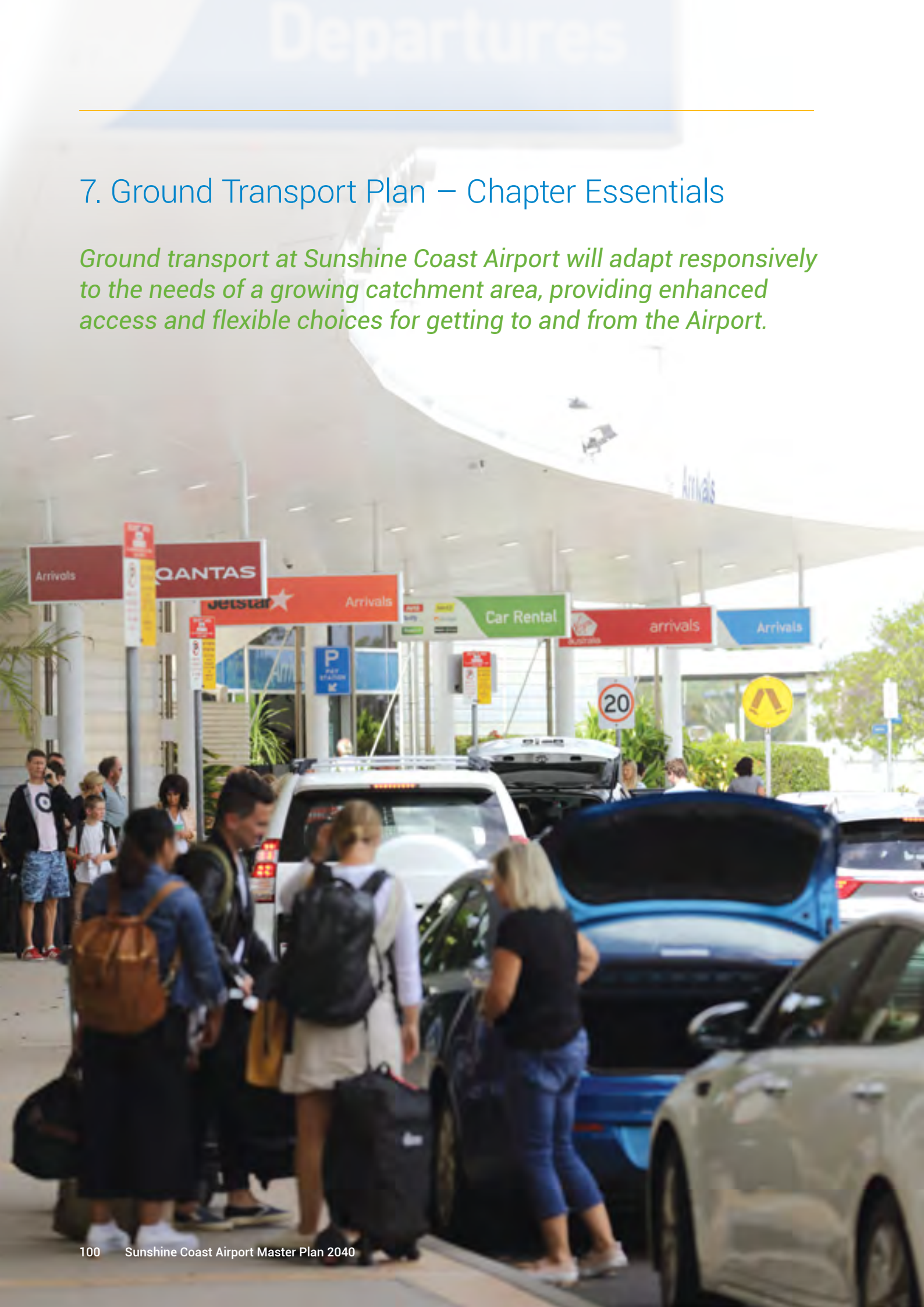
Figure 6.6: Airport West Precinct.


SHUTTLE BUS
TO YOUR DOOR
CON-X-ION
SUNAIR
Alamo
enterprise
National
Thrifty Car Rental
Hertz
Alamo
Debit Card Policy

7 Ground Transport Plan

7. Ground Transport Plan – Chapter Essentials

Ground transport at Sunshine Coast Airport will adapt responsively to the needs of a growing catchment area, providing enhanced access and flexible choices for getting to and from the Airport.



ROAD NETWORK

The capacity of the internal road network and points of

access to the airport

will be enhanced to accommodate additional traffic demands.

AIRPORT ACCESS

Public car

parking will be expanded

as well as rental car ready bays and revised arrangements for taxis, ride share and private bus operators.

PUBLIC TRANSPORT

SCAPL supports local government

improvements to public transport,

in terms of the frequency and type of connections, and the possibility of a future light rail connection to the Airport.

Existing Ground Transport Arrangements

Ground transport arrangements at Sunshine Coast Airport facilitate a range of private and public transport modes. These include private vehicles, rental vehicles, taxis, buses, ride share vehicles, hotel transfers and tour operators. In addition to passenger transport, the road system at the Airport accommodates goods delivery, waste and recycling collection and aviation fuel delivery vehicles.

On average, 3,000 vehicles per day enter the Airport, including passengers, staff working at the Airport and service vehicles.

Road Networks

LOS within a road network refers to operating conditions encountered by people driving, such as speed, trip time, interruptions, interference, freedom to overtake, ability to manoeuvre, safety, comfort, convenience and vehicle operating costs.

The intersection at Airport Drive and Kittyhawk Close currently operates with a road network LOS A, which indicates a free flow of traffic where drivers can travel at their own free speed with little interference. Traffic modelling indicates the roundabout will cater for 2040 forecast traffic volumes.

While it is expected that the intersection at Airport Drive and Kittyhawk Close will meet the forecast demand through the Master Plan horizon, the entire Airport road network will continually be assessed against demand to maintain the LOS.

Pick-Up/Drop-Off Zone

The passenger pick-up and drop-off zone is located on Friendship Avenue, adjoining the terminal building. It is approximately 85 metres long and has capacity for approximately 12 to 14 passenger cars.

The section of Friendship Avenue adjoining the pick-up and drop-off zone is used by a mix of light vehicles, small commercial vehicles, heavy vehicles, mini-buses, coaches and pedestrians of varying age and mobility.

Public Transport

The Airport is serviced hourly by one bus service running between Maroochydore and Noosa. The existing mode share for public transport at the Airport is low but may be improved with additional or higher frequency services to accommodate growing passenger numbers.

Car Parking

The Airport has three public parking areas:

- Short Stay (open air) – 318 bays total, divided for public use, rental car ready bays and staff
- Long Stay (open air) – 168 bays
- Long Stay Plus (weather coverage) – 170 bays.

Pedestrian Connectivity

There is an established network of concrete pedestrian footpaths throughout the Airport site. Within the Short Stay car park, there is a central pedestrian spine which provides a visible connection to the terminal and is partially weather protected. Pedestrian connectivity between the Short Stay car park and the terminal building is provided with priority zebra crossing locations across roads at key locations on Friendship Avenue.

Figure 7.1: Public parking areas at Sunshine Coast Airport.

Sunshine Coast Airport as a Transport Hub

Future Ground Transport Innovation

The future ground transport strategy for the Airport is based on current Australian practices, however SCAPL will remain responsive to innovation in ground transport technologies.

The convergence of technology with the automotive industry has raised considerable interest in the development of autonomous, or self-driving vehicles. Several major automotive manufacturers have concept vehicles under testing or have announced research projects to bring autonomous vehicles to market in the short term.

During the planning horizon of the Master Plan, it is expected that manufacturers will bring autonomous vehicles to market in a way that will become a regular part of the transport network. It is also expected that authorities such as the Department of Transport and Main Roads will have resolved the necessary legislative environment to enable these vehicles to operate safely.

This technology has the potential to change how people will make their journey to and from the Airport. Just as ride share services have enabled easier and cheaper transport, autonomous vehicles have the potential to reduce parking demand at the Airport. SCAPL is aware of the potential that this technology could bring and will monitor its progress and plan accordingly to facilitate the transport needs and preferences of people accessing the Airport.

Road Networks

Airport traffic in 2040 is estimated to generate approximately 9,000 vehicle trips per day. This represents a three-fold increase over present levels, and the Master Plan proposes an enhanced internal and external road network to address this growth.

The proposed road network access points require further traffic analysis and modelling to confirm capacity needs and intersection design.

Gateway Precinct Access

As the terminal grows to meet forecast demand, the terminal frontage road network within the Gateway Precinct will need to evolve to reflect changes in transport modal split and maximise operational efficiency. Pick-up/drop off bays will be increased during the Master Plan period, and the evolution of the Gateway Precinct will embrace the latest safety and security developments in its design.

A new intersection on David Low Way is required to provide additional access to the Gateway Precinct and will be designed to cater for heavy vehicles, providing an alternative heavy vehicle connection into the Airport. The proposed configuration consists of an extension of the dual lanes on David Low Way from the existing signalised intersection to the new intersection.

As demand may require freight and logistics facilities to be moved within the Airport, provision may be made for articulated vehicle access via an internal road network to a potential freight facility in the Airport North Precinct.

The Master Plan proposes an enhanced internal and external road network to address growth.

Figure 7.2: Proposed Gateway road network.

Airport North Precinct Access

In the future, realignment of David Low Way between the intersection at Turtle Beach and north of Petrie Avenue would open up the Airport North Precinct to enable improved economic outcomes for the area.

A new intersection will be required on David Low Way to provide access into the precinct. If freight and logistics facilities outgrow the Gateway Precinct and move to the Airport North Precinct in the medium to long term, articulated vehicle access may be provided via a dedicated network of internal Airport roads.

Airport West Precinct Access

An additional access point to the Airport is desirable to reduce traffic on the local road network and increase capacity of the internal road network to accommodate future growth, particularly if freight operations are relocated to this precinct in the medium to long-term. Upgrading the Finland Road overpass into a connection to the Airport from the Sunshine Motorway would address these needs.

Internal Airport Roads

The Airport's internal road network will be enhanced and upgraded in response to growth in traffic volumes during the Master Plan period. These enhancements may include an upgrade to the main entry on Airport Drive; a new north/south road running to the west of Friendship Avenue, providing a direct connection to the Aerospace Precinct and reducing traffic through the terminal area; and widening of key intersections.

Transport options and access to the Airport are considered to accommodate future growth

Figure 7.3: Proposed Airport North road network.

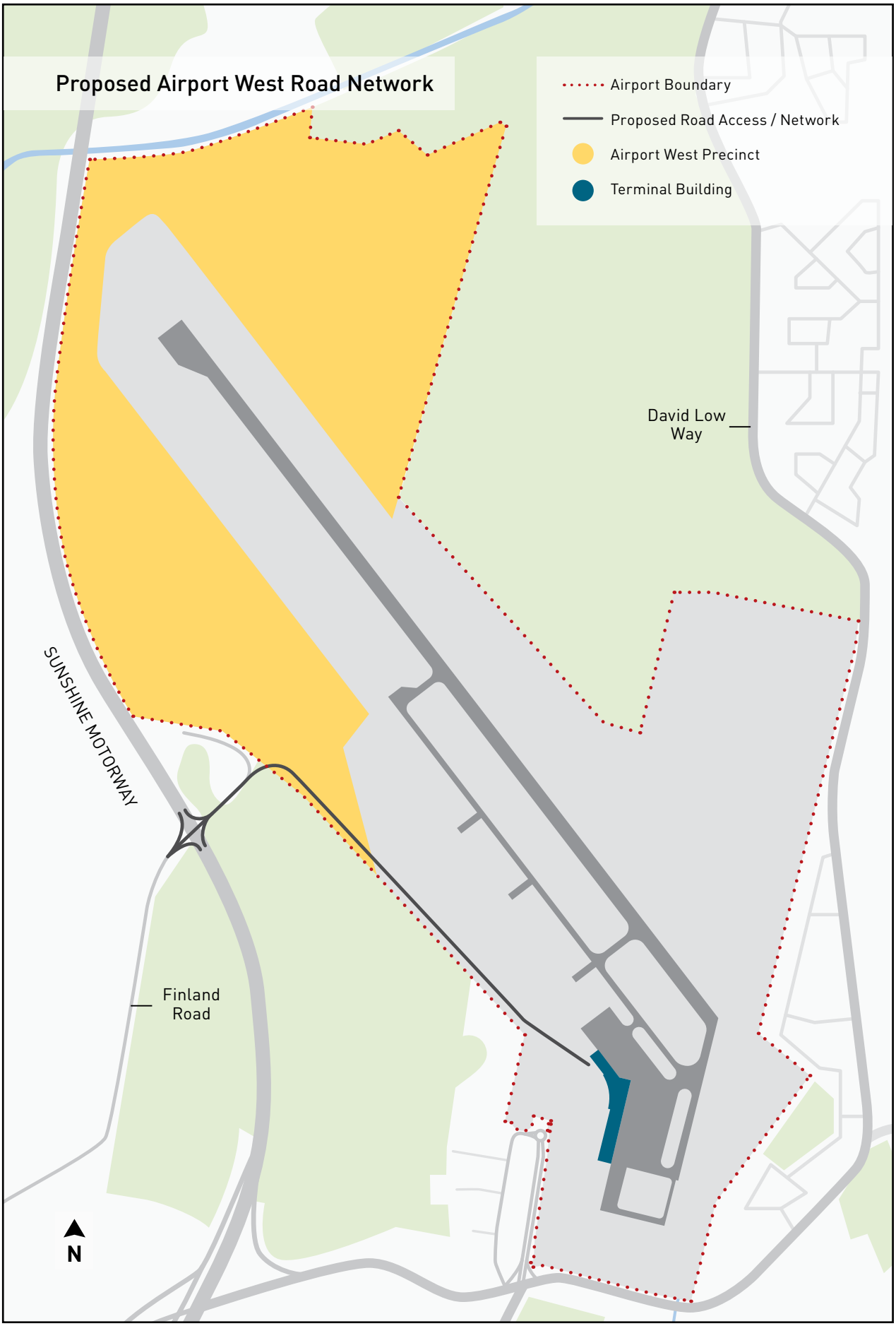


Figure 7.4: Proposed Airport West road network.

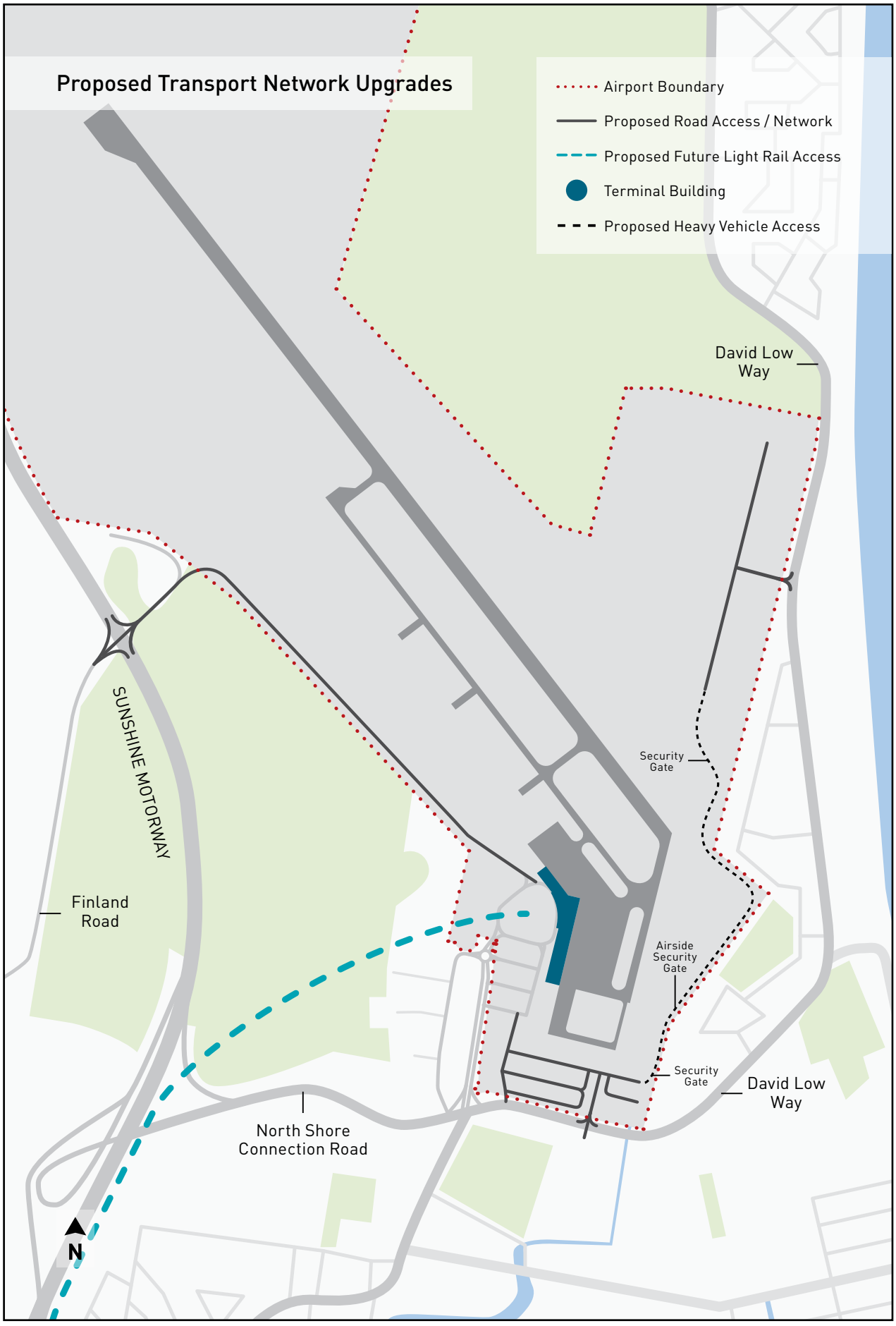


Figure 7.5: 2040 ground transport at Sunshine Coast Airport.

Public Transport

Public transport connections servicing the Airport will improve over the life of this Master Plan. SCAPL will collaborate with local and state agencies to deliver seamless public transport solutions.

Connecting SEQ 2031 – An Integrated Regional Transport Plan for Queensland, published by the Department of Transport and Main Roads, identifies Sunshine Coast Airport as part of the 2031 Urban Link bus network concept for South East Queensland. This network is a connected link of high frequency bus routes.

The current South East Queensland Regional Plan 2017, *Shaping SEQ* outlines the intent of the State Government to develop high-frequency public transport connections between various nodes within the Sunshine Coast, including between the Maroochydore city centre and the Airport, and the Airport and Noosa.

There are numerous options for rail access to the Sunshine Coast being investigated by Sunshine Coast Council and the Queensland Government. These rail connections will provide enhanced connectivity across the Sunshine Coast and will ultimately connect to Sunshine Coast Airport. The Master Plan preserves a corridor for rail connection into the Airport.

SCAPL recognises the value of diversification of transport options providing access to and from Sunshine Coast Airport, in keeping with the desire to minimise the reliance of traditional motor vehicle access to the Airport. SCAPL is a strong supporter of the introduction of light rail to the Airport providing a fast, clean and efficient link to Maroochydore and on to broader destinations within the region. Both heavy and light rail infrastructure is planned for the transformation of the region, and a connection to Sunshine Coast Airport is a critical link in the effective public transportation vision for the region.

Artist impression of elevated light rail station at the Airport.

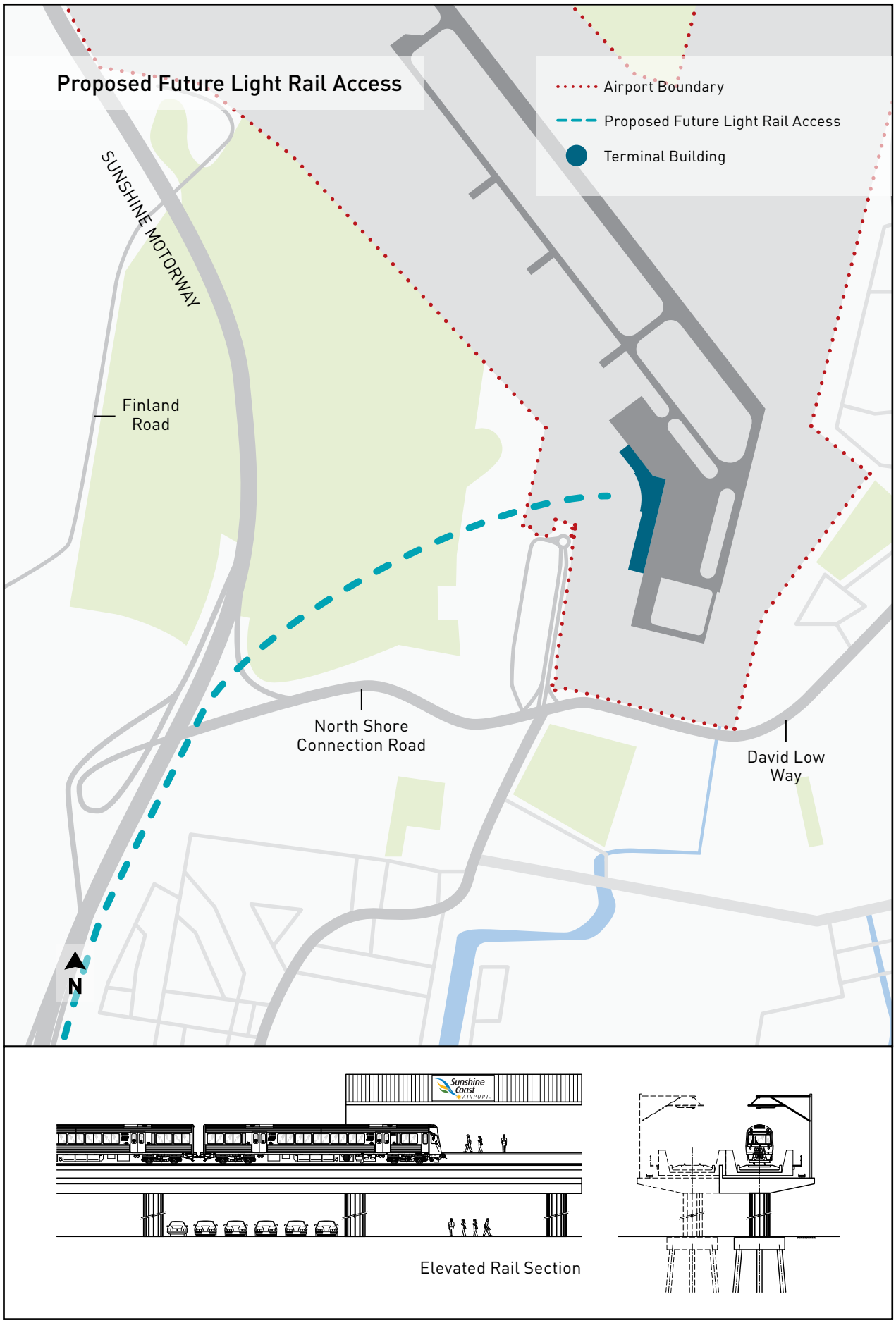


Figure 7.6: Proposed future light rail corridor to Sunshine Coast Airport.

Car Parking

Car parking is a very important part of the development of an airport. Car parking areas at Sunshine Coast Airport will be expanded incrementally to accommodate forecast growth. Parking demand will be reviewed regularly to account for changes in future mode share of private vehicles and the potential impact of new technologies such as ride share services and autonomous vehicles which may influence parking demand. As the demand for car parking changes, the facilities provided at Sunshine Coast Airport will evolve, providing enhanced product diversification.

Expansion of the car parking areas will be required in the short-term planning period of this Master Plan. The reconfiguration will increase parking capacity by 400 spaces, including parking for the public, rental cars and staff. This will occur within three stages by 2022:

- Stage 1 – expansion of current Long Stay car park
- Stage 2 – construction of a new Long Stay car park
- Stage 3 – relocation of rental car ready bays.

The short-term reconfiguration strategy is expected to significantly increase parking availability, reduce traffic congestion in front of the terminal and provide increased parking for staff at the Airport.

Following this expansion, a range of options will be investigated if additional car parking is required based on demand. These options might include at grade car parks, multi-storey car parks and remote car park areas.

Pedestrian Connectivity

Sunshine Coast Airport will provide for pedestrian connectivity to cater for both access to the terminal, as well as amenity for Airport staff throughout the Airport site.

Pedestrian access routes from the car parks to and from the terminal to the various transportation modes will be transformed over time, in line with increased demand. The pedestrian facilities will provide an exceptional journey through a mix of café piazza style areas, natural greenery and open spaces, and will be consistent with the Sunshine Coast look and feel.

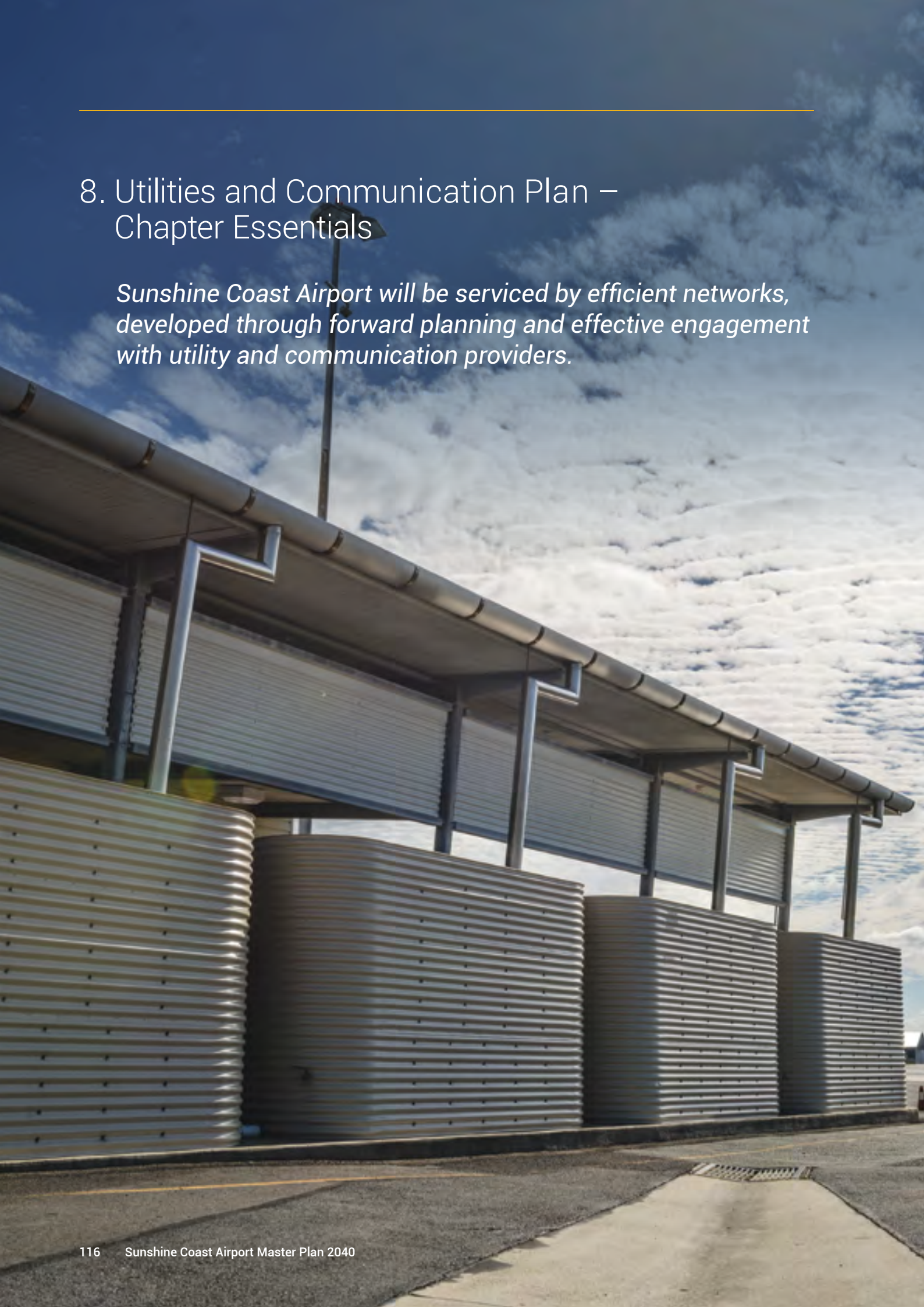
Pedestrian access routes will be transformed over time and in line with increased demand.

Figure 7.7: Medium term car parking reserve

8 Utilities and Communication Plan

8. Utilities and Communication Plan – Chapter Essentials

Sunshine Coast Airport will be serviced by efficient networks, developed through forward planning and effective engagement with utility and communication providers.



UTILITIES INFRASTRUCTURE

SCAPL will work with providers to plan for

effective utilities infrastructure

to support the growth of the Airport.

RENEWABLE ENERGY

SCAPL will explore options to develop

renewable energy supply sources

within the Airport site, including solar power generation.

COMMUNICATION NETWORKS

The Airport and the International Broadband Submarine Cable will

improve connectivity for business

in the region.

Existing Utilities and Communications

An effective utilities network is integral to the operation of Sunshine Coast Airport. Development will be planned to accommodate future capacity requirements based on a staged strategy for electricity, gas, water, sewerage and communications.

Electricity

Current electricity consumption across the Airport is in the order of 2.4 gigawatt hours per annum. The electrical distribution to the Airport is provided by Energex via a series of transformers that are supplied at medium voltage and distributed at a low voltage.

There are five generators supplying electricity to the terminal, ATC tower, a future development site within the Gateway Precinct and general aviation operations north of the terminal building.

The external electricity supply is supplemented by two on-site generators. As part of the SCAEP, an additional generator will be provided.

Gas

Liquefied petroleum gas, or LPG, is currently supplied to the terminal in bottled form, as there is no gas reticulation network on the Sunshine Coast.

Water

The existing water supply to the Airport is supplied from the east via a connection to two Unitywater potable water mains, and from the west with a connection to a larger water trunk main.

Sewerage

Unitywater is responsible for the supply of sewer services on the Airport site. Due to the relatively flat nature of the land at the Airport, the sewerage network includes multiple sewage pump stations connecting shorter runs of gravity sewers.

Near the ARFFS station is a sewage pump station that receives pumped flow from the east and gravity flow from a sewer in the north. The station connects into a gravity sewer which conveys sewage flow further south.

There is a sewage pump station on Friendship Avenue which receives inflow from gravity sewers servicing the existing sites west of the terminal and then pumps to a gravity sewer.

Communications

The Airport is connected to the Telstra cable network and the National Broadband Network via a pit and conduit system.

Service for several mobile telecommunications providers is available at the Airport.

The terminal building is served by the Airport's wireless internet, available to both Airport staff and passengers.

Australia Post provides a post box at the terminal, which can be used by passengers and businesses and is cleared daily.

Future Utilities and Communications Plan

SCAPL recognises the critical nature of utilities in the successful operation of the Airport and will work closely with providers to facilitate the timely development and upgrading utilities to meet demand.

Electricity

As development of the Airport progresses, electrical energy demands will increase. Where possible, electricity demands will be offset by continuing the energy efficiency measures successfully implemented at Sunshine Coast Airport. Measures such as these are a strategic priority of SCAPL and supported the Airport in becoming the first carbon neutral airport in Australia in 2017.

SCAPL will work with electricity network providers and retailers to explore options for developing renewable energy supply sources within the Airport. Solar power generation would appear to be the most practical option in this regard.

SCAPL will continue to explore the feasibility of rooftop solar generation and battery storage to meet a proportion of the demands of the terminal building, car parks, street lighting and the Airport management office. Rooftop solar will also be considered in the context of any new covered car parking.

The advantages of this approach are:

- weather protection of the car park
- reducing reliance on fossil fuels
- reducing reliance on, and cost of, purchasing externally-generated electricity
- operational resilience
- reducing reliance on back-up generators
- reducing the Airport's carbon footprint.

In the longer term, SCAPL will work with the network provider to establish a solar array in the Airport West Precinct, recognising that the project will be dependent upon the availability and cost effectiveness of a connection to high-voltage network of transmission lines. This Master Plan identifies allocated space in the Airport West Precinct for a solar array of sufficient size to address forecast demand.

Gas

SCAPL supports government and industry development of a reticulated gas network on the Sunshine Coast, in consideration of the benefits such a network would bring to the wider community.

Sunshine Coast Airport seeks to leverage opportunities for solar energy generation.

Water

The development of the Airport in accordance with the Master Plan will require expansion of the potable water network within the Airport site to service each of the precinct areas. The existing potable water trunk network outside the Airport is expected to be sufficient for the increased demands, however, this will require a confirmed servicing plan to be developed in collaboration with Unitywater.

For the development of the Aerospace Precinct, it is proposed that the existing main will be extended. Additional flow and pressure can be delivered by extending the main further in Friendship Avenue to create a loop main connection to the existing water trunk main in Finland Road.

The ARFFS station will continue to be supplied from water mains to the east of the Airport site, and the proposed maintenance and support areas would be supplied from the existing branch main in Boundary Crescent. The Airport North Precinct will be supplied by a new branch off the existing water trunk main.

Sewerage

Development proposed within the Master Plan will require expansion of the internal Airport sewerage network to service the precincts. However, the existing trunk sewerage network adjacent to the Airport is expected to be sufficient for the increased demands, subject to preparing a development servicing plan in concert with Unitywater.

The existing gravity sewer connection to the existing sewage pump station will continue to service the Airport development.

With the development of the Airport West Precinct, it is proposed that new gravity sewers and a new sewage pump station will be required. When increased terminal flows are coupled with the additional flow from the Airport precincts, the existing external Airport Drive sewage pump station will also require upgrading.

The development of the Airport North Precinct will require realignment of the existing drainage corridor with a view to improving the efficiency of land use.

Communications

The Airport has a diverse range of communication networks on the National Broadband Network, offering efficient and high-speed connectivity and retailer choice to tenants and stakeholders.

SCAPL recognises the opportunities associated with the Sunshine Coast International Broadband Submarine Cable project that will transform the region, maximising the next generation of communications infrastructure in terms of capacity, connectivity, capability and value for money.

The Sunshine Coast will deliver Australia's fastest telecommunications connection to Asia and second fastest connection to the United States when the International Broadband Submarine Cable project is completed in 2020. Data-intensive businesses, global technology companies and internet retailers will value the competitive advantage of a base on the Sunshine Coast. This will only be enhanced by the physical connectivity, quality user experience and suite of services, including freight capacity, facilitated through Sunshine Coast Airport.

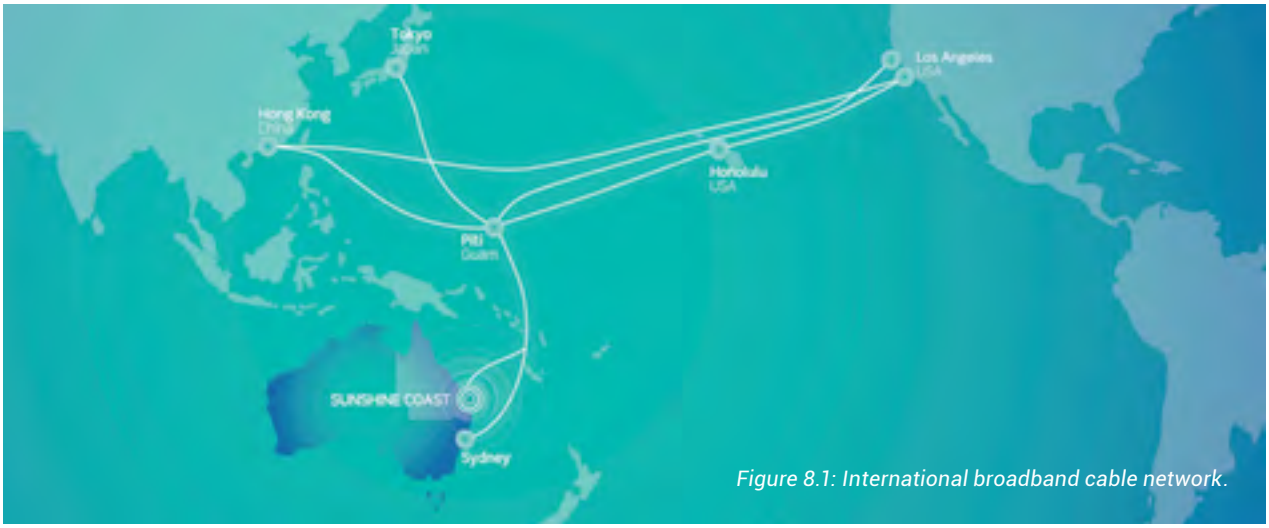


Figure 8.1: International broadband cable network.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9 Environment Strategy

9. Environment Strategy – Chapter Essentials

Sunshine Coast Airport became Australia's first carbon neutral airport in 2017, and SCAPL will continue to take ambitious steps toward sustainability in operations, reflecting the values of the company and the community.

RESPONSIBILITY

SCAPL proactively

manages potential sources of environmental impact

through its Environmental Management Plan.

CARBON NEUTRAL

Sunshine Coast Airport is

Australia's first carbon neutral airport,

and SCAPL intends to maintain this status into the future.

SUSTAINABILITY

SCAPL will continue to

lead the way with environmental initiatives,

including composting, rain water tanks and solar energy generation.

Environmental Management Objectives

In October 2017, an Environmental Policy was adopted which applies to SCAPL's Board, management and all staff, setting the foundation for environmental management at the Airport. The policy establishes the approach to environmental management at the Airport and outlines the guiding principles and framework by which SCAPL fulfils its corporate governance responsibilities relating to environmental management and compliance.

Through its Environmental Policy, SCAPL has committed to:

- establishing a culture of environmental sustainability, including defining and documenting responsibilities and processes required to integrate environmental sustainability into all facets of the business
- linking environmental management to other regulatory compliance reporting
- operating, managing and developing the Airport in an environmentally responsible manner
- complying with relevant environmental legislation
- identifying and managing significant environmental impacts on the Airport
- setting targets to minimise SCAPL's environmental impacts and prevent pollution
- continually improving environmental management, consequences and activity performance
- sustainably managing resources
- consulting with the community, government agencies and other stakeholders
- promoting SCAPL's commitment to sustainable environmental management to employees, tenants, neighbours and the Sunshine Coast community at large.

To implement the Environmental Policy, an EMP has been developed in consultation with an environmental consultant. The EMP describes Sunshine Coast Airport's environmental management system, which incorporates relevant standard operating procedures and outlines relevant environmental risks, impacts and respective mitigation measures. The EMP also addresses environmental values to be regarded in the planning and operation of the Airport, as well as implementation and compliance considerations.

The EMP will be reviewed periodically as required to assess its continued relevance to development of the Airport and surrounding land; new information; the results of ongoing monitoring of environmental indicators; changes to legislation; and evolving community expectations.

Consultation with a representative from the Sunshine Coast Environment Council reinforced the interest in understanding how closely the Master Plan aligns with the SCAEP EIS. The environmental initiatives on the following pages include management actions, performance requirements, monitoring and reporting deliverables directly associated with the SCAEP EIS, which will be maintained by SCAPL following the handover from Sunshine Coast Council on completion of the project.

Environmentally-Significant Areas

The Airport occupies a 457-hectare site within the north-east of the Maroochy River floodplain. The site is generally flat and slopes gently to the south-west towards the Maroochy River. Much of the site was originally cleared for the purposes of sugar cane farming and, from 1958 onwards, the development of the Airport. A relatively small area of remnant and regrowth vegetation was cleared in 2017 to facilitate the construction of the new runway, as approved via a bilateral State and Commonwealth EIS process in 2016.

Areas of Wallum heath remain at the end of the new runway and within the former Airservices Australia land to the west of the existing runway. In the west of the Airport site adjacent to Finland Road, areas of closed and open heath vegetation communities remain.

The Airport and the lands generally to the east, north-east and south of it are relatively urban in nature, while land north and west of the site includes the Sunshine Motorway, the northern and southern components of Mt Coolum National Park and Marcoola Bushland Reserve.

The Airport is underlain by two aquifers separated by indurated sands often referred to as 'coffee rock'.

The relatively impervious nature of coffee rock combined with the generally flat topography has resulted in the two aquifers having distinctly different chemical characteristics. The lower aquifer is saline in nature while the shallow upper aquifer is acidic. Maintenance of the acidic ground water conditions will be critical in maintaining those areas of remnant vegetation and the fauna species of state and national significance that inhabit the site.

Areas of specific environmental significance are shown at Figure 9.1 and consist of:

- Wallum heath management area
- Mt Emu She-oak population
- Mt Emu She-oak receival area
- Conservation corridor
- Vegetation management area.

The management of these areas during the construction phase of the SCAEP is governed by the project's conditions of approval and subsequent permits issued. Upon Sunshine Coast Council's completion of the construction phase of the SCAEP, management of these areas will become the responsibility of SCAPL.

SCAPL has an Environmental Policy in place.

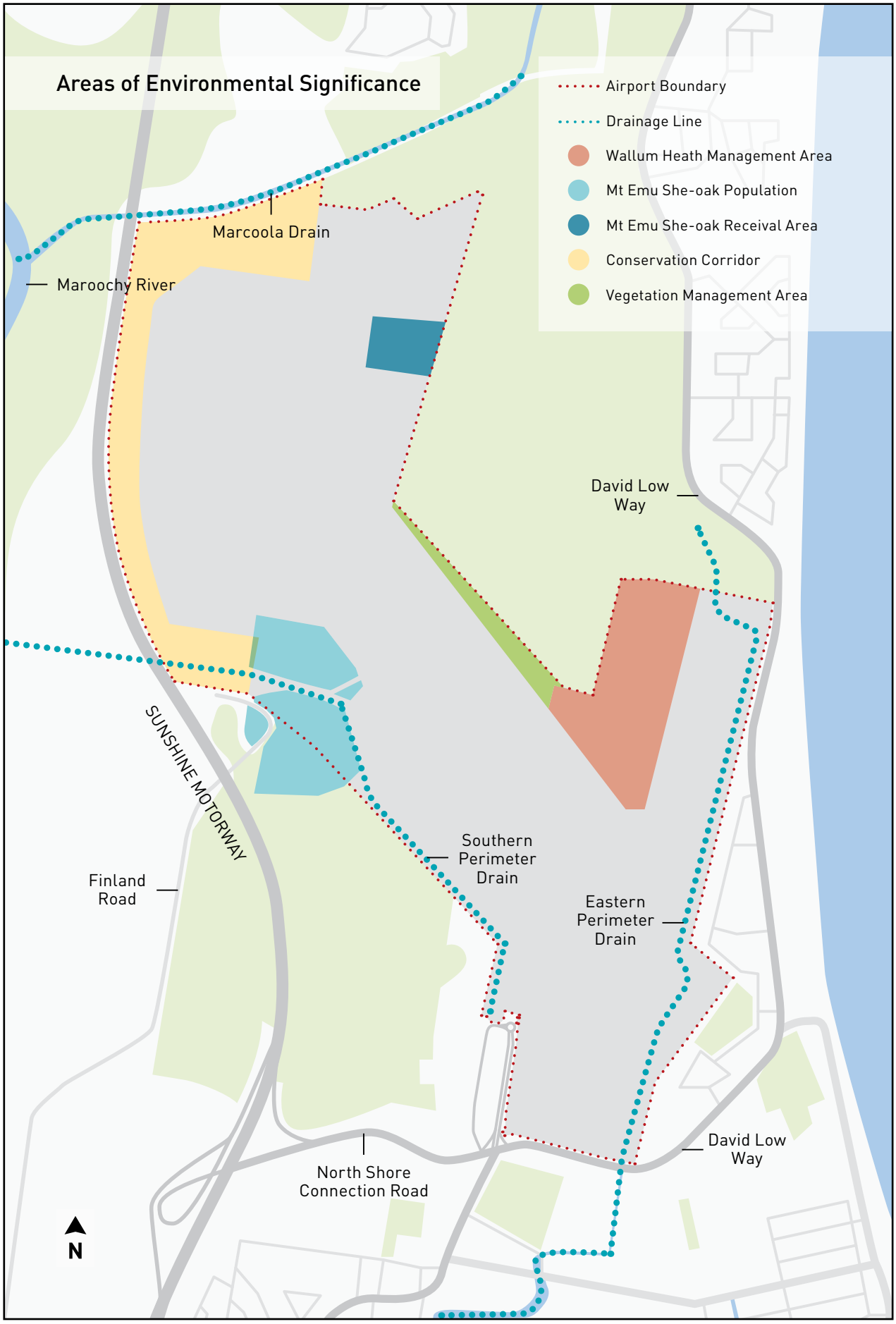

Figure 9.1: Areas of environmental significance at Sunshine Coast Airport.

Potential Environmental Impacts

There are many environmental considerations relevant to the operation of the Airport. Sunshine Coast Airport's EMP includes measures to minimise, mitigate or offset sources of environmental impact, and specifies relevant ongoing monitoring and maintenance strategies. The commitments and permit conditions associated with the SCAEP EIS will be maintained by SCAPL following the handover from Sunshine Coast Council on completion of the project.

The key sensitivities for Sunshine Coast Airport, along with potential sources of environmental impact, are summarised in the following table. Each of these considerations and associated mitigation measures for potential risks are explored in more detail in the following pages. In addition to these specific aspects, any future development will be subject to the requirements of the Planning Scheme including environmental impact assessments such as flooding.

Environmental Aspect	Potential Source/s of Impact
Air quality and emissions	• Aircraft engine testing and operation of ground vehicles • Ground disturbance activities causing airborne dust
Cultural heritage	• Development disturbance
Fauna	• Aircraft or ground vehicles causing injury • Habitat clearing for development • Invasive pest fauna preying upon and competing for the habitat of protected fauna
Flora and vegetation communities	• Vegetation clearing for development • Invasive pest plants outcompeting protected vegetation communities • Hot works being undertaken near protected vegetation areas
Ground-based noise and vibration	• Construction activities or the operation of ground vehicles, engine testing and low-flying or hovering aircraft
Hazardous substances and contamination control	• Exposure to soil impacted by hazardous materials or toxicants • Direct exposure to hazards/contaminants
Waste management	• Waste disposed to landfill
Water quality	• Ground disturbance activities causing sedimentation and erosion • Release of soil impacted by hazardous materials or toxicants into groundwater • Reuse water contaminated by toxicants

Environmental Initiatives

Air Quality and Emissions

Carbon Neutrality

To minimise the Airport's overall carbon footprint, a plan was implemented between 2011 and 2016, which included:

- power factor correction
- renewing air conditioning systems with more efficient units
- installing large, slowly rotating fans to aid in patrons' comfort levels and reduce reliance upon air conditioning
- installing a building management system (BMS) to optimise the operation of the air conditioning system
- linking the BMS to flight schedules to avoid unnecessary energy use
- reducing the solar heat load by installing shade structures
- installing air curtains
- replacing internal and external halide and fluorescent lighting with LED lighting, saving 50% on lighting energy consumption.

To apply for the Airport Carbon Accreditation Scheme, an independent verification of the Airport's carbon footprint was required in accordance with ISO14064 (Greenhouse Gas Accounting), including the carbon management and stakeholder engagement plans.

Management of Dust

To control dust generated by both routine and abnormal operations (e.g. construction or drought-affected operations), SCAPL has in place a standard operating procedure (SOP) and a management plan associated with the SCAEP. The SOP applies to all staff, contractors and tenants. It requires SCAPL to manage activities to reduce and suppress the amount of dust generated on-site by:

- minimising or stopping dust generating activities during dry and windy conditions
- covering spoil loads on trucks during works
- fitting dust-generating tools with water attachments or dust removal devices during works
- providing exhaust systems where appropriate during works.

The SOP also requires management of activities to suppress any dust being created on-site as required, specifying that:

- unpaved roads in use are periodically sprayed with reclaimed water throughout the day and as necessary
- visible awareness of all pedestrians and vehicles is maintained when the watering truck is in use, or the water is shut off when pedestrians or vehicles are in the vicinity of the spray, to avoid contact

SCAPL is focused on conserving energy wherever possible.

- unvegetated stockpiles are kept moist during windy days
- stockpiles are revegetated or covered when not in use.

During works, the Construction Manager will carry out a weekly general site inspection to identify areas that may require attention, and a register of complaints is maintained. Each complaint is investigated, and corrective actions are applied where necessary or construction activities are ceased until conditions allow them to resume satisfactorily. If complaints are widespread or persistent, high-volume air sampling will be undertaken and may trigger a review of dust management practices.

Cultural Heritage

The Airport exists within an area of significance to the descendants of the original Kabi Kabi inhabitants of the Sunshine Coast. The coastal plain and estuarine environment would have been a valuable source of food and raw materials to the original inhabitants. The major landscape features – the Maroochy River, Mt Coolum, Mt Ninderry and Mudjimba Island – all feature in the cultural traditions of the Kabi Kabi people. Under the *Aboriginal Cultural Heritage Act 2003* (Qld), there is a duty of care requirement to take all reasonable and practicable precautions to avoid harming Aboriginal cultural heritage. This duty of care is referenced in the Sunshine Coast Airport EMP.

Non-indigenous heritage on the Airport takes two forms: The Sunshine Coast Aero Club, which has been in operation at the Airport since 1959; and the association of the site with Finnish immigrants who began cane farming in the early years of the 20th century on land now being developed for the new runway. A memorial to the Finnish settlers exists in the aptly named Finland Road to the west of the Airport.

SCAPL has in place a safe operating procedure to manage the discovery of cultural heritage artefacts, and a management plan associated with the SCAEP to prevent damage or loss to cultural heritage items that may exist on the site. The SOP applies to all staff, contractors and tenants. It requires SCAPL to manage activities that may impact cultural heritage by:

- consulting with relevant local cultural heritage groups prior to any construction works on the Airport
- identifying any known cultural heritage sites or artefacts on a site map and relevant registers prior to works
- developing a formal cultural heritage management plan and obtaining appropriate permits prior to works as required
- administering training of relevant staff and contractors prior to commencement of construction works
- stopping works and taking the specified notification and consultation steps if new cultural heritage sites or artefacts are discovered during construction works
- preserving cultural heritage sites discovered during works where possible, and developing an on-site management plan for the area, specifying the degree of legislative protection of the site, access restrictions and ongoing management actions.

A number of indigenous artefacts were found during the clearing associated with the SCAEP and as a result, a formal cultural heritage management plan has been developed. A non-indigenous cultural heritage induction booklet was also developed prior to works, and a historical archaeologist has been appointed 'on call' during the construction works.

Visual inspections and formal weekly audits are undertaken by the Construction Environmental Manager (CEM) during construction to monitor and report on compliance with the construction environmental management plan (CEMP). Corrective actions are implemented when necessary.

Fauna

The presence of fauna in the vicinity of the Airport introduces both the potential for collisions with aircraft or ground vehicles, and the need for developmental considerations.

SCAPL has in place a wildlife hazard management plan to maintain aviation safety and conserve the biodiversity and ecological values of the site, as well as a fauna management plan associated with the SCAEP. Any new development with the potential to impact upon species of state or national environmental significance will be subject to the processes as defined by legislation.

Sunshine Coast Airport is home to a variety of habitats including approximately 40 hectares of Wallum heath. The Sunshine Coast Airport Wallum heath management plan was prepared to restore a large proportion of Wallum heathland previously found on the Airport, while retaining and enhancing full operational capacity and safety.

SCAPL has an Environmental Policy in place

Expanding the area of Wallum heathland at the Airport should encourage bird species that pose a lesser risk of bird strike, while discouraging large generalist species such as ibis and spur-winged plovers.

Passive measures to reduce the attractiveness of the Airport to species of high risk, such as habitat management or fencing treatments to exclude large animals, are often effective. The Wildlife Hazard Management Plan also allows for active dispersal techniques when warranted.

Airport Safety Officers conduct bird counts three times on one day per week, following the same route through 13 designated areas and formally recording the data. This standardised procedure allows quality data to be obtained for use in analysing trends. Bird surveys also occur by external ornithologists on a monthly basis. These supplementary surveys provide ongoing monitoring and assessment of bird risk at the Airport, and also target species of legislative significance, such as the ground parrot. All surveys also record opportunistic observations of other fauna.

In addition to bird count monitoring procedures, the wildlife hazard management plan contains other wildlife hazard management-related operations procedures. These include:

- bird and other wildlife strike reporting
- identification and handling of remains
- runway and flight strip inspections
- bird patrols
- bird and other wildlife dispersal
- bird and other wildlife culling
- flying-fox monitoring guidelines
- grass management
- SCAPL firearms policy.

SCAPL liaises with Sunshine Coast Council to develop and implement pest management plans as required if feral species, such as foxes, are regularly sighted at the Airport.

For the SCAEP and ongoing development at the Airport, CEMPs are implemented regarding habitat clearing. Before clearing commences, zones will be clearly marked, including exclusion fencing, to prevent unnecessary damage to vegetation. Sediment and weed controls will also be implemented to protect habitat prior to clearing. Both the fences and sediment controls will be monitored throughout construction and maintained or repaired as required.

The Wildlife Hazard Management Plan will be reviewed regularly to maintain safe operation of the Airport while having minimal environmental impact. Procedures and reporting related to specific CEMPs will also be reviewed to consider appropriate responses where commitments are either not being considered or addressed in future stages of a project.

Flora and Vegetation Communities

Flora at the Airport is managed to preserve the ecological values of the site while preventing vegetation from posing an aviation safety risk. The Airport supports both vegetation communities and flora species of significance, and any proposed works must consider these ecological values.

SCAPL has in place SOPs to manage vegetation clearing, planting, weeds and grass, which apply to all staff, contractors and tenants, and encompass all areas of the Airport. There is also a terrestrial flora management plan associated with the SCAEP to minimise disturbance, damage and loss of vegetation

during construction, and to retain and protect all flora species of conservation significance, including the Mt Emu She-oak.

Relevant staff or contractors must take the following actions regarding vegetation clearing:

- obtain preliminary advice from relevant council officers in the planning stage
- obtain appropriate approvals prior to vegetation clearing
- undertake clearing works in an environmentally responsible manner
- protect adjacent vegetation and ecological/habitat values both prior to and during works.

Additionally, vegetation clearing works shall be kept to a minimum to avoid unnecessary clearing.

Erosion and sediment control measures must be considered and implemented as required. Where clearing works are required for vegetation that has been assessed as potentially providing fauna habitat, a suitably qualified and experienced fauna spotter-catcher must be present during works to monitor and minimise impact on fauna.

Weeds can render significant environmental, economic and social impacts. SCAPL's weed management SOP specifies the following actions:

- appropriate approvals and permits for weed management activities are obtained prior to commencement
- weed control activities are undertaken in an environmentally responsible manner
- weed management elements are included in induction and training for relevant staff as required.

The following management actions must be taken prior to construction works:

- pre-clearing surveys are conducted within the clearing footprint for any threatened or near-threatened flora species and pest plants, and appropriate mitigation measures, such as translocation, are applied to conserve the threatened or near-threatened species
- contractors will be briefed on the potential occurrence of threatened or near-threatened flora species
- seeds from impacted Mt Emu She-oak will be collected as a risk management measure
- zones for retained vegetation will be clearly marked, including fencing and signage where necessary to identify the location of significant areas
- a weed management plan specifically addressing declared pest plants will be prepared and implemented.

Additional actions are required both prior to and during works. These include:

- locating construction compounds, stockpile areas, storage areas, vehicle parking/access areas and site offices outside of areas of remnant or regrowth vegetation
- clearly signing and marking the boundaries of Mt Coolum National Park and making all construction personnel aware of the National Park boundaries, as well as the fact that access tracks within the National Park are not to be used for any construction purposes
- educating personnel about pest species for identification in the project area.

During construction, contractors must:

- give consideration to weather conditions, and avoid hot works near protected vegetation areas during times of high fire danger
- salvage cleared native vegetation to be mulched, composted or stockpiled on-site, or dispose of it at a green waste transfer station
- treat and remove declared pest plants separately from native vegetation waste
- compost cleared vegetation that is stockpiled on-site and reused as mulch in landscaping works to allow for the eradication of any weed seeds or propagules
- brush down vehicles prior to entering the site, so that machinery brought to site does not introduce weed reproductive material on the Airport.

The CEM will implement and monitor these management actions, maintaining records of clearing dates, areas, volumes of material and types of cleared vegetation. If monitoring identifies practices inconsistent with minimising risks associated with soil pathogens and weeds, the CEM will apply and document the necessary corrective actions.

Following construction, ongoing management is required to protect the long-term viability of the significant terrestrial flora features of the project area. This includes monitoring of any translocated plants,

treatment of declared pest plants and maintenance of required low, dwarf heathland.

SCAPL employs a vegetation planting SOP, which specifies that appropriate local native plant species are used in any landscaping or revegetation works to minimise attractiveness to wildlife; particularly birds and flying foxes. The following actions are defined in the SOP:

- the Compliance Supervisor will develop vegetation planting guidelines as required
- ground maintenance staff or contractors must obtain approval of the plant species lists as required
- planting works must be carried out in accordance with vegetation planting guidelines as required.

A grass management SOP is in place to manage airside grassland areas to reduce attraction for birds and other wildlife. This SOP requires that:

- areas of Wallum heathland are managed according to the Wallum heath management plan
- mowing contractors and Airport Safety Officers abide by the grass maintenance procedures as required
- mowing contractors and the Asset Manager must maintain grassland in certain areas of the Airport to particular heights, not allow grass to flower or seed, and maintain grass near the creek and drains to avoid birds seeking shelter or breeding in these areas.

Ground-Based Noise and Vibration

Noise impacts generated by aircraft in flight and adopted management measures are addressed in Chapter 4 – Airport Safeguarding. In addition to these noise considerations, SCAPL also has in place a safe operating procedure specific to ground-based noise and vibration, as well as a terrestrial noise and vibration management plan associated with the SCAEP.

Potential sources of ground-based noise at the Airport include:

- construction activities
- airfield pavement maintenance activities
- ground service equipment
- plant and machinery noise
- airport operational vehicles
- daily testing of ARFFS station equipment
- vehicle traffic to and from the Airport
- ground running of aircraft engines.

Noise generated by ground running of aircraft engines is an inevitable aspect of aircraft maintenance and repair. SCAPL seeks to minimise the noise impacts from such activity by restricting engine testing to designated locations. For this purpose, a location for a run-up bay has been identified in the Master Plan.

SCAPL has a safe operating procedure in place specific to ground-based noise and vibration.

The ground-based noise SOP is designed to identify actual and potential noise issues; specify measures to control or eliminate these issues where possible; specify training required to address noise issues; and provide guidance to allowable noise limits. The SOP covers all ground-side activities undertaken on the Airport site, and is applicable to all staff and contractors, and for tenant guidance.

The procedure requires that operators of helicopters and fixed-wing aircraft undertake their operations in accordance with SCAPL's *Fly Neighbourly Policy* during all flights. With regard to ground-based noise and vibration, this includes:

- using satellite strips for aircraft circuit operations
- keeping the volume of touch-and-go and auto-rotation training to a minimum
- restricting training and engine ground running for the purpose of engine testing at sensitive times of the day or night
- responding to community enquiries about noise in a cooperative manner.

As the Airport's passenger volume and aircraft activity is increasing, SCAPL is exploring methods to reduce the impact of activity-generated noise upon those living near the Airport, such as:

- developing engine ground run procedures for aircraft operators to minimise engine running at sensitive times of the day or night
- avoiding construction activities at sensitive times of the day or night
- providing notice to nearby residents of unavoidable occurrences of construction, maintenance or operational noise at sensitive times of the day or night
- identifying plant and equipment that can operate at lower noise levels
- using electric vehicles where practicable
- working with Airport tenants to raise awareness of noise impacts
- continuing to monitor and promptly respond to noise complaints.

For construction works, including the SCAEP, a terrestrial noise and vibration management plan is implemented to minimise noise levels generated by the project's operation, and comply with the daytime, evening and night-time noise goals set in the project's construction noise management plan.

Nearby residents will be notified of construction activities and hours of work where possible, and regularly updated on the duration during works. These residents will also be notified prior to works when excessive noise or vibration or significant heavy vehicle traffic is anticipated.

Contractor management actions during construction include:

- mitigating the sound power level of equipment through selection of the quietest available plant, or the use of enclosures or mufflers
- limiting work outside of standard construction hours to essential mobile plant only
- utilising one near-new, well-maintained dozer fitted with modern sound reduction for night works as required
- regularly maintaining vehicles and machinery, and checking muffling devices
- giving consideration when selecting construction techniques and equipment/machinery
- installing operational noise mitigation where practicable.

The CEM will monitor overall noise emissions from the project area to confirm the mitigation strategies are being implemented successfully. This is achieved through formal weekly audits by the CEM to monitor compliance, implement necessary corrective actions and report on compliance with the CEMP.

Hazardous Substances and Contamination Control

Hazardous substances can potentially have a damaging impact on human health and the environment if they are not handled and stored in the correct manner.

Some activities undertaken at the Airport have associated hazardous substances, such as fuels and oils, polychlorinated biphenyls (PCBs) and asbestos. These activities include:

- repairs and maintenance
- fuel storage and handling for vehicles and aircraft
- ground service requirements, such as cleaning, line marking, maintenance, weed and pest control
- washing down of vehicles
- repainting of aircraft.

SCAPL has in place a range of SOPs relating to hazardous substances and contamination control, including one which details the safe handling, use, management, storage and disposal of hazardous substances at the Airport. This SOP applies to all staff, contractors and tenants anywhere on the Airport site.

Environmental studies have identified potential sources of soil contamination on the Airport site, which include per- and polyfluoroalkyl substances (PFAS), a family of chemicals used in a variety of applications. Airservices Australia, which provides specialised aviation rescue fire fighting services at airports nationwide, used a fire fighting foam until 2010 which was later found to contain PFAS.

PFAS contamination has been detected in some soils, isolated locations of the groundwater table and surface water drains across the Airport site. Contaminated soils were excavated and removed from the site, and groundwater encountered in the earthworks for the new runway and associated infrastructure has been extracted and stored in specially lined tanks. Current contamination levels are several orders of magnitude lower than what is considered acceptable where human interaction is possible, as prescribed in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality and the PFAS National Environmental Management Plan.

SCAPL is committed to working with environmental and health experts, as well as relevant local, state and federal government agencies, to address and responsibly manage any potential PFAS concerns and provide accurate information to the community.

Also identified as a potential source of soil contamination is aviation fuel. This Master Plan proposes the establishment of new fuel facilities and the decommissioning of the existing facility. In designing and developing the new fuel facilities, industry experts will be engaged to minimise the risk of soil contamination by hydrocarbons. Any contamination resulting from the operation of the existing fuel facility will be remediated by the operator as part of the decommissioning process.

Another SOP at Sunshine Coast Airport pertains to existing contaminated land at the Airport. It applies to staff and contractors who handle hazardous substances or material containing hazardous substances, such as soil.

Investigations must be initiated on areas of land identified as potentially contaminated prior to works to verify and map the location and extent of the contamination. Determinations can then be made regarding remediation of the land. If removal off-site is the only solution, then a disposal permit is required. The General Manager Operations and Assets will be notified immediately if odours or visual indicators of contamination are noticed during works in areas that are not suspected of having contaminated soil.

To avoid introducing contamination, any fill entering the Airport must be verified with requisite documentation certifying that it is free of contaminants and acid sulfate soil.

The Airport is located between the Pacific Ocean and the Maroochy River, with elevations of less than 5 metres Australian Height Datum across the site. It is known that the Airport contains areas of actual and potential acid sulfate soils. Earthworks on-site have the potential to disturb acid sulfate soils, leading to the degradation of ground and surface water quality. To reduce the risks posed by acid sulfate soils, consideration specific to these soils will be required in CEMPs for projects where soil disturbance is likely to expose them. The CEMP will include the following management actions:

- implement a specific acid sulfate soil management plan to monitor, treat and neutralise acid sulfate soils prior to and during construction
- remove contamination or mitigate worker exposure for earthworks at former farm shed locations by implementing a site management plan prior to earthworks and during construction
- consider naturally acidic ecological habitats in the vicinity and seek advice from an appropriately qualified ecologist regarding liming rates and locations when using neutralising agricultural lime within the site
- monitor groundwater and receiving waters, such as the Maroochy River and Marcoola Drain, during and after filling activities and conduct regular visual inspections of the banks for signs of impact.

A weekly audit report is required in accordance with the acid sulfate soil management plan. Any discharge water results that fail to meet the release limit criteria, or non-compliances with the requirements of the acid sulfate soil management plan or overarching legislation must be immediately reported to the appropriate authority.

Signage has been implemented by SCAPL as a proactive step to minimise waste to landfill.

Waste Management

A reduction in waste material being sent to landfill sites was achieved as a result of a strategy adopted to implement waste separation facilities within the terminal and Airport management office.

Standard waste and recycling collection services are provided at the Airport and serviced by Sunshine Coast Council. To facilitate compostable waste, a solar powered on-site composting apparatus (OSCA) was installed to convert organic waste into compost, reducing waste to landfill and generating quality compost for landscaping use.

SCAPL has in place a safe operating procedure related to the use of the OSCA, and a management plan associated with the SCAEP to minimise impacts by facilitating appropriate disposal of waste, and to recycle or reuse materials where possible to reduce waste generation during construction. The SOP provides safety and operational information for the OSCA, including training and personal protective equipment, rules and guidelines, and troubleshooting information.

For construction works, including the SCAEP, performance requirements specify that there must be no contamination of environment through unsafe storage, spill or disposal of wastes. Furthermore, measures must be taken to prevent detrimental impact on existing fauna and attraction of pest species to the site.

Prior to and during works, the following management actions apply:

- construction material quantities must be accurately estimated to reduce over-ordering and on-site stockpiling of materials
- any unexploded ordnance waste detected must be disposed off-site by specialist personnel
- cleared vegetation must be chipped for reuse on-site, or unsuitable material disposed off-site at a licenced facility
- concrete waste must be crushed and stockpiled on-site for reuse
- liner offcuts generated through installation beneath the reclamation area must be disposed off-site to a licenced facility.

The solar powered on-site composting apparatus at the Airport.

The following management actions are applicable during works:

- all construction wastes, site refuse and any solid or liquid contaminants must be disposed of in accordance with statutory and local authority requirements
- temporary storage of wastes must be contained in a suitably stabilised area, such as the construction compound or designated stockpile areas, and such wastes should be collected frequently
- wastes that may attract vermin must be stored in secure containers
- non-recyclable materials and wastes are to be disposed of at licenced landfill sites or in accordance with relevant legislation
- pavement and other aggregate materials must be stockpiled and reused where possible
- surplus pipes and fittings from pipeline assembly, unsuitable material and surplus bedding material from pipeline installation must be disposed off-site or recycled as appropriate by specialist contractors.

The CEM is responsible for the application of the environmental management measures outlined in the CEMP, regularly monitoring compliance, reporting any non-compliance to the Project Manager and performing any corrective actions required.

Water Quality

A reduction in potable water consumption at the Airport was achieved through:

- the installation of rainwater tanks for use in irrigation and toilets
- attaining a roof water storage capacity of approximately 110,000 litres
- upgrading existing dual flush toilets to 'four-star' systems, halving water consumption per flush.

The surface water drainage network within the Airport has been heavily modified by past land use, particularly sugar cane farming and urban development around the Airport site. The land receives substantial runoff from the surrounding urban development. Ground water levels are generally high and there is ready connectivity between the ground water and surface water drainage network, resulting in the major drainage channels retaining water all year round. Water levels and quality can also be influenced by tidal movements. The Airport's drainage network, particularly the large eastern perimeter drain (see Figure 9.1), plays an important role in managing stormwater flows from urban development to the north and east of the Airport site.

Rainwater tanks in use at the Airport.

There are a range of activities with the potential to affect water quality at the Airport. Without considered measures in place, surface water in and around the Airport may be impacted by:

- run-off and stormwater flows, sediment mobilisation and erosion resulting from development within and upstream of the Airport site
- earthworks and vegetation removal
- plant and equipment maintenance
- run-off from car wash bays
- contamination arising from spills or inappropriate storage/handling of fuel or hazardous materials
- exposure of acid sulfate soils.

To minimise the risk of adverse water quality outcomes, the following measures have been incorporated into SCAPL's EMP:

- regular targeted monitoring of ground and surface water
- environmental checklists to include:
  - erosion and sediment control
  - maintenance of vegetation
  - spill management
  - hazardous material handling
  - maintenance of stormwater treatment devices
  - environmental inductions for SCAPL and third-party staff and contractors
  - waste handling procedures and
  - weed and pest control
- regular auditing of tenants and construction activities
- incorporating water-sensitive urban design and total water cycle management principles into the design and delivery of development at the Airport
- addressing water quality management in project-specific CEMPs.

Future Considerations and Opportunities

The position of the Airport site within the floodplain of the Maroochy River requires all due consideration of the potential flood impacts and climate change resilience of new development.

From the investigations carried out in the preparation of this Master Plan, it is expected that the extent and nature of the land uses proposed can be achieved without adverse impacts upon the remainder of the floodplain, subject to appropriate design and mitigation. The development of the Airport presents opportunities for SCAPL to collaborate with Sunshine Coast Council to enhance the climate change resilience and flood immunity of the local area.

To extend SCAPL's commitment to sustainability, the following initiatives will be investigated and implemented where feasible:

- renewable energy generation through a solar array
- chilled water air conditioning systems
- use of electric vehicles for operational purposes
- installation of LED airfield lighting
- reducing potable water consumption through total water cycle management
- increasing the mode share of public transport at the Airport
- using low-embodied energy building materials
- working with existing and future tenants at the Airport to implement the above initiatives in third-party development where possible.

SCAPL is committed to sustainability.


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10 Implementation Plan

10. Implementation Plan – Chapter Essentials

The Master Plan will be implemented through appropriate staged development in response to passenger and regional growth.

SHORT-TERM 2019-2024

The short-term period between

2019–2024

will see initial expansion of the terminal plus transport enhancements and establishment of freight facilities.

MEDIUM-TERM 2025-2030

The medium-term period between

2025–2030

will see further terminal expansion, precinct development and transport enhancements plus new fuel facilities and first-stage solar facilities.

LONG-TERM 2031-2040

The long-term period between

2031–2040

will see further terminal expansion, precinct development and transport enhancements plus completion of solar facilities.

Changes from the 2007 Master Plan

The current Sunshine Coast Airport Master Plan was adopted by Sunshine Coast Council in 2007, outlining Council's vision for the Airport to 2020.

Changes from the 2007 Master Plan to this Master Plan include:

- closure of the existing runway as a result of SCAPL's safety analysis following refinement of the new runway design, as detailed in Chapter 3
- staged relocation of general aviation activities from the southern general aviation precinct to the new Aerospace Precinct
- consolidation and expansion of the present terminal precinct in situ
- improved fuel access for both commercial and general aviation airport users through the establishment of new fuel facilities
- establishment of new precincts to support investment in aviation infrastructure
- inclusion of logistics and freight zones initially located in the Gateway Precinct with provision for subsequent location in the Airport North or Airport West precincts as demand requires, subject to further analysis.
- new access arrangements from David Low Way
- updated passenger forecasts.

This Master Plan provides direction and clarity on key infrastructure, including runways, taxiways, aprons, terminal development and land use. Nonetheless, SCAPL remains flexible on timing and commercial strategies, allowing the ability to respond to evolving trends and varied economic conditions.

SCAPL will also review and update the Master Plan at least every eight years to consider whether the plans continue to be achievable and responsive to prevailing operating conditions.

Master Plan Implementation Stages

The guiding principles for the development of Sunshine Coast Airport are:

- responsiveness to passenger forecasts
- promotion of innovation
- ancillary development, providing diversification of revenue streams
- enhancement of the Airport's role as the primary gateway to the Sunshine Coast
- maturation of ground transport arrangements with enhanced and increased public transport connections.

Aerial of the new runway under construction.

Short-Term Development – 2019 to 2024

Developments expected to be delivered during the short-term planning horizon include but are not limited to the following:

Aviation Capacity-Related

- new runway
- partial parallel taxiway
- expanded apron
- repurposing part of the existing runway into a taxiway
- terminal expansion, including upgraded food and beverage, retail offerings and passenger lounges
- security upgrades
- dedicated international passenger facilitation infrastructure.

Transport-Related

- additional car parking
- new intersection access off David Low Way to the new Gateway Precinct
- increased capacity for rental cars
- additional public pick-up/drop-off bays
- additional bays for taxis and ride share vehicles.

Commercial-Related

- establishment of freight facilities.

Medium-Term Development – 2025 to 2030

Developments expected to be delivered during the medium-term planning horizon include but are not limited to the following:

Aviation Capacity-Related

- terminal expansion in line with the passenger growth forecast
- expansion of baggage handling facilities
- development of new airline offices
- development of new aviation fuel facility.

Transport-Related

- new car parking spaces as required
- update ground transport arrangements within the Gateway Precinct.

Commercial-Related

- development of the Aerospace Precinct
- transition of general aviation to the Aerospace Precinct
- development of the Airport North Precinct
- delivery of first-stage solar power array
- development of the Gateway Precinct.

Long-Term Development – 2031 to 2040

Developments expected to be delivered during the long-term planning horizon include but are not limited to the following:

Aviation Capacity-Related

- further expansion of the terminal building
- development of narrow-body aircraft capacity within the Aerospace Precinct.

Transport-Related

- new car parking spaces as required.

Commercial-Related

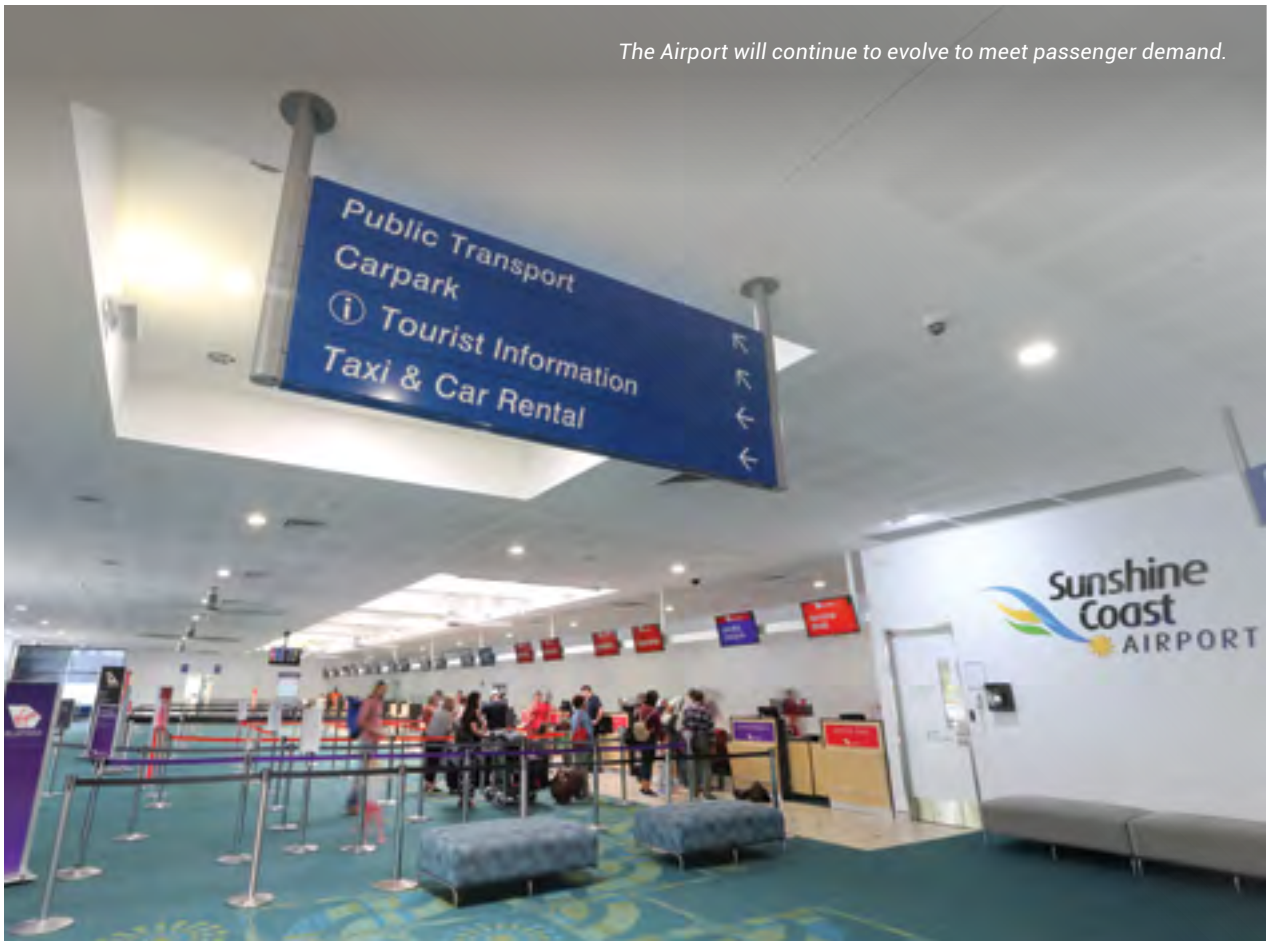
- continuation of solar array developments.

Ultimate Development – Beyond 2040

Beyond the 2040 planning period of this Master Plan, the Airport will continue to evolve to meet passenger demand.

It is expected that the full length of the parallel taxiway will ultimately be required, along with an expansion of the terminal building to its fullest possible southern extent. Regular reviews of the passenger forecast will enable a decision to be made with respect to further expansions of the terminal.

The potential corridor for the Airport to be connected to an expanded light rail network will continue to be protected for the long-term planning of the Gateway Precinct. This development, when it occurs, is likely to significantly alter ground transport arrangements at the Airport, and SCAPL will respond to accommodate this with the aim of improving accessibility for all users of the Airport.



The Airport will continue to evolve to meet passenger demand.

Figure 10.1: Sunshine Coast Airport ultimate master planned site (see Appendix 2 for list of acronyms).


QANTASLINK

The Future of Your Airport

The Future of Your Airport

The Master Plan illustrates SCAPL's continuing commitment to foster economic growth, employment and diversification for the region.

As one of Australia's fastest-growing airports, Sunshine Coast Airport contributes to economic activity across Australia, playing a vital role for Australian tourism and business, and providing a significant source of employment on the Sunshine Coast.

Through the implementation of this Master Plan, Sunshine Coast Airport will continue to deliver substantial, long-lasting economic, employment and social benefits to the Sunshine Coast region and beyond.

SCAPL is committed to the future of the Sunshine Coast and wider region.


AIR NEW ZEALAND

Appendices

Appendix 1:
NASF Guidelines Summary

NASF Guidelines	Roles and Responsibilities
Guideline A – Noise Management Measures for managing impacts of aircraft noise	The Airport Master Plan 2040 informs Sunshine Coast Council of forecast noise impacts through detailed modelling inclusive of ANEF noise contours.
Guideline B – Windshear and Turbulence Managing the risk of building generated windshear and turbulence at airports	The Airport Master Plan 2040 informs Sunshine Coast Council of the Airport's OLS, and potential planning scheme amendments for off-Airport development and safeguarding. SCAPL avoids development and building structures that may cause building-generated windshear/turbulence near runways.
Guideline C – Risk of wildlife strikes Managing the risk of wildlife strikes in the vicinity of airports	SCAPL consults with Sunshine Coast Council on wildlife and parks management and wetland management agencies on land uses of concern within a designated radius of the Airport. The Airport Master Plan 2040 develops the Airport site in accordance with the International Civil Aviation Organization's guidelines in detracting areas that have risk of wildlife congregation areas. SCAPL documents procedures for managing wildlife in accordance with the CASA Manual of Standards Part 139.
Guideline D – Wind Turbine Farms as Physical Obstacles to Air Navigation Managing the risk of wind turbine farms as physical obstacles to air navigation	The Airport Master Plan 2040 informs Sunshine Coast Council of the Airport's OLS.
Guideline E – Distractions to Pilots from Lighting in the Vicinity of Airports Managing the risk of distractions to pilots from lighting in the vicinity of airports	SCAPL complies with CASA's Regulation 94 of 1988 for lighting that does not cause confusion, distraction or glare to pilots. The arrival and departure routes are published by Airservices Australia.

NASF Guidelines	Roles and Responsibilities
Guideline F – Intrusions into the Protected Airspace of Airport Managing the risk of intrusions into the protected airspace of airports	The Airport Master Plan 2040 informs Sunshine Coast Council of the Airport's OLS. SCAPL and Local Government jointly identify and document intrusions into the OLS and develop appropriate risk mitigation strategies.
Guideline G – Protecting Aviation Facilities Communications, Navigation and Surveillance Protecting aviation facilities – Communications, navigation and surveillance	The Airport Master Plan 2040 informs Airservices Australia of its intended land use and development objectives. Airservices Australia assists State, Territory and Local Governments and SCAPL with specific building restricted area protection requirements for communication, navigation and surveillance facilities, as required.
Guideline H – Protecting Strategically Important Helicopter Landing Sites Protecting strategically important helicopter landing sites	An aerodrome may be declared a Strategically Important Helicopter Landing Site by the State or Territory Government. Where required, it is operationally essential that flight paths are incorporated within the land use planning controls.
Guideline I – Public Safety Areas Public safety areas	The Airport Master Plan 2040 informs Sunshine Coast Council of its compliance with safeguarding guidelines. Sunshine Coast Council advises SCAPL of incompatible uses in regard to public safety areas.

Appendix 2: Acronyms and Abbreviations

ACI	Airports Council International
ADRM	Airport Development Reference Manual
ANEC	Australian Noise Exposure Contour
ANEF	Australian Noise Exposure Forecast
ARFFS	Aviation Rescue Fire Fighting Service
ATC	Air Traffic Control
BMS	Building Management System
BOM	Bureau of Meteorology
CASA	Civil Aviation Safety Authority
CEM	Construction Environmental Manager
CEMP	Construction Environmental Management Plan
CTAF	Common Traffic Advisory Frequency
DME	Distance Measuring Equipment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FAA	Federal Aviation Administration (United States)
FY	Financial Year
GA	General Aviation
GDP	Gross Domestic Product
GNSS	Global Navigation Satellite System
GRP	Gross Regional Product

GSE	Ground Service Equipment
IATA	International Air Transport Association
LED	Light-Emitting Diode
LOS	Level of Service
NASF	National Airports Safeguarding Framework
NDB	Non-Directional Beacon
NEF	Noise Exposure Forecast
OAS	Obstacle Assessment Surfaces
OSCA	On-Site Composting Apparatus
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
PFAS	Per- and Polyfluoroalkyl Substances
RNAV	Area Navigation
RPT	Regular Public Transport
SCAEP	Sunshine Coast Airport Expansion Project
SCAPL	Sunshine Coast Airport Pty Ltd
SEQ	South East Queensland
SOP	Standard Operating Procedures
VHF	Very High Frequency
VOR	VHF Omni-directional Range

Appendix 3: Definitions and Interpretations

Airfield/Airside	The movement area of an airport, adjacent terrain and buildings or portions thereof, access to which is controlled.
Apron	A defined airside area intended to accommodate aircraft for loading or unloading passengers or cargo, fueling, parking or maintenance.
Baggage make-up	The area where passengers' checked baggage is sorted by flight number and transported to the aircraft.
Fixed-wing	An aircraft with wings that remain fixed in the same position, as opposed to those with rotating wings, such as helicopters.
General aviation	Non-scheduled fixed-wing and helicopter aircraft activity, including small charter, aeromedical, rescue and training operations.
Ground handling	The servicing of an aircraft while it is on the ground, including cabin service, catering, ramp services, field operation services and passenger services inside the terminal.
Ground service equipment	Support equipment used to service aircraft between flights, including refuelling equipment, belt loaders and passenger boarding stairs.
Horizon	The length of time into the future that is accounted for in a particular plan.
Landside	Any area within the Airport site which is outside of the airside restricted access perimeter, including public access areas such as car parks and part of the terminal building.
Level of service (terminal)	IATA's LOS concept is the industry benchmark for optimum passenger terminal facilities.
Level of service (transportation)	A classification of performance based on quantitative criteria including average delay and queue lengths.
Low-embodied energy building materials	Building materials which consume low amounts of energy (such as concrete, bricks and timber) throughout the processes associated with building production, from mining and processing of natural resources to manufacturing, transport and product delivery.

Narrow-body aircraft	A single-aisle aircraft with seating arranged up to six-abreast in a cabin less than 4 metres wide (e.g. B737/A320).
Obstacle limitation surfaces (OLS)	A series of conceptual surfaces associated with a runway which define the lower boundary of aerodrome airspace, above which objects become obstacles to the safe operation of aircraft.
Regular public transport (RPT)	Commercial flight operations conducted to fixed schedules over specific routes and on which seats and/or cargo space is available to the general public.
Runway	A paved strip on which aircraft take off and land.
Runway strip	The area surrounding the runway to mitigate damage from unintentional excursion from the runway surface.
Safeguarding	Land use planning as it pertains to aviation operations and development activity on and around airports.
Solar array	A collection of connected solar panels.
Sunshine Coast Airport	Refers to the Airport site.
Sunshine Coast Airport Pty Ltd/SCAPL	Refers to the Airport operator.
Swing gate	A terminal boarding gate able to handle domestic or international flights depending on operational requirements.
Taxiway	A paved strip used by aircraft in taxiing to or from a terminal, hangar or runway.
Transitional surface	A component of the OLS, running along each side of a runway from the edge of the runway strip and sloping up and away from the ground at 7:1 until it meets the subsequent surface of the OLS.
Wide-body aircraft	A twin-aisle aircraft with seating arranged with seven or more seats abreast in a cabin more than 4 metres wide (e.g. A330/B787).

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