

Caloundra Aerodrome
Master Plan
2042

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1

Executive Summary



Caloundra Aerodrome was established in 1931, when it was first reserved as a landing ground. It is currently owned and operated by Sunshine Coast Council and is a key asset to the South East Queensland aviation network contributing to the industry's development in the region.

1.1 Master Plan Review and Changes

Generally, aviation facility master plans are required to be reviewed and updated as necessary in order to keep pace with changing market conditions and relevant legislation. As these matters change there are potential changes that need to be adopted and accommodated with the strategic directions and future development options of the master planned area. The Caloundra Aerodrome Master Plan 2042 seeks to satisfy these requirements.

Comparing the previous master plan to the Caloundra Aerodrome Master Plan 2042 the most notable change is to the master footprint boundary. This change has been a result of detailed ecological investigations into the area identified for potential expansion to the west of the aerodrome footprint into the Isabel Jordan Bushland Reserve. As a result of the finding of the ecological studies this area is no longer identified for future potential expansion and has been removed for the Caloundra Aerodrome Master Plan 2042 area.

1.2 The Caloundra Aerodrome Master Plan 2042

The vision for the Caloundra Aerodrome Master Plan 2042 is:

Caloundra Aerodrome will become a precinct of choice for advanced aerospace and associated manufacturing activities delivering cutting edge, sophisticated and sustainable opportunities of significance to the South East Queensland aviation and aerospace industry.

1.3 Strategic Directions

This Master Plan will achieve the vision through the following strategic directions:

Innovation and Enterprise: Provide a platform for the emergence of an innovative, high value advanced manufacturing and research and development cluster that contributes to a sustainable and diverse economic base with job opportunities and connections to the domestic market and supply chains.

Connections and Movement: Leverage opportunities from local and regional transport infrastructure, providing strong connections to the Caloundra City Center and the broader Sunshine Coast region and beyond.

Support and Education: The Aerodrome provides significant capacity to enable future employment and training opportunities in high value advanced manufacturing industries. The existing facilities will seek to provide ongoing support for current educational and aviation focused activities while also branching into other or ancillary aviation related industries such as Research and Development, High Value Manufacturing, Low Impact Last Mile Logistics and Defence.

Impact Management: Seek to ensure no material degradation of the current impacts associated with flying operations. Explore implementation of suitable mechanism to manage and mitigate operational risks and seek to attract investment that has minimal impact on surrounding receptors.

Environmentally Conscious: Continue to apply the existing management approaches to reduce and mitigate the impacts arising from aviation activities while also seeking to sustainably manage and maintain the aerodrome's landside supporting and ancillary infrastructure.

Community Contribution: Sustainably accommodate aviation focused community activities that provide an offering that is considered significant to Caloundra and the greater Sunshine Coast region.

Legend

- Caloundra Aerodrome Study Area
- Caloundra Aerodrome Site Boundary
- Roads

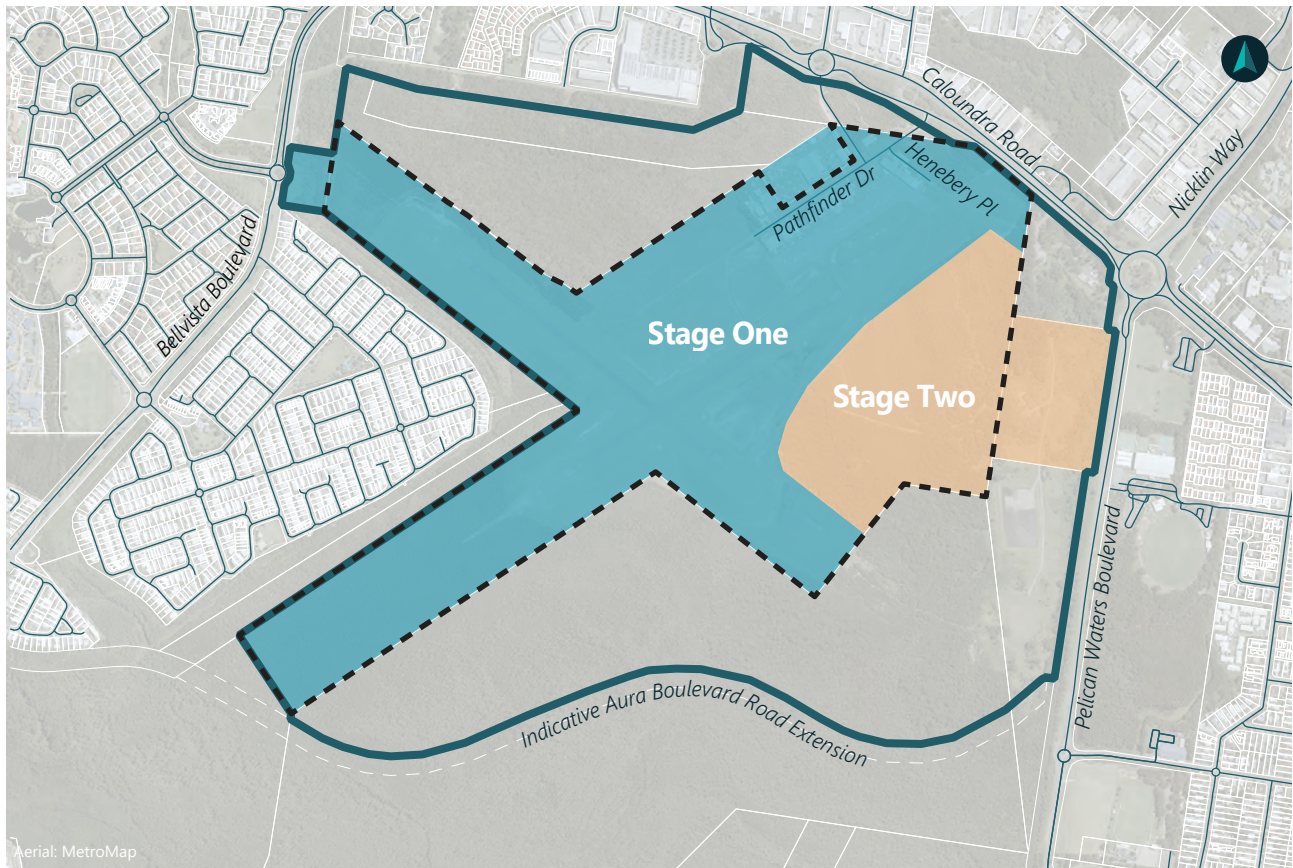


Figure 1: Staging Plan

1.4 Proposed Staging

This master plan presents a two stage approach that seeks to sustainably support economic investment in the Caloundra Aerodrome. The Master Plan seeks to firstly optimise and secondly unlock the aerodrome's airside and landside

resources. This two stage approach seeks to ensure that this significant and unique asset continues to positively contribute to the Caloundra community while also servicing the current demand and future growth of Caloundra's aviation-related advanced manufacturing and research within the South East Queensland regional aerospace industry.

Stage 1

Outlines the strategic planning framework to support the existing use while also facilitating the potential growth and diversification of a broad range of aviation-related business investment in the northern portion of the site; provides measures to manage aircraft movement and limit adverse noise amenity impacts, and identify actions for Sunshine Coast Council to expand the returns to the regional economy and the local community.

Stage 2

Identifies a future investigation precinct for the purpose of supporting the growth of aviation businesses and other potential compatible uses. Stage 2 seeks to enable the aerodrome to adequately respond to and facilitate a range of innovative and appropriate economic growth opportunities as they arise. Indicative land use options are to be considered and proposed, taking into consideration the existing physical and environmental characteristics of the precinct and the applicable regulatory mechanisms local and state, as well as the identified future investment in transport infrastructure and localised transit services.

The following table provides a summary of the Master Plan components.

| Land Release | |
|--|---|
| Stage 1 – Optimise and Develop | <ul style="list-style-type: none"> • Stage 1 identifies 6.3ha of net leaseable area of aviation oriented commercial land to be made available with flexible lot sizes. • This land release seeks to support and facilitate the growth aspirations of the existing aviation related tourism, manufacturing and technology development industries. • Accommodate the attraction of new cutting-edge aerospace businesses and services to the aerodrome. • Facilitate the optimisation of finite landside resource available to maximise the economic benefit to the Caloundra and broader Sunshine Coast community. • Movement of existing airside infrastructure to facilitate the optimisation of finite airside land resources, maximising benefits to both existing and new aviation-related businesses. This includes a mix of active business land and sheltered aircraft storage. |
| Stage 2 – Identification of New Investigation Areas | <ul style="list-style-type: none"> • Stage 2 is focusing on the identification of growth and potential land use options; taking into consideration environmental constraints, future transit connections and compatible land uses with a view to realize up to 37ha of land that can potentially be developed in a way that is compatible with the existing Aerodrome uses and generates high value employment activities. |
| Landside Infrastructure Investment | |
| Access and Utilities | <ul style="list-style-type: none"> • Extension of Pathfinder Drive to the south west to service new lease areas. • As and when appropriate, review the location and investigate the functionality of the public amenities and site office. • Addition of new Bus Setdown and car parking spaces. Site office will be relocated to accommodate these new features. |
| Airside Infrastructure Investment | |
| Additional Aircraft Parking | <ul style="list-style-type: none"> • Provision for three new aprons to increase general aviation parking capacity by an additional 32 (fee for occupancy) spaces. • Movement of the existing windsock will allow for the provision of new airside leasable aircraft hangars to allow owners to safely store and service aircraft. |
| Additional Helicopter Parking | <ul style="list-style-type: none"> • Provision for an additional three helicopter parking spaces. |
| New Higher Capacity Helipad Facility | <ul style="list-style-type: none"> • Provision for an all-weather hard stand helipad to accommodate a broad range of helicopters. |
| Airside Investment – New Taxiways | <ul style="list-style-type: none"> • The investment in the construction of new taxiways will seek to improve aircraft manoeuvring and flow during peak periods, reducing congestion and increasing safety. The improvements in efficiency and flow of aircraft will seek to manage and reduce on ground idling time and queuing time for landing approaches. |

1.5 Contribution to the Sunshine Coast – Social and Economic

1.5.1 Community Contribution

The Caloundra Aerodrome supports a diverse range of community-based aviation activities and benefits that are considered as being locally, regionally and nationally significant. These include:

- Queensland Air Museum,
- Westpac Lifesaver Rescue Helicopter, and
- Australian Air Cadets.

1.5.2 Economic Contribution

Currently the Caloundra Aerodrome is estimated to have contributed the following to the Sunshine Coast LGA economy in 2019-2020:

- \$64.6 million in output for local businesses (0.3% of the total for the Sunshine Coast LGA).
- \$27.6 million in Gross Regional Product (0.4% of the total for the Sunshine Coast LGA).
- 502 FTE jobs paying \$18.1 million in wages, salaries, and other employee compensation (0.4% of FTE jobs and 0.4% of total wages and salaries for the Sunshine Coast LGA).

The strongest contributing sector of the Aerodrome is the helicopter and aircraft maintenance and repair, generating over 86% of the Aerodrome's contribution to Gross Regional Product (GRP), with 58% of the Aerodrome's direct employment. Conversely, flight training, despite contributing 13% of direct employment, generated only 4% of the GRP. Additionally, the QAM attracts approximately 20,000 guests per annum as a tourist destination and community hub (Brady, T., 2020) making many who visit likely to contribute to other sectors of the Sunshine Coast economy.

Once Stage 1 is tenanted and industries are operational, Caloundra Aerodrome is projected to increase its potential contributions to the Sunshine Coast economy. This contribution is summarised in the table below. Including direct and flow-on activity, Caloundra Aerodrome is estimated to contribute the following to the Sunshine Coast LGA economy once Master Plan Phase 1 is complete and operational:

- \$178 million in output for local businesses.
- \$75.3 million in Gross Regional Product.
- 1,120 FTE jobs paying \$49.2 million in wages, salaries, and other employee compensation.

The following table provides as summary of the projected economic contribution that would be potentially realised on completion of full occupancy of Stage 1.

| Caloundra Aerodrome Economic Impact Potential | Output (\$M) | Gross Regional Product (\$M) | Incomes (\$M) | Employment (FTEs) |
|---|--------------|------------------------------|---------------|-------------------|
| Initial Stimulus in Local Economy | \$89.2 | \$31.4 | \$22.6 | 281 |
| Production Induced (Type I Flow-On) Impacts | \$33.7 | \$15.0 | \$10.7 | 298 |
| Household Consumption (Type II Flow-On) Impacts | \$55.1 | \$28.9 | \$15.9 | 541 |
| Total Impacts in Local Economy | \$178 | \$75.3 | \$49.2 | 1,120 |





2

Introduction

Caloundra Aerodrome was established in 1931, when it was first reserved as a landing ground. It is currently owned and operated by Sunshine Coast Council and is a key asset to the local and South East Queensland aviation network contributing to the industry's development in the region.

Caloundra Aerodrome has two sealed runways, which are predominantly used for flight training for both light fixed wing aircraft and helicopters. The site also contains aviation related business in the areas to the north-east of the runways.

This Master Plan presents a two staged approach that seeks to sustainably support economic investment in the Caloundra Aerodrome. The Master Plan seeks to firstly optimise and secondly

expand on the aerodrome's airside and landside resources. This two stage approach seeks to ensure that this significant and unique community asset continues to positively contribute to the Caloundra community while also serving and servicing the current demand and future growth in the aviation sector within the Sunshine Coast Council local government area and South East Queensland regional aviation industry context.

Stage 1

Outlines the strategic planning framework to support the existing use while also facilitating the potential growth and diversification of a broad range of aviation-related business investment in the northern portion of the site; provides measures to manage aircraft movement and limit adverse noise amenity impacts, and identify actions for Sunshine Coast Council to expand the returns to the regional economy and the local community.

Stage 2

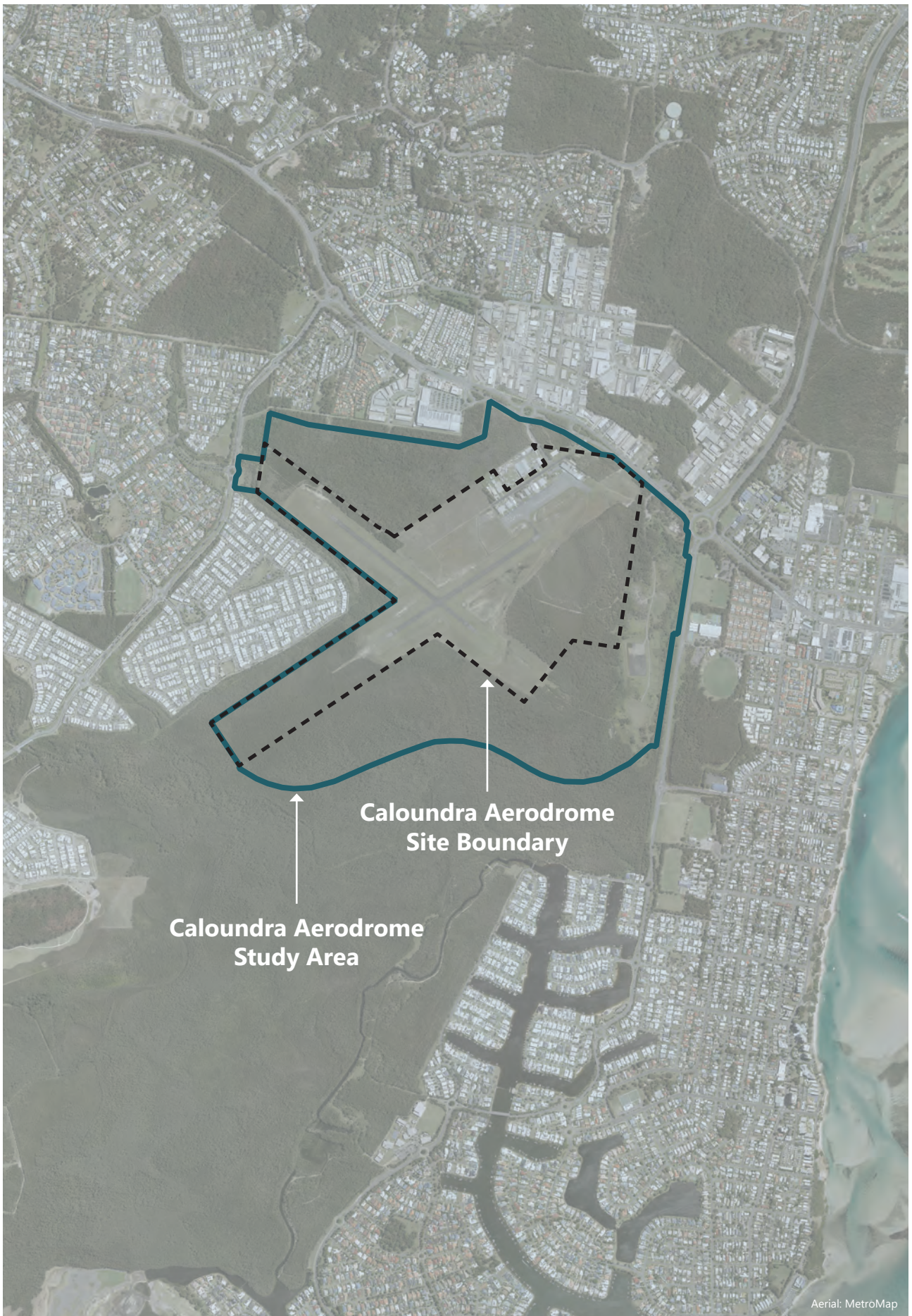
Identifies a future investigation precinct for the purpose of supporting the growth of aviation businesses and other potential compatible uses. Stage 2 seeks to enable the aerodrome to adequately respond to and facilitate a range of innovative and appropriate economic growth opportunities as they arise. Indicative land use options are to be considered and proposed, taking into consideration the existing physical and environmental characteristics of the precinct and the applicable regulatory mechanisms local and state, as well as the identified future investment in transport infrastructure and localised transit services.

This Masterplan comprises of the following:

- Section 3: Masterplan Overview
- Section 4: Caloundra Aerodrome
- Section 5: Employment and Economic Contribution
- Section 6: Planning and Regulatory Context

Section 7: Caloundra Aerodrome Site and Physical Characteristics

- Section 8: Aircraft Flight Activity
- Section 9: Masterplan
- Section 10: Masterplan Implementation



Aerial: MetroMap

Figure 2: Caloundra Aerodrome Study Area



3

Master Plan Overview

3.1 Vision

The vision for the Caloundra Aerodrome Master Plan 2042 is:

Caloundra Aerodrome will become a precinct of choice for advanced aerospace and associated manufacturing activities delivering cutting edge, sophisticated and sustainable opportunities of significance to the South East Queensland aviation and aerospace industry.

This Master Plan will achieve the vision through the following strategic directions:

Innovation and Enterprise: Provide a platform for the emergence of an innovative, high value advanced manufacturing and research and development cluster that contributes to a sustainable and diverse economic base with job opportunities and connections to the domestic market and supply chains.

Connections and Movement: Leverage opportunities from local and regional transport infrastructure, providing strong connections to the Caloundra City Center and the broader Sunshine Coast region and beyond.

Support and Education: The Aerodrome provides significant capacity to enable future employment and training opportunities in high value advanced manufacturing industries. The existing facilities will seek to provide ongoing support for current educational and aviation focused activities while also branching into other or ancillary aviation related industries such as Research and Development, High Value Manufacturing, Low Impact Last Mile Logistics and Defence.

Impact Management: Seek to ensure no material degradation of the current impacts associated with flying operations. Explore implementation of suitable mechanism to manage and mitigate operational risks and seek to attract investment that has minimal impact on surrounding receptors.

Environmentally Conscious: Continue to apply the existing management approaches to reduce and mitigate the impacts arising from aviation activities while also seeking to sustainably manage and maintain the aerodrome's landside supporting and ancillary infrastructure.

Community Contribution: Sustainably accommodate aviation focused community activities that provide an offering that is considered significant to Caloundra and the greater Sunshine Coast region.

3.2 Master Plan Snapshot

Land Release

Stage 1 – Optimise and Develop

- Stage 1 identifies 6.3ha of net leaseable area of aviation oriented commercial land to be made available with flexible lot sizes.
- This land release seeks to support and facilitate the growth aspirations of the existing aviation related tourism, manufacturing and technology development industries.
- Accommodate the attraction of new cutting-edge aerospace businesses and services to the aerodrome.
- Facilitate the optimisation of finite landside resource available to maximise the economic benefit to the Caloundra and broader Sunshine Coast community.
- Movement of existing airside infrastructure to facilitate the optimisation of finite airside land resources, maximising benefits to both existing and new aviation-related businesses. This includes a mix of active business land and sheltered aircraft storage.

Stage 2 – Identification of New Investigation Areas

- Stage 2 is focusing on the identification of growth and potential land use options; taking into consideration environmental constraints, future transit connections and compatible land uses with a view to realize up to 37ha of land that can potentially be developed, generating high value employment activities.

Landside Infrastructure Investment

Access and Utilities

- Extension of Pathfinder Drive to the south west to service new lease areas.
- As and when appropriate, review the location and investigate the functionality of the public amenities and site office.
- Addition of new Bus Setdown and car parking spaces. Site office will be relocated to accommodate these new features.

Airside Infrastructure Investment

Additional Aircraft Parking

- Provision for three new aprons to increase general aviation parking capacity by an additional 32 (fee for occupancy) space.
- Movement of the existing windsock will allow for the provision of new airside leasable aircraft hangars to allow owners to safely store and service aircraft.

Additional Helicopter Parking

- Provision for an additional three helicopter parking spaces.

New Higher Capacity Helipad Facility

- Provision for an all-weather hard stand helipad to accommodate a broad range of helicopters.

Airside Investment – New Taxiways

- The investment in the construction of new taxiways will seek to improve aircraft manoeuvring and flow during peak periods, reducing congestion and increasing safety. The improvements in efficiency and flow of aircraft will seek to manage and reduce on ground idling time and queuing time for landing approaches.

3.3 Updating the Caloundra Aerodrome Master Plan

The Caloundra Aerodrome Master Plan 2042 seeks to investigate, challenge and advance the approaches and initiatives established by the previous Caloundra Aerodrome Master Plan.

The purpose of updating the Caloundra Aerodrome Master Plan is to:

- Ensure that the activities and operations of the aerodrome are undertaken in a way that is aligned with contemporary aviation industry practice.
- Explore and understand the ever-evolving technological advancements in the aviation industry to enable the operators of the infrastructure to proactively respond when and as appropriate.
- Strategically manage the future development and operations of the asset in accordance with the expectations of Council and the community they represent.
- Facilitate the evolving aspirations of the aviation industry and seek to leverage sustainable and viable economic development opportunities that support the growth and development of the aviation and aerospace industries in the region and in south east Queensland more broadly.
- Ensure current applicable legislative requirements are understood and considered, and the implications are acknowledged and applied.

3.3.1 Changes to the Plan

A key difference in the approach to area boundaries when comparing the previous Master Plan to the Caloundra Aerodrome Master Plan 2042, is the consideration of the nearby ecological reserve. This change has been a result of detailed ecological investigations into the area identified for potential expansion of the aerodrome footprint into the Isabel Jordan Bushland Reserve. As a result of the ecological studies this area is no longer identified for future potential expansion of the aerodrome related activities.

3.4 Master Plan Process

Sets out the vision over the next stages of the Aerodrome's development:

1. Sets out the vision for the Aerodrome over the next phase of sustainable growth.
2. Establishes a planning framework for delivery of the Master Plan vision.
3. Guides the optimisation of the existing Caloundra Aerodrome landside activities.
4. Identifies areas to be considered to cater for future economic development and industry growth.
5. Identifies the provision and augmentation of key land and airside infrastructure to enable the implementation of Stage 1.

The Master Plan has been developed in consultation with existing Caloundra Aerodrome tenants, community-based associations and aviation industry and businesses. These groups each offered unique perspectives into how they wanted the future of Caloundra Aerodrome to be shaped and identified several matters for consideration within the Master Plan.

Generally, stakeholders support the Caloundra Aerodrome and the economic and social service contribution that it makes to the community and the broader Sunshine Coast local government area. There is a recognised economic benefit gain through increasing business development opportunities and the quantum of leasable land. Most stakeholders agree that Caloundra Aerodrome has the potential to become a regional transport hub through leveraging of the future Bus Setdown site, General Aviation commuting, and the proposed Beerwah to Maroochydore (B2M) Station. Connections to the regional aviation network and a proximity to the Caloundra city center make the Site valuable as an interchange and destination.

With a current clientele of established, growing businesses, the potential gain from developing within the existing aerodrome footprint is strong. Caloundra Aerodrome is also in a desirable location, with good road access and proximity to a future public transport infrastructure node.

The impact of aviation activities on surrounding sensitive receptors has been a matter raised as an ongoing concern, with stakeholders identifying that an intensification of education and circuit training could perceivably increase both the volume and duration of the aviation associated noise impacts. Concern was also raised in regard to any optimisation of Caloundra Aerodrome resulting in land being cleared from the neighbouring conservation reserve. Stakeholders have also expressed concern around the potential expansion of activities into the Isabel Jordan Bushland Reserve that has intrinsic community value and is comprised of locally significant environmental conservation values.

1

Sets out the vision for the Aerodrome over the next phase of sustainable growth.

2

Establishes a planning framework for delivery of the Master Plan vision.

3

Guides the optimisation of the existing Caloundra Aerodrome landside activities.

4

Identifies areas to be considered to cater for future economic development and industry growth.

5

Identifies the provision and augmentation of key land and airside infrastructure to enable the implementation of Stage 1.

Figure 3: Caloundra Aerodrome Master Plan Process

Legend

-  Study Area 228.3 ha
-  Caloundra Aerodrome site boundary
-  Existing lot boundaries
-  Existing easements
-  Existing road network
-  Indicative Beerwah to Maroochy Rail Extension corridor
-  Public safety area
-  Dedication for the public transport corridor and buffer
-  Commercial redevelopment opportunity
-  Proposed leaseable areas (subject to further investigation)
-  Indicative helipad location
-  Proposed leaseable areas - airside (subject to further investigation)
-  Indicative taxiway access
-  Indicative road access
-  Henebery Place extension to Pelican Waters Boulevard (alignment to be considered and coordinated in the ultimate Beerwah to Maroochy Rail Extension design)
-  Proposed Airside extension
-  Proposed Airside adhoc aircraft activities
-  Proposed Bus setdown and car parking
-  Taxiway (based on future demand)
-  Undercover open T Hangar parking
-  Future windsock location
-  Navigational aid buffer/restricted building height
-  Indicative Stage 2 (30 ha approx)

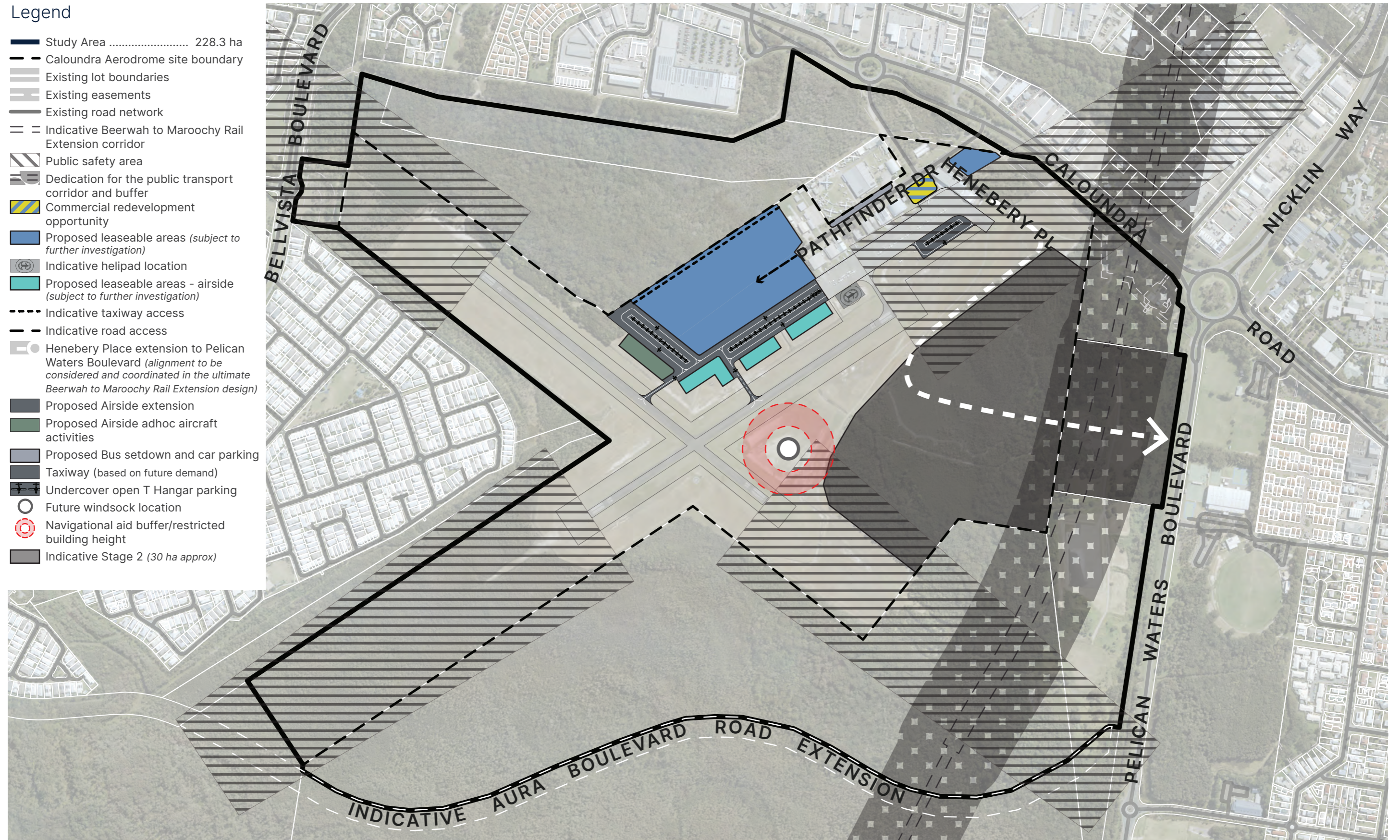


Figure 4: Master Plan Overall



4 Caloundra Aerodrome

Caloundra Aerodrome is located at 14 Caloundra Drive, Caloundra West, and is legally known as Lot 1 on SP312324. It is 3.5km west of the Caloundra city centre and has a total study site area of approximately 145ha. The site is generally flat sloping down towards the south. It has an elevation of 38ft above mean sea level and is located at a latitude of 26.48° South and a longitude of 153.15° East.

The land tenure for the Caloundra Aerodrome is freehold land owned by Sunshine Coast Council. This provides Council with the opportunity to explore and facilitate economic development opportunities for the Aerodrome that seek to advance Council's commitment to the delivery of the Regional Economic Development Strategy (REDS) and manage the future development of the aerodrome in a commercial manner while balancing the expectations and commitments of the broader community.

Legend

- Caloundra Aerodrome Site Boundary
- Major Roads

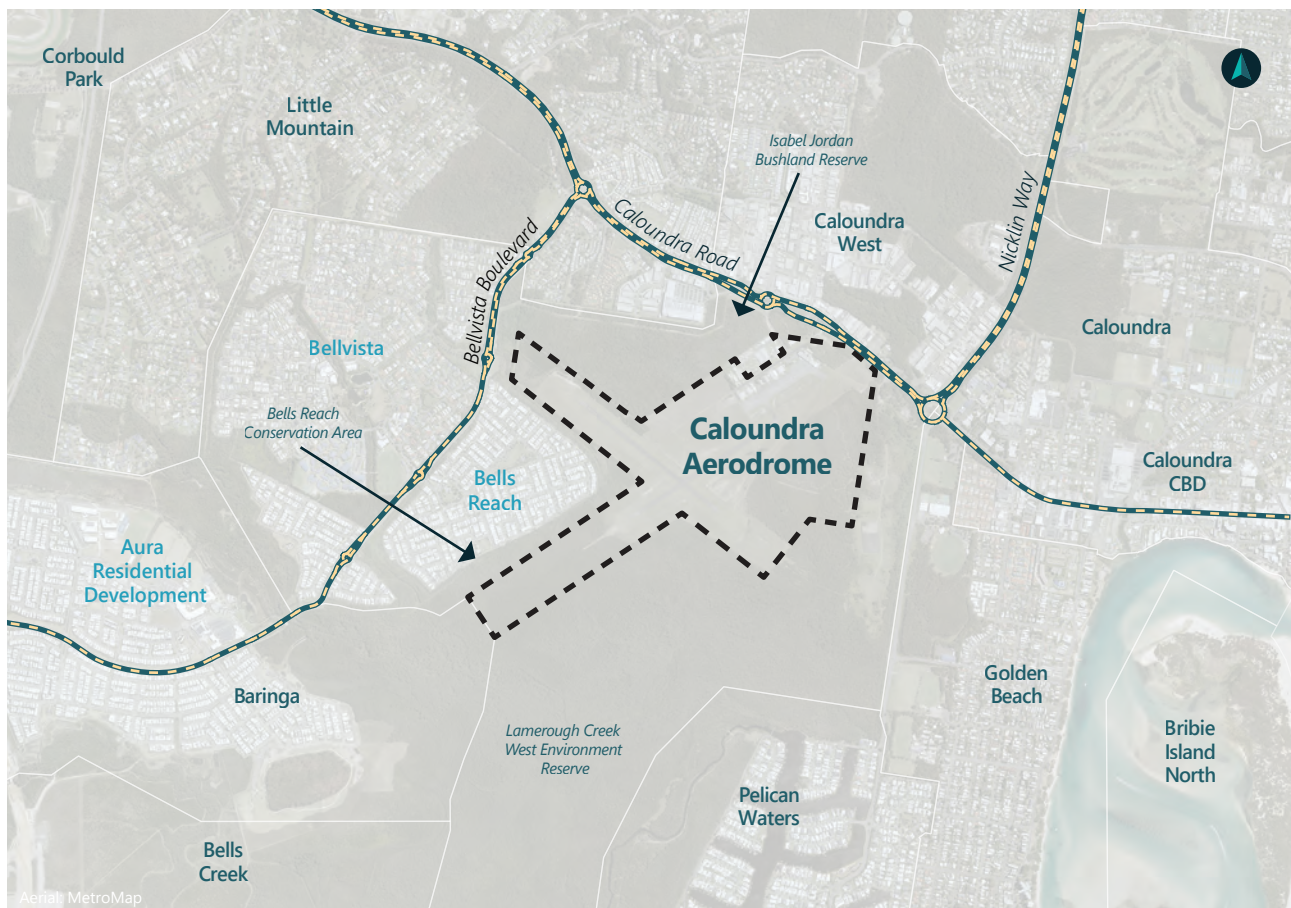


Figure 5: Locality Map

4.1 Surrounding Land Uses

The land uses surrounding Caloundra Aerodrome are a mix of industrial to the north, a portion of conservation land then residential to the east, an ecological land reserve to the south, and residential to the west. Given that both the east and west sides of the lot contain sensitive uses, and the south is an ecological reserve, additional development will need to mitigate against or minimize the impacts from noise pollution or to amenity in the surrounding area.

primarily aviation-related, and include advanced helicopter modifications and fit outs, aircraft flight training, aircraft repairs and maintenance, aviation equipment sales and skydiving training.

In addition to formal lease holdings, private aircraft are parked at Caloundra Aerodrome both at secure tie down points on the apron and on adjoining grassed areas. At present Sunshine Coast Council does not charge for runway use or aircraft parking. However, this is an area that Council should look to transition to.

4.2 Industry Composition

The Caloundra Aerodrome currently supports a number of businesses, each of which occupy one or multiple lots at the aerodrome site. Businesses currently operating at Caloundra Aerodrome are

There is some interaction between the Aerodrome-based businesses and the industrial land adjacent to the site, with several Aerospace part manufacturers relocating to the industrial land and continuing to work with airside businesses intermittently.

Legend

- Caloundra Aerodrome Study Area
- Lots
- Roads

Land Ownership

- 1 Caloundra Aerodrome
- 3 Queensland Air Museum
- 5 Rotary Park
- 7 Freehold Land
- 2 Commercial Tenants
- 4 Isabel Jordan Bushland Reserve
- 6 State Land (Reserve)

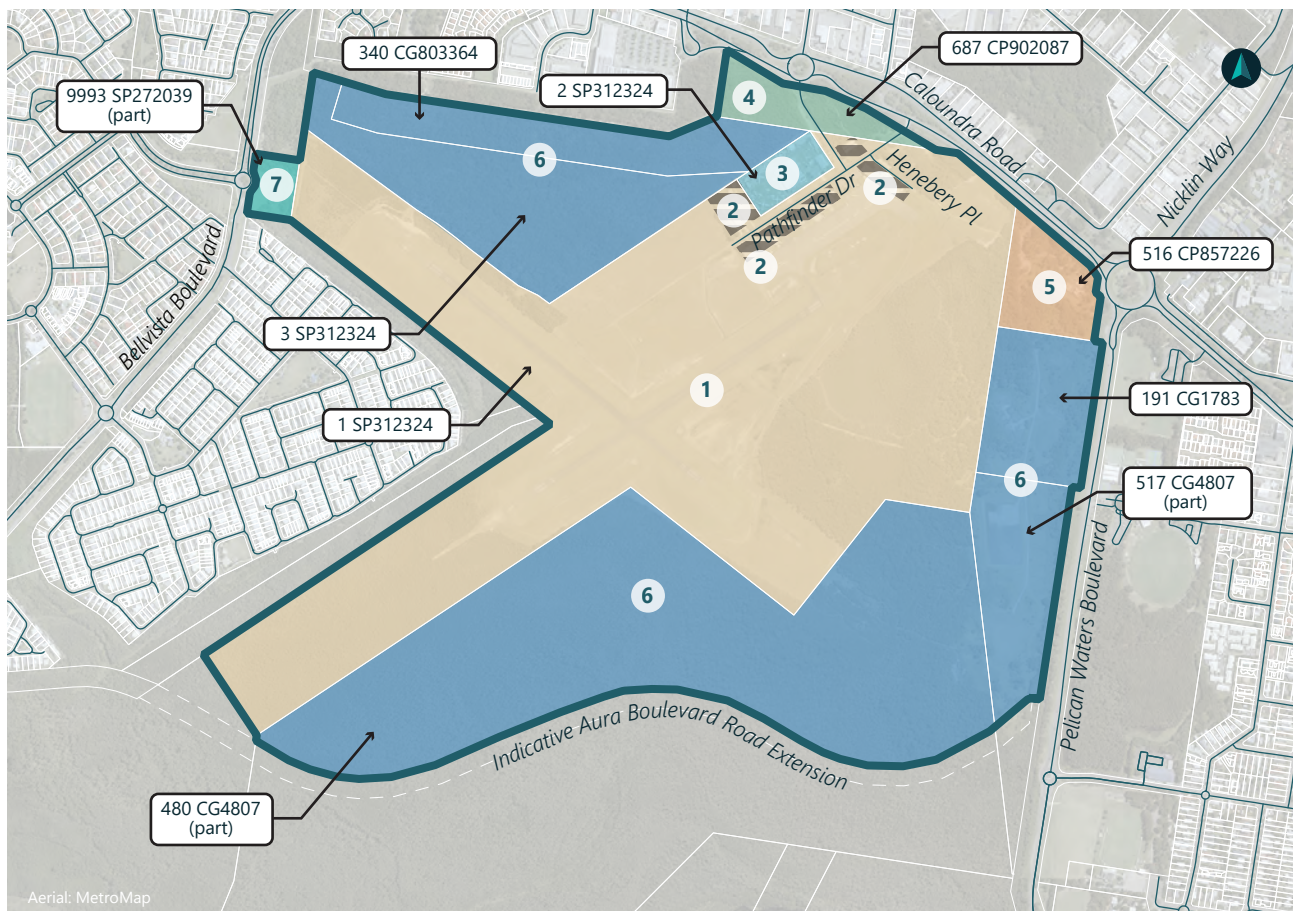


Figure 6: Land Ownership



4.3 Community Activities and Benefits

The Caloundra Aerodrome supports a diverse range of community-based activities and benefits that are considered as being locally, regionally and nationally significant. These include:

- Queensland Air Museum,
- Westpac Lifesaver Rescue Helicopter, and
- Australian Air Cadets.

4.3.1 Queensland Air Museum

The Queensland Air Museum (QAM) is located on the northern side of the Caloundra Aerodrome, on reserve land that is adjacent to several freehold lots. The 2ha QAM site was first established at the Caloundra Aerodrome in 1986. It now incorporates two hangars, a library and storage facilities as well as hard stand display areas.

In 2020 the QAM engaged Dr Tony J Brady to undertake an Assessment of Significance of the QAM Collection. The assessment identified that QAM is the largest and most diverse aviation museum in Australia. It is operated by volunteers and currently has 358 registered members. QAM's mission is to collect and preserve all aspects of aviation heritage with special emphasis on Australia and Queensland and to exhibit the collection for the educational and cultural enrichment of the community.

The Queensland Air Museum Inc was formed as a not-for-profit society in June 1974 and was reincorporated under the Queensland Associations Incorporation Act on 2 April 1998.

The museum is run entirely on a volunteer basis and the entire collection of the museum is deemed to be held in trust for the community. The QAM team is well organised, with a defined structure that is coordinated by an elected executive committee supported by an elected general committee and volunteers in assigned roles.

QAM also plays a key role in contributing to the social capital and connectedness of the Caloundra community. QAM connects over 100 volunteers with their passion in aviation and hosts events that are significant for the local and regional aviation communities. These events are a place for connecting, sharing interests, socialising and historical preservation. The site also offers several educational sessions and events that are used to attract and engage the broader Caloundra community. Recently, the site has pivoted to become a hosting venue for corporate and social events.

4.3.2 Westpac Rescue

In addition to the QAM, the Westpac Rescue Helicopter and Air Cadets are users that bring a host of benefits to the community. The Westpac Rescue Helicopter operates in the local Sunshine Coast area to perform and assist with a variety of sea and land based rescues. This service is a mix of paid workers and volunteers and works with local Lifeguards and Emergency Services to educate the public, rescue people in danger, and provide a great public service.

4.3.3 Air Cadets

The Australian Air Cadets are an extension of the Royal Australian Air Force and serve to introduce people under 18 to an environment working with Aircrafts. The Cadets operate a variety of courses and camps to promote teamwork and other life skills. The Air Cadets host several educational and practical events to provide the youth with a variety of life skills and learned experiences.



5 Employment and Economic Contribution

5.1 Current Economic Conditions

The Caloundra Aerodrome facility currently supports a range of aviation businesses. The businesses currently operating are primarily aviation-focused, and include advanced Helicopter modification and fit-outs, Aircraft maintenance, repair and part manufacturing, flight training, charter flights, and skydiving.

Including direct and flow-on activity, the Aerodrome is estimated to have contributed the following to the Sunshine Coast LGA economy in 2019-2020:

- \$64.6 million in output for local businesses (0.3% of the total for the Sunshine Coast LGA).
- \$27.6 million in Gross Regional Product (0.4% of the total for the Sunshine Coast LGA).
- 502 FTE jobs paying \$18.1 million in wages, salaries, and other employee compensation (0.4% of FTE jobs and 0.4% of total wages and salaries for the Sunshine Coast LGA).

The strongest sector for the 2019/20 Fiscal Year was Helicopters and Aircraft Repairs and Maintenance due to its large number of on-site staff, and high industry costs. This sector generated 86% of the Aerodrome's contribution to Gross Regional Product (GRP) and 58% of the direct employment. Conversely, flight training despite providing 13% of direct employment, generated only 4% of the GRP contribution. It should be noted that these figures are based off of 2019/20 data only and do not show long term movements. These figures are to be revised and reviewed periodically to identify new trends.

5.1.1 Relations with other Regional Aviation Facilities

The South East Queensland aviation facility network is serviced by a combination of Airports and smaller Aerodromes and Airfields. Generally, the differences between Airports and Aerodromes come from the scale of their operations. Airports offer general aviation and aviation related services at a national and international level, while aerodromes and airfields offer the same services but at a regional scale.

Historically, the Sunshine Coast Airport has operated largely independently of the Caloundra Aerodrome, with both facilities not mentioning collaboration in their respective master plans. Similarly, many of the regional Aviation facilities do not collaborate in a consistent manner. This historic disconnect provides the opportunity for the creation of an integrated plan between the South East Queensland aviation facilities, reinforcing the notion of the Caloundra Aerodrome and Sunshine Coast Airport becoming complementary assets.

This has already begun, with the *Sunshine Coast Regional Development Strategy 2013 - 2033* establishing a Sunshine Coast Enterprise Corridor from the Sunshine Coast Airport to the Caloundra Aerodrome. This corridor will run parallel to the Caloundra South PDA.

5.2 Economic and Aviation Trends

5.2.1 General Economic Themes

Macroeconomic change has been occurring in Australia for some time, but the emergence of the COVID-19 pandemic has been catalytic in accelerating change in the manner in which Australian (and global businesses) operate.

5.2.2 De-Globalisation of Supply Chains

Trade restrictions imposed (on a temporary basis) in the early stage of the COVID-19 pandemic resulted in supply chain breakdowns across the world (Harvard Business Review, 2020). In response, corporations are moving to mitigate future risk through adapting their supply chains:

- Use of technology to reduce risk exposure as well as other process innovations to improve access to the supply chain (such as bringing some components of the manufacture process in house).
- Diversifying the supply base (geographically).
- Micro supply chains by establishing multiple, smaller, smarter supply chains in market or close to market.
- Decentralisation of supply chains by moving supply chains to more regional areas, closer to primary products and away from some of the risks and costs of operating in the cities.

At the same time, consumers are still demanding lower costs, and this balance between localised production and supply chains and costs of production will be key in improving local economic outcomes. For the Sunshine Coast, this theme offers an opportunity to leverage the region's relatively low cost of industrial land, proximity to Brisbane (and export markets) and strong lifestyle amenity to attract and retain key businesses in the region.

5.2.3 Increased Digitalisation of Work and E-Commerce

The COVID-19 pandemic has resulted in a surge in e-commerce and other components of digitisation (UNCTAD, 2021). The policy response to COVID-19 domestically resulted in many Australians working from home. In late April and early May 2020, approximately 46% of working Australians said they were working from home (ABS, 2020). During this period, the use of digital technology became a replacement for many activities previously primarily done through face-to-face interactions, including business meetings, education, health and shopping. Globally, e-commerce's share of total retail trade lifted from 14% to 17% between 2019 and 2020. Domestically, Australian e-commerce expanded by 57.0% in the 2020 year (Australia Post, 2021).

In a mid-2021 survey of Australians, approximately 32.8% indicated they expected working from home to be an aspect of COVID-19 restrictions which would continue in their life after COVID (ABS, 2021).

The implications of this trend for the Sunshine Coast are the potential for increased residential attraction as working from home and access to e-commerce platforms for shopping and other activities facilitates greater choice of residential location for Australian workers.

In terms of aviation activity in the Sunshine Coast, there is potential for logistics, warehousing and other activities to locate to aviation precincts such as Caloundra Aerodrome to realise efficiencies in the transport of time-sensitive goods requiring air freight. This could potentially include the use of drones for delivery purposes within the region.

5.2.4 Advanced Manufacturing

Advanced manufacturing has significant opportunity in Australia, resulting in higher value add outcomes for the industry. It is expected the sector will be more focused on bespoke production of goods, expansion of manufacturers' role in the value chain, incorporation of smart technologies in the process, a focus on environmental and social sustainability and greater collaboration and integration of supply chains (CSIRO, 2016).

Attraction of advanced manufacturing businesses is a potential opportunity for the Sunshine Coast, with local industrial land prices significantly lower than those in Brisbane and Sydney, lower labour costs, strong access to infrastructure and access to available land for development (Sunshine Coast Council, 2020). There is potential for this activity to be attracted elsewhere within the Sunshine Coast LGA where clustering may already be occurring.

The advanced manufacturing sector already has a presence in the Caloundra Aerodrome facility, with the presence of HeliMods located onsite. The exploration into electric aircraft manufacturing presents a unique opportunity to transform how current flight movements are managed and shift into the software, robotics, and innovation sectors. Additionally, this leans into the research and development of new and experimental technology-based solutions for the aerospace industry. The attraction of further high value-added manufacturing activity to the Caloundra Aerodrome space is a key opportunity to be leveraged by the Master Plan.

5.2.5 Regional Migration

The Sunshine Coast's population growth has been bolstered from 2020 onward, stemming from COVID-related interstate migration. Key age groups that have experienced significant reductions in departure rates between December 2019 and December 2021 include all age cohorts under 45 years. The Sunshine Coast benefits from significant lifestyle amenity including a large number of natural assets as well as close geographical proximity to Brisbane City. The Sunshine Coast LGA has consistently recorded population growth above the rate for Queensland since 2011, with average annual growth of approximately 2.3% over this time frame (compared to 1.6% for Queensland).

This trend, should it be continued into the future, has the potential to improve local business access to skilled labour who might have otherwise relocated for study and work purposes. Increased access to skilled labour has benefits for the advanced manufacturing sector.

5.3 General Themes in Aviation

There is significant structural change impacting the aviation sector. Due to the lack of passenger transport or freight uses of the Caloundra Aerodrome, this section focuses primarily on the trends in aviation that impact on aircraft manufacturing, air freight and general aviation.

5.3.1 Aviation Manufacturing

Recent technological developments in the aviation sector in terms of drones, high-powered aircraft and vertical take-off and landing vehicles (eVTOL) present opportunities to the aviation sector as a whole (DITRDC, 2020). Potential uses for Advanced Aerial Mobility (AAM) and eVTOL in Australia include commuting, emergency services, works and logistics and recreation (Deakin University, 2020).

Drones offer a cost-effective, time-efficient, emissions-minimising solution to a broad range of business challenges, and have been adopted for use in many industries, including insurance, infrastructure, agriculture, and media and telecommunications. Drone use has become increasingly user friendly and accessible over recent years, particularly in Australasia, with the Asia-Pacific region accounting for 34.5% of the global drones market value in 2018 (Drone Insure 2020).

Manufacture of such aviation technologies would be considered high value-add technologies and could be considered as opportunities for location/co-location at Caloundra Aerodrome.

5.3.2 Air Freight

Since the mid-1980s, levels of international freight volumes have lifted significantly, with air freight levels reaching a high of 582,000 (inbound) and 568,600 by 2017-18 (BITRE, 2021). Since the onset of the global pandemic and implementation of (short term) trade restrictions, international air freight volumes have eased. In addition, in international freight volumes, domestic freight volumes on scheduled flights reduced by 16% in the year to June 2020 (Freight Australia, 2020). Trends in air freight, domestic and international, are in contrast to other methods of freight logistics, with maritime and road freight volumes comparatively stable over the period (Freight Australia, 2021).

Recovery in the air freight sector will be dependent on the opening of international borders and the general recovery in the national economy. There is some potential for the Sunshine Coast to play a role in increased access to international markets through air freight; however, it is unlikely this activity will be located at the Caloundra Aerodrome due to the operational limitations associated with associated with the existing facility and the intention for the Sunshine Coast Airport to remain the primary air freight gateway for the Sunshine Coast.

5.3.3 General Aviation and Fixed Base Operations (FBO)/ Charter Operations

General Aviation and the FBO sector have reportedly enjoyed strong growth through COVID-19 as essential business travel sought a safer, and more reliable, mode of travel than commercial passenger flights. Flying operations support a number of industries. From agricultural flying, through to aerial surveying work, border patrol, scientific flying, fly-in fly-out transfers, remote area logistics, flying veterinarians, photographers, tourism etc, there is a vast array of operators which carry out diverse business operations in general aviation and rotary wing aircraft. These Flying Operations present an opportunity for future industry within the Aerodrome, as they all require minimal modification to the existing airside infrastructure. Additionally, General Aviation at Caloundra Aerodrome does not have to compete with the interstate and commercial passenger aircraft traffic seen at the nearby Sunshine Coast Airport, making it a much more efficient option for businesses that run multiple flights. These operating conditions are considered to be significant enablers for the growth of General Aviation activities within the Caloundra Aerodrome.

5.4 Future Industry Development Opportunities

To identify potential future industry development opportunities for the Caloundra Aerodrome, a Benchmark Assessment comparing several other similar regional publicly-owned Aviation Facilities was undertaken, with many of these also in close proximity to a larger Airport.

All the sites operate under similar circumstances to Caloundra Aerodrome and with similar surrounding land uses. The primary uses of the sites were found to be the same as Caloundra, with aircraft maintenance and repair, flight training, and aviation manufacturing. Some larger sites were able to integrate some logistic and freight work; however, these sites were located in areas with low population density and were surrounded by industrial zoned land. If an increase in flights and noise impacts were successfully mitigated, there could be an opportunity for Caloundra Aerodrome to accommodate last mile freight capacity functions. This would be especially useful for freight class that are aviation related or require rapid transit, such as medical supplies.

Stakeholder engagement and economic industry trend analysis identifies additional opportunities for Caloundra include:

- The expansion of existing advanced aerospace related manufacturing alongside general aviation businesses. This would grow the economic activity of the site, leading to more jobs and a higher GRP. Many existing businesses have expressed a desire to expand so doing so is a key development opportunity.

- Transforming the Aerodrome into a regional tourism and community destination through investment and expansion of the QAM to provide more community events and with a great array of aircrafts.

5.5 Future Economic Contributions

5.5.1 Stage 1: Optimisation and Development

Stage 1 expects to expand the land available for rent by approximately 6.3ha of net leaseable area across four locations across the Master Plan Study Area. The existing aerospace engineering and development businesses have expressed a desire to expand, with much of the land released in Stage 1 potentially being taken up. In addition to releasing land, Stage 1 also includes improvements to the aviation infrastructure, making for more efficient operations. An assessment was conducted on the potential economic contribution of Stage 1, using a model that assumes the expansion of current businesses with an estimated workforce of 145 employees. Including direct and flow-on activity, Caloundra Aerodrome is estimated to contribute the following to the Sunshine Coast LGA economy once Master Plan Stage 1 is complete and operational. Much like the assessment of the current situation, the QAM is entirely volunteer run, however an expansion to the QAM would be highly likely to increase visitors to the area. However, at this time limitations of the data prevent an estimation of the contribution being projected on this visitor number.

Table 1: Caloundra Aerodrome Projected Economic Contribution for Stage 1

| Caloundra Aerodrome Economic Impact Potential | Output (\$M) | Gross Regional Product (\$M) | Incomes (\$M) | Employment (FTEs) |
|--|---------------------|-------------------------------------|----------------------|--------------------------|
| Initial Stimulus in Local Economy | \$89.2 | \$31.4 | \$22.6 | 281 |
| Production Induced (Type I Flow-On) Impacts | \$33.7 | \$15.0 | \$10.7 | 298 |
| Household Consumption (Type II Flow-On) Impacts | \$55.1 | \$28.9 | \$15.9 | 541 |
| Total Impacts in Local Economy | \$178.1 | \$75.3 | \$49.2 | 1,119 |

Note: Conservative estimates according to AEC

5.5.2 Stage 2: Future Investigation Area Development

Stage 2 intends to leverage off the proposed future B2M corridor to create a precinct that connects public transport with the Aerodrome. Stage 2 currently in the preliminary stage, it could be transformed into several different land use types. These include but are not limited to:

- **Aerospace Engineering:** Expansion of low-rise manufacturing, repair, and manufacturing facilities to capitalise on current uses.
- **Research and Development:** Creation of Aerospace Centre for the development of new aviation technologies, flight simulation, drone research.
- **Entertainment Hub:** Capitalise on proposed B2M corridor by increasing tourism potential. Creation of themed entertainment to provide additional attraction to the precinct.
- **Integration of Renewables:** Incorporate Renewable energy production means into new buildings to assist in offsetting emissions. Construction of research facility into renewable energy-powered aircrafts.

The potential economic contributions from Stage 2 are yet to be modelled and quantified therefore the value that can be potentially created from development will only be defined once further investigations are completed. All development options have the potential to result in high value employment generating activities, increasing local aviation and ancillary service jobs and therefore economic activity. However, until the additional investigations are completed quantifying the developable land area; identifying the infrastructure servicing and the associated site access arrangements; a robust economic cost benefit analysis and economic contribution breakdown cannot be calculated with a high level of certainty.

5.6 Aviation Regional Context

Twelve aerodromes were identified in the South East Queensland (SEQ) Region (including Brisbane metropolitan area) which are sufficiently close to Caloundra to potentially pose either a commercial threat or provide additional aeronautical capacity to support Caloundra's General Aviation Activities.

Under the requirements of CASR part 139, only Sunshine Coast and Archerfield are certified (certified aerodromes are generally labelled as airports), while the remainder are categorised as Aircraft Landing Areas and certain other aerodromes such as Caloundra Aerodrome are unregulated facilities and are used in accordance with the aircraft operators certificate and/or pilot's responsibility to determine suitability of the facility. Ownership of these is either private or Council (with various management structures in place).

The aerodromes are shown in Figure 7. Brisbane Airport is included as it is the primary aviation facility in the south east Queensland region.

Aerodromes that provide a similar level of service and standard of facility to Caloundra include Redcliffe, Caboolture, Kilcoy and Watts Bridge Memorial. All however have operational requirements and or constraints which limit their ability to support the existing General Aviation Industry and associated activities at Caloundra Aerodrome (Appendix B). Smaller aerodromes such as Noosa, Teewah (Model Beach Only), Tangalooma, Koorngal, and Greenfield currently have no known plans for expansion or closure, and would require significant upgrades before they could be considered a relevant competitor to the Aerodrome.

5.6.1 Relationship with Sunshine Coast Airport

A key factor in establishing the Caloundra Aerodrome vision is the relationship context with the Sunshine Coast Airport and the respective aeronautical and non-aeronautical markets each service.

Caloundra Aerodrome's commercial offering seeks to diversify and accommodate the region's aviation-related advanced manufacturing capability. It is envisaged that the Aerodrome's relationship with the Sunshine Coast Airport will be complimentary and will seek to provide a commercial offering that does not directly compete.

The Sunshine Coast Airport's runway length and 24-hour operation enables it to accommodate a host of Regular Passenger Transport (passenger aircraft), and General Aviation activities. Additionally, Sunshine Coast Airport also has flight training (fixed wing and rotary), aircraft maintenance, and aeromedical facilities.

By comparison, Caloundra Aerodrome's short runways and limited taxiway network will continue to limit its market to light aircraft, primarily used for general aviation and for ab-initio (beginner) flying training.

Both airports are located near trunk roadways and may have land available for aviation related commercial development. The potential development area available at Sunshine Coast

Airport and the number of potential environment constraints at Caloundra Aerodrome make Sunshine Coast Airport more attractive for larger developments, particularly freight hubs (in line with its Master Plan objectives).

With the presence of the Queensland Air Museum, Caloundra Aerodrome is also a tourism destination. Both aerodromes do and will continue to provide scenic flights for the tourism market.



Figure 7: Surrounding Aerodromes and Associated Aviation Facilities



6

Planning and Regulatory Context



6.1 Commonwealth Legislation

6.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance.

Using the Protected Matters Search Tool returned several threatened ecological communities, threatened flora and fauna and migratory species that have potential to occur within 2km of the Caloundra Aerodrome. Previous ecological survey (North Coast Environmental Services, 2018) did not identify any threatened ecological communities, flora and fauna or migratory species. If Matters of National Environmental Significance are identified during additional survey, a Significant Impact Assessment should be undertaken to determine if a referral to the Minister is required.

6.2 State Planning Legislation

6.2.1 Shaping SEQ – South East Queensland Regional Plan 2017

The Caloundra Aerodrome is identified within the Northern sub-region in the *South East Queensland Regional Plan 2017* (SEQRP). The Northern sub-region is characterised by:

- A strong focus on consolidation around major urban centres and along a planned coastal passenger transport corridor, complemented by major expansion areas on its southern and south-western edges where public transport can be easily extended.
- Its role as the northern gateway, connecting SEQ to coastal and regional cities, and central and northern Queensland towns.

- An emerging national and global-oriented economy that embraces innovation and renewable energy, creativity and entrepreneurial activity, and which leverages major 'future city' investments in health and education infrastructure.
- Its role as a domestic and international tourism destination.
- A growing domestic airport, which supports tourism and broader economic activities.
- A developing integrated transport network that is accelerating access within the sub-region, and contributing to strong social and economic connections with the Metro sub-region.
- Nationally and internationally recognised natural assets and environmental values, including world-class hinterland areas and an identifiable inter-urban break that helps frame and differentiate it from the Metro sub-region.

The Caloundra Aerodrome though not specifically identified within the SEQRP, has the characteristics of regionally significant infrastructure as it does have a role in advancing the characteristics for the region by supporting economic diversity, tourism and activity clustered around planned public transport nodes.

6.2.2 State Planning Policy

The State Planning Policy (SPP) identifies the interests the State has across a range of planning matters. Relevant to the Caloundra Aerodrome is the State's position on the protection and facilitation of aviation facilities, the encouragement and growth of the State's aviation industry, and the Aerodrome's potential as a tourism destination. The SPP acknowledges the contribution that the aviation industry makes to the broader Queensland economy on the areas of tourism, logistics, business. Air transport infrastructure such as aerodromes also provide important community infrastructure and enable the efficient delivery of vital emergency services. The SPP provides direction relating to managing and mitigating development to ensure that the operation of strategic airport infrastructure is not impacted.

The SPP identifies that development and associated activities:

- (1) *Do not create incompatible intrusions, or compromise aircraft safety, in operational airspace.*
- (2) *Avoid increasing risk to public safety in a public safety area.*
- (3) *Are compatible with forecast levels of aircraft noise within the 20 ANEF contour or greater [as defined by Australian Standard 2021–2015: Acoustics—Aircraft noise intrusion—Building siting and construction (AS 2021), adopted 12 February 2015] and mitigate adverse impacts of aircraft noise.*
- (4) *Development complements the role of a strategic airport as an economic, freight and logistics hub, and enhances the economic opportunities that are available in proximity to a strategic airport.*
- (5) *Aviation facilities are protected by avoiding development and associated activities within building restricted areas that may affect the functioning of the aviation facilities.*
- (6) *Key transport corridors (passenger and freight) linking strategic airports to the broader transport network are identified and protected.*

Additionally, the delivery of sustainable tourism development is facilitated where it:

- (1) *Is complementary to and compatible with other land uses including sensitive land uses.*
- (2) *Promotes the protection or enhancement of the character, landscape and visual amenity, and the economic, social, cultural, and environmental values of the natural and built assets associated with the tourism development.*

The SPP specifically lists strategic airports of state significance, of which the Caloundra Aerodrome is not one. However, the SPP intent, guidance and direction is relevant to the Caloundra Aerodrome viewed through a regional significance lens and could generally be applied within a local context through the Sunshine Coast Council regulatory land use planning mechanisms.

6.3 State Environmental Legislation

The Caloundra Aerodrome Study Area contains several lots that are impacted across a variety of State Environmental Legislation. These lots include:

- 340 CG803364
- 687 CP902087
- 516 CP857226
- 191 CG1783
- 517 CG4807
- 480 CG4807
- 3 SP312324

As part of the investigation and development process into land release and future development, several ecological requirements may be activated. These include:

- Flora Survey to be completed prior to vegetation clearing under the *Nature Conservation Act 1992*.
- Survey into the Wallum Froglet – if discovered, management plan will be required under the *Natural Conservation Act 1992*.
- Any Development in Koala Habitat will be considered Assessable under the *Planning Act 2016* and require the applicable Development Application.
- If activities (land clearing) prescribed under Schedule 1 of the *Environmental Offsets Regulation 2014* is required and has an impact on MSES Vegetation, an Environmental Offset Plan will be required.
- Remnant Vegetation that is cleared across the above impacted lots is exempt provided it is done for an airport-related purpose and does not require development approval under the *Vegetation Management Act 1999*.

Legend

- Caloundra Aerodrome Study Area
- Lots
- Caloundra Aerodrome Site Boundary
- Core Koala Habitat Area

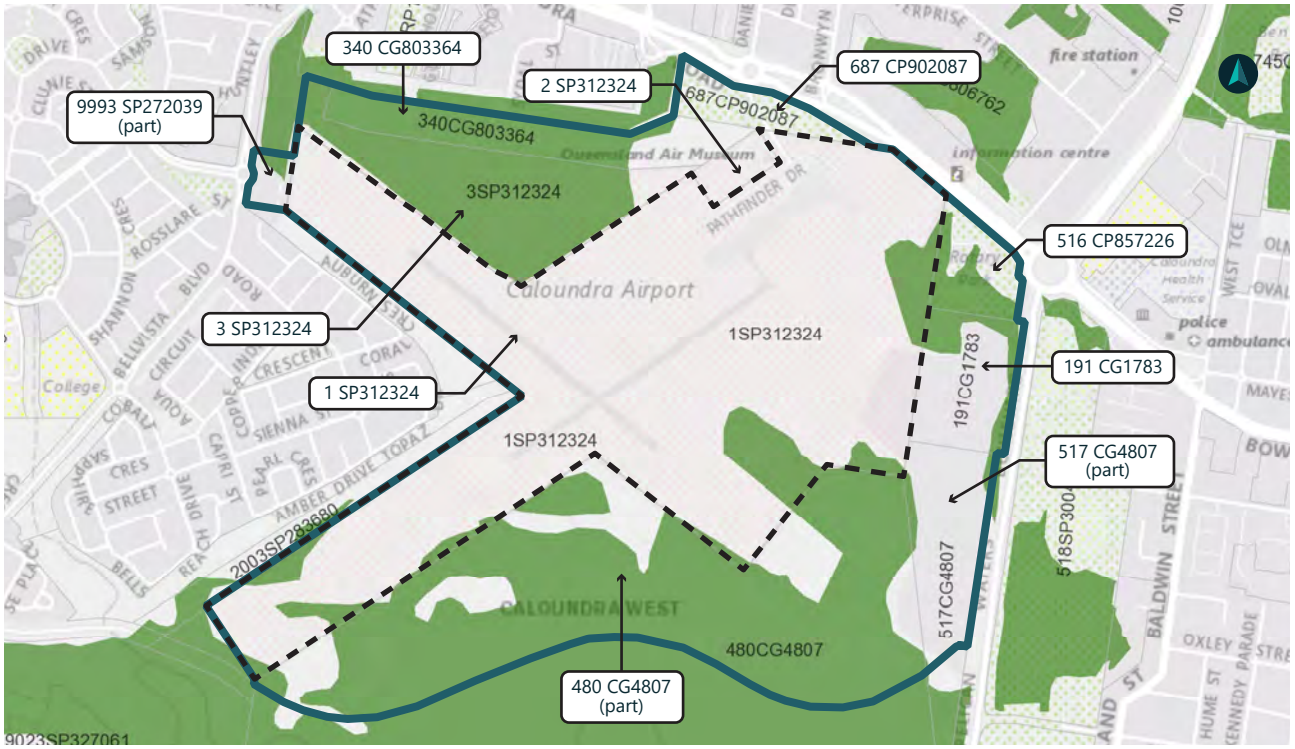









Figure 8: Koala Habitat Mapping (Source: DAMS Mapping)

Legend

-  Caloundra Aerodrome Study Area
-  Caloundra Aerodrome Site Boundary
-  Lots
-  Cadastre (25k)

MSES – Wildlife habitat

-  MSES – Wildlife habitat (endangered or vulnerable)
-  MSES – Wildlife habitat (special least concern animal)
-  MSES – High ecological significance wetlands

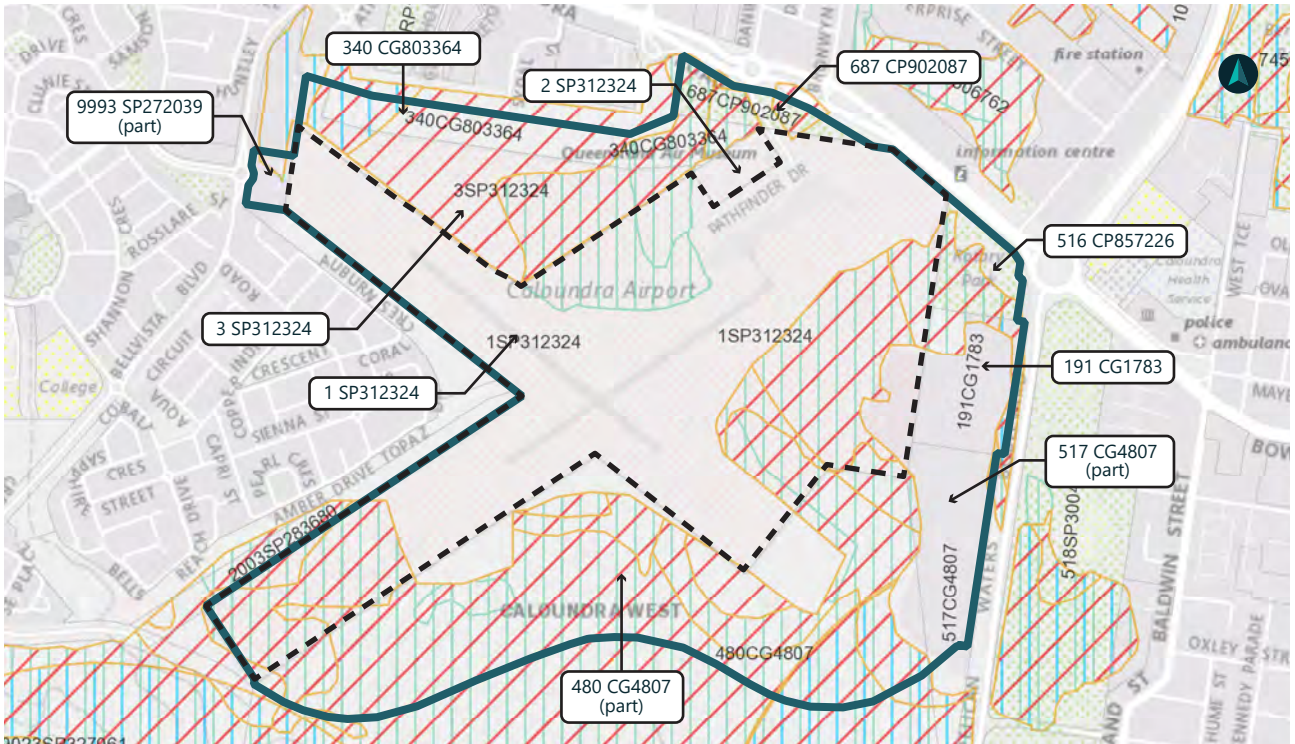


Figure 9: MSES Mapping (Source: SPPIMS)

- | | | | |
|---|-----------------------------------|---|---------------------------------|
| Legend | | Environment – Vegetation Management | |
|  | Caloundra Aerodrome Study Area |  | Nature conservation information |
|  | Caloundra Aerodrome Site Boundary |  | Protected plants trigger map |
|  | Lots | | |



Figure 10: Protected Plants Mapping (Source, Queensland Globe, 2021)

6.4 Sunshine Coast Planning Scheme 2014

The *Sunshine Coast Planning Scheme 2014* (the Planning Scheme) sets out Council's framework to manage growth and development until 2031. The strategic intent for the region is for the Sunshine Coast to be renowned for its vibrant economy, ecological values, unique character and strong sense of community. The majority of new growth will be located in the Sunshine Coast Enterprise Corridor, with 'game changer' projects and associated priority investment areas including the Maroochydore City Centre Priority Development Area, Sunshine Coast University Hospital and adjacent health precinct, the Sunshine Coast Airport and the University of the Sunshine Coast.

The Planning Scheme indicates that while the Sunshine Coast Airport provides regional, national and international aviation and related services, the Caloundra Aerodrome is intended to provide general aviation and related services for the Sunshine Coast.

The Caloundra Aerodrome Master Plan seeks to facilitate and accommodate the preferred land uses permitted within the current zoning. These uses are targeted toward specific operational, functional and locational needs to support air services, while being of a scale, appearance and intensity that is compatible with existing and intended development in adjacent zones.

At the Ordinary Meeting held in January 2021, the Sunshine Coast Council resolved to prepare a new Planning Scheme. It is intended that the outcomes of the Caloundra Aerodrome Master Plan will seek to inform the preparation of the new Planning Scheme.

6.4.1 Zoning and Overlays

The Caloundra Aerodrome is zoned 'Community Facilities', specifically identified for Air Services in the Caloundra Local Plan Area. The Aerodrome is surrounded by Environmental Management and Conservation Zoned lands, Medium Impact Industry zoned land, Open Space and Sport and Recreation zoned land. Refer to Figure 11: Zoning Plan (*Sunshine Coast Planning Scheme 2014* extract).

The Aerodrome is mapped as containing land subject to the Airport environs overlay due to the existing land use over the site. The Airport environs overlay, Airport environs overlay code and Planning Scheme Policy (PSP) for the airport environs overlay code intend to maintain and enhance the safety and operational efficiency of Caloundra Aerodrome and aviation facilities and avoid land use conflicts.

The Airport environs overlay code includes a number of assessment benchmarks relating to Caloundra Aerodrome including the consideration of obstruction and hazards, aircraft noise and public safety areas. The PSP for airport environs overlay code provides guidance to achieve the obstruction and hazards outcomes in the Airport environs overlay code e.g. cranes, bodies of water, lighting.

The Airport environs overlay, Airport environs overlay code and Planning Scheme Policy (PSP) for the airport environs overlay code intend to maintain and enhance the safety and operational efficiency of Caloundra Aerodrome and aviation facilities and avoid land use conflicts.




The Airport environs overlay code includes a number of assessment benchmarks relating to Caloundra Aerodrome including the consideration of obstruction and hazards, aircraft noise and public safety areas. The PSP for airport environs overlay code provides guidance to achieve the obstruction and hazards outcomes in the Airport environs overlay code e.g. cranes, bodies of water, lighting.

The Master Plan area is identified as being subject to additional overlays in the Planning Scheme including:

- Biodiversity, Waterways and Wetlands
- Flood Hazard
- Bushfire Hazard
- Height of Buildings and Structures

Impacts of these overlays on the future Caloundra Aerodrome Master Plan are discussed in the subsequent applicable sections of this report.

Legend

-  Caloundra Aerodrome Study Area
-  Caloundra Aerodrome Site Boundary
-  Land Parcel Boundaries

SC Planning Scheme 2014 (Boundaries)

-  Local Plan Area Boundary

SC Planning Scheme 2014 (Zoning)

Zone Precincts

Low Density Residential Zone Precinct

-  Precinct LDR1 (Protected Housing Area)

Rural Zone Precinct

-  Precinct RUR (Meridan Plains Extractive Resource Area)

Zones

- | | |
|--|--|
|  Low Density Residential Zone |  Low Impact Industry Zone |
|  Medium Density Residential Zone |  Medium Impact Industry Zone |
|  High Density Residential Zone |  High Impact Industry Zone |
|  Tourist Accommodation Zone |  Waterfront and Marine Industry Zone |
|  Principal Centre Zone |  Community Facilities Zone |
|  Major Centre Zone |  Emerging Community Zone |
|  District Centre Zone |  Limited Development (Landscape Residential) Zone |
|  Local Centre Zone |  Rural Zone |
|  Sport and Recreation Zone |  Rural Residential Zone |
|  Open Space Zone |  Specialised Centre Zone |
|  Environmental Management and Conservation Zone |  Tourism Zone |

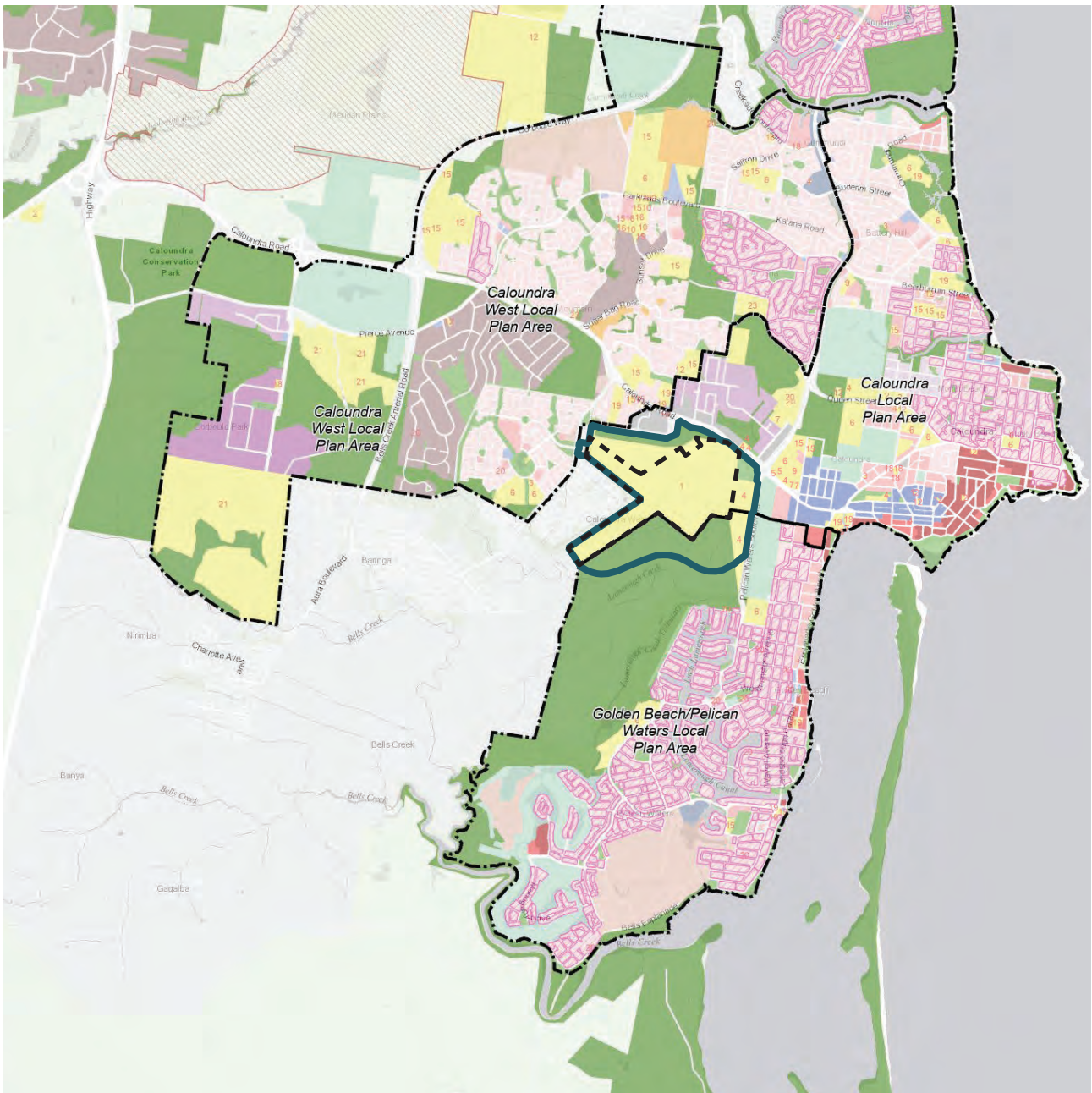





Figure 11: Zoning Plan (Sunshine Coast Planning Scheme 2014 extract)

6.4.2 Biodiversity, Waterways, Wetlands

Overlay Mapping identifies Native Vegetation Areas and Wetlands across Lot 3 SP312324, 340 CG803364, 687 CP902087, 516 CP857226, 191 CG1783, 517 CG4807 and 480 CG4807 (Refer to Figure 12). Any future developments will require assessment against Code 8.2.3 for Biodiversity, Waterways and Wetlands Overlay Code under the *Sunshine Coast Planning Scheme 2014*.




Legend

-  Caloundra Aerodrome Study Area
-  Caloundra Aerodrome Site Boundary
-  Lots

SC Planning Scheme 2014 (Overlays)

Biodiversity, Waterways and Wetlands

Waterways

-  Stream Order 1 – 2
-  Stream Order 3 – 4
-  Stream Order 5 and above

-  Riparian Protection Area
-  Wetlands
-  Native Vegetation Area

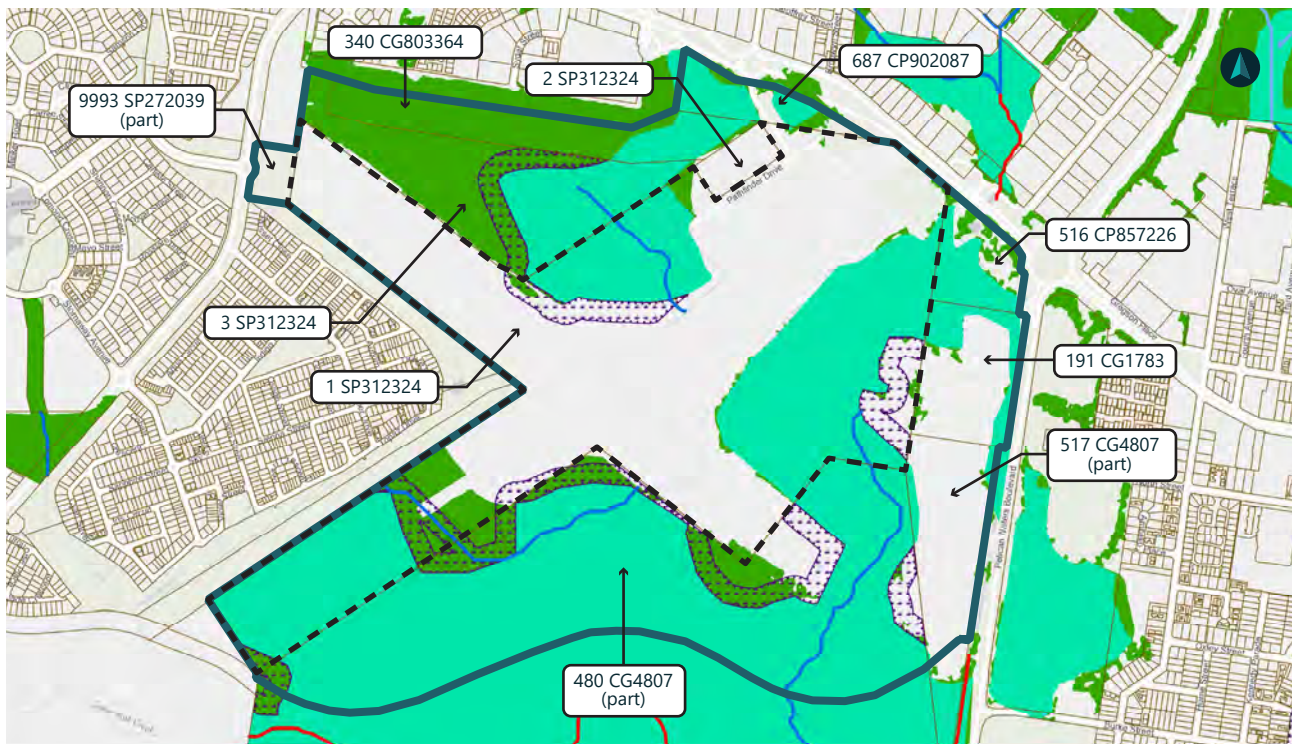


Figure 12: Biodiversity, Waterways and Wetlands (*Sunshine Coast Planning Scheme 2014 extract*)

6.4.3 Caloundra Local Plan Code

Under Part 7: Local Plans of the Sunshine Coast Planning Scheme 2014, the Caloundra Local Plan Code was created to provide locally relevant planning provisions for assessable development in the Caloundra area. These provisions guide urban development in such a way as to preserve and improve the amenity and character of the area. Regarding the Caloundra Aerodrome, the Caloundra Local Area Plan Code specifies that:

'Development within Precinct CAL LPP-3 (Caloundra Aerodrome) provides for the establishment of a range of uses and activities that are compatible with the primary function of the aerodrome including aviation related business, tourism and industrial uses. The scale of development and operations recognises the location of the aerodrome within the urban fabric and the need to take into consideration impacts on nearby existing or proposed residential areas. Development at the Caloundra Aerodrome does not compromise the Sunshine Coast Activity Centre Network.'

This Overall Outcome in addition to Performance Outcome PO21 of Table 7.2.6.4.2 provide the Planning Scheme guidance for the Aerodrome Facility. Air services can be supported at Caloundra Aerodrome subject to compliance with the Caloundra local plan code, zone codes and relevant overlay codes.

6.4.4 Regional Economic Development Strategy

Sunshine Coast: The Natural Advantage, Region Economic Development Strategy (REDS) is a high-level blueprint for the sustainable economic growth of the Sunshine Coast Local Government Area (LGA) from 2013 to 2033. The REDS seeks to develop the Sunshine Coast economy to realise its fullest potential and turn the Region into an active participant in the domestic and global economy. This will be achieved through investment into seven key regional industries:

1. Health and Wellbeing
2. Education and Research
3. Tourism, Sport and Leisure
4. Knowledge Industries and Professional Services
5. Agribusiness
6. Clean Technologies
7. Aviation and Aerospace

A facility such as the Caloundra Aerodrome offers great potential to pivot from a general aviation facility into an aerospace innovation hub, as it overlaps with many of the key regional industries – being a traditional aviation facility, with the ability to incorporate education, research and development, tourism, and clean technologies through future expansion. The addition of a station for the Beerwah to Maroochydore Rail Extension also links the Aerodrome to the broader Enterprise Corridor.





7 Caloundra Aerodrome Site and Physical Characteristics

7.1 Urban Operating Context

The Caloundra Aerodrome is located within the urban setting of Caloundra, close to the Central Activity Centre. This predominantly commercial and residential precinct is bounded by Currimundi Creek and Currimundi Lake in the north, the Coral Sea in the east, Landsborough Parade, Kennedy Parade, North Street and the Caloundra Aerodrome in the south, and Latcham Drive, Mark Road, the industrial area, the transmission line, Sugar Bag Road, Nicklin Way, Gannawarra Street and Gamban Esplanade in the west. The Caloundra Central Activity Centre has an estimated residential population of approximately 17,366 people as identified by the 2021 ABS data.

The *Caloundra Centre Master Plan 2017* focuses on the downtown City Centre precinct east to the Aerodrome, and the *Caloundra South Urban Development Area Development Scheme 2011* sharing a property boundary with the Aerodrome.

Both of these documents identify the Caloundra Aerodrome as a site to be considered to acknowledge and preserve the Aerodrome's existing use rights, operational safety and efficiency. The replacement of the *Caloundra Aerodrome Master Plan 2013* provides the opportunity for the outcomes endorsed through all of the previously mentioned strategic documents and policies to be integrated into the new planning scheme.

Regardless, the Aerodrome's location along the arterial Caloundra Road, sandwiched between two master-planned areas ensures its integration into Caloundra's urban fabric. The Caloundra Aerodrome is located among a mix of uses with the Baringa and Bells Reach residential developments to the west, a business park to the North, the coastal residential suburb of Golden Beach to the east, and Isabel Jordan Bushland Reserve to the north. With such a variety of uses in its surroundings, the Caloundra Aerodrome is well positioned to integrate complementary services into these existing uses.

7.2 Cultural Heritage

Caloundra Aerodrome is situated on the traditional lands of the Gubbi Gubbi people (also referred to as the Kabi Kabi People). The lands of the Gubbi Gubbi People extend from approximately 18km north of Brisbane, to approximately 45km south of Bundaberg, encompassing almost 10,000km² of land.

Rotary Park, located on the eastern side of the study area (north of Stage 2), is nominated Native Title land. Duck Holes Creek – the waterway which dissects Rotary Park, previously provided Indigenous people with shelter and a stable food source. The group that inhabited the area and surrounding spaces were known as the Undumbi family, and many of their descendants live within Caloundra today.

While the Aboriginal cultural heritage database and register did not identify any cultural heritage sites within the site itself, fourteen cultural heritage sites were identified within the 1km buffer surrounds. Any future development should have regard to the potential and known presence of cultural heritage artefacts found on the Site and avoid any impact to cultural heritage sites in the surrounding locations.

The *Aboriginal Cultural Heritage Act 2003* ("the Act") commenced on 16 April 2004. The Act binds all persons, including the State, and is intended to provide effective recognition, protection and conservation of Aboriginal cultural heritage. The *Cultural Heritage Act 2003* establishes a duty of care and places legal responsibility on Landowners to act in a way that seeks to protect and conserve aboriginal cultural heritage. On this basis it is recommended that prior to any disruptive earthworks commencing within the Caloundra Aerodrome Master Plan area, a thorough survey of the site should be undertaken to ensure that the legislated duty of care is met.

7.3 Ecological

Reserve land surrounding the Caloundra Aerodrome and the eastern portion of the freehold land parcel contains high value natural assets which are important within the regional and local area. These vegetated areas provide a safe and non-intrusive buffer between aviation land uses and residential communities. It is appropriate to ensure continued protection of these values on reserve land.

Ecological survey investigations of the Master Plan area identified that Wallum froglets were present at both the Isabel Jordan Bushland Reserve and the wetland area in the eastern portion of the Aerodrome. Wallum sedge frogs were also identified in the wetland area in the eastern portion of the Master Plan area. Wallum rocket frogs were not identified in either site during the surveys.

Habitat assessments undertaken at each transect identified similar attributes. The topography of most transects was flat with ground depressions, which in many cases held standing water. The vegetation was mostly comprised of a canopy consisting of *Melaleuca* sp., and a relatively open mid-story of *Banksia* sp. A thick understory of *Xanthorrhoea* sp. and sedges was present. Where standing water was present there was also emergent vegetation. The majority of transects were assessed as being suitable habitat for acid frogs.

While no EPBC-listed migratory birds were recorded in the bird surveys, these surveys were conducted in late March 2021 and it is possible that they would have commenced their migration and thus were not present for detection (although note that the non-listed migratory species, the leaden flycatcher (*Myiagra rubecula*) was recorded). It is possible that a number of migratory forest birds and aerial insectivores may use the study area for occasional foraging and/or during migration. The ground parrot was not recorded during targeted surveys, including acoustic sampling spread over a three-month period. For several reasons, it is likely that this is a true absence.

ISABEL JORDAN RESERVE COMMUNITY CONTEXT

The Caloundra Aerodrome adjoins the Isabel Jordan Bushland Reserve, a 4ha area of environment reserve formally described as Lot 687 on CP 902087. The reserve straddles either side of Pathfinder Drive at the entrance to the Caloundra Airport and the Queensland Air Museum. The reserve is administered by Sunshine Coast Council for State Government. The preservation of Isabel Jordan Bushland Reserve is advocated for by Wildlife Preservation Society of Queensland (Sunshine Coast & Hinterland Branch). The Reserve is named in honour of Isabel Jordan, a past president of the group.

On 28 February 2008, four years after the death of Isabel Jordan, an area of bushland reserve was named in her honour for her contribution to the local community and to conservation. The environmental characteristics of the reserve are considered to make a significant contribution and provide ecological and natural benefit to the Caloundra and Sunshine Coast Council communities.

7.4 Bushfire

Caloundra Aerodrome is located within areas at risk for Bushfire. Future Stage 1 development and built form will be required to comply with medium bushfire risk. This will require development to be constructed in compliance with Code 8.2.4 of the Bushfire Hazard Overlay Code (as updated from time to time).

The Bushfire Hazard Overlay maps the potential expansion areas as a medium bushfire hazard area and buffer area. Any development in this area will therefore require assessment against the Bushfire Hazard Overlay Code under the Planning Scheme. Refer to Figure 13.

The extent of bushfire risk for the Stage 2 investigation area will be determined through detailed studies.



Figure 13: Natural Hazards Risk and Resilience: Bushfire hazard area – Bushfire prone area (Source: DAMS)

7.5 Hydrological Regimes

Caloundra Aerodrome is located 4km north of the lower parts of Lamerough Creek, separated by a forested buffer. Historically, Lamerough Creek has not experienced frequent flooding and the proposed Stage 1 optimisation unlikely to be flood affected as the SCC flood mapping does not show impact on any of the existing buildings.

Western and southern portions of the Site are affected by flooding which will need to be appropriately managed within any future development.

7.5.1 Stormwater and Flooding





The Master Plan area is affected by the Flood Management Overlay. Refer to Figure 14. Future Development will be required to be designed to be above the 1 in 100 flood level due to Climate Change allowances, as outlined in the Flood

Overlay Code of the *Planning Scheme 2014*. Some earthworks modifications may be appropriate within the Flood Management Overlay; however, any works must not impact on the downstream water quality or storage capacity.

The areas to the south-west of the runways are considered unsuitable for development. This land may hold opportunities for conservation or for the purpose of mitigating and managing stormwater management.

Although some land to the north west of the runways does not see as intense flooding, it is recommended that these areas are largely avoided for any substantial redevelopment; however, there may be opportunities for some localised modifications particularly within the Caloundra Aerodrome freehold land. Further, there are also some other transient land uses that may be explored for these areas, such as aircraft parking.

Legend

-  Caloundra Aerodrome Study Area
-  Caloundra Aerodrome Site Boundary
-  Lots
-  Land Parcel Boundaries

Flooding Hazard

-  Defined Flood Event

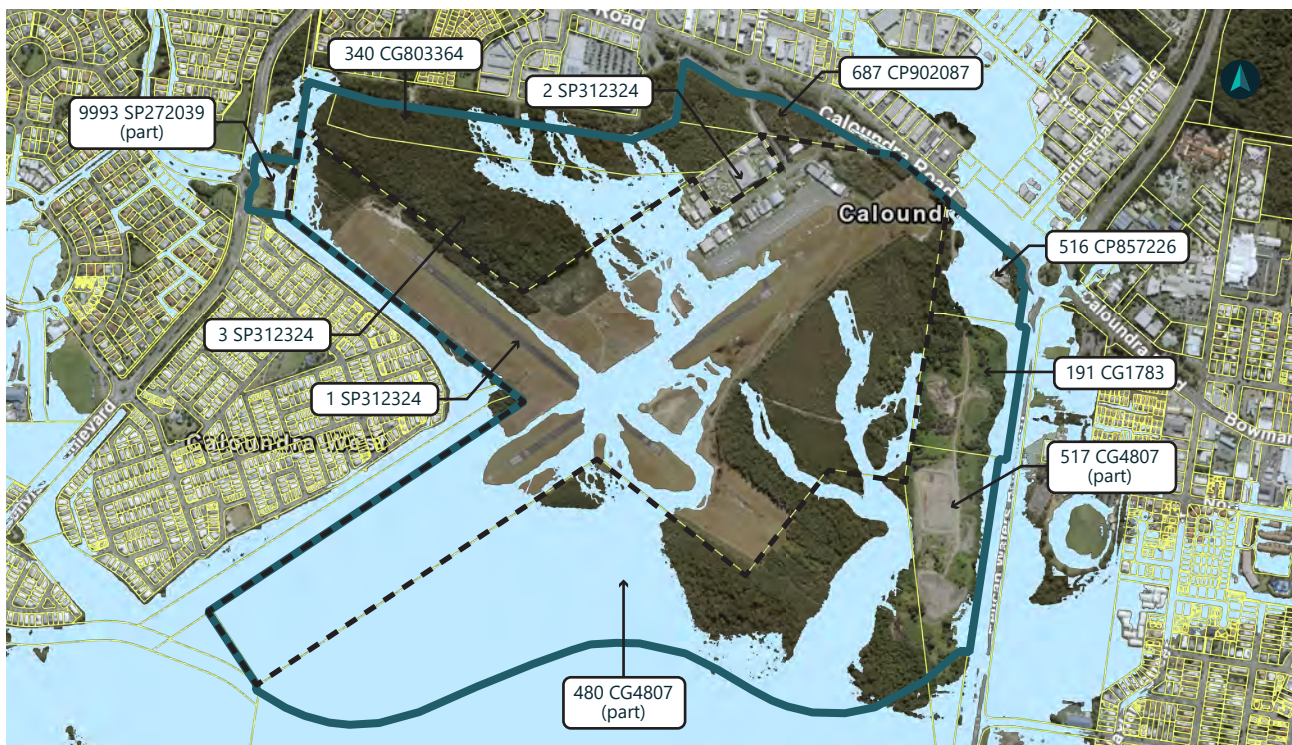


Figure 14: Flood Hazard Overlay

7.6 Contaminated Land

There are areas within the study area that have been identified as having potential contamination. The Caloundra Aerodrome freehold (Lot 1SP312324) is identified as being potentially contaminated. The areas within the western portion of the study area are listed on the Environmental Management Register and Contaminated Land Register due to previous land use activities.

Eight lots were identified as containing moderate contamination constraints and two lots were identified as containing low contamination constraints (Table 2).

Table 2: Contamination Constraints Summary

| Land parcel | EMR/CLR listing | Comment | Constraint criteria |
|--------------|-----------------|--|---------------------|
| 191CG1783 | EMR | Listed on the EMR for Landfill activities. | Moderate |
| 1SP312324 | EMR | Listed on the EMR for fuel storage, potential PFAS risk. | Moderate |
| 2SP312324 | EMR | Listed on the EMR for fuel storage, potential PFAS risk. | Moderate |
| 340CG803364 | EMR | Listed on the EMR for fuel storage. | Moderate |
| 3SP312324 | EMR | Listed on the EMR for fuel storage. | Moderate |
| 480CG4807 | - | Potential PFAS risk. | Moderate |
| 516CP857226 | EMR | Listed EMR for landfill activities, Listed ERA license for sewerage treatment. | Moderate |
| 517CG4807 | EMR | Listed on the EMR for Landfill activities. | Moderate |
| 687CP902087 | - | - | Low |
| 9993SP272039 | - | - | Low |

7.7 Transport

The Caloundra Aerodrome is currently well connected to the existing road network via Pathfinder Drive and Henebery Place. An assessment of the road network indicates that there is some capacity in the existing intersection at Caloundra Road and Pathfinder Drive to accommodate additional trip movements that would be generated by the development of Stage 1. Currently, Caloundra Road is a state-controlled road with many complex intersections and roundabouts. As part of this state ownership, the reserve for the road connects with the Caloundra Aerodrome property boundary.

Once this capacity has been expended, a secondary access to the site may be required. There is a current authorised/emergency access route through Caloundra Road to the north of the site.

This access route will remain and could be investigated for the purpose of providing additional access at a later development timeframe. Another route could be provided to the eastern portion of the Master Plan area from Pelican Waters Boulevard subject to compatibility with future railway corridor infrastructure design studies.

Figure 15 shows the B2M Corridor running along the eastern boundary of the Site, with a planned station located centrally along the Site boundary. Once delivered, this railway station will establish an important regional connection to the Site via public transport.

Active transport exists through Henebery Place, in parallel with Caloundra Road. This network should be utilised and extended to improve connections within the Caloundra Aerodrome precinct.

Legend

| | | | |
|--|-----------------------------------|---|---|
|  | Caloundra Aerodrome Study Area |  | Dedication for the public transport corridor and buffer |
|  | Caloundra Aerodrome Site Boundary |  | Indicative B2M Stop |
|  | Major Roads | | |

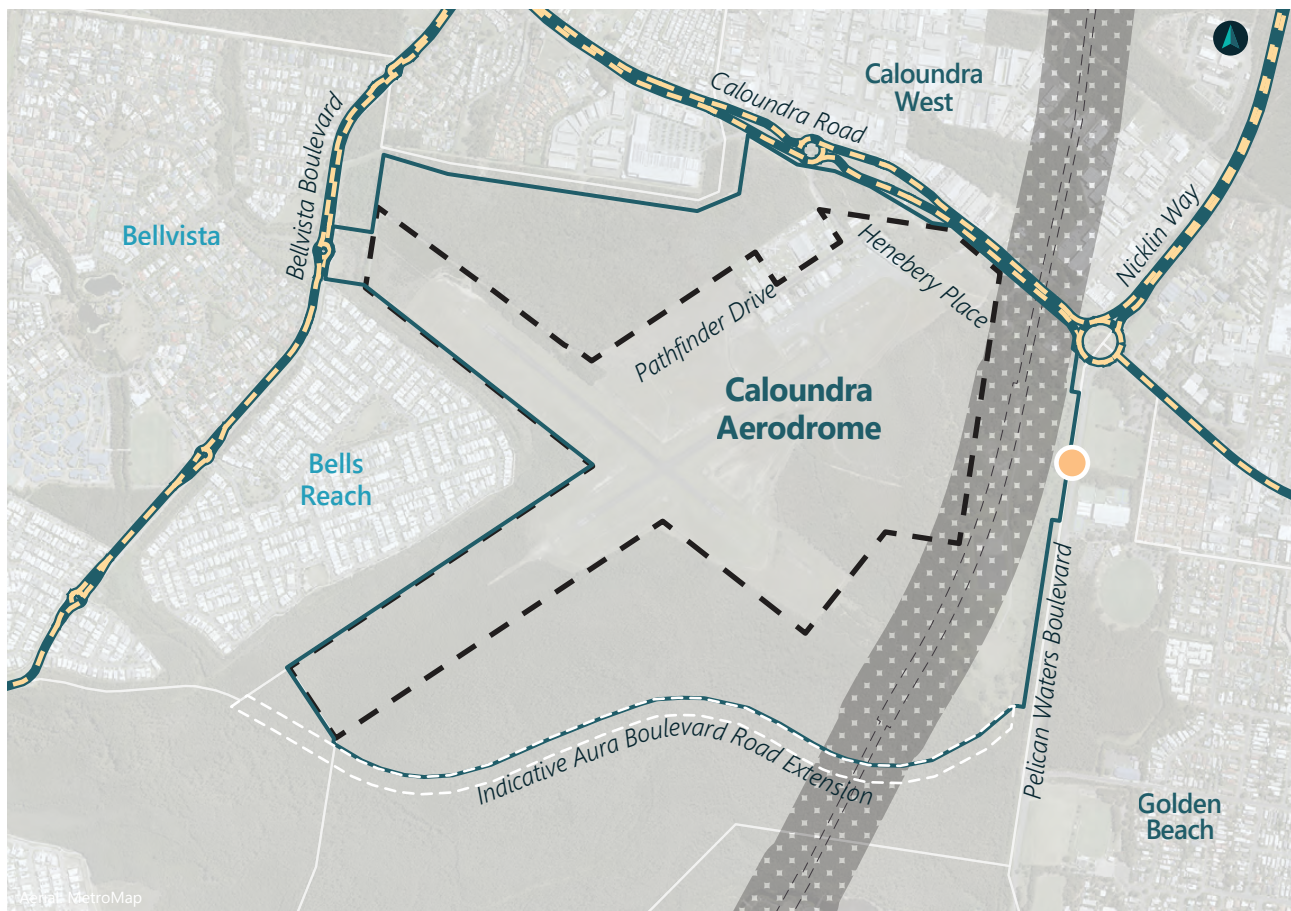


Figure 15: Transport Network

7.8 Landside Infrastructure

The Master Plan area is currently serviced by existing urban utilities including water, sewer, electricity and telecommunications. The following section summarises the current service provision and capacity to service the proposed Master Plan.

7.8.1 Water

The current reticulated water supply is provided through a 150mm pipe from the Caloundra Road/ Pathfinder Drive Intersection. The pipe then reduces to 100mm partly along Pathfinder Drive. Although this meets the current demand, if future expansion of industry is to proceed a detailed investigation of water infrastructure augmentation will be required to determine the required upgrades as identified by Unity Water.

7.8.2 Sewerage

The current sewerage infrastructure consists of connections from each lease lot to a recirculated pipe that is pumped to holding tanks connected to the city-wide sewerage network. Although the current system is meeting demand, any future expansion or development will require the system be upgraded and expanded as identified by Unity Water.

7.8.3 Electrical

The current electrical system is part of the urban electric network, with leased areas individually metered. The current infrastructure does meet the demands of Stage 1 construction; however, new business should discuss their energy needs with the local provider (Energex) to ensure reliable connections. It should also be noted that future overhead electrical infrastructure should be mindful not to penetrate the Caloundra Aerodrome Obstacle Limitation Surface (OLS).

7.8.4 Telecommunication Infrastructure

The current telecommunication infrastructure is a fixed line network consistent with the types of network used by providers throughout the city. The current infrastructure can meet the current and projected demand as proposed by the Master Plan.

It is important to acknowledge the potential of the Sunshine Coast International Broadband network infrastructure. This infrastructure facilitates a significant step change for telecommunications in the region. The infrastructure, now complete, provides the fastest international connection point in Queensland. This telecommunications project provides the opportunity for businesses of the region to generate business growth and facilitate investment and seeks to future-proof the regions telecommunications capability and capacity.

7.8.5 Stormwater Infrastructure

The current drainage infrastructure is a mix of piped and open drainage lines. Historically, a Q100 flood event has been required to cover the site; however, small flood events have partially covered the runways, making them unusable. As the city sees increasingly severe flood events, the drainage of the site should be reconsidered to minimise down time after a flood event.

7.9 Aviation and Airfield Infrastructure

The key infrastructure elements that contribute to the ongoing operations at the Caloundra Aerodrome are Ground Facilities and Airspace and are considered in the following summary.

7.9.1 Ground Facilities

RUNWAYS

The Aerodrome is serviced by two runways that offer the ability to cater for a broad range of aircraft. Runway 05/23 is a non-instrument Code 1 runway oriented on a magnetic bearing of 046°/226°. It is 795m long, 18m wide and sealed. It is located within a 915m x 60m wide runway strip, which prior to 2020 made the runway suitable for a non-precision approach. The pavement is rated for a maximum take-off weight (MTOW) of 5,700kg and a tyre pressure of 650kpa/ 92PSI. This rating will allow unlimited operations by most Code 1 aircraft and some smaller Code 2 aircraft such as Metro-II. Runway 05/23 is equipped with low-intensity runway edge lights and runway end/threshold lights which can be activated manually and remotely via Pilot Activated Lighting (PAL).

The second Runway 12/30 is a non-instrument Code 1 runway oriented on magnetic bearing of 117°/297°. It is 795m long, 18m wide and sealed. It is located within a 915m x 90m wide runway strip, which prior to 2020 made the runway suitable for a non-precision approach. The pavement is rated for a MTOW of 5700kg and a tyre pressure of 650kpa/ 92PSI. Visual aids associated with the runways include runway markers and markings. The runways width is suitable for use by an aircraft with an outer main gear wheel span (OMGWS) up to but not including 6m. This will allow unlimited operations by most Code 1 aircraft and some smaller Code 2 aircraft.

TAXIWAYS

Taxiway Alpha connects Runway 05/23 with the apron. It is 55m long and 7.5m wide and is within a 31m wide strip and a 20.5m wide graded strip making it suitable for aircraft with an OMGWS of up to but not including 4.5m. It has an asphalt concrete surface and a pavement rating as per the runway. The taxiway is lit.

GENERAL AVIATION APRON

The General Aviation (GA) apron has a sealed surface and an area of approximately 22,600m². There is one (1) 24m wide Code A taxi lane on the western side of the designated parking area and one (1) 16m taxiway on the eastern side of the designated parking area. The designated parking area is able to accommodate 22 Code A aircraft and 2 helicopters. The apron is flood lit. There is a 4,350m grass parking area adjacent to the sealed apron. This has no designated parking positions.

HELICOPTER LANDING PADS

The Aerodrome provides access to two concrete helicopter landing pads located on either side of Runway 12/30 south of the runway intersection – these were built when Caloundra Aerodrome was a base for helicopter training and are now little used.

WIND DIRECTION INDICATOR

There is one IWI located north north east of the runway intersection approximately 400m from the 05/23-runway end.

This navigational aid requires clean air flow to accurately inform landing and take-off manoeuvres. The Bureau of Meteorology observation specification 2013.1. The guidelines for the siting and exposure of meteorological instruments and observing facilities, has established functional design parameters for developing within the vicinity of anemometers.

"The World Meteorological Society stipulates that anemometers must be sited in open terrain, where open terrain is defined as an area where the distance between the anemometer and any obstruction is at least 10 times the height of the obstruction. This exposure, although adequate for general purposes, still places the anemometer within the zone of influence of the obstruction when winds are of moderate speed. For greater accuracy, a clear zone of thirty times the height of the obstruction is required."

For the purpose of this Master Plan the 10 times the height of the potential buildings indicatively (5m) has been adopted. The parameters have been incorporated within the Master Plan.

GROUND SIGNAL

A ground signal indicating serviceability is located adjacent to the IWI.

SECURITY

The airside area of Caloundra Aerodrome is bounded by a wire mesh access fence controlled by locked vehicle gates and keypad operated pedestrian gates.

Closed circuit television cameras are focused on the apron and taxiway to Runway 05/23.

FUEL STORAGE

A BP 10,000 litre on ground tank JetA1 storage tank with a key card dispenser located at the air/ landside boundary. It is filled by road tanker located on the landside road network. The need for gasoline is serviced by off aerodrome retail outlets with on aerodrome storage provided in drums at various tenancies.

Future changes to fuel storage with the introduction of alternative fuel types such as electric and hydro power should be investigated as the need arises. The available technology at the time of drafting of this Master Plan is not considered developed enough to adequately address the operational and functional needs of the aviation industry. Advances in battery and hydrogen power technology are expected to occur in the latter half of the 20-year planning horizon. It is therefore recommended to review the status of fuel at the next iteration of the Caloundra Aerodrome Master Plan.

7.9.2 Airspace

Caloundra Aerodrome operates as an un-controlled aerodrome with no air traffic control operating. It is located within Class G uncontrolled airspace which means no clearance is required for aircraft to operate within it. Class G airspace extends from the surface to the base of the overlying Class C airspace which has a lower limit of 4500 ft. Class C is the controlled airspace surrounding major airports with both Instrument Flight Rules and Visual Flight Rules flights permitted and communication with air traffic control.

Caloundra Aerodrome is within the Sunshine Coast Airport 25 nautical mile Minimum Safe Altitude (MSA) surface which east of Caloundra specifies an altitude of 1900 ft above mean sea level and 4100 ft west of Caloundra.



Figure 16: Features Plan

7.10 Airport Safeguarding

Safeguarding of Caloundra Aerodrome is integral to its safe operation into the future. Safeguarding is facilitated through various measures determined by airfield layout, airspace design, noise management strategies and Planning Scheme 2014 overlays. Ongoing protection of Airport and Environs Safeguarding will be critical to ensure outcomes of the Master Plan can be achieved.

7.10.1 Obstacle Limitation Surface

The OLS is a conceptual surface associated with a runway, which identifies the lower limits of the Caloundra Aerodrome airspace above which objects become obstacles to aircraft operations and must be reported to Civil Aviation Safety Authority (CASA). The OLS is depicted in Figures 17a and 17b.

This Master Plan only provides for non-instrument (visual) approaches on both runways. The Manual Obstacle Standards allows for an 80m wide strip for a Code 1 Runway 05/23 which is lit, and a 60m wide strip Code 1 Runway 12/30 which is unlit.

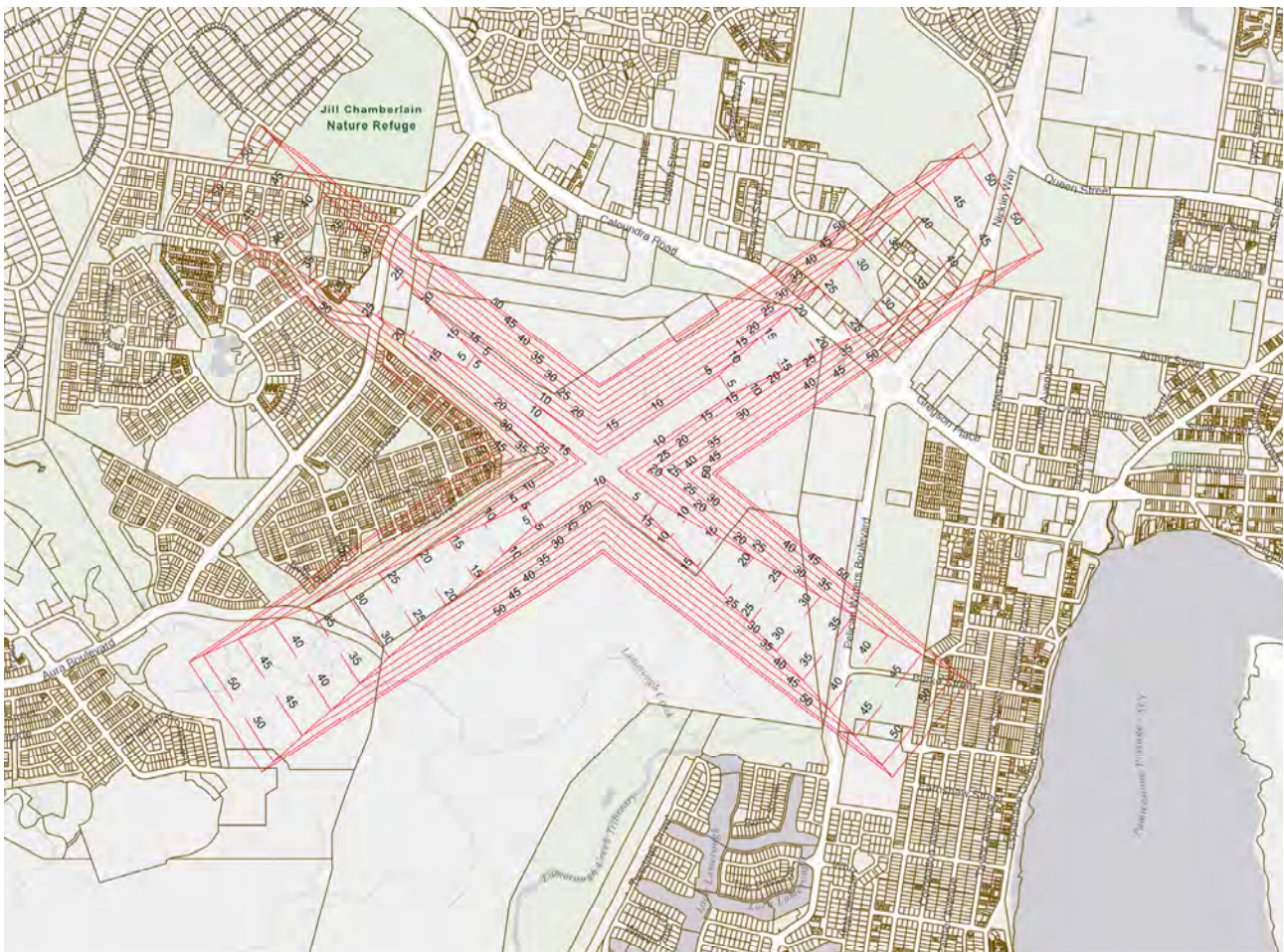


Figure 17a: Existing Obstacle Limitation Surface Local (Sunshine Coast Planning Scheme 2014 extract)

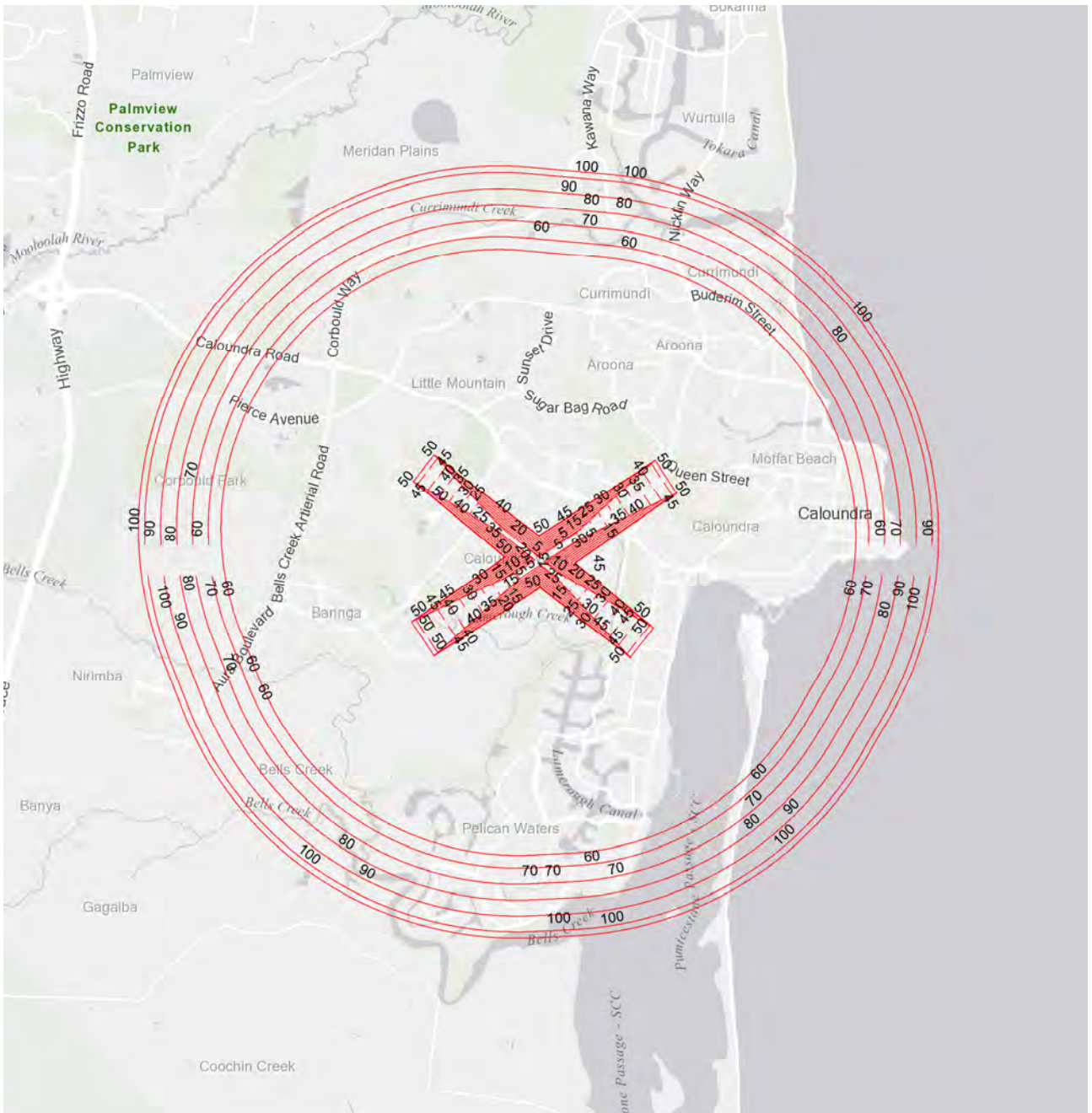


Figure 17b: Obstacle Limitation Surface Regional (Sunshine Coast Planning Scheme 2014 extract)

7.10.2 Public Safety Area

Public Safety Area's (PSA's) are mapped over the Caloundra Aerodrome and identified in the Airport Environs Overlay which was adopted as part of the Planning Scheme 2014. PSA's seeks to minimise the risk of development compromising public safety by incidents in the take-off and landing phases of aircraft operations. Compatible air service related development may be located in the PSA's subject to compliance with the requirements of the planning scheme.

The Airport Environs Overlay Code identifies the specific outcomes required to be achieved to develop in the PSA. It seeks to ensure that proposed development is compatible with protecting the safety of both aircraft passengers, property and people on the ground in the event of an aircraft incident during landing or take-off and does not increase the risk to public safety within a public safety area.

The Airport Environs Overlay Code proposes measures to manage and mitigate the risk of an incident that may potentially put at risk the safety of aircraft passengers, people and property by ensuring that development does not involve:

- an increase in the number of people living, working or congregating in the area; and
- the manufacture use or storage of flammable, explosive, hazardous or noxious materials.

It should be noted that the current PSA was introduced under the Planning Scheme 2014, however there is no statutory requirement for the PSA to remain given the size and scale of the Caloundra Aerodrome.

Legend

| | | | |
|---|-----------------------------------|---|--------------------|
|  | Caloundra Aerodrome Study Area |  | Public Safety Area |
|  | Caloundra Aerodrome Site Boundary |  | Suburb Boundaries |

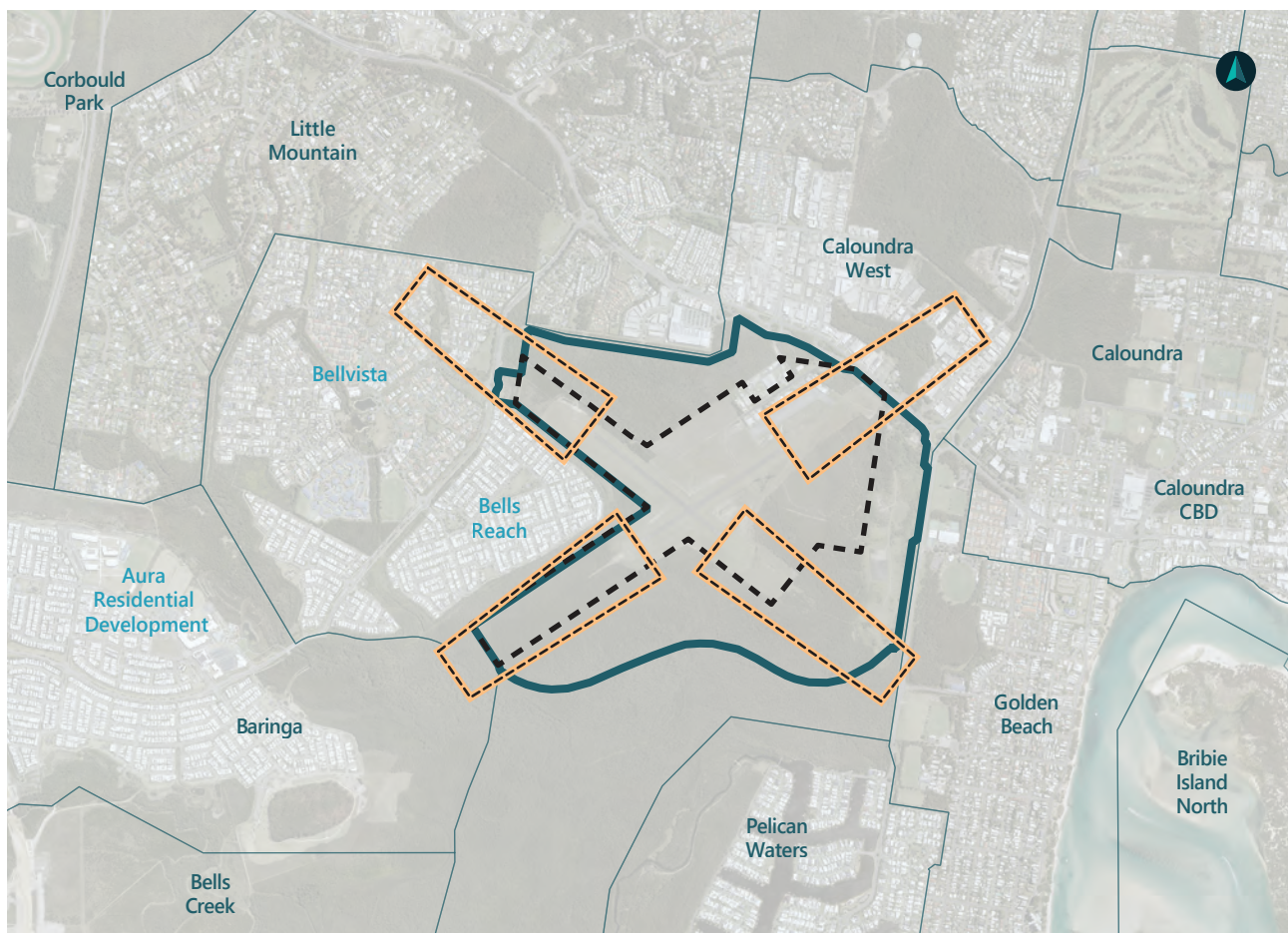


Figure 18: Public Safety Area

7.10.3 ANEF

To ensure that land surrounding civil aerodromes in Australia is appropriately planned, the concept of the Australian Noise Exposure Forecast (ANEF) was developed and applied as a land use planning overlay. Caloundra Aerodrome currently has an ANEF overlay listed in the *Sunshine Coast Planning Scheme 2014 Airport Overlay Mapping*.

The ANEF system defines a means of determining a scientific measure of the noise exposure levels around Australian airports considering the following factors:

- The intensity, duration, tonal content and spectrum of audible frequencies of the noise of aircraft take-offs, approaches to land, overflights and reverse thrust after landing
- The forecast frequency of aircraft types and movements on various flight paths
- The average daily distribution of aircraft take-off and landing movements in daytime and night time.

The ANEF system has been endorsed by the Australian Government for use as the basis of determining land use compatibility for areas where aircraft noise is an issue. Only one ANEF map can be current at any one time, and a more recently endorsed map supersedes an earlier map.

The existing ANEF was produced in 2010 with a 20-year planning horizon in accordance with the guidelines stated in the Australian Standard AS 2021-2015 (Acoustics – Aircraft Noise Intrusion – Building Siting and Construction). The standard identifies suitable land uses within the various ANEF contours. Within the 20 ANEF contour to 25 ANEF contour the standard considers that the incorporation of noise control features in the construction of residences or schools is appropriate. The 20 ANEF contour is shown as a dotted line as its location cannot be precisely determined mainly because of variations in aircraft flight paths.

In recognition that aircraft noise does not end at the 20 ANEF and to better understand aircraft operations and how these impact on surrounding communities, Council has in recent years commenced collecting and analysing operations data using the services of Avdata. Avdata is a private aircraft movement tracking company that uses information relating to the type and number of aircraft operating, runway used and operating times. This data will inform Council on how to implement mitigation and management strategies supporting airport users as well as providing potentially better noise amenity outcomes for surrounding communities.

Council is exploring a range of contemporary aircraft management approaches and the associated implications, one of the options being the application of a cap on movements. This approach seeks to understand the potential to balance the impacts on the Aerodrome's aviation activities and the surrounding communities. Therefore, it is recommended that an appropriate data collection and management system is put in practice to inform the future decision-making processes.

There are also potential technological advances that may mitigate operational impacts on sensitive receptors – 'silent flight' is being currently investigated by aircraft manufacturers. This technology seeks to power aircraft by electric or hydrogen engines – the aircraft would have minimal sound compared to internal combustion power engines and therefore provide a significant reduction in the ANEF area. This technological approach seeks to treat the source of noise rather than seeking to apply mitigation measures at the receptor, resulting in a potentially positive outcome for the future operations of the Aerodrome.

Legend




-  Caloundra Aerodrome Study Area
 -  ANEF Level Existing
 -  Suburb Boundaries
- ESRI Satellite Aerial



Figure 19: Caloundra Aerodrome Australian Noise Exposure Forecast Contours – Existing (*Sunshine Coast Planning Scheme 2014 extract*)



8

Aircraft Flight Activity



8.1 Aircraft Usage

Aeronautical demand at the Caloundra Aerodrome has been monitored in recent years. Ongoing monitoring of demand is needed to obtain a larger data set, enabling Sunshine Coast Council to identify aeronautical trends to further inform its planning and management decisions.

The aircraft types recorded using the Caloundra Aerodrome to date included a wide range of fixed wing and helicopters. The operational flight data that has been collated over a number of years is not considered sufficiently robust to draw meaningful conclusions and adequately inform an evidence-based approach to operational decision making. The most complete dataset was collected in 2020. However, there are a range of circumstances that may have had an impact to the number of air movements in this period including:

- COVID-19 pandemic – the state government’s health initiative restrictions limiting people movement may have resulted in a reduction in flight movements.
- The reduction in the number of flight training operators working out of the Aerodrome is also considered to have a reductive impact on the number of flight movements.

Analysis of the data collected in 2020 indicated:

- Approximately 43% of movements were related to circuits and other related training activities.
- Approximately 20% of these movements were from aircraft registered outside of the Sunshine Coast region.

Aircraft movements identified as arrivals, departures, and circuits during 2020 were estimated to be approximately 50,000 movements, broken down as shown in Table 3: Current Aircraft Usage.

Table 3: Current Aircraft Usage

| Aircraft | Arrival | Departure | Circuit | Total |
|--------------|---------------|---------------|---------------|---------------|
| Fixed Wing | 12,300 | 12,300 | 19,900 | 44,500 |
| Helicopter | 2,475 | 2475 | 550 | 5,500 |
| Total | 14,775 | 14,775 | 20,450 | 50,000 |

The number of aircraft movements could be managed through the application of a range of mechanisms to ensure the airside infrastructure continues to adequately meet the desired standard of service for the ongoing operation, management and safety of the Caloundra Aerodrome. The key drivers of demand potentially influencing future usage may change over time, external factors

outside of Council’s control such as significant increases in the cost of operation; fuel costs, insurance premiums, and general economic prosperity. Council could also influence demand through the introduction of a user pays airside activities fees and charges schedule or the application of a limit / cap on specific activities movements and manoeuvres.

8.2 Aeronautical Infrastructure

8.2.1 Airside Facilities

Caloundra Aerodrome's airside infrastructure is currently considered at capacity for storage in both the sealed apron and the hangars. Existing lease holders have advised that unless additional leasable areas are made available the growth of their existing business activities and operations may be adversely impeded. Lease holders are also considering the viability of optimising current lease areas and the impacts this approach may have on the ability of the operations to grow in line with projected demand.

8.2.2 Landside

Primarily, economic activities located at aerodromes leverage the access to air-related infrastructure and are directly related to aeronautical activities – such as flight training, advanced aircraft manufacturing and development, cabin fit-outs, repairs, scenic and recreational flights and aircraft-related heritage activities. Key opportunities include:

- Optimisation of existing businesses located at Caloundra Aerodrome that are compatible with aeronautical activities.
- Activation of environmental areas which are otherwise development constrained for economic activities, such as appropriate tourism uses (e.g. hiking trails) throughout the conservation areas, use of advanced offsets to generate economic value from the existing habitat and wetland areas, and potential solar power generation.
- Low-noise training and recreational flight uses, including simulation flight training and gliding (or other non-powered, low noise flights).
- Attraction of further advanced aerospace related manufacturing and high technology dependant aviation opportunities. Efforts should be focused on supporting current tenants to expand while also advertising for new businesses.
- Attraction of further advanced aerospace related manufacturing, technological development activities, and associated supply chains may be an opportunity. Efforts should be focused on supporting current tenants to expand while advertising for new businesses.

There is existing demand from current tenants and potential new tenants for more land to be released at the Aerodrome. The majority of these new lots would be located on the land / airside boundary to enable airside access. These blocks would be sized similarly to those currently provided. In the short term this development would occur adjacent to the existing lots along the air/ land side boundary parallel to Runway 05/23.

8.3 Roads/Carparking

There is an existing access to the site at the end of Pathfinder Drive that will be continued towards the aircraft storage area. The gate that currently restricts access to the site at the end of Pathfinder Drive will remain in place post-construction to restrict public access.

The existing carpark requires optimisation as the current carparks off Pathfinder Drive and Henebery Place experience full capacity, forcing excess traffic to use the grass either side of Pathfinder Drive, with some tenants allowing employees to park within their lots.

With the proposed optimisation of Pathfinder Drive, there would be an increased capacity in on-street parking, although many tenant employees may continue to park on the grass near their business.

Currently any new development would require on-site car parking to be provided in accordance with the Planning Scheme. Internal carpark layouts proposed will comply with AS/NZS 2890.1:2004 Parking facilities – Off-street carparking. This standard is generally conditioned through the Council's Planning Scheme development assessment and approval process.

The Master Plan seeks to provide opportunities for more public visitors to the Aerodrome through the allocation of an area for parking and bus / coach set down to be investigated for the purpose of developing a detailed engineering solution.



9

Master Plan



9.1 Vision

The vision for the Caloundra Aerodrome Master Plan to 2042 is:

Caloundra Aerodrome will become a precinct of choice for advanced aerospace and associated manufacturing activities delivering cutting edge, sophisticated and sustainable opportunities of significance to the South East Queensland aviation and aerospace industry.

9.2 Strategic Directions

The Master Plan will achieve this vision through the following strategic directions:

Innovation and Enterprise: Provide a platform for the emergence of an innovative, high value advanced manufacturing and research and development cluster that contributes to a sustainable and diverse economic base with job opportunities and connections to the domestic market and supply chains.

Connections and Movement: Leverage opportunities from local and regional transport infrastructure, providing strong connections to the Caloundra City Center and the broader Sunshine Coast region and beyond.

Support and Education: The Aerodrome provides significant capacity to enable future employment and training opportunities in high value advanced manufacturing industries. The existing facilities will seek to provide ongoing support for current educational and aviation focused activities while also branching into other or ancillary aviation related industries such as Research and Development, High Value Manufacturing, Low Impact Last Mile Logistics and Defence.

Impact Management: Seek to ensure no material degradation of the current impacts associated with flying operations. Explore implementation of suitable mechanism to manage and mitigate operational risks and seek to attract investment that has minimal impact on surrounding receptors.

Environmentally Conscious: Continue to apply the existing management approaches to reduce and mitigate the impacts arising from aviation activities while also seeking to sustainably manage and maintain the aerodrome's landside supporting and ancillary infrastructure.

Community Contribution: Sustainably accommodate aviation focused community activities that provide an offering that is considered significant to Caloundra and the greater Sunshine Coast region.

9.3 Master Plan Approach

The Caloundra Aerodrome Master Plan 2042 has been developed as a two-staged approach.

Stage 1

PATHFINDER DRIVE EXTENSION




Stage 1 of the Master Plan focuses on rationalising the landside and airside optimisation opportunities in the existing Pathfinder Drive precinct. Stage 1 provides opportunities for increased investment in the aeronautical industry within proximity to runways and increased return for Sunshine Coast Council for activities that can be expanded.

Stage 2

EASTERN FURTHER INVESTIGATION AREA

Stage 2 of the Master Plan outlines a future investigation precinct. The Master Plan identifies growth options for this area taking into consideration environmental constraints, future transit services and compatible land uses.

Legend

-  Caloundra Aerodrome Study Area
-  Caloundra Aerodrome Site Boundary
-  Roads

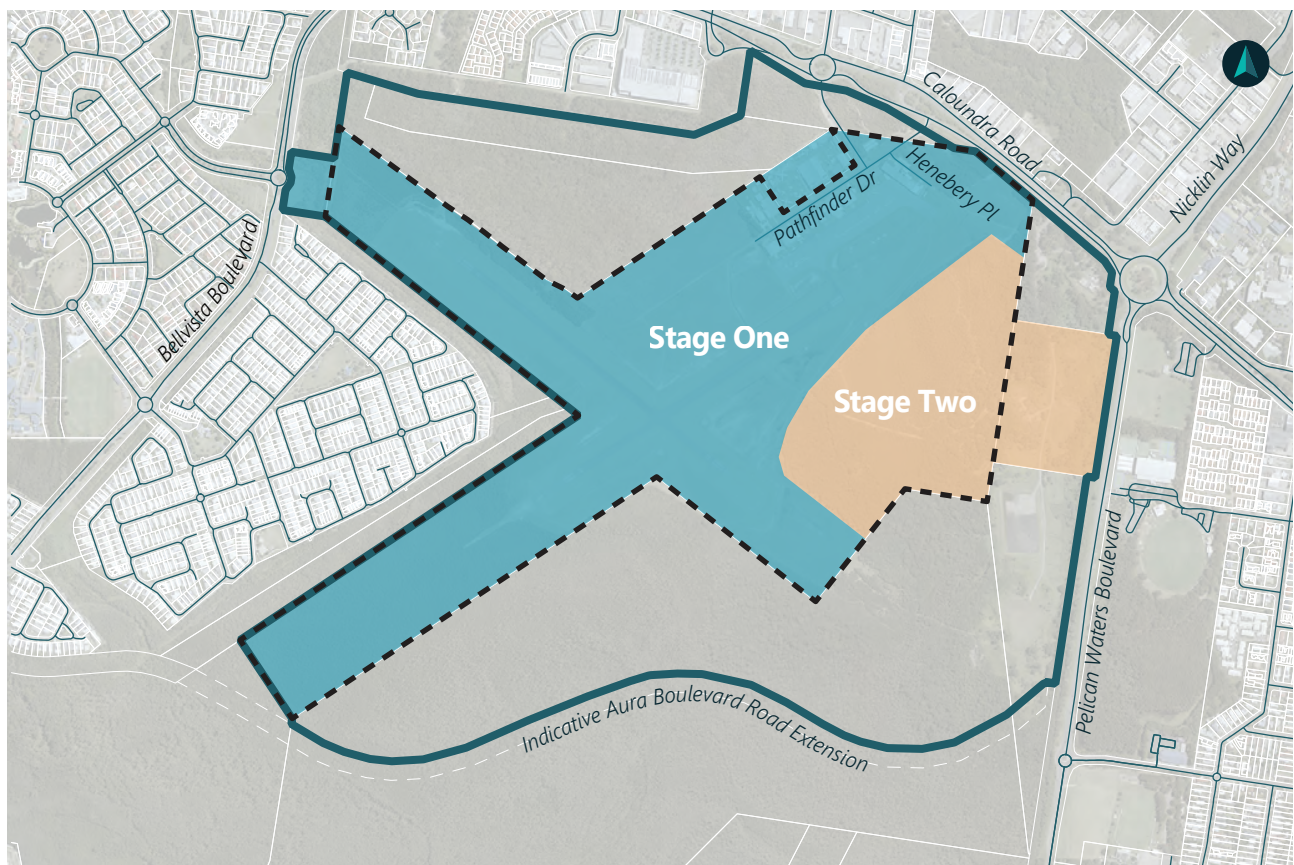


Figure 20: Staging Plan

9.4 Stage 1 Master Plan

The objectives for Stage 1 are achieved through the following Master Plan elements and implementation of the land use outcomes depicted in Figure 21: Master Plan (Stage 1):

Stage 1 Caloundra Aerodrome Master Plan

Innovation and Enterprise

COMMERCIAL LEASE AREA OPTIMISATION

Stage 1 identifies the optimisation of commercial lease areas by up to 6.4ha with the potential for new lease areas to be located to the north and south of an extended Pathfinder Drive.

These new lease areas have flexible lot sizes to allow for diverse aviation centric commercial growth opportunities to either support growth of existing businesses or to encourage new investment for businesses compatible with the aeronautical industry.

Connections and Movement

INTERSECTIONS

Access to the Stage 1 will be provided via the existing roundabout from Caloundra Road to Pathfinder Drive.

ROADS

Stage 1 identifies the extension of Pathfinder Drive to the south west to service the new lease areas. The Pathfinder Drive extension will see a 20-metre continuation of the current road, ending in a cul-de-sac that will have leasable plots running along either side.

No extension of Henebery Place is proposed in Stage 1 and it may be appropriate to consider the closure of Henebery Place to facilitate existing lease area consolidations and contiguous development.

CAR PARKING

Any new development would require on-site car parking to be provided in accordance with the Planning Scheme. Internal carpark layouts proposed will comply with AS/NZS 2890.1:2004 Parking facilities – Off-street car parking.

PUBLIC CARPARKING AND BUS/ COACH SET DOWN

Stage 1 provides for a public visitor car parking and bus/ coach set down area to be located on Pathfinder Drive. The detailed engineering solution needs to be investigated prior to committing to the capital expenditure.

Stage 1 Caloundra Aerodrome Master Plan

Support and Education

APRONS AND HANGERS

Stage 1 outlines the provision for three new aprons, which will adjoin the existing apron and extend the capacity by adding 32 new parking spaces for planes and three helicopters spaces.

The apron extensions will be realised by extending the current apron that runs parallel to Runway 05/23 to accommodate an additional 15 aircraft and three helicopters. This apron will also be extended in the north-eastern corner to accommodate an additional seven aircraft. Supplementary hangar storage will also be provided to allow for leased undercover storage.

A new apron will be added at the base of the proposed cul-de-sac on Pathfinder Drive. This apron will connect to the extension of the existing apron, have connection to a new taxiway and accommodation for 10 additional aircraft.

VERTICAL TAKE-OFF AND LANDING

It is also proposed to provide a hard stand helipad capable of handling up to heavy-lift helicopters at an indicative location to be confirmed based on future operational requirements. Sealing this area will enable the helipad to be used in all weather conditions.

As aeronautical technology advances there may be the need to consider the development of additional operational guidelines for the facilitation of a range of aircraft that use vertical take-off to become airborne.

TAXIWAYS

Two new taxiways are identified to be added to improve the flow of air traffic during peak periods, comprising:

- Connection to Runway 05/23
- Connection to Runway 12/30

The additional taxiways will de-conflict aircraft movements by enabling one-way traffic flow resulting in improved traffic flow during peak periods.

ILLUMINATED WIND DIRECTION INDICATOR

The existing IWI is set to move from its current location to the eastern side of the runway intersection. This move was completed to better activate airside land along the proposed aprons. The Master Plan highlights a 50m and 100m buffer from the IWI.

AIRSIDE EXTENSION

The Master Plan does not forecast significant change to the type of aeronautical activity and therefore does not provide for a change in the runway configuration; length, strength or location.

Stage 1 Caloundra Aerodrome Master Plan

Impact Management

NOISE

This Master Plan supports ongoing fly neighbourly measures to reduce noise impacts such as:

- Encouraging the introduction of electric and hybrid-electric aircraft use.
- Sharing the runway loads to disperse constant noise.
- Continuous monitoring of circuit training which has been identified as the predominantly nuisance noise source.

FLIGHT MOVEMENT MANAGEMENT

A future management strategy should be developed by Sunshine Coast Council considering the type and quantum of manoeuvres and movements per annum.

The methods to implement the strategy and the associated impacts of the approach will inform when and how Council will adopt this strategy. The proposed approach should be sustainable in managing the impacts on the commercial viability of the Aerodrome's operations and the surrounding sensitive receptors and natural environs.

NET ZERO EMISSIONS – MINIMISING IMPACTS OF OPERATION

A future "net zero" management strategy should be explored by Sunshine Coast Council considering the opportunities for how the Aerodrome's airside operations and landside tenants could seek to advance the Council's vision to be "Australia's most sustainable region – Healthy. Smart. Creative". This vision could be sought via commitments to reduce emissions by identifying specific performance targets or alternatively through some other instrument such as conditions within lease agreements.

CONNECTION TO COUNTRY

The future activation of Stage 1 land should involve engagement with the Gubbi Gubbi people to investigate opportunities to create a strong connection to country, acknowledging the cultural heritage assets located at the Site and historic activities which took place there. All future development should take place in accordance with the *Aboriginal Cultural Heritage Act 2003* and ensure a proper duty of care is adopted.

Stage 1 Caloundra Aerodrome Master Plan

Environmentally Conscious

FLORA AND FAUNA

Engagement with the relevant State and Commonwealth agencies required to determine suitable extent of development footprint, ensuring that flora and fauna values on the Site are well protected and potential impacts are appropriately managed.

DRAINAGE AND WATERWAYS

Any surface runoff from the lots will be captured with the road and discharged into the channels at the appropriate locations to the existing network. An extension to the network will be required in conjunction with the continuation of Pathfinder Drive.

Any proposed drainage alterations will require flood modelling and assessments to ensure non-worsening effects on the surrounding properties, access roads or runway.

CONTAMINATION

A Site-specific contamination assessment (including on-site testing) will be required prior to any future development occurring to ensure potential contamination sources are identified and appropriately disposed of.

BUSHFIRE

Development and built form along the north western extent of the Site will be required to comply with medium bushfire risk requirements under the Bushfire Hazard Overlay Code of the Planning Scheme.

Efficient Infrastructure

SEWERAGE AND WATER

A new DN150 PE100 SDR21 sewer main with maintenance structures should be installed along Pathfinder Drive.

WATERMAIN

An additional water main will be required on both sides of Pathfinder Drive, to provide direct connection to lot areas establishing a secure supply. A minimum DN150 PE100 SDR11 water main will be installed with hydrants at maximum 80m spacing.

There is not expected to be a significant increase in water or sewerage demand from the development.

Sewerage and water connections for the development are assumed to be at the end of Pathfinder Drive and it is recommended potholing be completed to confirm the end of line arrangement.

ELECTRICAL AND COMMUNICATIONS

Existing infrastructure includes overhead lines, which will be maintained and continued along the proposed upgrade.

Legend

- Study Area 228.3ha
- Caloundra Aerodrome site boundary
- Public safety area
- Dedication for public transport corridor and buffer
- Commercial redevelopment opportunity
- Proposed Leaseable Areas (subject to further investigation)
- Proposed Leaseable Areas - Airside (subject to further investigation)
- Indicative helipad location
- Proposed Leaseable Areas - Airside (subject to further investigation)
- Henebery Place extension to Pelican Waters Boulevard (alignment to be considered and coordinated in the ultimate Beerwah to Maroochy Rail Extension design)
- Indicative taxiway access
- Indicative road access
- Proposed Airside extension
- Proposed Airside adhoc aircraft activities
- Proposed Bus setdown and carparking area
- Existing windsock and navigational aid buffer/building height restriction location (to be relocated)
- Future windsock location
- Future navigational aid buffer/building height restriction
- Taxiway (based on future demand)
- Undercover open T Hanger parking
- Indicative Stage 2 (30 ha approx)

Leaseable Areas and Land Use Budget

Landside - Stage 1A

| | |
|--------------------|--|
| 1 | 6.34 ha (includes taxiway and road access) |
| 2 | 0.26 ha |
| 3 | 0.38 ha |
| A | 0.48 ha |
| B | 0.20 ha |
| TOTAL | 7.66 ha |

Airside - Stage 1B

| | |
|--------------------|----------------|
| 4 | 0.32 ha |
| 5 | 0.27 ha |
| 6 | 0.40 ha |
| TOTAL | 0.99 ha |

| | |
|--|----------------|
| Aerodrome taxiway and apron | 3.69ha |
| Aviation and supporting uses | 8.61ha |
| TOTAL land use to develop | 12.30ha |

(All area calculations are approximate only and subject to further investigations)

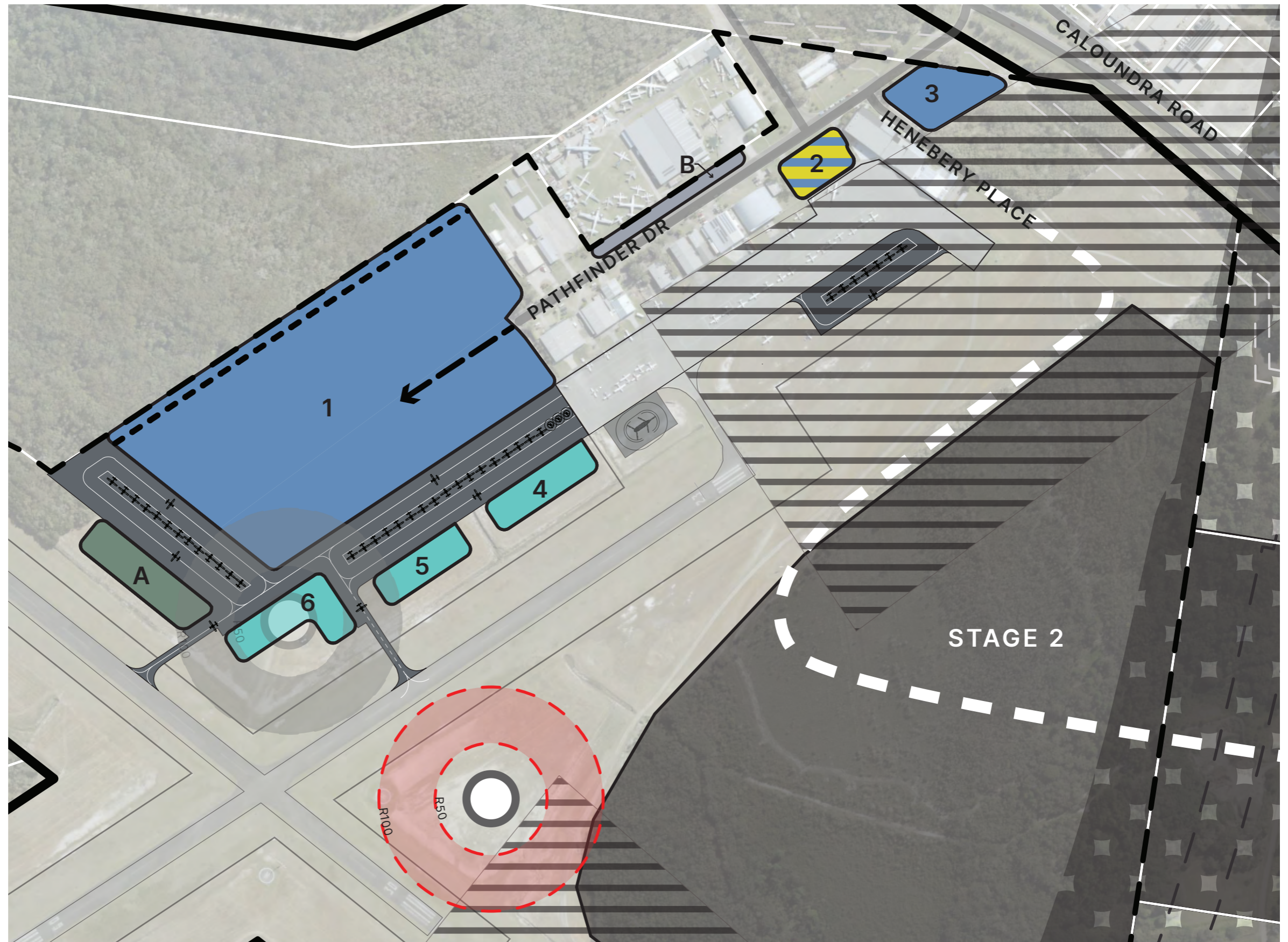


Figure 21: Master Plan (Stage 1)

9.5 Stage 2 – Eastern Further Investigation Area

Stage 2 is identified as a future investigation precinct. This area needs further investigations as outlined below to define the developable areas, resolve access and egress options and identify commercial opportunities.

The objectives for Stage 2 are achieved through the following Master Plan elements and implementation of the land use outcomes depicted in Figure 22: Master Plan Overall.

Stage 2 Caloundra Aerodrome Master Plan

Innovation and Enterprise

FUTURE LAND USE

The investigation precinct has the potential to support industry growth, foster employment opportunities and increase economic benefit for the region. Future land use options include:

- **Aviation / Engineering Hub** – low scale, low density aviation and engineering land uses located together to expand and complement the existing industrial uses.
- **Commercial and Industrial Hub** – locate complimentary aeronautical industries airside of the precinct, and with increased density for associated employment generating uses closer to the future B2M station.
- **Community Entertainment Hub** – capitalise on public transport access to create a tourist and entertainment hub comprising facilities such as indoor event spaces and outdoor adventure spaces. This type of use would likely be busier outside commercial peak hours to assist in alleviating transport congestion and also noise issues.
- **Education Hub** – capitalise on public transport network and support surrounding residential growth by co-locating an aviation research and development facility.

Stage 2 Caloundra Aerodrome Master Plan

Connections and Movement PLANNED PUBLIC TRANSPORT

The investigation precinct is located adjacent to the proposed B2M transit corridor, where a future station location is also identified.

The construction of this station and the associated transit corridor will increase the connectivity of the surrounding area and reduce reliance on car commutes. The station has the potential to be directly integrated into the Stage 2 investigation area creating greater connectivity to the broader Sunshine Coast region and beyond.

INTERSECTIONS

A new intersection from Pelican Waters Boulevard will be required to provide access to the Stage 2 precinct. It is anticipated this access could be a shared vehicular road servicing the future railway station.

ROAD

To provide access to the Proposed B2M Transit Corridor, further investigation towards potential east to west road linkages will be required.

CAR PARKING

Any new development would require on-site car parking to be provided in accordance with the Planning Scheme. Internal carpark layouts proposed will comply with AS/NZS 2890.1:2004 Parking facilities – Off-street car parking.

ACTIVE TRANSPORT

Active transport opportunities should be considered as part of a future structure plan for Stage 2, ensuring strong connections are provided between the planned railway precinct and Stage 1 lease areas.

Support and Education APRONS AND HANGERS

Should additional demand for apron parking be required at Caloundra Aerodrome in the future, additional parking could be provided within a new apron constructed to the east of the existing runway.

Stage 2 Caloundra Aerodrome Master Plan

Impact Management

BUILT FORM

Following detailed constraint investigations, built form will be considered taking into account future land uses. Building envelopes, and in particular building heights will need to acknowledge aircraft safeguarding limitations. So, while there is likely potential for increased density and heights close to the proposed station, this will likely need to be scaled down moving toward the runways.

CONNECTION TO COUNTRY

Future structure planning of Stage 2 should involve engagement with the Gubbi Gubbi people to investigate opportunities to create a strong connection to country, acknowledging the cultural heritage assets located at the Site and historic activities which took place there.

Any future development must also have regard to the potential and known presence of cultural heritage artefacts found on the Site and avoid any impact to cultural heritage sites in the surrounding locations.

Environmentally Conscious

FLORA AND FAUNA

The following additional investigations will be required to inform the structure planning for Stage 2 to confirm environment and heritage values:

- A Flora Survey in accordance with the Flora Survey Guidelines – Protected Plans (DES, 2020)
- Koala habitat survey
- Fish surveys where works cross waterways mapped as Queensland waterways for waterway barrier works and do not comply with Accepted Development Requirements
- Cultural Heritage investigations

Engagement with the relevant State and Commonwealth agencies required to determine suitable extent of development footprint, ensuring that flora and fauna values on the Site are well protected and potential impacts are appropriately managed.

DRAINAGE

Further flood investigations for Stage 2 will be required to ensure future built form is located away from flood prone areas. Further, to ensure flood resilience, any built form in areas affected by the Q100 flood or greater will be required to be adequately designed and constructed.

Further, additional drainage measures will be investigated to ensure efficient drainage towards Lamerough Creek and the nearby wetlands.

CONTAMINATION

If future development is intended to extend into the study area lots identified in Table 2, on-site contamination testing will be required to confirm the presence of potential contaminants and appropriate mitigation measures to enable future development to occur.

Stage 2 Caloundra Aerodrome Master Plan

Sustainable Development

RENEWABLES

Construction of renewable energy production means into the buildings through rooftop solar and potential wind turbines. Energy consumption for the site will be offset, lowering the overall impact of the Aerodrome. Surplus energy could potentially be invested into powering future electric aircraft.

Efficient Infrastructure

UTILITY SERVICES

An extension of all utility services to Stage 2 will be required. A servicing strategy will be required to support a future Structure Plan for the precinct.

Legend

-  Study Area 228.3 ha
-  Caloundra Aerodrome site boundary
-  Existing lot boundaries
-  Existing easements
-  Existing road network
-  Indicative Beerwah to Maroochy Rail Extension corridor
-  Public safety area
-  Dedication for the public transport corridor and buffer
-  Commercial redevelopment opportunity
-  Proposed leaseable areas (subject to further investigation)
-  Indicative helipad location
-  Proposed leaseable areas - airside (subject to further investigation)
-  Indicative taxiway access
-  Indicative road access
-  Henebery Place extension to Pelican Waters Boulevard (alignment to be considered and coordinated in the ultimate Beerwah to Maroochy Rail Extension design)
-  Proposed Airside extension
-  Proposed Airside adhoc aircraft activities
-  Proposed Bus setdown and car parking
-  Taxiway (based on future demand)
-  Undercover open T Hangar parking
-  Navigational aid buffer/restricted building height
-  Indicative Stage 2 (30 ha approx)

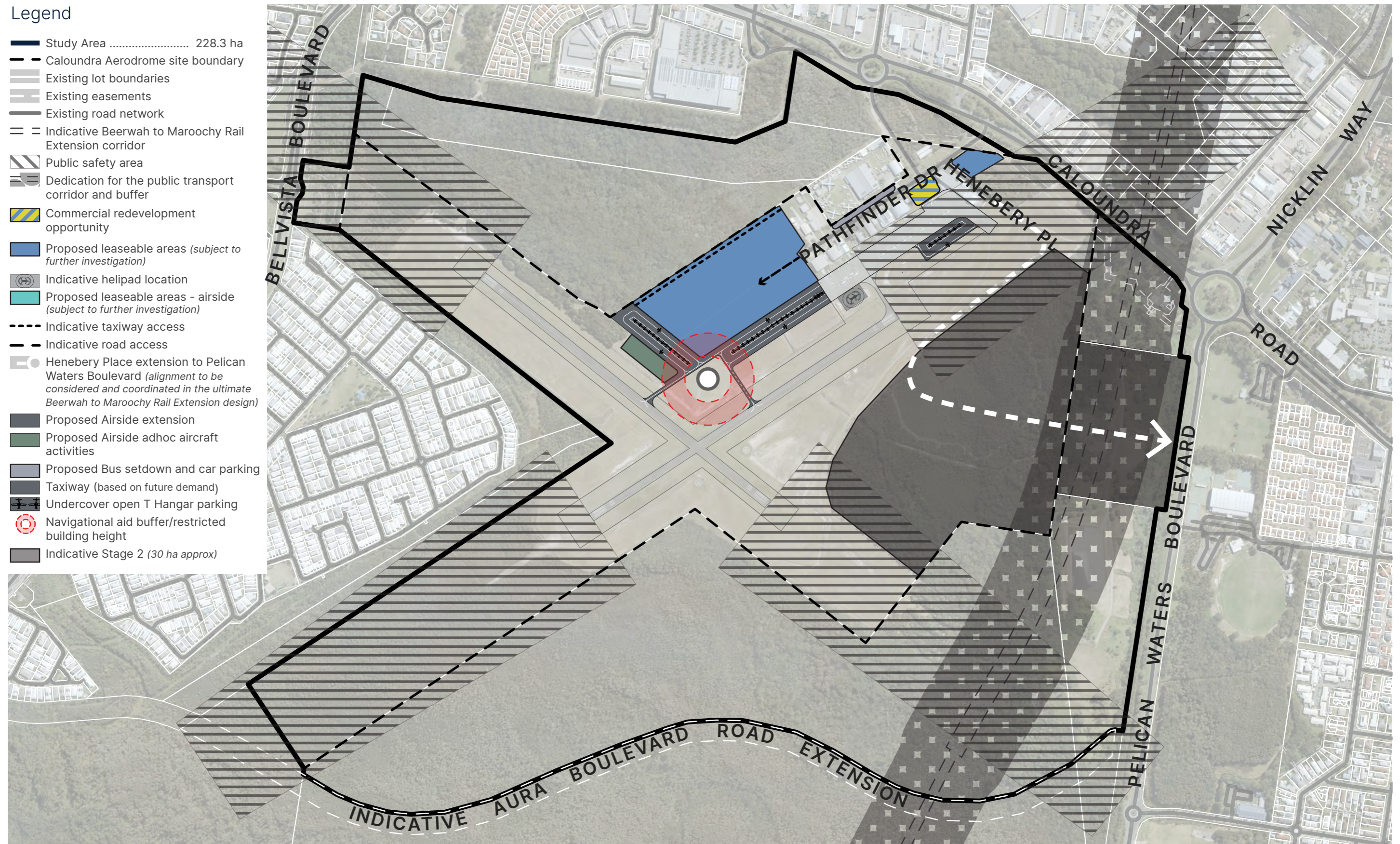


Figure 22a: Master Plan Overall Current State of Play

Legend

- Study Area 228.3 ha
- Caloundra Aerodrome site boundary
- Existing lot boundaries
- Existing easements
- Existing road network
- Indicative Beerwah to Maroochy Rail Extension corridor
- Public safety area
- Dedication for the public transport corridor and buffer
- Commercial redevelopment opportunity
- Proposed leaseable areas (subject to further investigation)
- Indicative helipad location
- Proposed leaseable areas - airside (subject to further investigation)
- Indicative taxiway access
- Indicative road access
- Henebery Place extension to Pelican Waters Boulevard (alignment to be considered and coordinated in the ultimate Beerwah to Maroochy Rail Extension design)
- Proposed Airside extension
- Proposed Airside adhoc aircraft activities
- Proposed Bus setdown and car parking
- Taxiway (based on future demand)
- Undercover open T Hangar parking
- Future windsock location
- Navigational aid buffer/restricted building height
- Indicative Stage 2 (30 ha approx)

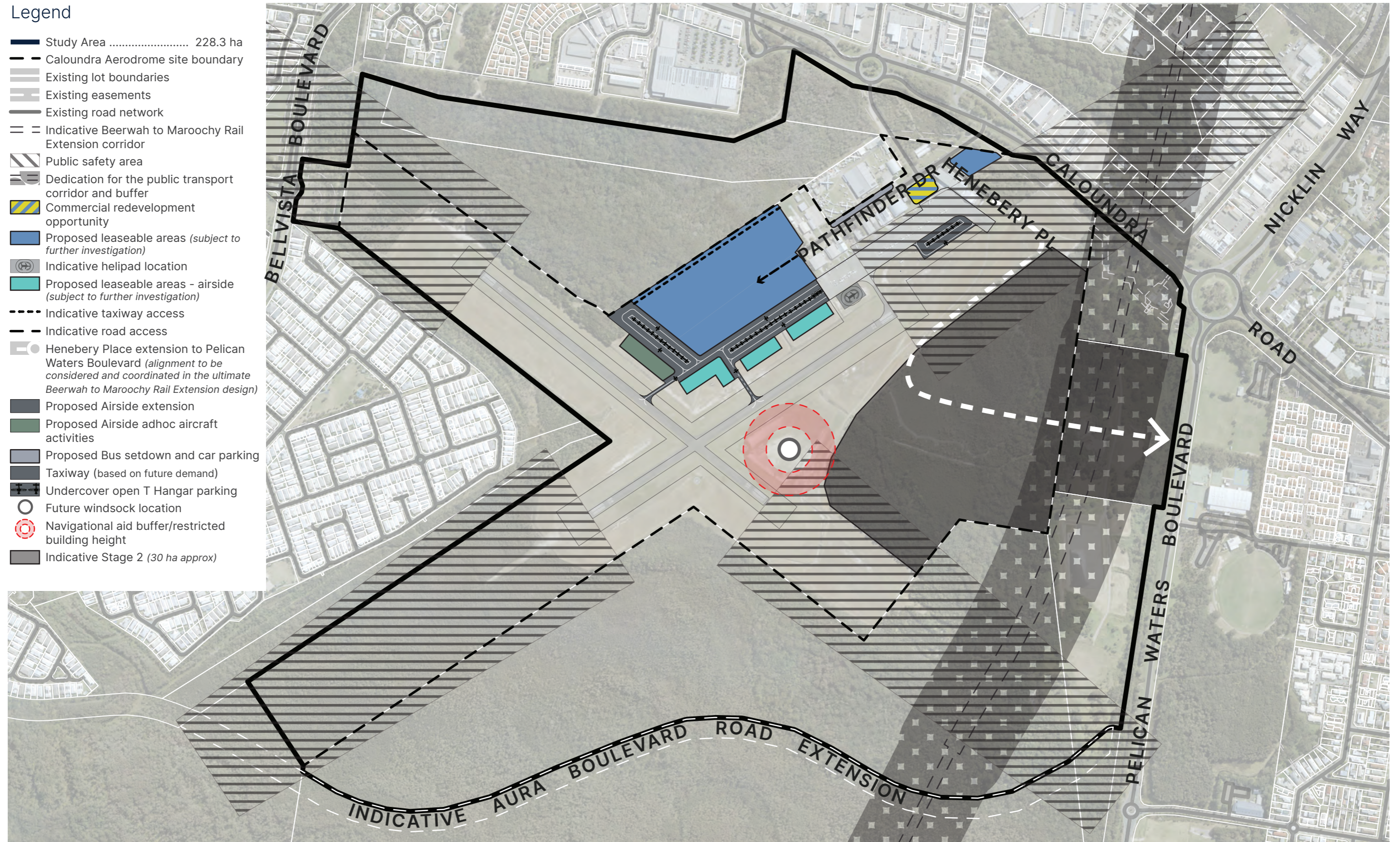


Figure 22b: Master Plan Overall Windsock Relocation Required



10 Master Plan Implementation

10.1 Implementation Plan

The implementation of much of the Master Plan recommendations will be determined by the timing of demand and Council's financial priorities.

While anecdotal data suggests there is a latent demand for more lettable land and apron parking, future Council leases and aeronautical charges will influence how and when this demand coalesces in actual development opportunities.

An indication of actions, timing and responsibilities is in Appendix C.

10.2 Expression of Intent

The Caloundra Aerodrome provides a unique environment for the development of aviation, aerospace and complementary industry specific activities. The location of the Caloundra Aerodrome and proximity to social, environmental, economic opportunities and attractive lifestyle benefits are considered to be of great value and in high demand for retaining current leaseholders and attracting future tenants. As identified, Caloundra Aerodrome has limited opportunity to significantly expand the developable area footprint due to sensitive surrounding land uses and environmental and physical characteristics. It is therefore essential that the future operations and leases are managed to ensure that the economic development and employment generating potential of the available land is optimised to meet the vision.

To achieve this Council may consider establishing an Expression of Intent framework and decision-making guidelines. If adopted, this framework would be applied when considering the:

- Extension of leases for a medium to long period of time (greater than 12 months)
- Expansion of lease areas (greater than 4000m²) or
- Agreeing lease terms with new tenants on leases (greater than 12 months and with an area greater than 4000m²).

The Expression of Intent framework would require tenants to consider how the proposed activity will assist the Aerodrome to deliver on the Vision and Strategic Directions, in particular:

- Identify the proposed built form outcomes in accordance with aviation industry operational requirements and the Planning Scheme.
- Identify the proposed built form outcomes in accordance the Sunshine Coast Council Land Use Planning mechanisms.
- Provide a functional design site plan and if appropriate a staging plan to optimise the lease area.
- Consider the operational infrastructure requirements and potential demand loads of the proposed activity to ensure sufficient capacity is available to cater for proposed demand – including, though not limited to, power, water and sewer, and transport.
- Identify the intended economic development contribution of the proposed activity in terms of:
 - employment
 - potential revenue
 - local supply chain.
- Consider and integrate the use of renewable energy sources were operationally appropriate.
- Consider and identify the opportunities and contribution to the Caloundra and broader Sunshine Coast community.



11 References



- CASA Manual of Standards Part 139
- Environment Protection and Biodiversity Conservation Act 1999, Commonwealth (com)
- Nature Conservation Act 1992 – Protected Plants High Risk Trigger Area, Queensland (Qld)
- Nature Conservation Act 1992 – Protected Fauna, Qld
- Nature Conservation (Koala) Conservation Plan 2017, Qld
- Environmental Offsets Act 2014 – Matters of State Environmental Significance (MSES), Qld
- Environmental Offsets Act 2014 – MSES, Qld
- Sunshine Coast Planning Scheme 2014
 - Acid Sulfate Soils
 - Airport Environs (Public Safety Area, Obstacle Limitation Surface and Australian Noise Exposure Forecast Level)
 - Biodiversity, Waterways and Wetlands
 - Bushfire Hazard
 - Flood Hazard
 - Height of Buildings and Structures
 - Regional Infrastructure (Railway Corridor and Buffer, Major Road Corridor and Buffer)
 - Australian Standard AS2021-2015 Acoustics—Aircraft Noise Intrusion—Building Siting and Construction
- <https://heritage.sunshinecoast.qld.gov.au/>
- https://invest.sunshinecoast.qld.gov.au/wp-content/uploads/2022/02/regional_economic_development_strategy_2013.pdf
- https://invest.sunshinecoast.qld.gov.au/wp-content/uploads/2022/02/reds_implementation_plan_2019-2023_summary.pdf
- <https://dilgpprd.blob.core.windows.net/general/spp-july-2017.pdf>
- <https://dsdmipprd.blob.core.windows.net/general/shapingseq.pdf>

Appendix A

Abbreviations and Acronyms

ABBREVIATIONS

| Abbreviation | Meaning |
|--------------|-----------------------|
| com | Commonwealth |
| ha | Hectare |
| km | Kilometres |
| kpa | Kilopascal |
| PSI | Pound per Square Inch |
| m | Metre |
| Plan | Master Plan |
| Qld | Queensland |

ACRONYMS

| Acronyms | Meaning |
|----------|---|
| AEDT | Aviation Environmental Design Tool |
| ANEF | Australian Noise Exposure Forecast |
| AS2021 | Australian Standard AS2021-2015 Acoustics—Aircraft Noise Intrusion—Building Siting and Construction |
| B2M | Beerwah to Maroochy Rail Extension |
| CCT | Close Circuit Training |
| DoA | Deed of Agreement |
| FW | Fixed Wing |
| FTE | Full Time Employees |
| GASEPF | Representing Fixed Pitched Single Piston Engine Aircraft |

| Acronyms | Meaning |
|----------|---|
| GASEPV | Representing Variable Pitched Single Piston Engine Aircraft |
| LGA | Local Government Area |
| MSES | Matters of State Environmental Significance |
| MOS | CASA Manual of Standards Part 139 |
| OLS | Obstacle Limitation Surface |
| PSA | Public Safety Area |
| QAM | Queensland Air Museum |
| Rec | Recreational Aviation Australia registered aircraft |
| SCA | Sunshine Coast Airport |
| SCC | Sunshine Coast Council |
| T&G | Touch and Go |

Appendix B

Operational Characteristics of Surrounding Aerodromes

| Aerodrome | Distance (km) | Runway | | | Accessibility | Operational Restrictions |
|------------------------|---------------|--------|-------------------|--------|---|--|
| | | Number | Surface | Lights | | |
| Sunshine Coast Airport | 22 | 1 | Asphalt | Yes | Landing fees | Circuits require ATC approval |
| Redcliffe | 45 | 1 | Seal | Yes | Training flight by non-resident aircraft require prior permission | No aircraft operations are permitted between 8pm and 6am Local training flights for resident aircraft are limited to 6:00 – 20:30pm Monday – Friday and 7:00 – 18:00 on weekends. |
| Caboolture | 33 | 2 | Grass | No | Training flight by non-resident aircraft require prior permission | Training circuits permitted between 7:00 – last light |
| Kilcoy | 57 | 1 | Grass | No | No commercial circuits permitted | Circuits for resident aircraft permitted day light hours only |
| Gympie | 71 | 2 | 1 Seal 1 Grass | No | Open to public No landing fees | Nil |
| Watts Bridge | 72 | 3 | 2 Grass | No | Member use Members who wish to conduct commercial activities require prior approval from Board of Management | Training circuits not permitted before 7:00 hours Aircraft to operate with minimum audible and visual impact on surrounding community |
| Archerfield | | 2 | 2 Seal 2 Grass | Yes | Open to public Landing fees | Circuits require ATC approval |

Appendix C

Indicative Implementation Plan

| | Council Action | Outcome | Benefit | Responsibility |
|---|--|--|---|---|
| 2022 ~ | Commit to exploring options to manage movements to ensure no worsening of current operations | Management of use of runways for touch down/ take offs for non-local flight training | Assists in noise management | **Responsibilities to be workshopped with Council** |
| | Ongoing commitment to the Fly Neighbourly Policy | Ensures pilots and aviation businesses consider operational noise impacts and how they can minimise noise in and around the aerodrome to ensure no worsening of current operations | | |
| ~ 5 years | Implement Landing Fees charging scheme | Rationalises use of the runways by non-local flight training | Revenue for Council | |
| | Adopt and implement new apron parking fees | Supports local user access and prioritises local businesses | | |
| | Review and negotiation of existing leases | Extension of Lease terms | Provides security for tenants and future investors | |
| | | Additional land for growth of existing businesses | | |
| | | Inclusion of additional tenant specification requirements (i.e. security, vertical take-off and landing etc) | | |
| | Positioning and marketing of new lease areas | Attraction of high-value employment generating land uses catering for advanced aerospace related manufacturing and repair activities, and associated supply chains | Establishes an aeronautical 'hub' desirable for external investment | |
| Extension of Pathfinder Drive including associated utility upgrades | Enables release 6.3ha of developable land | Provides attractive investment of optimisation land for both existing and new business operators | | |
| | Establishment of advanced manufacturing floor space | Increases local and regional job opportunities | | |
| Monitor and review ANEF mapping | Consideration of potential noise implications in new development | Assists in noise management | | |

| | Council Action | Outcome | Benefit | Responsibility |
|---|--|---|---------------------------|-----------------------|
| ~ 5 years | Consult with DTMR with regard to B2M alignment and future access link to service Stage 2 | Agreed concept design for access and station location | | |
| | Commence detailed investigations for 'Stage 2' | Cultural Heritage assessment | Identify developable land | |
| | | Flood study | | |
| | | Bushfire Risk assessment | | |
| | | Koala Habitat assessment | | |
| | | Ecological analysis | | |
| Transport study | | | | |
| Commence Stage 2 'Land Use' Master Plan | Establish a land use plan for 37ha investigation area including consideration of Aviation / Engineering Hub, Commercial and Industrial Hub, Entertainment or Educational Hub | | | |
| Construct new taxiway to Runway 05/23 | Greater circulation and safety for Aerodrome users | Improved safety | | |
| Relocation of navigation aid | Facilitates expansion of leaseable areas airside | Increased capacity of airside facilities and opportunities for growth | | |
| Extend the current apron that runs parallel to Runway 05/23 | Additional 15 aircraft and 3 helicopters | Revenue for Council | | |
| ~ 10 years | Extend apron parking to the north-eastern corner | 7 additional aircraft and leased undercover apron parking | Revenue for Council | |
| | Construct new taxiway to Runway 12/30 | Greater circulation for Aerodrome users | Improved safety | |
| | Deliver a new apron at the base of the proposed cul-de-sac on Pathfinder Drive | Connection to the extension of the existing apron, and new taxiway | | |
| Establish an additional 10 aircraft parking spaces | | | | |
| ~ 15 years | Realisation and delivery of the Stage 2 Structure Plan | Employment generating floor space | Jobs | |
| | | Potential sale of developable land | Revenue for Council | |
| ~ 2042 | | Sustainable and economically thriving precinct | | |

