



WorleyParsons

MACKAY PORT AUTHORITY



Mackay Airport Land Use Plan

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MACKAY PORT AUTHORITY
MACKAY AIRPORT
LAND USE PLAN



Synopsis

The Land Use Plan for the Mackay Airport fulfils the statutory obligations on the Mackay Port Authority in relation to the review and preparation of its Land Use Plan for the Airport as set out in the *Transport Infrastructure Act 1994*. This document is accompanied by a set of Development Guidelines to assist the Port Authority in its role as Assessment Manager for all development on Strategic Port Land.

This document has been prepared on behalf of and for the exclusive use of Mackay Port Authority and is subject to and issued in accordance with the agreement between Mackay Port Authority and WorleyParsons Services Pty Ltd.



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EXECUTIVE SUMMARY

Queensland's Port Authorities are landowners and managers and have statutory authority over "Strategic Port Land". Since 2000, development on Strategic Port Land has also been subject to the provisions of the *Integrated Planning Act 1997* and port authorities are assessment managers under that regime (in most cases) for development on their land.

Land Use Plans are required for all port authorities for Strategic Port Land both for land use planning purposes and development assessment. The function, form and process for preparing Land Use Plans has changed considerably over recent times and amendments to the *Transport Infrastructure Act 1994* in 2005 entrenched vastly different requirements both for the content and the process of making Land Use Plans.

This Land Use Plan for the Mackay Airport is the culmination of the Mackay Port Authority's combined Master Planning and Land Use Planning exercise. It has been prepared in accordance with the relevant statutory requirements but also reflects the corporate direction of the Authority including the need to balance financial performance with planning outcomes.

In order to deliver these requirements the Land Use Plan includes:

- A set of Desired Environmental Outcomes (DEOs) which provide the overall vision for the Airport and a set of outcomes to be reflected through the Land Use Plan.
- Five Land Use Plan Precincts which allocate all Strategic Port Land into a precinct of similar character or development intent and performance.
- A description of the Intent and a list of Preferred Uses that relate to each land use precinct.
- Land identified as Future Strategic Port Land because of its strategic importance and value to the Airport. At this time, future strategic port land is still subject to Mackay City Council jurisdiction until such time as it is formally under the control of the Mackay Port Authority and included in the Land Use Plan as Strategic Port Land.

A Development Guidelines document that includes a set of Codes against which all development on Strategic Port Land is assessed against also accompanies this Land Use Plan.

This Land Use Plan document contains supporting information on the planning process, local, regional and state context and input from the Master Planning Study as context for the core Land Use Plan elements described above.

Underpinning this Land Use Plan is the notion that planning for the Airport should be vibrant, innovative, flexible and timely to provide a framework for future development. This framework must consider the need to balance the desire to increase capacity, operate efficiently and provide passenger service and comfort while minimising costs.

The Land Use Plan cannot directly deliver this but can contribute to its achievement by providing a planning and development framework that includes sufficient land availability to accommodate future growth, attracts and retain appropriate activities and development, and provides the mechanism to take advantage of the opportunity to add value to traditional aviation business activity by realising the development opportunities of airport land not required for aeronautical purposes in the short-medium term. The implementation of the Land Use Plan will also ultimately assist in re-energising the port's important role as a gateway to the City of Mackay, as well as the broader region.



1. INTRODUCTION

Mackay is situated about 800 kilometers north of Brisbane (Figure 1a) with a population for the Mackay region in excess of 140,000 people. The region is the largest sugar producing area in Australia and the seaport (also owned and operated by the Mackay Port Authority) hosts one of the world's largest bulk sugar terminals and the only bulk refined sugar terminal in the southern hemisphere. The nearby Bowen Basin also produces most of Queensland's coal. Mackay is an attractive tourist destination and serves as a gateway to the Whitsunday Islands.

The Mackay Port Authority (MPA) has overall statutory responsibility for the operations of the Airport and Seaport in Mackay.

Mackay Airport is recognised by the Queensland Government as an airport of state significance. The airport has been owned and operated by the Mackay Port Authority since the transfer to local ownership from the Commonwealth of Australia in 1989. At this time a significant upgrade of facilities was undertaken including runway enhancements and a new domestic regular public transport (RPT) passenger terminal.

The past two years have seen significant and rapid growth in traffic, stimulated by the mining boom in the region and frequent and low cost services offered by VirginBlue and Jetstar, as well as Qantaslink. The airport is currently undertaking a number of projects to accommodate the growth, including terminal and car parking expansions.

The Mackay Port Authority considers an unencumbered, well planned and efficient Airport is paramount to the success of the region as a whole. Accordingly, the Mackay Port Authority has been updating its land use planning and master planning for the Airport¹ in order to continue to facilitate its important role in ongoing development of the Mackay region.

The previous Land Use Plan for the Airport prepared by the Mackay Port Authority was completed in 2000, updating an earlier plan delivered in 1993. Regular updates to the Land Use Plan are seen by the MPA as vitally important to the ongoing relevance and effectiveness of the strategic planning process.

This Land Use Plan has been prepared concurrently with a Master Plan for the Airport and both projects have incorporated environmental, planning and engineering input in order to develop short, intermediate and long term directions consistent with the MPA's vision and mission.

Importantly, the Master Plan work involves establishing a detailed picture of growth potential and service capacity for the Airport, which gives direction to the potential expansion needs (land use requirements) and future development opportunities. The outcomes of this work directly influenced the preparation of the Land Use Plan.

¹ While the term 'Airport' may generally be associated with those activities directly related to airport activities (such as runways, terminals, etc) the Airport land referred to in this document is all strategic port land in the airport vicinity and under the authority (for planning, development and management purposes) of the Mackay Port Authority.



Although prepared concurrently with the Land Use Plan review process, the Master Plan does not accompany this Land Use Plan. It contains commercial in-confidence material and therefore is not available as a public document. However key outcomes of the Master Plan, and at times extracts directly from it, are included or reproduced, as appropriate, in this Land Use Plan.

Other existing Mackay Port Authority documents including the Corporate Plan, Environmental Management Plan and report by Environment Science and Services entitled 'Environment and Cultural Heritage Background Report for Mackay Airport 2006' have helped inform this Land Use Plan.

The Mackay Port Authority's corporate vision and mission for all its operations sets the very broad framework for the development of both the Airport Master Plan and Land Use Plan.

This vision is *'to be recognised as creative, dynamic and value driven'* and their mission is *'to be the infrastructure and logistics providers of choice focussed on the future needs of the region and state'*.

Therefore in addition to the statutory requirements for preparing a Land Use Plan, this document reflects the Mackay Port Authority's core values which are to:

- **Our Shareholders** – to retain their support by delivering recognised shareholder value;
- **Our People** – to respect, trust, embrace diversity and encourage continuous improvement in a safe working team environment;
- **Our Customers** – dedicated to helping our customers, internally and externally, succeed by anticipating and meeting their needs;
- **The Environment** – exhibit environmental stewardship through our actions;
- **The Community** – to foster trusted links within the regional and state community through transparency, openness, and involvement in mutual interests; and
- **Governance** – to act professionally in upholding our legal and statutory obligations and being ethical in all our dealings.

In achieving the mission the Mackay Port Authority will:

- provide infrastructure and capabilities to meet customer needs;
- collectively maintain balance and focus to ensure an accountable and viable organisation;
- promote leading planning principles and management systems;
- at all times uphold our corporate values;
- foster an innovative culture; and
- strive to capture an equitable part of the value from supply chain initiatives.

The Airport is also identified as being of 'state economic significance', and therefore the Queensland government's own objectives and priorities are relevant. These include:

- managing urban growth and building Queensland's regions through:
 - support Queensland's regions through statewide infrastructure development and regional jobs creation;
 - link Queensland through efficient and integrated transport options;
 - build on the strengths of Queensland's diverse regions;



-
- growing a diverse economy and creating jobs by:
 - expanding market access, export and trade opportunities;
 - diversified and strengthened economy through value adding, productivity growth and the development of future growth industries.

Finally, while the Mackay Port Authority is of the corporate view that a well planned, strategic plan for the Airport operations is essential, all port authorities have statutory responsibility over 'Strategic Port Land'. Land Use Plans are required by legislation for all Port Authorities for Strategic Port Land and are an important tool for development assessment of future activities on that land. The *Transport Infrastructure Act 1994* describes the process and requirements for preparing and reviewing Land Use Plans. This process has been adhered to in the development of this Land Use Plan.

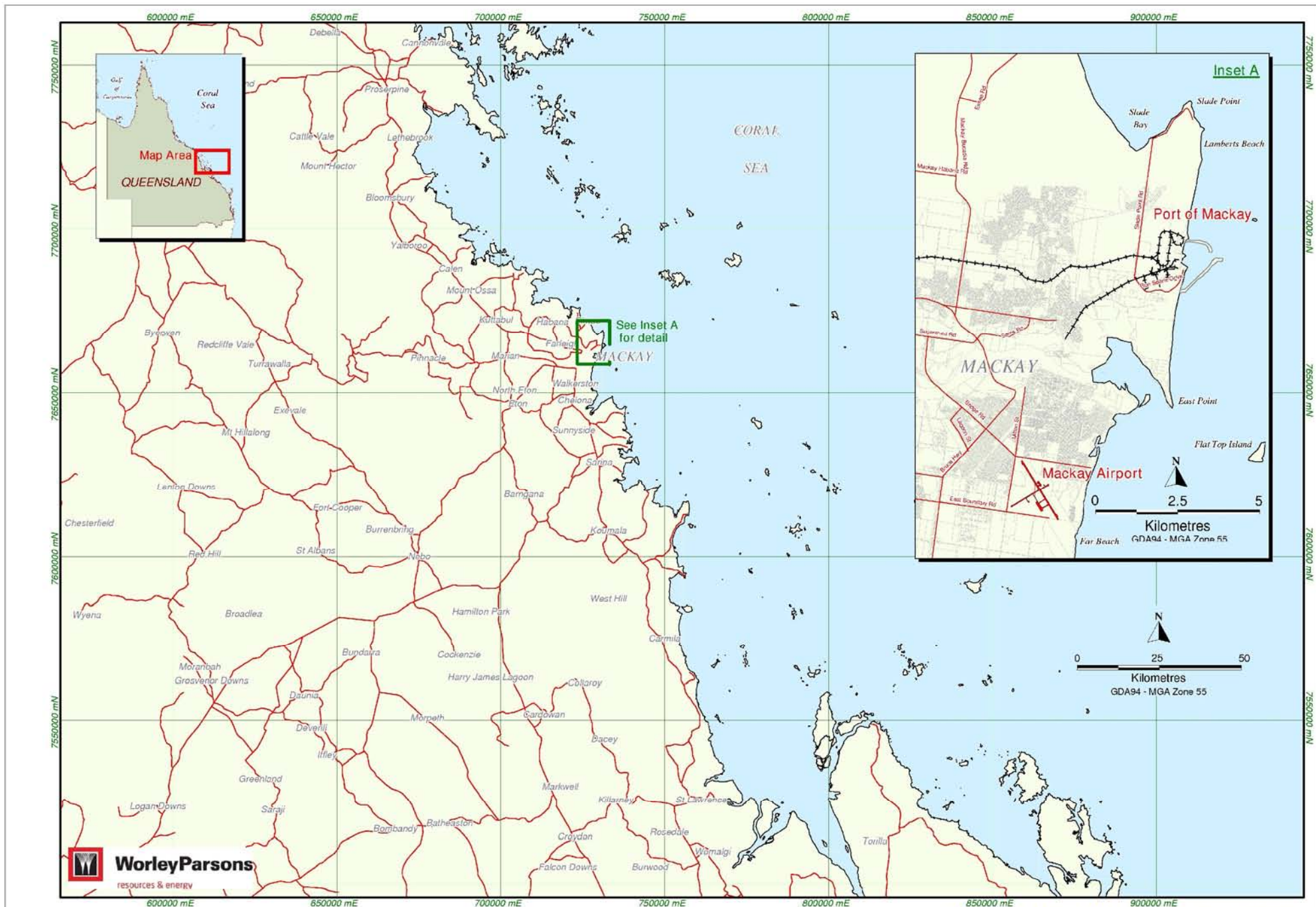


Figure 1a



Figure 1b Existing Strategic Port Land



2. ABOUT THE LAND USE PLAN

2.1 What is a Land Use Plan

Queensland's port authorities are landowners and land managers and have statutory authority over "Strategic Port Land". The *Transport Infrastructure Act 1994* (in conjunction with the *Government Owned Corporations Act 1993*, and the *Integrated Planning Act 1997*) establishes the regime under which port authorities operate – this is within an overall strategic framework for operation of government owned corporations. Since 2000 the approval processes for development on Strategic Port Land has also been subject to the provisions of the *Integrated Planning Act 1997* (IPA).

These provisions (amongst others) confirm that port authorities are the assessment manager for assessable development on Strategic Port Land and accordingly Land Use Plans are required by all port authorities for Strategic Port Land, as the tool for development assessment. In the case of the Mackay Port Authority, Strategic Port Land includes its landholdings at both the Airport and Seaport.

Land Use Plans typically deal with a narrow range of land uses and port land use planning is often focussed on industrial, transport, commercial and infrastructure related development having regard to synergies that come from co-location of port uses, proximity to waterfront and berthing activities (for seaports) and transport and logistic activities (for all ports).

Land Use Plans also consider issues such as the protection of ecological values, land interface issues and community amenity and benefit. In this way, they are more than simple development plans and have a complex range of issues and influences that differ from local government planning schemes.

Amendments to the *Transport Infrastructure Act 1994* were passed by the Queensland Parliament in May 2005 to add new procedural and content requirements for preparing and reviewing Land Use Plans. These amendments reflect provisions in the *Integrated Planning Act 1997* describing the process for preparing or amending a planning scheme.

The key changes affect the content of and process for making a Land Use Plan and in particular require that it must:

- contain details of Strategic Port Land;
- coordinate and integrate the "core matters" relevant to the land use plan²;
- set desired environmental outcomes; and
- incorporate measures to achieve the desired environmental outcomes.

As part of the process the Land Use Plan must also consider State interests. These interests in the Mackay region include, but are not limited to:

- state infrastructure including airports and aviation facilities, state controlled roads, etc;
- tidal and coastal processes, vegetation and marine life;

² Core matters are defined in the *Integrated Planning Act 1997*.



- acid sulfate soils;
- water resources;
- the Great Barrier Reef (Marine Park);
- heritage (including cultural and indigenous heritage); and
- regional planning.

The 'Port Land Use Planning Guideline' prepared by the Queensland Ports Association, also provides guidance and information to assist Queensland port authorities in the preparation of a Land Use Plan.

This guideline preceded the *Transport Infrastructure Act* amendments and was developed to help guide port authorities to develop and implement land use plans that were more advanced than the legislative requirements at the time and specifically to assist them in their role as assessment managers for Strategic Port Land. It reflected many of the approaches and principles applicable to the preparation of local government planning schemes (in advance of the *Transport Infrastructure Act 1994* requirements of 2005). It has also been referred to through this Land Use Planning process.

An initial phase in the preparation of the Land Use Plan is the development and release of a Statement of Proposals document. The Statement of Proposals document is primarily a consultation tool. A Statement of Proposals for the Land Use Plans for the Seaport and Airport was prepared and released by the Mackay Port Authority in 2005 for public comment. Feedback received during this notification and consultation process has been considered during the development of this Land Use Plan.

2.2 How will the Land Use Plan Achieve the Vision for the Airport?

The structure of this Land Use Plan is influenced by both the legislative requirements of the *Transport Infrastructure Act 1994* and the desire to effectively deliver the Mackay Port Authority's corporate vision and the Master Plan. The structure of the Land Use Plan therefore comprises the following:

1. Identifying five land use precincts for all Strategic Port Land at the Airport

- The land use precincts provide a structured approach to land use allocation of airport Strategic Port Land (refer to Figure 1b above for the existing extent of Strategic Port Land at the Mackay Airport). The five identified precincts are a rationalisation of the previous land use plan precincts and areas and identify land use areas of intended like character and function.
- The location of each land use category is shown in subsequent sections of this document and specifically at Figure 8.
- The land use precincts have been determined partly on function but also on performance based considerations such as possible impacts and preferred character.
- In addition to Strategic Port Land identified within one of the five precincts, land is also identified as Future Strategic Port Land – this is land intended to become Strategic Port Land because of its strategic value and significance to the airport. This land is identified separately and the individual intent for each site described.

The MPA recognises that in some instances the development of Strategic Port Land will be dependent upon acquiring all necessary approvals under both federal and state legislation.



2. *Describing the purpose or intent of each of the land use precincts*

- The intent of each land use precinct reflects the preferred existing or future function and character of that area and desirable future development. This intent reflects the work of the Airport Master Plan in terms of short and long term opportunities.

3. *Identifying a range of preferred land use types or developments that are considered to be generally consistent with each land use precinct*

- This is based on the previous Land Use Plan and the work of the Airport Master Plan and reflects the current (where appropriate) and future preferred uses. The range of uses will assist in determining where future development proposals are consistent or inconsistent with the Land Use Plan, as required for any future development application over Strategic Port Land.
- In developing the intent of each precinct and the range of preferred uses, regard has been given to the intent of the Mackay City Council planning scheme, Mackay Port Authority objectives and the specific needs of the port authority and its operations.

4. *Identifying those measures or codes that will be considered in the assessment of any future development proposed on a piece of Strategic Port Land at the Airport.*

- The Mackay Port Authority has previously informally adopted development criteria and requirements primarily based on the now superseded Mackay City Council Planning Scheme. A more formal and updated set of development codes and criteria (based on the IPA planning scheme) are now contained in a separate Development Guidelines document to be used for development assessment of future proposals on Strategic Port Land.
- The Development Guidelines cover a range of criteria including:
 - environmental management;
 - airport operational requirements (including obstacle limitations, noise contours, etc);
 - site layout and building design;
 - access, parking, circulation;
 - landscaping;
 - safety and hazard management;
 - setbacks and buffer requirements;
 - infrastructure requirements;
 - extractive industry;
 - stormwater management;
 - erosion and sediment control; and
 - other Mackay Port Authority requirements for new development.

This Development Guideline forms a separate supporting document to this Land Use Plan.



3. FACTORS AFFECTING THE AIRPORT DEVELOPMENT

3.1 The Existing Airport Environment

Mackay Airport is located about 5kms by road south of the centre of Mackay adjacent to the coast near Shellgrit Creek. The airport comprises some 270 hectares.

The key facilities are the main and crosswind runways, taxiways, the passenger terminal and aprons, general aviation areas and other support infrastructure. The airport currently has a main runway, a secondary cross runway and 8 taxiways. The two general aviation aprons allow for the use of resident aircraft, including helicopter and charter services.

In addition to the main airport area, the Mackay Port Authority (MPA) owns land on the north east side of the Bridge Road and Milton Street intersection. Residential development extends to the north and west airport boundaries and is quite close to the north-western end of the main runway.

The movement area of the airport (runways, taxiways and aprons) is shown in Figure 2 below which is an extract from the Mackay Airport Master Plan. The runways divide the airport into four quadrants referenced as North eastern, South western, North western and South eastern quadrants (as shown in Figure 3).



Figure 2: Existing Airport Features and Environs

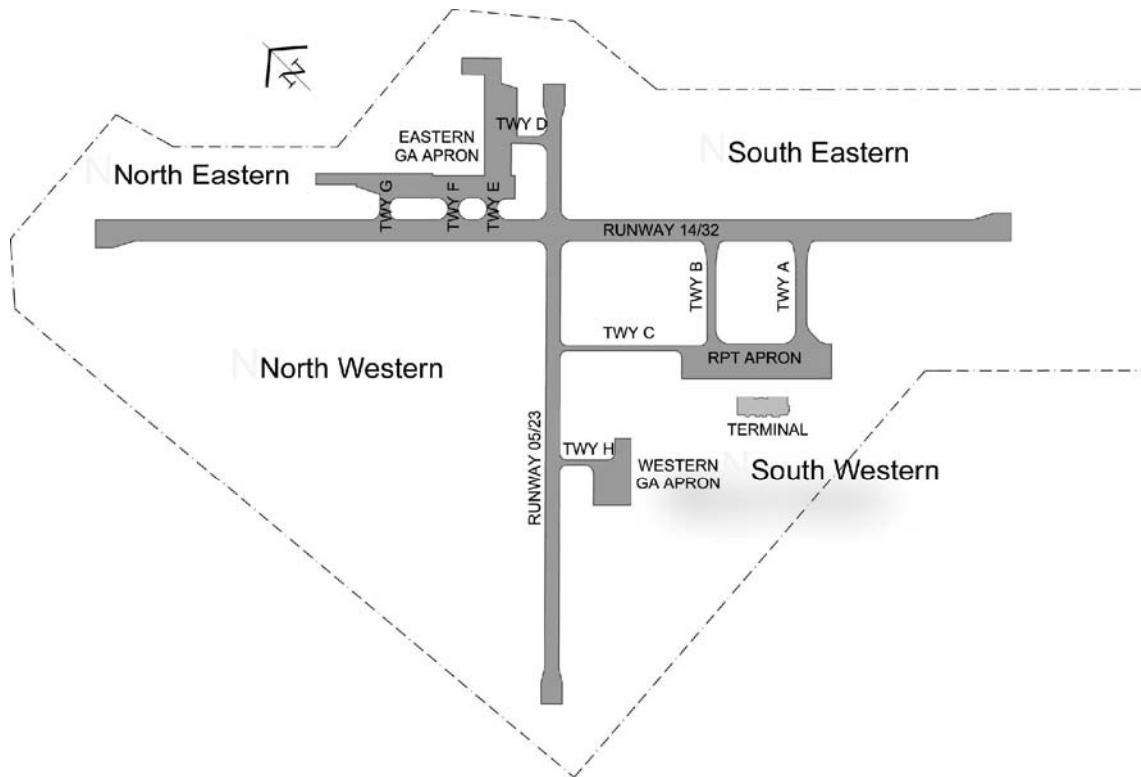


Figure 3: Airport Quadrants

3.1.1 Airport Facilities

The four quadrants effectively split by the runways can be described as follows:

Quadrant	Facilities
South west	Contains the regular public transport (RPT) passenger terminal, aircraft aprons and car parks. There is also a new commercial GA area in this quadrant
North west	Currently only containing the control tower and aviation rescue and fire fighting Service (ARFFS)
North east	Where the original RPT terminal was located, and which now accommodates GA operations, including helicopters and aircraft maintenance
South east	Contains the VOR/DME navigation aids and associated protection areas, abutting Shellgrit Creek



The Airport is comprised of a number of facilities and support services described below.

- The main **runway** (14/32) and a cross runway (05/23) that service the main commercial and passenger services and supporting general aviation activities.
- The **passenger terminal** which includes typical passenger related services for aircraft travel including check in, airline desks, departure lounge, baggage handling areas, public amenities and retail services.
- **Aircraft parking aprons** including the RPT apron, cargo apron, north-eastern general aviation apron and south-western general aviation apron.
- The existing **control tower** located in the north-western quadrant of the airport, close to the entry from Milton Street. The location and height of the control tower is determined by key criteria including response time (for an air traffic controller to detect the movement of an aircraft after it has commenced its take off run) and views to the movement area and airspace surrounding the airport.
- The existing **aviation rescue and fire fighting (ARFF)** facility is located in the north-west quadrant of the airport and near the control tower. There is also a hot fire training facility located adjacent to the ARFF station.
- Existing **fuel supply** for the refuelling of aircraft in the north-east quadrant of general aviation services. Shell operates an Avgas self serve bowser and turbine powered fixed wing and helicopters are refuelled by mobile tankers.
- The only **air freight** facility is located close to the RPT terminal and apron.
- **General aviation** activities (including fixed and rotary wing with some associated fuel and maintenance) and services currently occur primarily in the north-eastern quadrant and typically include corporate general aviation/charter for the mines; recreational and light general aviation including pilot training; helicopters for transport of marine pilots to ships offshore and transport of tourists to resort islands.
- The Mackay Port Authority owns the **Ground Service Equipment (GSE)** which is rented to ground service agents that serve Virgin Blue and is currently parked in designated areas on the edge of the RPT apron. Qantas have their own equipment.
- **Navigational aids** such as NDB, VOR/DME and VHF and UHF communications are provided for at various locations around the airport site.
- **In flight catering** and **aircraft maintenance** are also accommodated within the airport facility.
- **Government, community** and other **corporate services** including Quarantine services, air sea rescue, are also located within the Airport lands.



3.1.2 Access and Parking

The primary airport access from the city is along Milton Street and then Boundary Road East. Milton Street is a major artery for access to the industrial areas to the south of the city.

There is currently an entry road from Milton Street to the north-western sector to service the Airservices Australia Control Tower and Rescue and Fire Fighting Service compounds.

Access to the north-eastern general aviation area is via Bridge Road and Casey Avenue.

There are currently some 452 public car parking spaces all at ground level. A newly opened facility adjacent and towards the rear of the car park provides undercover security parking with 67 spaces. Construction of another 163 public car parking spaces is currently underway, for completion in the second half of 2006. This also includes an extra 64 bays to the undercover secure car park.

There are plans for the rearrangement of the road system in front of the terminal to increase efficiency and resolve some traffic issues.

There are also future plans to introduce a one-way system to the terminal traffic route and main car park implemented from Boundary Road. This would involve converting the existing airport access road to the entry road and providing a new exit road. Such a system would be expected to provide capacity on the resultant two lane one-way road of a similar volume to the two way road of some 1,200 vehicles per hour.

While this gives a snapshot of the current scenario and short term proposals for access and parking at the time of this document being prepared, it is important to note that such facilities (ie. parking, improved access, etc) continue to be in demand due to the dynamic nature of the Airport operations. Future land use planning and importantly master planning, must accommodate these demands and changes.

3.2 External Considerations on Airport Development

3.2.1 Obstacle Limitation Areas

CASA (Civil Aviation Safety Authority) sets out requirements for the control of obstacles within airspace around an aerodrome. Obstacles may include natural features, buildings, mast/towers, trees and transient objects such as road traffic/vehicles.

Obstacle Limitations Surfaces (OLS) associated with Mackay Airport have been considered and mapped by Airbiz as part of the Master Plan. They are shown in Figures 4 and 5 below and based on a worst case scenario of considering the existing main runway dimensions and the possible future expansions and changes discussed in the Master Plan.

From these figures it is obvious that due to the proximity of the main runway to Bridge Road and Milton Street, vehicles on these roads would penetrate the OLS based on the surface levels of these roads being similar to the level of the runway threshold.

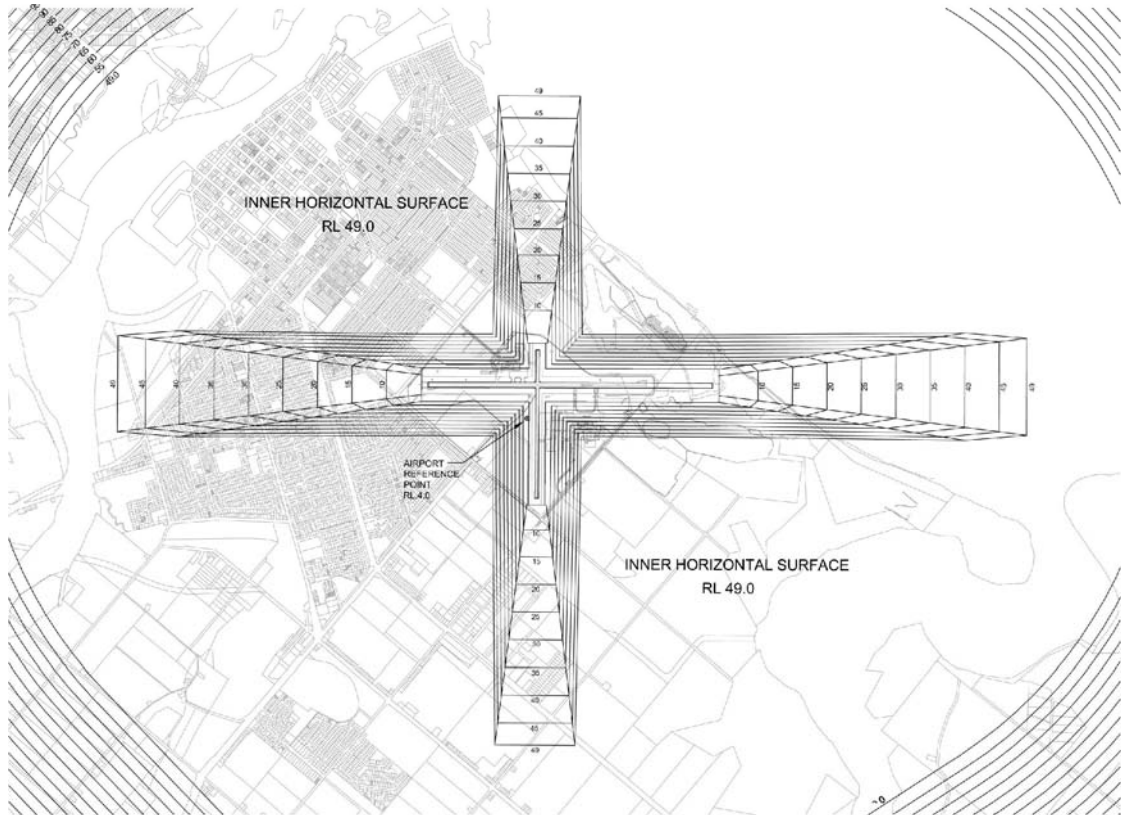


Figure 4: Obstacle Limitation Surfaces



Figure 5: OLS Impacts to the North-West of Runway 14/32



This information will act as an overlay for future development subject to this Land Use Plan and although the Land Use Plan has no control over land that is not Strategic Port Land it is also separately called up in the Mackay City Council Planning Scheme.

3.2.2 Public Safety Areas

The *State Planning Policy (SPP) 1/02 "Development within the Vicinity of Certain Airports and Aviation Facilities"* sets out guidelines for developments within the vicinity of airports, aerodromes and aviation facilities. This policy applies to the Mackay Airport. The SPP considers that although air travel is relatively safe and the probability of an incident during any single operation very low, the highest aircraft accident risks occur close to an airport during take off or landing, and accordingly, 'public safety areas located beyond the ends of the runways at major airports', including Mackay, are required to be identified. In particular the SPP states that "...increased risks to public safety can arise from development that involves the following:

- residential uses
- the manufacture or bulk storage of flammable, explosive or noxious materials
- uses that attract large numbers of people (ie. sports stadiums, shopping centres, industrial or commercial uses involving large numbers of workers or customers)..."

Therefore an area identified as Public Safety Areas at the end of each runway shows where development activities are restricted. This area for Mackay Airport is shown in Figure 6 below.³



Figure 6: Public Safety Area

³ Figure 6 is an extract from the Mackay Port Master Plan (Figure 9.3).



It is noted that:

- The Public Safety Area associated with the main runway extends beyond the airport boundary and incorporates the South's Football Clubrooms and much of the airport owned open space (Schaeffer's Paddock), the soccer and hockey playing fields, and the Astro-turf hockey field, as well as housing along Paradise and Longair Streets. The Mackay Port Authority is currently attempting to relocate the soccer/hockey facilities from within the limits of this Area.
- The Public Safety Area also extends onto tidal flats and mangrove areas on the eastern end of the main runway.

3.2.3 Aircraft Noise

The Australian Noise Exposure Forecast (ANEF) system is the aircraft noise exposure index adopted in Australia for guidance in land use planning in the vicinity of airports. It is a scientific measurement system the takes into account the following factors of aircraft noise:

- the intensity, duration, tonal content and spectrum of audible frequencies of the noise of aircraft take-offs, landings and reverse thrust after landing;
- forecast the frequency of aircraft types and movements on various flight paths; and
- the average daily distribution of aircraft takeoffs and landing movements in both day time and night time hours.

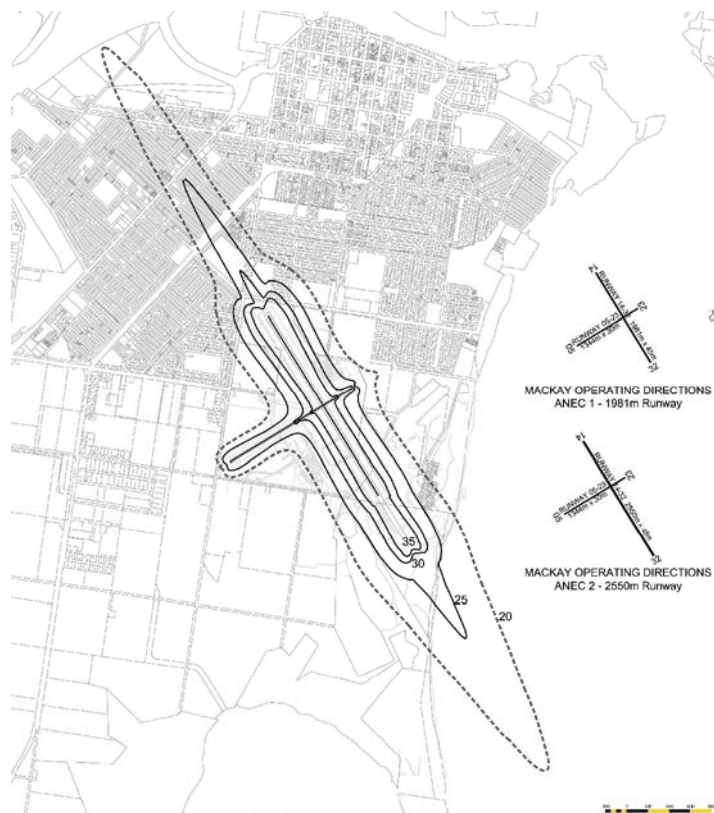


Figure 7: ANEF 2030



Although the ANEF contours do not generally affect development of airport Strategic Port Land, composite noise contours are shown in Figure 7⁴ and are noted by Mackay City Council in its current planning scheme for consideration in future land use planning and development decision making.

3.3 Environmental Factors

Mackay Airport is located close to the coast on generally flat land south of the Pioneer River. Airport infrastructure such as terminal areas, much of the runways, movement areas and associated facilities has generally been developed by filling parts of the Shellgrit Creek estuary and associated freshwater wetlands with imported materials. The filling has typically ranged from 1 to 2 metres above natural materials.

The **Shellgrit Creek estuarine system** of today is a remnant of what was originally an extensive wetland system that was linked to the Bakers Creek wetlands to the south. While past airport development has contributed to the disturbance of the Shellgrit Creek estuary and wetlands, it is only one of the agents of change. The Shellgrit Creek estuary and associated freshwater wetlands have also suffered from drainage / filling for cane growing, filling for urban development, extraction of sand for use as fill, adjacent solid waste disposal sites, unmanaged recreation and the construction of major drains taking runoff from East Mackay and South Mackay into the estuary.

The Shellgrit Creek estuary is an outlier that forms the northernmost part of the Sandringham Bay-Bakers Creek Aggregation. This wetland aggregation has a total area of 7,372 ha and is listed on the Directory of Important Wetlands of Australia – Reference No. QLD052.

Sediment testing within the estuary shows that the estuarine sediments associated with Shellgrit Creek:

- have low heavy metal and metalloid concentrations that are below currently recognised trigger levels; and
- have little acid forming potential at depths up to 1.0 metre, although there is a higher risk of encountering acid producing soils at depths of between 2.0 and 4.0 metres.

Coastal dynamics of the Mackay shoreline have been studied by the Environmental Protection Agency. In so far as Shellgrit Creek and Far Beach are concerned, the study found that:

- sediment transport in the vicinity of Far Beach (immediately north of the mouth of Shellgrit Creek) is mostly cross-shore with a weak northerly component;
- over the past 100 years, as the mouth of the Pioneer River has moved, the onshore supply of sediments to Far Beach has been reduced, resulting in constant shoreline realignment;
- the input of fluvial sediments to the intertidal area offshore from Far Beach is therefore highly episodic as it depends on the occurrence of a flood event in conjunction with favourable tidal conditions;

⁴ Figure 7 is taken from the Mackay Airport Master Plan (Figure 9.4).



- analysis of the available survey data for Far Beach during 1971 to 1997 indicates a trend of erosion; and
- the Far Beach coast has been considerably affected by human activities including sand extraction, pedestrians and vehicle use.

The only remaining **native vegetation** within and adjacent to the airport boundaries is associated with the Shellgrit Creek estuary around and beyond the south-eastern end of the main runway. The remaining native vegetation consists of the following vegetation types:

- intertidal vegetation comprising mangroves, saltmarsh and saline grassland; and
- a variety of coastal dune vegetation on the foredunes and small areas of hind dunes and remnant sand ridges.

There are no threatened plant species or regional ecosystems classified as 'endangered' under the *Vegetation Management Act 1999* on the airport lands.

Some **fauna species** of special conservation significance are found in the vicinity of the airport. The most important are migratory shorebirds that feed and roost along the coastline around the mouth of Shellgrit Creek. The most abundant species are the Bar-tailed Godwit, Eastern Curlew, Red-necked Stint, Greater Sand Plover, Whimbrel, Great Knot, Grey-tailed Tattler and Pacific Golden Plover. Daily numbers in excess of 1,500 individuals have been recorded.

At low tides, when the sandy tidal flats are exposed, wader foraging habitat stretches several hundred metres out to sea. These feeding flats are part of an extensive area that extends southwards some 7 km to Bakers Creek and Sandringham Bay.

At high tide, near the airport, waders are bunched together by the incoming tide into three main areas that form high tide roosts. These roost sites are:

- a sandy spit on the north side of the Shellgrit Creek entrance (Site 1);
- a sandy spit near the small creek mouth north of the Illawong Beach Resort (Site 2); and
- an 'island' located near the downstream opening in the 'detention' basin' (Site 3).

At very high tides, all three roosts are submerged. They disappear in the sequence of Site 1, Site 2 and Site 3.

The beaches of the Mackay area are also known to provide nesting sites for marine turtles, albeit in relatively low densities. The area between Carmila Beach to the south and Repulse Bay to the north supports approximately 10 percent of the eastern flatback nesting females. Based on the results of monitoring since 1992, the Mackay Turtle Watch Association has advised that:

- there are no historical records of sea turtles nesting along the beaches near Shellgrit Creek; although
- there are confirmed reports of nesting on the beach just north of Shellgrit Creek.

The airport lands have been assessed to determine **cultural heritage values**. This involved discussions with Traditional Owner representatives, literature reviews and field inspections in company with Traditional Owner representatives.



It is probable that the general area, and particularly the estuary, was used by Aboriginal people to fish and procure various shellfish and plant resources. However, the low-lying mangrove-dominated areas would not have been suitable for camping.

At the conclusion of the inspections, no places with material cultural evidence present were identified. There are reports of shell middens having been seen in the area 15 - 20 years ago. However, as is the case along most of this coastline, storm surges and extremely high tides regularly swamp the coastal dunes and militate against survival of significant elements of the material cultural record.

All intertidal marine plant communities have a generalised range of ecological values – ie. goods and environmental services, which includes the following: plant productivity, shoreline protection, water quality maintenance, habitat provision and biodiversity. Not all intertidal marine plant communities provide all of these goods and services.

In so far as the Shellgrit Creek estuarine system is concerned, the following points are relevant:

- the mangrove communities are not particularly diverse;
- mangrove biomass and annual litterfall are estimated to be at the low end of the range for tropical mangroves;
- the estuarine area and associated tidal sand and mud banks in the vicinity of the airport provide important habitat for at least 42 bird species of special conservation significance;
- the estuarine waterways are likely to provide significant feeding and nursery habitat for a range of fish species, even though connections to upstream freshwater areas have long been severed;
- other fauna values are generally low;
- the mangroves and other intertidal vegetation provide shoreline protection by reducing flood hazards, breaking up flow peaks, increasing flow duration and providing flood storage – the roots of fringing marine vegetation also help to bind partly consolidated sediments;
- fringing vegetation acts as a sediment and chemical sink and recycles other compounds (e.g. nitrogen) through complex biological processes – estuarine communities therefore help to protect adjacent marine systems from land-based silts, nutrients and heavy metals;
- direct ecological connections with the larger Bakers Creek wetlands to the south have been severed;
- the estuary has been substantially reduced in size and highly modified by past and current human activities; and
- there are cultural heritage values associated with past Aboriginal use of the area, but Traditional Owner groups do not regard these values as being an impediment to properly managed airport development.

Evidence collected as part of recent studies indicates that the relative significance of values associated with the Shellgrit Creek estuary and adjacent intertidal areas are as outlined in Table 3.1.



Table 3.1 Relative Significance of Values Associated with the Shellgrit Creek Estuary and Intertidal Areas

Value	Relative Significance
Fisheries values	Of local significance
Ecological values	Of regional to State significance for shorebirds Otherwise of local significance
Flood retardation values	Of local significance
Cultural heritage values	Of local significance

3.4 Local, Regional and State Considerations

Strategic Port Land (SPL) at the Mackay Airport falls within the Mackay City local government area, but is outside its jurisdiction in terms of planning and development and general management control. The Mackay City Council Planning Scheme 2006 identifies SPL as 'Designated Lands – Strategic Port Land'. This recognises the status of the land within the scheme while also acknowledging that it is not part of the 'zoning' system applicable to other local government land.

In a similar way, Strategic Port Land is included, where appropriate in the various overlays adopted in the scheme. For example, overlays for acid sulfate soils, good quality agricultural land, lands subject to inundation, etc cover Strategic Port Land where relevant. The scheme also includes specific provisions and overlays to manage development outside the airport's Strategic Port Land to ensure development does not adversely impact on the airport operation (or conversely new development is not unreasonably affected). This specifically includes overlays addressing the airport operational issues such as height limits, airport noise and public safety areas. This assists the Council, the MPA, state agencies and the community understand that while management control is allocated to different authorities, that constraints and overlay considerations do not have regard to these management differences.

Development adjoining Strategic Port Land at the airport is a mix of residential, industrial and rural uses, which at times does create some incompatibility issues. The Mackay Port Authority has sought local government support to consider the operations likely to cause impacts, and to develop processes and scheme provisions within the Mackay City Council Planning Scheme to reduce or manage issues associated with these potential impacts. This is subject to further discussions between the MPA and the Council.

Although Strategic Port Land is not subject to the provisions of the Mackay City Council planning scheme, this Land Use Plan has regard to the intent of the local government's planning scheme and the port authority's vision. At times the local government policy, and commercial and operational requirements of the port may not be compatible and the Mackay Port Authority has had regard to the airport's designation as being of state economic significance, in developing its own outcomes and land use planning.



Under the State Coastal Management Plan for Queensland, the Shellgrit Creek estuary is a 'significant coastal wetland' by virtue of its listing in the Queensland Chapter of 'A Directory of Important Wetlands in Australia'. Under the Plan, the Airport is also defined as an 'area of state significance (social and economic)' for the purposes of coastal management.

The Shellgrit Creek estuary is also subject to the Strategy for the Conservation and Management of Queensland Wetlands. One of the Queensland Government's objectives for wetlands is to 'avoid further loss or degradation of natural wetlands unless overriding public interest can be shown'.

The Central Queensland Coast Bioregion has been subject to a Biodiversity Planning Assessment by the Environmental Protection Agency. This assessment found that the Shellgrit Creek estuary is of State Biodiversity Significance by virtue of the presence of intertidal wetlands and its listing in the Directory of Important Wetlands in Australia.

The western boundary of the Mackay/Capricorn Management Area of the Great Barrier Reef Marine Park runs along this part of the Mackay Coast at mean low water. Given the large tidal range and extensive sand and mudflats, low water is some distance offshore. The Mackay Port Authority has undertaken survey work to map mean low water offshore from Shellgrit Creek and found that it is approximately 1.2 km offshore. This is also the western boundary of the Great Barrier Reef World Heritage Area.

The 2003 Zoning Plan for this section of the Marine Park places waters along this section of the coast in the 'Habitat Protection' Zone. Above low water, the Great Barrier Reef Coast Marine Park (enacted under Qld Marine Parks legislation) came into effect on 5 November 2004. It provides complementary zoning over tidal lands and tidal water of Queensland.

3.5 Opportunities, Constraints and Other Planning Parameters

3.5.1 Growth Drivers

The Mackay Airport is a major contributor to transport infrastructure for the region of Mackay/Whitsunday. The airport plays an important role in servicing both business and recreational and tourist user groups in passenger and freight services. The future development of the tourism industry will ensure that demand for airport services continues. The airport also offers excellent access to surrounding agricultural and mining districts focusing on the sugar cane, coal and cattle industries.

Over the past few years the passenger traffic of the airport has continued to increase with the introduction of new services by Virgin Blue and Jetstar, and growth of the other established carriers.

Deviations around the trend line show the dip in 1989/90 associated with the domestic pilot's dispute, the below-trend performance in 1998/99 through to 2001/02 and the strong performance of the past two years following the introduction of competitive low cost carriers. Overall, there has been a consistent upward trend, with passenger numbers increasing 2 ½ times over the past 20 years.



Annual passenger movements are forecast to more than double over the next 25 years. This will mean increased flight numbers, possibly larger aircraft and increased pressure on the peak times in the terminal. Planning to accommodate this projected growth is therefore essential to provide adequate capacity in the future.

The region is presently experiencing significant economic growth and the Airport is ideally situated to capitalise on the strong regional economy.

The Whitsunday Hinterland and Mackay region covers the local government areas of the City of Mackay, and the Shires of Bowen, Whitsunday, Sarina, Mirani, Nebo, Broomsound and Belyando. The region's economic strength comes from its mining, agriculture, manufacturing and tourism industries, all of which provide the necessary infrastructure to support the needs of the region's growing community.

The region is predominantly associated with coal extraction, with the Bowen Basin coalfields contributing more than half of Australia's export coal; as well as its strong manufacturing industry and port facilities. These major industries are supported by agriculture, retail and services, and a growing tourism industry.

The attraction and success of the region can be attributed to:

- significant coal deposits within the region;
- the availability of extensive areas of good quality agricultural and grazing land;
- access to domestic and international markets via port, air, rail and road infrastructure;
- suitable deep water ports at Hay Point/Dalrymple Bay and Abbot Point that provide world-class coal loading facilities, as well as the Mackay Port that has the region's major non-coal bulk commodity facilities; and
- appropriate infrastructure and services including energy and transport connections between the mines and ports facilities.

The Master Plan considers a range of economic and other growth drivers for the airport within Mackay and the broader region. These drivers are summarised below and include:

- resident population: the Mackay Airport serves a region in the order of 140,000 persons and the forecast is for this to grow to up to 152,000 by 2026;⁵
- the Whitsunday region's economy has grown faster than Queensland's as a whole over the past four years;⁶
- dwelling approvals in the region also continue to grow;
- there is a wide range of general aviation operators at the airport including charter, flying training and helicopter transfers (to ships entering the seaports, to mining and tourism industry and medical flights). There is recent rapid growth within the current resources boom in this area – in particular in fixed wing and rotary wing supporting the mining industry and for safe transit through the Great Barrier Reef;

⁵ According to the Mackay Airport Master Plan document based on Queensland Department of Local Government and Planning forecasts.

⁶ Based on information from the Department of Local Government and Planning's 'Planning Information and Forecasting Unit' population growth report for the Whitsunday, Hinterland and Mackay Region (WHAM) for 2005.



- expansion of general aviation services is expected;
- according to a report on the City of Mackay by the Whitsunday Regional Economic Development Commission:
 - the region surrounding Mackay is the largest sugar cane producing area in Australia. The region is home to six sugar mills, one of Australia's four refineries and the largest bulk sugar terminal in the world. The region generates one-third of Australia's sugar production;
 - Mackay Region has the largest coal seam in Australia and Queensland is one of the world's largest seaborne coal exporters. The Bowen Basin in Mackay's hinterland accounts for 85% of production and contains more than 70% of the State's known resources. Mackay has the largest coal export terminal in Australia and second largest in the world;
 - Mackay City has a large engineering services base and supports the region's mining sector;
 - Mackay has a higher than average income structure compared to the State figures and historically lower than State levels of unemployment;
- while not a traditional tourism destination, the Mackay Region has a number of special attributes in this area including:
 - 31 beaches and substantial wildlife and national parks;
 - it is among the few areas where the platypus can be seen in its natural environment; and
 - the largest stretch of subtropical rainforest in Australia and the Cape Hillsborough National Park home to 150 species of birdlife and tropical butterflies.

On the basis of this and more detailed modelling and projection of passenger and other aviation service demands, Mackay Airport can expect continued growth and increased demand for a range of aviation services and activities with subsequent land use demands and/or implications.

Conversely the Mackay Airport is a significant link in the air transport network connecting businesses within the region and elsewhere in the state (or country) and connecting tourists to off-shore locations. Accordingly, the airport's contribution as a key driver of the local economy should not be forgotten.

3.5.2 Constraints and Opportunities

The Master Plan for Mackay Airport identifies, at the macro level, a series of constraints and opportunities for consideration in the internal and external land use planning strategy. These constraints and the Master Plan land use considerations, have helped form the Land Use Plan precinct planning in this document.



Three levels of physical and operational constraints were identified, dependent on their effect on aviation safety issues and/or complexity in relation to provision of new facilities at the airport:

Level 1	Comprise major items of infrastructure and investment that are fundamental to the operation of the airport and critical clearances for aircraft operations. These constraints should, if possible, be retained in the planning	Runways 14/32 and 05/23, major taxiways and associated clearances. Re-alignment of the runways is not considered an option, but the potential to shorten or close the cross-runway is discussed in Chapter 5. The existing terminal complex is the next most significant item of airport infrastructure. Three dimensional surfaces close to the airport associated with the existing runway system that must be protected for the safe navigation of aircraft in the vicinity of the airport. Public safety areas, which are a town planning issue under the control of local government. External roads and housing, including Bridge Road and Milton Streets and housing located on the opposite side of both roads from the airport.
Level 2	Comprise substantial items of infrastructure and investment, as well as less critical clearances for aircraft operations. These should not be compromised unless there are compelling technical reasons and a cost benefit case is established for relocation	The Air Traffic Control (ATC) complex and the Aviation Rescue and Fire Fighting (ARFF) Service facility. The VOR/DME installation and the T-VASIS installed on Runway 14/32 landing aides. The Airport boundary.
Level 3	Comprise items of existing infrastructure that can be relocated to make way for future development, although at a cost.	Underground and overhead engineering services Surface water drainage, including the protective levee bank system. Existing aprons and associated GA buildings in the north-east GA area (3A).



In combination with the environmental considerations noted in the earlier sections, a set of opportunities and constraints can be summarised as follows: ⁷

Constraints	Opportunities
1. Bridge Road and urban development outside the Airport's boundaries, compromise runway protection zones, Obstacle Limitation Surfaces and are incompatible with aircraft noise impacts. 2. Operational requirements, clearances and compatibility concerns between the control tower and rescue fire fighting services. 3. Navigational aids need to be protected from incompatible land uses. 4. Shellgrit Creek hydrological issues and environmental values require appropriate treatment for future runway extension and/or any future development. 5. The current alignment of the RPT apron is not adequate for widebody aircraft. 6. Location/proximity of flood prone areas.	A. Runway extension will allow airport operations to go to new markets. B. Terminal area expansion will cater for growth including apron and car parking areas. C. Future land acquisition for airport related strategic use (including long term expansion of terminal and associated aprons and car parks). D. Realignment of Boundary Road for terminal area development and improved access. E. Airport related industrial and commercial opportunities. F. Corporate and commercial general aviation facilities. G. Redevelopment of the north-eastern general aviation areas.

⁷ Adapted from the Figure 3.1 Constraints and Opportunities in the Mackay Airport Master Plan section 3.1



4. THE VISION FOR THE MACKAY AIRPORT

The new legislative changes require the development of a set of Desired Environmental Outcomes (DEOs) as part of the Land Use Plan. These describe the vision for the port areas and usually comprise outcomes related to the three components of ecological sustainability: economic development, community well being and ecological processes. In combination with context for the Airport established in previous sections, they inform preparation and drafting of the balance of the Land Use Plan so that all aspects of the Land Use Plan (ie. the precincts, intent, preferred uses and measures) are consistent with and contribute to the achievement of these outcomes.

At the highest level, the DEO's for the Airport have regard to Mackay Port Authority's Corporate Statements (in particular the vision and mission discussed previously) as well as the Queensland State government's objectives and priorities for areas of state significance.

However the vision for the Mackay Airport is also influenced by the need to be competitive and consistent with services, operations, and best practice of other Airport competitors in order to continue to provide growth in seat capacity and quality services. The challenge is to seek a balance between increasing capacity, operating efficiently and providing passenger service and comfort, with the need for economical development and community convenience. All of this is also within the overarching context of financial performance for the airport shareholder, and delivery of outcomes through a variety of mechanisms including the land use planning and development assessment process.

The DEOs also reflect the work of the Master Plan and the strategic directions presented in that document. Accordingly, the DEOs for the Airport are diverse and are stated below.

4.1 Economic Development

- Provide infrastructure and capabilities to meet customer needs and a high quality of service to passengers and airlines.
- The Airport is commercially viable and returns profits to the state government including taking advantage of the opportunity to add value to traditional aviation business activity by realising the development opportunities of airport land not required for aeronautical purposes in the short-medium term.
- The Airport contributes to the local, regional and state economy.
- Capital investment has and will continue to be invested in the Airport facilities and will be used efficiently and effectively to capitalise on compatible development potential of the airport, therefore generating employment and economic growth for the region and equitable return for shareholders.
- Land use planning responds to changes in user demands, regional factors and global markets.
- The Airport provides employment opportunities locally and beyond.
- Land is identified and will be available for the long term needs of the Airport operations.



- Industrial, commercial and other port related activities can be accommodated at appropriate locations within Strategic Port Land to maximise the airport's long term sustainable revenue from its land resources while meeting the overall strategy.
- The Mackay Port Authority is an accountable and viable organisation.

4.2 Ecological Processes

- Manage the Airport in an ecologically sustainable manner.
- Lead change by integrating environmental considerations into all aspects of strategic planning business decision making and operations.
- Mackay Port Authority is committed to ecologically sustainable development within the Airport.
- Operations will be undertaken in accordance with best practice and will over time, incorporate energy efficiency principles and water sensitive design techniques.
- Open space and environmental buffers are identified and managed for conservation.
- Codes and criteria to manage ecological, environmental and amenity considerations are developed and adopted as part of the development assessment process.
- Environmental Management Systems are continually updated and implemented.

4.3 Community Well being

- To be a community and civic leader behaving in a socially responsible manner.
- Responsible and sustainable development of Airport land that has regard to the land use of surrounding areas.
- Public access provided to waterfront and buffer areas where it does not compromise safety, security, operational or environmental values of port lands.
- Operations are safe across all elements of Airport business.
- Land use planning undertaken by the Mackay Port Authority on Strategic Port Land does not exacerbate noise and other impacts on residents and the community.
- The Mackay Port Authority continues to work with the local government to ensure land use planning and the interface of port and non port lands is compatible and does not result in reverse amenity issues and impacts on Strategic Port Lands.
- Enhanced community engagement through visible planning and decision making processes, while executing legal and statutory obligations.
- Long-term development at the Airport to ensure it becomes an integral and inseparable element of the economy and culture of the Mackay region.
- Capitalise on the compatible development potential of the site thereby generating employment and economic growth for the region and an equitable return for shareholders.



5. ELEMENTS OF THE LAND USE PLAN

5.1 Land Use Precincts

The Land Use Plan applies to all Strategic Port Land and future Strategic Port Land – the extent of this area is shown in Figure 8.

All Airport Strategic Port Land has been identified in one of five Land Use Precincts. These precincts provide a structured approach to the allocation of land and probable location of future development on port land.

The land use precincts identify areas of similar (intended) land use character and function and reflect the diversity of the Airport operations: from activities which represent the core airport operations (such as runways, passenger terminals and car parking areas, through to land uses and activities such as aviation related commercial/business activities that support the airport, provide a transition between the more intense higher impact activities and which also respond to constraints such as Public Safety Area requirements and Obstacle Limitation Surface areas.

In addition to all existing Strategic Port Land allocated into one of the five land use precincts, land proposed by the Mackay Port Authority as Future Strategic Port Land is also shown. This future Strategic Port Land is discussed further at Section 5.7.

Each land use precinct is accompanied by a discussion on the intent or purpose of the precinct, and a range of preferred uses. The measures relevant to the assessment of future development applications in the precinct are contained in the separate Development Guidelines document.

The process of identifying land use categories, preferred uses and the intent for each area has been informed by the earlier stages of the Land Use Plan process, which included identifying and considering:

- environmental issues and drivers locally and within the region in order to achieve sustainable growth;
- understanding and detailing the interface between the operational components of the Airport and the surrounding urban and industrial development;
- researching industry drivers and potential growth opportunities;
- forecasting the potential for new trade and traffic volumes through the airport (including for domestic, internal, general, aviation, freight, etc);
- consideration of engineering and infrastructure constraints which may impact on the planning of the facility;
- the views of a range of local, regional and state interest stakeholders including Mackay City Council, the local community, state agencies, elected representatives, users and operators;
- adhering to standards that support safe aircraft operation;
- flexibility to accommodate changes in demand and land use needs; and



- encouragement of revenue producing non-aeronautical activities.

The five Land Use Precincts are as follows:

- Aviation;
- Passenger Terminal;
- Aerospace and Aviation Support;
- Airport Commercial and Industrial; and
- Buffer;

and are described in detail in the following sections.

Land is also shown as Future Strategic Port Land and is discussed separately at the end of this section. A full description of each parcel of land to be included as Strategic Port Land under this Land Use Plan, together with a description of its current and proposed use is included within section 6.

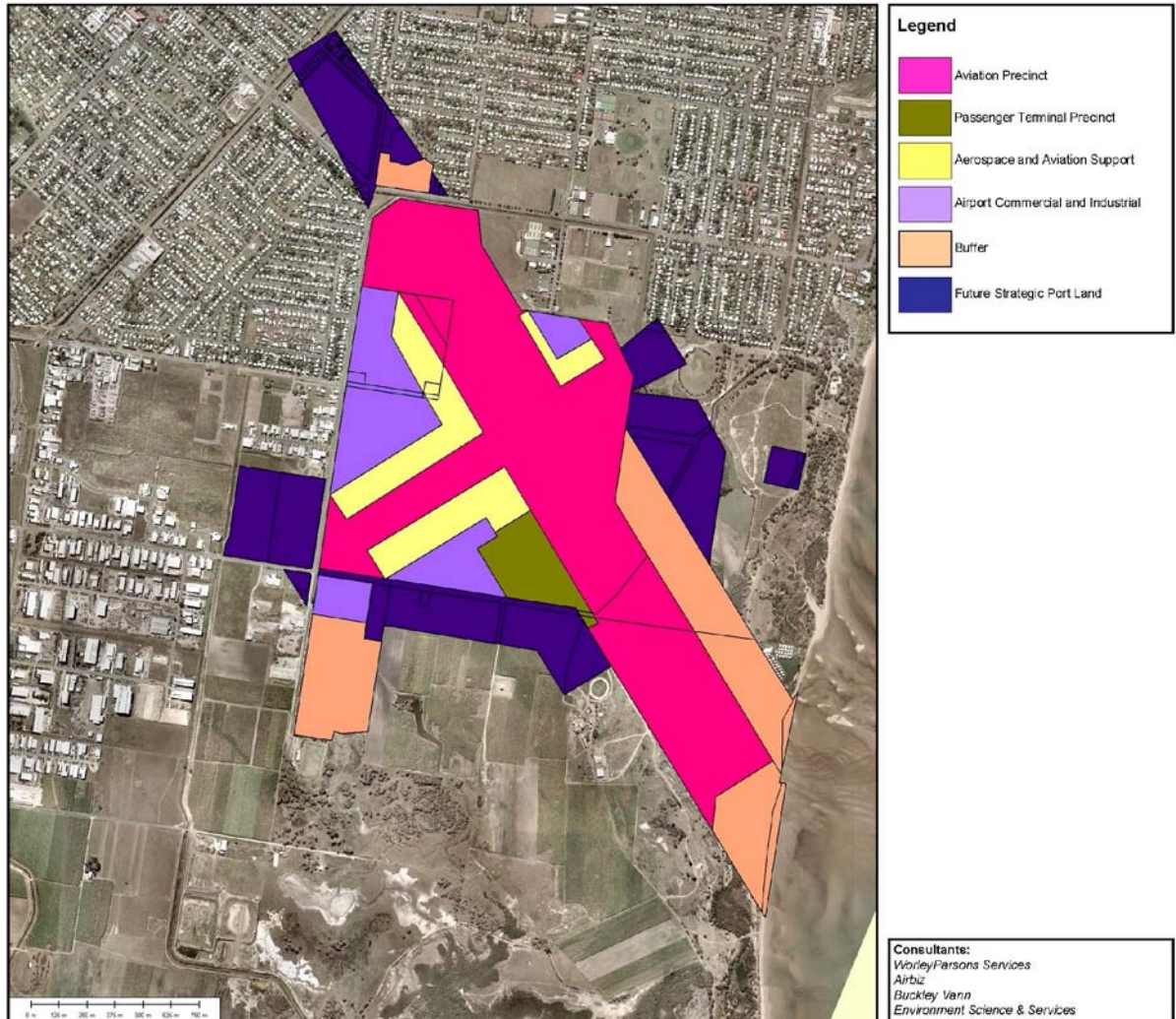


Figure 8: Airport Land Use Plan Precincts



5.2 Aviation Precinct

Intent

This precinct includes all areas required for the safe take-off, landing and taxiing of aircraft as well as the related facilities for the safe operation of aircraft movement including:

- runways, taxiways and standing areas;
- aircraft navigational aids;
- radar and communication equipment;
- air traffic control;
- aviation rescue and fire fighting;
- meteorological services; and
- RESA (runway end safety areas)

The Master Plan anticipates that the Airport precinct will include extension to the main runway (over time), development of a full parallel taxiway system, and retention of the existing cross runway with the development of parallel taxiways to service aprons in the various general aviation areas. The existing cross runway will remain at its current length. A separate study also recommended that mandatory RESA (runway end safety areas) be provided at the end of the main runway.

This precinct is intended to accommodate those future changes (whether or not anticipated within the life of this Land Use Plan or beyond).

Preferred Uses

The preferred range of activities intended for this precinct is noted below. It also includes those activities not described below but generally consistent with the intent of the precinct:

- clearance areas and runway end safety areas;
- control tower;
- emergency staging areas/services facilities;
- helicopter landing, training and parking facilities;
- meteorological services including weather radar scanner and runway visibility reporting;
- navigational aids;
- radar and telecommunications equipment;
- rescue and fire fighting services (including towers, fire station, tender vehicle standing and maintenance, fire drill training facilities);
- road access to this area;
- runways (and runway extensions); and
- taxiways.



5.3 Passenger Terminal Precinct

This precinct includes land that represents the primary airport operations directly linked to the activities of the Aviation Precinct. The precinct accommodates facilities for the safe, efficient and economic handling of aircraft, passengers, freight and related services. It caters for the role of the Airport as a key tourist and business gateway to the region.

The precinct typically includes the area for the movement and standing of aircraft and areas used for the movement of aircraft and related vehicles.

This precinct includes:

- aprons (aircraft parking apron) and other movement and standing areas for aircraft;
- the terminal building incorporating:
 - areas for passengers (ticketing, departure lounges, frequent flyer clubs);
 - a possible international terminal;
 - support facilities such as baggage areas, back of house, passenger amenities, etc;
 - supporting specialty retail (such as newsagents, cafes, bars, some speciality retail) and car rental services;
- car parking and set down areas, as well as car hire drop off/collection;
- freight handling;
- aircraft maintenance;
- ground transportation;
- hotel/convention/corporate accommodation and services;
- aviation services including in flight catering; and
- facilities with a strong commercial focus that directly contribute to the viability and operation of the airport (such as airfreight, in flight catering, Airservices, etc).

Preferred Uses

The preferred range of activities intended for this precinct is noted below. It also includes those activities not described below but generally consistent with the intent of the precinct:

- aircraft maintenance (hangarage and washdown areas included);
- aircraft manoeuvring and parking including all apron areas (but excluding runways and taxiways);
- air freight handling and freight forwarding (including cold storage facilities);
- airline/passenger terminals and associated services including:
 - public amenities
 - check in, departure lounges, frequent flyer clubs,



- convenience retail services (e.g. convenience store, pharmacy, post shop, bank, café, bar, phone shop)
- related commercial services such as airline services and car rentals, limousine hire
- telecommunication facility;
- bus station or multi modal transport facility;
- car parking areas and set down areas (for cars, coaches, taxi, car rentals);
- car rental pick-up or drop –off, limo hire, taxi ranks, vehicle storage;
- aircraft related catering services;
- conference facilities;
- control tower;
- fire and rescue services;
- fuel storage/installations and aircraft refuelling;
- government and other community service operations such as Customs, and Medivac services (including CQ Rescue and Royal Flying Doctor Service);
- hotel/convention/corporate accommodation and services;
- general aviation services and associated access/standing areas and ancillary office areas including industry, storage and warehouse uses associated with these activities;
- heliport;
- liquid fuel depot;
- radar and telecommunication facilities;
- service station and/or car wash; and
- telecommunication facility.

5.4 Aerospace and Aviation Support Precinct

Intent

This precinct will provide land for existing and future port related industries and activities that support the primary Airport operations described above. Activities will generally require direct access to the Airport and Passenger Terminal precincts (ie to standing areas, runways, aprons, terminals, baggage areas, etc). These uses are seen as vitally important to the function, commercial viability and safety of the airport.

This precinct will typically include development consistent with general aviation related service and support activities, tourist related aviation, and community and corporate aviation related activities (such as training, air sea rescue, etc), as well as services that directly support these uses.



The precinct may also include those uses important to the transport logistics chain.

The precinct may also accommodate any future relocation of the Control Tower, Fire and Rescue Services and any integrated freight facility.

This range of activities all contribute to the commercial and operational viability of the Airport.

Preferred Uses

The preferred range of activities intended for this precinct is noted below. It may also include those activities not described below but generally consistent with the intent of the precinct:

- aircraft hangarage, parking and maintenance;
- air freight services – freight handling and forwarding;
- aviation related industry, storage and maintenance;
- aviation rescue and fire fighting services (ARFFS);
- aircraft refueling /fuel storage/ fuel installation;
- airline terminal/transport terminal;
- car parking;
- car hire/rental areas;
- aircraft related catering services;
- charter operators;
- commercial premises associated with any of the uses described in this list;
- control tower;
- emergency services facilities including fire and rescue operations;
- flying training/flying schools;
- general aviation (including standing areas and office components);
- ground service equipment (GSE);
- government, medivac and other community service operations (ie. Royal Flying Doctor Service, Customs, CQ Rescue, etc) requiring standing areas for aircraft and/or runway access;
- maintenance facilities particularly those associated with transport and aviation;
- navigational aids;
- quarantine waste disposal;
- telecommunication and radar facilities; and
- warehouse and storage facilities associated with the uses described above.



5.5 Airport Commercial and Industrial Precinct

Intent

This precinct will provide for a range of related and non-related commercial and industrial activities that contribute to the financial and operational viability of the airport. In this way development in the precinct may take advantage of the opportunity to add value to the traditional aviation business activity of the Airport by realising property development opportunities on airport land not required directly (in the short or medium term) for aeronautical purposes. As the airport business grows and expands they can be replaced over time by core airport functions or business.

This precinct will also accommodate a range of activities and development that support the core port operations. Although activities that locate in this precinct are not necessarily primary Airport activities or related to those uses, they are considered essential supporting facilities to the airport operations.

At certain locations development on this land provides a transition or buffer between more intense and core port activities and adjoining less compatible land uses. Uses in this precinct therefore, also provide a 'transitioning' role from more intense, visually intrusive or industrial type activities to other incompatible development (such as residential) on non Strategic Port Land.

It is not intended that this precinct will compete with the Mackay CBD in terms of commercial and retail development. The scale, range and quantum of commercial and related uses will complement the Mackay City centres hierarchy and ultimately support the aviation business.

Preferred Uses

The preferred range of activities intended for this precinct is noted below. It also includes those activities not described below but generally consistent with the intent of the precinct:

- aircraft hangarage, parking and maintenance;
- air freight services – freight handling and forwarding;
- aviation related industry, storage and maintenance;
- car parking;
- car hire/rental areas;
- aircraft related catering services;
- child care;
- commercial premises, serving airport visitors, residents or local businesses (including but not limited to, banking, cafes, takeaway food stores, pharmacies, post office, gift shops, service stations) and/or associated with any of the other uses described in this list;
- conference facilities;
- education, research, defense and electronics businesses;
- hotel, motel, corporate accommodation;
- import/export businesses;



- leisure and recreation (such as a mini golf);
- maintenance facilities particularly those associated with transport and aviation;
- navigational aids;
- professional offices, serviced offices (particularly those with a nexus to the airport or transport and logistics);
- tourism/charter operators; and
- warehouses and light industrial (short term compatible uses only).

5.6 Buffer Precinct

Intent

The Buffer Precinct may have multiple functions and include land with diverse values and development. The buffer precinct may include land:

- with environmental or ecological values;
- subject to inundation or flooding;
- with conservation values;
- having limited development potential as it provides a transition between areas of possible incompatibility.

It is not automatically assumed that no future development occur on all lands within this precinct. Any future activities must be consistent with the values and functions of the specific area and positively contribute to those values or functions, having regard to the land use (current or intended) of adjoining land.

Preferred Uses

The preferred range of activities intended for this precinct is noted below. It also includes those activities not described below but generally consistent with the intent of the precinct:

- uses complementary to the values of the precinct or ecological values of the area;
- open space and conservation areas; and
- board walks and interpretative centres.

5.7 Future Strategic Port Land

The land use plan also provides the Mackay Port Authority with the ability to identify Future Strategic Port Land (FSPL) – this is land considered important to the airport operations because of its strategic location or development potential.



Given the actual timeframe for acquiring land (not already owned by the Port Authority) identified as Future Strategic Port Land is unknown and dependant on a number of external factors outside the control of the Port Authority, it would be the intention of the Port Authority to adopt a policy of acquiring such land on an opportunistic basis.

A number of parcels have been identified in the Master Plan for future strategic value. These are subsequently identified as future Strategic Port Land as follows (and shown on Figure 9):

1. A portion of land in the north east just beyond the current south eastern quadrant which is identified for the possible relocation of the control tower. This land is likely to ultimately fall within the Aerospace and Aviation Support Precinct.
2. Land is also identified for the specific purpose of terminal expansion (particularly to facilitate any future international terminal and passenger operations) in the south western quadrant and is likely to be included in the Passenger Terminal Precinct.
3. Identified as buffer between the terminal (expansion) and nearby incompatible land uses and may also be a possible future location for fuel storage with appropriate buffers. It is currently shown as future buffer but may ultimately be included in the Aerospace and Aviation Support Precinct.
4. Currently shown for future inclusion in Buffer Precinct although it is noted that this land may (in consultation with Council) be used for a range of complementary/supporting aviation/airport related uses. Therefore in the long term this land could potentially fall within the Airport Commercial and Industrial Precinct.
5. This land is an important and strategic location at the intersection of Milton and Boundary Roads so is an important gateway to the Airport Precinct. The site also captures the balance land up to the 10m contour for the OLS. It is proposed to include the Buffer Precinct although some low scale, low impact development may be appropriate over time.
6. This land is identified for buffer in the short term but has potential for airport related/commercial/industrial activities over time. Has good access to the airport and is currently generally separated from other incompatible uses. It provides a buffer or transitional opportunity.
7. Currently accommodates the Public Safety Area over the sporting clubs at the end of the main runway. It is identified as Buffer and development potential on this land is limited if not nil.
8. This land accommodates the area up to 10m OLS contour. It is proposed to include this ultimately in the Buffer Precinct.
9. This area is the protection area around the VOR/DME ground based navigational equipment and is currently owned by the Council. It is proposed as future Strategic Port Land in order to appropriately protect and manage this facility and ensure no adverse development. It is included in the Buffer Precinct. There is some potential for future appropriate development related to the MPA or Airservices operational requirements (for example).



A development application made over land that is identified as future strategic port land and not land MPA holds title to, or directly from the State, will be subject to the Mackay City Council planning scheme where Council will be assessment manager for the application.

Any such application over future strategic port land will follow the normal IDAS process under Chapter 3 of the Integrated Planning Act 1997, where Council will assess and decide the application in accordance with the rules and regulations established under the Act.

Until such time as future strategic port land is under the control of MPA and included in the Land Use Plan as strategic port land, Council will continue to act as assessment manager for any development applications made over future strategic port land.

This Land Use Plan can therefore form a guide to assist Council as part of its consideration and assessment of any future development application made over future strategic port land.

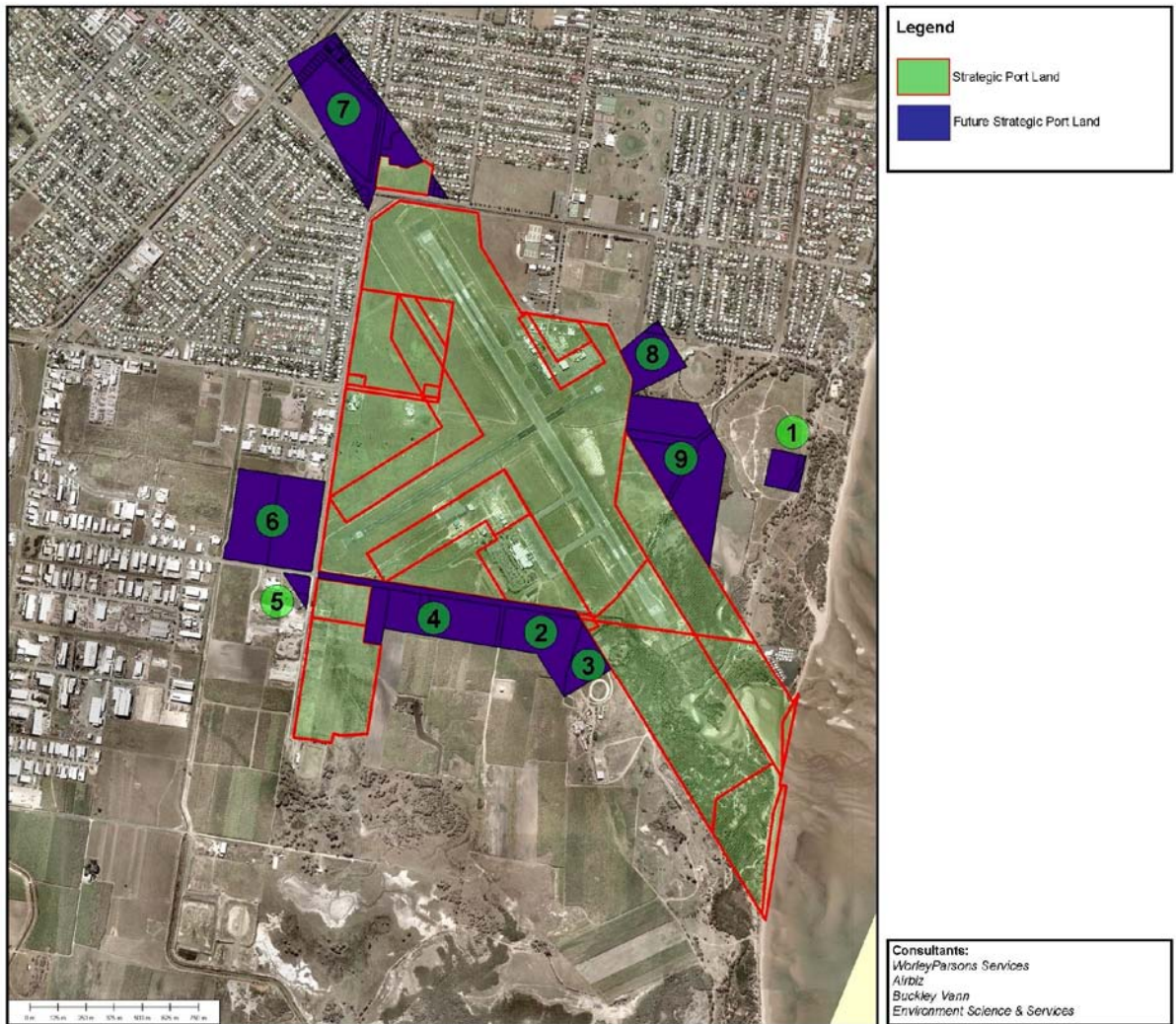


Figure 9: Proposed Future Strategic Port Land



6. SCHEDULE OF STRATEGIC PORT LAND

REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
1	443	CP724222	Runway, Air Traffic Control	Buffer	FH	190252.9
2	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Aviation Precinct	FH	1044273
3	3	CP842090	Control Tower	Airport Commercial and Industrial Precinct	FH	6919.9
4	1	CP842090	Future Met Bureau	Airport Commercial and Industrial Precinct	FH	3634.9
5	1	CP713704	Runway	Aviation Precinct	FH	17637.92
6	381	CP711085	Control Tower & Emergency Services	Airport Commercial and Industrial Precinct	FH	169.44
7	1	RP711078	Future Met Bureau	Aerospace and Aviation Support	FH	3541.11
8	2	CP842090	Future Met Bureau	Aerospace and Aviation Support	FH	46799.15
9	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Aerospace and Aviation Support	FH	116141.9



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
10	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Aerospace and Aviation Support	FH	122519.8
11	381	CP711085	Control Tower & Emergency Services	Aerospace and Aviation Support	FH	1246.96
12	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Airport Commercial and Industrial Precinct	FH	128345.2
13	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Aerospace and Aviation Support	FH	37191.7
14	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Airport Commercial and Industrial Precinct	FH	32009.82
15	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Airport Commercial and Industrial Precinct	FH	83613.89
16	405	CP842088	Runways, Terminal, Carparks, Airport lessees, Air Traffic Control, Undefined	Passenger Terminal Precinct	FH	114585.9
17	443	CP724222	Runway, Air Traffic Control	Passenger Terminal Precinct	FH	1347.33
18	1	RP723311	Runway, Emergency Access	Passenger Terminal Precinct	FH	2376.31



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
19	443	CP724222	Runway, Air Traffic Control	Aviation Precinct	FH	68211.56
20	2	CP842090	Future Met Bureau	Aviation Precinct	FH	19085.63
21	2	CP842090	Future Met Bureau	Airport Commercial and Industrial Precinct	FH	88275.32
22	3	RP723311	Buffer	Buffer	FH	17829.36
23	2	RP723311	Buffer	Buffer	FH	7578.98
24	1	CP723311	Runway, Emergency Access	Buffer	FH	109538.9
25	1	CP723311	Runway, Emergency Access	Buffer	FH	109843.7
26	1	CP723311	Runway, Emergency Access	Aviation Precinct	FH	336055.2
27	447	SP154088		Future Strategic Port Land	RE	1517.59
28	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	Road Reserve	2598.49
29	558	SP154008		Future Strategic Port Land	RE	1724.64
30	557	CI3324		Future Strategic Port Land	RE	20273.29
31	1	RP708186		Future Strategic Port Land	FH	2809.51
32	28	RP728811		Future Strategic Port Land	FH	211.63
33	29	RP728811		Future Strategic Port Land	FH	153.01
34	532	CI3835		Future Strategic Port Land	RE	47551.88



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MACKAY PORT AUTHORITY
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REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
35	9	M91105		Future Strategic Port Land	FH	262.08
36	8	M91105		Future Strategic Port Land	FH	820.19
37	7	M91105		Future Strategic Port Land	FH	821.82
38	6	M91105		Future Strategic Port Land	FH	822.94
39	5	M91105		Future Strategic Port Land	FH	824.37
40	4	M91105		Future Strategic Port Land	FH	836.21
41	3	M91105		Future Strategic Port Land	FH	815.49
42	2	M91105		Future Strategic Port Land	FH	826.4
43	1	M91105		Future Strategic Port Land	FH	833.64
44	1	RP722921		Future Strategic Port Land	FH	40.1
45	1	RP722921		Future Strategic Port Land	FH	275
46	1	GTP70382		Future Strategic Port Land	FH	43
47	2	RP722797		Future Strategic Port Land	FH	1021.45
48	1	RP724801		Future Strategic Port Land	FH	1020.04
49	23	RP811863		Future Strategic Port Land	FH	656.28
50	2	RP723008		Future Strategic Port Land	FH	897.54
51	3	GTP70309		Future Strategic Port Land	FH	203.41
52	0	GTP70309		Future Strategic Port Land	FH	310.42



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MACKAY PORT AUTHORITY
MACKAY AIRPORT
LAND USE PLAN



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
53	3	RP723008		Future Strategic Port Land	FH	909.7
54	2	GTP70309		Future Strategic Port Land	FH	149.47
55	1	GTP70309		Future Strategic Port Land	FH	148.6
56	2	GTP70383		Future Strategic Port Land	FH	230.17
57	0	GTP70399		Future Strategic Port Land	FH	28.33
58	1	GTP70399		Future Strategic Port Land	FH	28.8
59	0	GTP70383		Future Strategic Port Land	FH	126.9
60	1	GTP70383		Future Strategic Port Land	FH	130.95
61	2	GTP70466		Future Strategic Port Land	FH	190.38
62	2	RP749011		Future Strategic Port Land	FH	790.88
63	2	GTP70399		Future Strategic Port Land	FH	301.16
64	0	GTP70466		Future Strategic Port Land	FH	102.82
65	5	RP723008		Future Strategic Port Land	FH	820.21
66	0	RP723008		Future Strategic Port Land	FH	808.11
67	2	GTP70341		Future Strategic Port Land	FH	38.95
68	0	GTP70341		Future Strategic Port Land	FH	0.66
69	7	RP723008		Future Strategic Port Land	FH	807.67
70	8	RP723008		Future Strategic Port Land	FH	794.74



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
71	9	RP723008		Future Strategic Port Land	FH	819.8
72	2	RP732099		Future Strategic Port Land	FH	132.79
73	2	RP730608		Future Strategic Port Land	FH	501.23
74	2	RP716538		Future Strategic Port Land	FH	551.3
75	9	RP716538		Future Strategic Port Land	FH	441.43
76	0	GTP705359		Future Strategic Port Land	FH	69.51
77	1	GTP705359		Future Strategic Port Land	FH	29.8
78	30	RP727939		Future Strategic Port Land	FH	3.68
79	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	FH	1743.29
80	31	RP727939		Future Strategic Port Land	FH	584.85
81	44	RP727005		Future Strategic Port Land	FH	854.77
82	32	RP727939		Future Strategic Port Land	FH	79.62
83	43	RP727005		Future Strategic Port Land	FH	781.81
84	42	RP727005		Future Strategic Port Land	FH	302.07
85	91	CI3330		Future Strategic Port Land	RE	95122.37
86	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	Road Reserve	33725.72



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
87	562	CI3330		Future Strategic Port Land	FH	8534.6
88	114	RP730473		Future Strategic Port Land	FH	69.88
89	115	RP730473		Future Strategic Port Land	FH	229.68
90	116	RP730473		Future Strategic Port Land	FH	388.76
91	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	FH	39
92	117	RP730473		Future Strategic Port Land	FH	682.48
93	1	RP722081		Future Strategic Port Land	FH	1479.83
94	1	RP738783		Future Strategic Port Land	FH	876.68
95	2	RP738783		Future Strategic Port Land	FH	387.82
96	1	RP740144		Future Strategic Port Land	FH	81665.62
97	2	RP747380		Future Strategic Port Land	FH	76492.97
98	1	RP909285		Future Strategic Port Land	FH	7337.09
99	3	RP743546		Future Strategic Port Land	FH	1873.06
100	3	RP858331		Future Strategic Port Land	FH	2434.11
101	1	RP727575		Future Strategic Port Land	FH	20184.55
102	4	RP858331		Future Strategic Port Land	FH	88457.26
103	532	CI3835		Future Strategic Port Land	RE	53159.52



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REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
104	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	Road Reserve	19348.17
105	532	CI3835		Future Strategic Port Land	RE	33781.99
106	Road Reserve	Road Reserve	Road Reserve	Future Strategic Port Land	Road Reserve	37307
107	0	GTP106145		Future Strategic Port Land	FH	114.77
108	2	GTP106145		Future Strategic Port Land	FH	294.11
109	1	GTP106145		Future Strategic Port Land	FH	199.67
110	1	BUP70558		Future Strategic Port Land	FH	142
111	0	BUP70558		Future Strategic Port Land	FH	576.86
112	2	BUP70558		Future Strategic Port Land	FH	142.02
113	0	BUP71245		Future Strategic Port Land	FH	171.21
114	2	BUP71245		Future Strategic Port Land	FH	42.28
115	19	SP145073	Buffer	Buffer	FH	26329.31
116	18	SP145073		Future Strategic Port Land	FH	15879.78
117	17	SP119083		Future Strategic Port Land	FH	7689.15
118	2	RP733682		Future Strategic Port Land	FH	111437.5
119	2	RP837395		Buffer	FH	206125.6



REFERENCE	LOT NUMBER	RP DESCRIPTION	CURRENT USE	PROPOSED USE	TENURE	AREA – M ²
120	3	SP156139		Future Strategic Port Land	FH	106184.7
121	2	RP837395		Airport Commercial and Industrial Precinct	FH	206125.6

NOTES RELATED TO SCHEDULE:

- + This schedule is to be read in conjunction with the Airport Land Use Plan that follows.
- + Uses identified under the 'Proposed Use' column will be approved uses for all intents and purposes under the *Transport Infrastructure Act 1994* (following gazettal).
- + Where there is no 'Current Use' stated, this indicates that the land is not currently owned and/or managed by the Mackay Port Authority.
- + Tenure Legend:

SL – State Land
LL – Lease Hold Land
FH – Free Hold
RE – Reserve
PH – Pastoral Holding

