Archerfield

Brisbane's Metropolitan Airport

Master Plan 2011-2031

PART 1: Context, vision and plans for the future

Archerfield Airport Master Plan 2011-2031

Part 1:
Context, vision and plans for the future

May 2012

Prepared for:

Archerfield Airport Corporation
PO Box 747 ARCHERFIELD QLD 4108
Telephone (07) 3275 8000, Facsimile (07) 3275 8001
email: *aac@archerfieldairport.com.au*

Archerfield Airport Corporation

Prepared by:

Planned F.X. Pty Ltd
126 Valentine Street IVANHOE VIC 3079
Telephone (03) 9497 1120, Facsimile (03) 9497 1137
email: *plannedfx@bigpond.com*

PlannedFX
Planning Environment Strategy Design

Important notice

This Master Plan for Archerfield Airport, Brisbane has been prepared to satisfy the requirements of the *Airports Act 1996* and the regulations made under that Act, and should be read in that context only. The assumptions and forecasts in this Master Plan should not be used or relied upon by any person or entity for any other purpose.

While all care has been taken in the preparation of this Master Plan:

- it is based on a series of forecasts and assumptions and Archerfield Airport Corporation (AAC) makes no claim as to the accuracy or completeness of any of the information or the likelihood of any future matter;
- it should not be relied upon by any other party for any purpose;
- the maps and plans within this Master Plan are indicative only; actual developments and the timing and placement of those developments will be subject to demand, detailed planning and the obtaining of relevant approvals;
- it does not commit AAC to any development described or depicted in the Master Plan; and
- AAC accepts no liability whatsoever to any person who in any way relies on any information in the Master Plan (including making any decision about development or any other activity on or off Archerfield Airport).

Base maps and aerial photography supplied by the State of Queensland under licence

The following notice about the base mapping and photography is provided in accordance with the licence:

"Based on or contains data provided by the State of Queensland (Department of Environment and Resource Management) [2010]. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws."

Limitations statement-Planned F.X. Pty Ltd

The sole purpose of this report and associated services performed by Planned F.X. Pty Ltd is to describe an airport master plan and environment strategy in accordance with the scope of services agreed between Planned F.X. and Archerfield Airport Corporation ('Client').

In preparing this report Planned F.X. has relied upon and presumed accurate information provided by the Client and others identified in this report. Except as stated in this report, Planned F.X. has not attempted to verify the accuracy or completeness of any such information.

The passage of time, manifestation of latent conditions or impacts of future events may require further investigations, analysis and re-evaluation of the findings, observations and conclusions expressed in this report.

This report has been prepared for the exclusive use of the Client and Planned F.X. accepts no liability or responsibility whatsoever for any use or reliance upon this report by a third party.

Contents

Contents

Contents

Contents

Foreword

Thank you for your interest in our planning for the future of Archerfield.

Archerfield is a significant place in the history of international aviation. It is a significant place also in the soul of our nation through its multifaceted role during World War II. Above all it remains the heart of our community.

We are mindful of the responsibility entrusted to us of guiding the restoration and renewal of this precious resource.

This Master Plan outlines a modest pathway to guide Archerfield the next step towards its destiny. The plan represents the earnest endeavours of the Archerfield Airport Corporation team over the past three years to respond to the expectations of a diverse range of involved and interested parties.

The plan has been prepared in consultation with Brisbane City Council, and we thank the many involved representatives of our local authority for their contribution to its development.

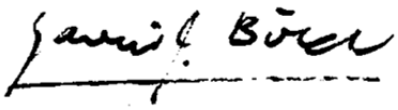
The plan seeks to appropriately embed the future of Archerfield within the South East Queensland region. It complements the SEQ Plan. We are grateful for significant contributions from the Department of Local Government and Planning and other Departments of the Queensland Government, for guiding our discernment in this regard.

The outcome heeds the guidance of those in Canberra who labour in a tense environment to encourage an outcome that is politically acceptable. Theirs is an unenviable task. Under the terms of the 1996 Airports Act, they bear the dual roles of facilitator and regulator, and it would be surprising if sometimes the balance between those roles was not obscured.

And finally, the plan is sensitive to the emotional attachments of those who would will Archerfield forward to a future that is an image of the past. That future cannot be. It is a measure of the affection that so many feel towards Archerfield that they grieve for an earlier time. This document seeks to sensitively acknowledge that sentiment.

The plan that is presented to you is modest in scope. Nonetheless, it is considered in direction and deliberate in substance. It represents the product of earnest endeavour by a range of individuals both within and without the Archerfield Airport Corporation. As well, it represents a considerable capital outlay. I thank the Board for their support of the process that underpins this plan.

I commend the plan to you for your consideration.



Gavin J. Bird AM
Managing Director
Archerfield Airport Corporation
May 2012

Summary

INTRODUCTION

The *Archerfield Airport Master Plan 2011-2031* is the third master plan prepared for Archerfield Airport Queensland by Archerfield Airport Corporation (AAC).

The Master Plan sets the planning framework for the development of the airport over the next 20 years.

It is reviewed on a 5 yearly cycle in accordance with the *Airports Act 1996*. The first plan was in operation from 1999 to 2005. The second plan was approved in 2005.

The location of Archerfield Airport is shown in Figure 1.

PURPOSE OF THE MASTER PLAN

The Master Plan describes the planning framework for development of the airport over the next 20 years.

The Master Plan must address a range of issues specified in the *Airports Act 1996*, and these are summarised in Chapter 1.

It provides the basis for the timely and coordinated development of aviation facilities and infrastructure, aviation and non aviation land use, and for appropriate management of the airport environment.

The Master Plan sets out the key issues facing the airport, concepts or options for addressing these issues, and defines the consultative and decision making processes that will be followed as the airport develops over the coming years.

Key development initiatives, and the catalyst for these, are described in Chapter 15.

This Master Plan should be read in conjunction with the *Archerfield Airport Environment Strategy 2011-2016* which is in Part 2 of this document.

ACHIEVEMENTS 1998-2011

AAC has over the period 1998-2011 implemented a number of projects that were foreshadowed in the first two AMPs.

These include:

- Road network improvements including an extension to Beaufighter Avenue, the redevelopment of Wirraway Avenue, and the creation of the Barton Street link (between Balham Road and Beatty Road, across the north of the airport).
- Relocation of Emergency Management Queensland (EMQ) to a new purpose built facility on Wirraway Avenue.
- Decommissioning of the former EMQ helipad (in the south east part of the Airport) and a second helipad north of the Control Tower. Both were in reasonably close proximity to residential properties on the south side of Mortimer Road.
- Purchase and refurbishment of the historic Airport Terminal building which is now the headquarters for ACC administration.
- Restoration of the former Shell building, and continued support for the conservation works by Friends of God's Acre.
- Overlay of Runway 28L/10R.
- Part reconstruction and overlay of taxiways Alpha, Bravo and Juliet, and aircraft parking areas.
- Overlay of Qantas Avenue, Ditchmen Avenue and Lores Bonney Drive.
- Reconstruction of the airport turbine pad.
- Upgrading of airport security, including additional measures to control access to airside areas.
- Construction of a long term car park.

- Development of major stormwater management infrastructure in the central, south-west and western parts of the airport.
- Upgrading of electricity supply to the airport and development precincts.
- Ongoing grounds and building maintenance including asbestos removal and building/hangar upgrading and regeneration.
- Completion of a heritage study of the airport.
- Development of corporate hangars, adjacent to the main runway and accessible from Wirraway Avenue.
- Development of a new office and warehouse on Beaufighter Avenue.
- Purchase of a number of hangars, and construction of a new hangar complex (site 235).
- Remediation of known contaminated sites.
- Implementation of rainwater collection measures in new developments (QES, corporate hangars and office/warehouse), changes to irrigation practices, upgraded water meters, and installation of water efficient fittings in new developments and refurbishments (including the Airport Terminal) in accordance with a *Water Efficiency Management Plan* (WEMP) prepared in consultation with tenants and Brisbane Water.
- Specification of energy efficient services (air conditioning, lighting, etc) in new and refurbished developments.

Further details are provided in Chapter 2.

AIRPORT CONTEXT

Location

The Airport is located approximately 12 kilometres by car south west of the Brisbane Central Business District (CBD). The site covers approximately 257 hectares, and is generally flat and slopes gently west and south west to Oxley Creek.

History

Archerfield Airport served as Queensland's main airport between 1931 and 1949 and played a strategic role during World War II.

After the war, Eagle Farm dominated aviation activity and resources in the Brisbane Basin, and Archerfield assumed secondary significance.

Lack of investment caused a gradual decline in serviceability, such that by the late 1980s much of the infrastructure had declined towards disrepair. Environmental standards had deteriorated, and commerciality had eroded.

Throughout the 1990's determined efforts were made by the Federal Airports Corporation to restore the airport to viability, but a lack of investment capital hindered those endeavours.

In 1998, Archerfield was privatised.

It now operates as the major general aviation airport in Queensland, and the metropolitan airport for greater Brisbane. More detail on the history and heritage of the site is provided in Chapter 13 of the Master Plan and in Chapter 5 of the Airport Environment Strategy.

Land use

The airport is surrounded to the north, north-west, east and south by mostly industrial and related uses. Some residential areas are located to the south, across Mortimer Road and to the east of the site, near Beaudesert Road.

To the west and south west is the Oxley Creek. This, in conjunction with the nearby Blunder Creek forms part of a regional habitat link and waterway running through the south west urban area of Brisbane, to the Brisbane River. The land use context is shown in Figures 3 and 10.

The Archerfield/Acacia Ridge area is one of the fastest growing industrial areas of Brisbane, and is part of the South West Industrial Gateway which is Brisbane's second most important industrial area (after the Australia TradeCoast).

As identified during the privatisation process, there remains over 75 hectares of undeveloped land on the airport that can be developed for both non-aviation and aviation purposes. There are also opportunities for

the progressive renewal of some of the established parts of the airport, to better meet existing and future needs.

Accessibility

The airport is highly accessible to ground transport. It is close to the Ipswich Motorway (with a full interchange at Granard Road 600 metres to the north, and an on ramp for south-west bound traffic at Boundary Road, which is 500 metres to the west).

Access is also available from Beaudesert Road, which is between 900m and 1.3km to the east of the airport (via Boundary Road, Kerry Road or Mortimer Road).

The regional road system provides arterial linkages north to Brisbane via South East Freeway or Gateway Motorway, south east to the Gold Coast via the Pacific Highway or inland to Sydney via Ipswich.

The airport is also 1.6 km from the main National Rail freight terminal on the Brisbane to Sydney line. The rail terminal is located to the east of the airport, at the end of Kerry Road. The rail line provides freight access linking the Port of Brisbane to Sydney.

The airport is also serviced by a number of bus routes, and is close to the Coopers Plains railway station. The railway is part of the metropolitan network, carrying services north to the Brisbane CBD, and the AirTrain that links Brisbane Airport to the Gold Coast.

THE VISION

Archerfield Airport Corporation strives to nurture the dynamic potential of Archerfield as a superior aviation destination.

Its vision is for the airport to be the focus of general aviation in South East Queensland and a sustainable aviation and enterprise hub, integrated with and serving the growing needs of Brisbane.

Archerfield is Brisbane's metropolitan airport. It will always be the focus of general aviation in Queensland. It will continue to develop as a centre of excellence for aeronautical and related activities, catering for flying training, charter, freight, and emergency services; supported by a range of allied businesses.

The aviation infrastructure will be developed progressively to meet the changing needs of the airport. AAC will continue to work with existing aviation businesses on the airport to encourage their long term sustainability, and will seek to attract new viable aviation businesses, where these are compatible with the vision for Archerfield.

Archerfield will also play a strategic role in the development of the *South West Industrial Gateway* of Brisbane, which has been designated by the Queensland State Government and Brisbane City Council (BCC) as one of the most important industrial areas in South East Queensland.

AAC will seek to build on the strengths of existing enterprises, facilities and infrastructure; and facilitate the development of industrial and appropriate commercial activities on land that is not required for aviation purposes.

AAC will work with BCC and the State Government to identify opportunities to attract and foster business investment that is complementary to the airport, and meets the emerging needs of the community and economy of this part of Brisbane and the designated regional growth corridors which extend to the south and west of the airport.

DEVELOPMENT OBJECTIVES

AAC has set the following overarching objectives for development of the Airport:

- to nurture and maintain airport facilities;
- to establish a complementary balance between aviation and commercial developments;
- to enhance, promote and support the aviation image of the airport;
- to achieve best practice with significant developments;
- to be a good neighbour;
- to complement key objectives identified by State and Local Government authorities;
- to work with government and the local community to achieve the ecologically sustainable development of airport land;
- to attract commercially viable developments to identified aeronautical and non-aeronautical sites;

- to facilitate the regeneration of the South West Industrial Gateway of Brisbane by providing additional land required for industrial developments, compatible with the continued operation and growth of the airport; and
- to advocate for the enhancement of the surrounding road network.

LAND USE ZONES

The five land use zones (referred to as 'Areas' in the Brisbane City Plan) proposed for the airport to the Year 2031 are shown in Figure 17 and discussed in Chapter 12.

The zones are:

- Special Purpose Centre SPC-6 Airport
- General Industry
- Light Industry
- Community Use-CU1 (Gods Acre Cemetery)
- Environmental Protection Area/Conservation.

The land use plan for the airport is consistent with the strategies and policies of Council and the State Government for Brisbane and the wider South East Queensland region.

The land use and zoning provisions follow those in the Brisbane City Plan.

AVIATION, LAND USE AND DEVELOPMENT PRECINCTS

The Master Plan divides the airport into eight precincts as shown in Figure 18 and discussed in Chapter 12.

These precincts are:

- Runway—which comprises all of the land used for runway and primary taxiway purposes.
- Beatty-this comprises land generally fronting Beatty Road, between the easternmost end of Runway 28/10 and Boundary Road.
- Mortimer—which is in the south east corner of the airport and extends to both sides of Beatty Road.
- Beaufighter—including land along Mortimer Road and Lores Bonney Drive, west to Oxley Creek, and north to the main runway complex.
- Wirraway—which is on the north side of the main runway complex and west of the secondary runways.
- Boundary—located along the south side of Boundary Road, between Beaufighter Avenue and the secondary runways;
- Ashover—located along the east side of Ashover Road, and bounded to the north by Balham Road and to the east by the secondary runway complex; and
- Barton-extending along the Barton Street frontage, and south along Beatty Road.

The primary functions and future plans for each of these precincts are discussed in Chapter 12.

AVIATION FACILITIES AND FUTURE NEEDS

Existing facilities

The airport has a multi-runway configuration comprising two parallel runways in two directions. Helicopter operations are facilitated with three helipads (one for EMQ) and separate parking areas. Aircraft parking is currently available for 200 fixed wing aircraft in tie down spaces.

There are 71 hangars on the airport (most being able to accommodate multiple aircraft), 82 other buildings for aviation and non-aviation uses, and over 95 businesses on site employing hundreds of people. These features are shown in Figure 4.

Forecast aviation needs

The Master Plan forecasts that by Year 2031, Archerfield Airport will be catering for between 180,000 and 270,000 aircraft movements per year. More detail on trends, influences and assumptions behind the forecast is provided in Chapter 5.

Aviation projects

The Master Plan identifies a number of projects planned to improve the operation of the airport over the next 20 years.

The Master Plan does not commit AAC to implementing all of these projects, but rather sets out its intentions based on its current understanding of the airport, the aviation and non aviation activities, and the emerging trends that impact on its operation.

Details of these proposals are given in Chapters 7 and 8.

Visual and non visual navigational aids

Over the next few years Global Positioning Systems (GPS) will become a primary navigational aid for light aircraft operations. A GPS approach procedure (RNAV (GNSS)) has been prepared for airport operations. It may also be necessary to install a GPS augmentation system such as a GBAS ground station at the airport.

A GPS approach procedure has been prepared for airport operations in anticipation of this expected technological evolution.

To improve the quality of aviation facilities, consideration will also be given to introducing new technology to assist landing in poor meteorological conditions for the 28R/10L runway.

It would also provide to the flying training industry a more marketable product when promoting the airport as the preferred location to learn to fly.

All existing runway and taxiway lighting facilities are subject to cyclical inspection and will be renewed as required.

Details of these aspects are given in Chapters 6 and 7.

Opportunities to improve the district and regional road network

The State Government is in the process of developing a strategy for progressive improvements to the regional and district road network, to better cater for growth in the region. AAC is participating in this process.

As discussed in Chapter 10, there is also scope to improve the efficient operation of the road network in the vicinity of Archerfield Airport, and these possibilities have been incorporated into the Precinct Structure Plans described in Chapter 12.

The earlier master plans foreshadowed the creation of a new east-west road link between Balham Road and Beatty Road. This has now been implemented and has addressed a significant shortcoming in the district road network.

The Master Plan also identifies a number of existing shortcomings of Beatty Road. AAC is concerned about the capacity of the road to carry existing (and increasing) through traffic, and the safety and efficiency of access to the airport and to other properties along the road.

The solutions include road widening, construction of an appropriate road cross section (with appropriate lane widths, drainage and other infrastructure, to reflect the important role of this road), and upgrading of intersections, to better handle traffic passing the airport.

Where these solutions involve the airport, there is also the opportunity to consider how they could be fairly and reasonably implemented, and the role (if any) that Archerfield Airport could play in this.

AIRPORT PROTECTION

Prescribed airspace

Prescribed airspace at Archerfield is shown in Figure 11—Current Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services—Operations surfaces (PANS-OPS) (OLS/PANS-OPS). The OLS and PANS-OPS for the reconfigured runways is shown in Figure 12.

Chapter 9 describes how AAC will seek to ensure the continued protection of the airport airspace.

Restricted Light Zones

These zones are shown in Figure 13 and have been mapped consistent with CASA guidelines.

Forecast noise impact—ANEF and N70

A Practical Capacity ANEF (Figure 14) has been approved for Archerfield. The ANEF was prepared in conjunction with the review of the Master Plan.

The Practical Capacity ANEF is based on an annual capacity estimate of 425,000 fixed wing and 35,200 helicopter movements. The ANEF takes into account current standards, the projected aircraft movement patterns, and likely aircraft mix.

The ANEF illustrates noise associated with significantly more air traffic than the maximum that is forecast for the 20 year planning period.

AAC has also commissioned the preparation of N70 mapping, which illustrates the distribution of noise levels over 70 dB(A). This mapping (Figure 15) assists with assessing the potential noise effects of aircraft on land around the airport.

More details on the ANEF and the N70 mapping are provided in Chapter 9.

Current and proposed noise management initiatives and procedures adopted by AAC are discussed in the *Airport Environment Strategy* (Part 2 of the Master Plan).

Public Safety Areas

State Planning Policy 1/02 *Development in the vicinity of certain airports and aviation facilities* calls for the identification of public safety areas (PSAs) at the end of the main runways at 13 airports in Queensland including Archerfield.

Within these areas which extend over neighbouring land 1000m from each end of the runway, planning decisions need to take into account the higher risk of aircraft accidents.

The PSAs for Archerfield are shown in the *Master Plan Vision* (Figure 2) and the *Practical Capacity ANEF* (Figure 14).

ENVIRONMENT STRATEGY

AAC recognises the importance of restoring, maintaining and where practical, enhancing the quality of the environment on Archerfield Airport and neighbouring areas.

These matters are addressed in the Airport Environment Strategy (AES).

It sets out AAC's environment policy and management arrangements, describes existing environmental conditions and issues, achievements over the past 12 years, and the plans and priorities.

Under the *Airports Act*, the AES applies to a five year period, and is then reviewed,

On 26 March 2010, the current AES for the period 2010-2015 was approved by the Minister.

Recent changes to the Airports Act require that this AES be reviewed so that it applies to the initial 5 years covered by the Master Plan (2011-2016).

The AES has been revised to synchronise it with the Master Plan cycle. Chapter 13 provides a summary of the AES, which is in Part 2 of this Master Plan.

REALISING THE VISION AND IMPLEMENTING THE MASTER PLAN

The ways in which this vision can be achieved are explored in more detail in the various concepts presented in the Master Plan.

Plans are in place for projects including:

- Lengthening and strengthening of the main runway and taxiways to cater for freight and RPT aircraft
- Realignment of the secondary grass runways to improve usability, provide greater flexibility for access to the main runway complex, and accommodation of future expansions to aviation and related development
- Creation of new aviation opportunities in the Wirraway, Beatty, Barton, and Mortimer precincts; close to existing and proposed improvements to the runway complex
- Provision for widening of Beatty Road, and improvements to access to the airport from other adjacent roads
- Further improvements to stormwater drainage
- Creation of serviced lots suitable for a range of industrial and related purposes in the Boundary, Ashover, Barton, Beatty, Mortimer and Beaufighter precincts.

The success of these ideas will be underpinned by AACs philosophy of pragmatic commercial management, and to sound environmental management.

In conjunction with servicing agencies and relevant development interests on airport and in the district, AAC will develop progressively the infrastructure serving the airport.

This will facilitate the continued successful operation of the aviation and non-aviation aspects of the airport enterprise.

To assist with the implementation process, AAC has established the *Archerfield Airport Community Aviation Consultation Group*, and is formalising the *Planning Coordination Forum*. More details on the role and function of these is provided in Chapter 15.

Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 1 **Airport location**

PlannedFX
Planning Environment Strategy Design

1 Introduction

1.1 ARCHERFIELD AIRPORT

Archerfield Airport is Brisbane's metropolitan airport. It carries the largest number of general aviation movements of all Queensland airports, has the most aviation operators and flying schools in Queensland, and is the base of more than two hundred aircraft.

Today it remains Queensland's largest general aviation airport, and it has a strategic and growing role in the network of aviation facilities serving South East Queensland.

This role is complementary to the activities of Brisbane Airport. Archerfield provides relief for Brisbane Airport from smaller aircraft, and valuable aviation services to the City.

1.2 ARCHERFIELD AIRPORT CORPORATION

Archerfield Airport Corporation (AAC) has operated and managed Archerfield Airport, Brisbane since 19 June 1998.

AAC, as Airport Leasing Company (ALC), is a wholly owned subsidiary of Miengrove Pty Ltd.

For the past decade Miengrove has injected significant capital into the repair, restoration and renewal of the airport.

Today, the airport business is a robust economic entity. It contributes hundreds of thousands of dollars to public coffers through rates paid to BCC and payments in lieu of State land taxes. It also for the first time pays income tax on the modest profit it has begun to generate.

These contributions will continue to rise as more of the available land mass is brought to commercial purpose, and wider use is made of the existing aviation infrastructure.

This will be achieved by encouraging 'best practice' for both aviation and non aviation activities, by progressively improving the aviation facilities, and by the Corporation being pro active in attracting complementary developments, uses and activities to Archerfield.

1.2.1 Objectives

AAC is committed to:

- nurture, and expand the aviation activities of the airport;
- encourage and work with the aviation community to ensure that Archerfield Airport is recognised as an aviation centre of quality and is positioned to experience its share of healthy growth;
- apply appropriate pricing policies for recovery of aviation related costs;
- restore, protect and where possible enhance the airport environment;
- attract quality commercial developments to land that is not required for aviation purposes in the long term, consistent with land use planning for this part of Brisbane; and
- build partnerships with government, industry and the local community to facilitate the realisation of this vision.

These core values underpin the vision for Archerfield Airport, and the actions proposed to implement the features of this Master Plan.

1.3 PURPOSE OF THE MASTER PLAN: A FRAMEWORK FOR THE FUTURE

This Master Plan sets the vision and strategic direction for the development of the airport over the next 20 years (2011-2031), with some elements planned to ultimate capacity.

It provides the basis for the timely and coordinated development of aviation facilities and infrastructure, aviation and non aviation land use, and for appropriate management of the airport environment (in conjunction with the *Airport Environment Strategy 2011-2016*).

It indicates to the public and other stakeholders the intended uses of the airport site, and its relationship to the surrounding area. It seeks to minimise where possible conflicts between uses on the airport site, and between the airport and surrounding land. It also seeks to highlight opportunities for compatible use and development to the mutual benefit of the airport and the wider community.

The Master Plan:

- describes the overall vision and development objectives for the airport
- looks back on the past twelve years, and the emerging factors that are shaping the future of the airport
- sets out the key issues and opportunities facing the airport
- identifies ways for addressing these issues
- describes key development initiatives, and the catalyst for these, and
- defines the consultative and decision making processes that have been, and will continue to be, followed as the airport develops over the coming years.

This is the third master plan prepared by AAC. The first was approved in 1999 and was revised in 2000 to incorporate an updated ANEF. The second master plan was approved in 2005, and addressed the period 2005-2025.

1.4 LEGISLATIVE FRAMEWORK

Commonwealth laws and regulations about land use planning and development controls, environmental management, and building and construction approvals apply to Archerfield Airport.

In summary:

- the *Airport Master Plan* provides a framework for land use and aviation infrastructure development decisions according to a 20 year vision;
- the *Airport Environment Strategy* identifies the environment protection issues that relate to the airport, and actions and procedures that will be followed to ensure that the environment is restored and managed appropriately;
- there are clearly defined roles and responsibilities for AAC and the Airport Building Controller (ABC) to ensure that all development meets relevant standards and is consistent with the long term vision for the airport.
- major developments require additional approval in the form of a *Major Development Plan* (MDP). A MDP is prepared in consultation with the public and other stakeholders and is ultimately assessed by the Minister responsible for the *Airports Act*.

1.4.1 Airport operators and airport regulators

The *Airports Act 1996* establishes the framework for the regulation of leased Federal airports.

The Act provides a system for separating the roles of the airport operator and airport regulator.

In the case of Archerfield Airport, the Commonwealth Department of Infrastructure and Transport (DIT) and the Civil Aviation Safety Authority (CASA) provide the regulator role.

Archerfield Airport Corporation being the Airport Leasing Company (ALC) undertakes the airport operator role. It is primarily responsible for activities that take place on the ground and within airport confines. The principal responsibility for airspace management is currently held by Airservices Australia.

AAC recognises that operational issues at times need to be addressed jointly by AAC and Airservices Australia, and AAC is proactive in identifying relevant aspects and potential solutions as appropriate.

Under the terms of the sale of the *Airports Act* businesses, the Commonwealth became both the landlord with responsibility for facilitation of the businesses

it had transferred to private ownership, and the regulator of those same businesses.

Moreover, the Commonwealth established a common framework for the future operation of those businesses. The framework was designed with sufficient robustness to control the national interest at the major ports of Sydney, Melbourne, Brisbane and Perth. During the sale process, it was projected that a light handed regulatory regime within the framework would apply to lesser economic entities like Tennant Creek, Archerfield, Alice Springs and Parafield.

However, increasing expectation of compliance uniformity has distorted the original intention of those who framed the *Airports Act.* Today, Archerfield is subject to increasing levels of regulatory complexity. Meanwhile, other significant former Commonwealth airports such as Cairns, Sunshine Coast, Mildura and Mackay operate free of the compliance constraints that apply at Archerfield.

AAC would be doing a disservice to the community, and it would be neglecting the responsibility that has been entrusted to it by the Commonwealth, if it failed to draw attention to this matter. The burden of increasing compliance expectations at Archerfield undoubtedly threatens the potential of Archerfield to contribute to Brisbane, and south-east Queensland, and the nation itself.

1.4.2 Scope and content of the Master Plan

Section 71 of the *Airports Act 1996* and *Regulation 5.02* stipulate that an airport master plan must address the following matters:

- AAC's development objectives for Archerfield Airport (Chapters 2, 3, and 12);
- AAC's assessment of the future needs of civil aviation users of the airport, and other users of the airport, for services and facilities relating to the airport (Chapters 2-7, 10 and 11);
- AAC's proposals for land use and related development of the airport site, where the proposal embraces airside, landside, surface access and land planning/zoning aspects (Chapters 2, 7, 10, 11, 12, 13, 14 and 15; and Figures 2, and 16-23);
- an Australian Noise Exposure Forecast (ANEF) for the areas surrounding the airport (Chapter 9 and Figure 14);
- flight paths at the airport (Chapter 6 and Figures 5-9);
- AAC's plans, developed following consultation with the airport industry and local government bodies in the vicinity of the airport, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels (Chapters 9 and 13, and Part 2 (AES);

- AAC's assessment of environmental issues that might reasonably be expected to be associated with the implementation of the master plan (Chapter 13 and Part 2-AES);
- AAC's plans for dealing with any identified environmental issues (Chapter 13 and Part 2- AES);
- if an environmental strategy has been approved—the date of that approval (Chapter 1, 14, 15 and Part 2-AES);
- any other matters (if any) as are specified in the regulations.

The approved Master Plan relates to a planning period of 20 years. It remains in force for five years or until a fresh master plan is approved by the Minister.

1.4.3 Additional approval requirements for major projects

For major projects, the *Airports Act 1996* requires the preparation and approval of a *Major Development Plan* (MDP). The types of projects requiring a MDP include:

- constructing a new runway;
- extending the length of a runway;
- constructing a new passenger terminal building greater than 500 square metres in area;
- extending a passenger terminal, where the extension increases the building's gross floor space by more than 10%; and
- a development that is likely to have significant environmental or ecological impact, including one which affects an area identified as environmentally significant in the *Airport Environment Strategy*.

A MDP is also required for projects that have a value in excess of $20 million (or an alternative prescribed amount) and involve construction of:

- a new building; or
- construction of a new taxiway or extensions to a taxiway, a new road or new vehicular access facility (or extensions), a new railway or new rail handling facility (or extensions), that significantly increase the capacity of the airport to handle movements of passengers, freight or aircraft.

The requirement for a MDP applies also to:

- a development of a kind that is likely to have significant environmental or ecological impact; or
- a development which affects an area identified as environmentally significant in the environment strategy; or
- a development of a kind that is likely to have a significant impact on the local or regional community; or

- a *sensitive development* in relation to which the Minister has given an approval under section 89A.

The *Airports Regulations* (made under the *Airports Act 1996*) can also specify the kinds of development requiring approval via a MDP.

If a MDP is required, it is prepared by the airport leasing company, in consultation with a range of stakeholders and must cover a wide range of matters as set out in the Act. The Minister responsible for the Airports Act makes the final decision on whether to approve a proposed MDP.

1.4.4 Airport Environment Strategy (Part 2 of the Master Plan)

Scope

The *Archerfield Airport Environment Strategy 2011-2016* (AES):

- sets out AAC's objectives for the environmental management of the airport;
- identifies environmentally significant areas within the airport;
- identifies sources of environmental impact associated with airport operations;
- defines studies, reviews and monitoring to be carried out in relation to the environmental impact of the airport;
- sets timeframes for completion of audits and reviews;
- sets out specific measures to be implemented by AAC to address existing or potential impacts, and timeframes for completion of these; and
- provides details of consultation undertaken in preparing the AES.

Contents of current AES

The current AES was approved on the 26th of March 2010 and remains in operation for five years, or until replaced by another approved AES.

With the recent amendments to the *Airports Act*, AAC is now required to synchronise the AES planning period with the first five years of the Master Plan. The approved AES has therefore been updated to this planning cycle, and is included as part 2 to the Master Plan.

The AES comprises:

- a statement of environmental responsibilities that apply to Archerfield Airport;
- a description of the Airport Environmental Management System, including the process by which AAC will implement the AES and related environmental management procedures;
- the AAC corporate environment policy;

- a summary of existing environmental issues, management responses to those issues and an action plan to address them; and
- details of the ongoing consultative processes AAC will adopt in implementing and reviewing the AES.

Principal environmental management issues

The principal environmental management issues at Archerfield Airport are:

- management of new development works to minimise and ameliorate impacts on the environment;
- conservation of any significant flora and habitat values along Oxley Creek;
- protection of storm water and ground water quality from contamination by pollutants from the airport;
- encouraging the efficient use of water and energy;
- ensuring that all chemicals on airport are appropriately handled, used, stored and disposed of;
- containment and management of spills;
- appropriate containment and handling of all asbestos in buildings and plant on airport (as identified in the asbestos audit and register);
- protection of any cultural and heritage values (pre and post contact); and
- ensuring that airport tenants are aware of their environmental obligations and comply with all relevant requirements.

1.4.5 Aviation Transport Security Act 2004 and Aviation Transport Security Regulations 2005

This legislation, administered by DIT, requires AAC to take account of security requirements in its planning processes. A summary of the security measures implemented at Archerfield in recent years is provided later in the Master Plan.

1.4.6 Civil Aviation Safety Regulation (CASR) 139

CASR 139.295 specifies that aviation facilities and obstacle limitation surfaces (OLS) at a certified or registered airport must meet the standards set out in the associated *Manual of Standards Part 139-Aerodromes* (MOS 139).

1.4.7 Other government planning policy requirements and guidelines

Other government policy and planning requirements and guidelines impacting on the preparation of this plan are considered in Chapter 3.

2 The vision for Archerfield Airport

2.1 THE VISION-AN AIRPORT WITH A SUSTAINABLE FUTURE

Archerfield plays a significant role in Queensland. It is Queensland's primary general aviation airport, a major airport in south—east Queensland, and is Brisbane's metropolitan airport.

AAC's corporate mission is to strive to nurture the dynamic potential of Archerfield Airport as a superior aviation destination.

The airport will become a sustainable aviation and enterprise hub, integrated with and serving the growing needs of Brisbane.

2.1.1 A centre of aviation excellence

Archerfield will continue to develop as a centre of excellence for aeronautical and related activities.

It will continue to be the base for significant flying training activity, and for Emergency Management Queensland (EMQ) and other emergency services. It will also serve the needs of charter and freight operations, supported by a range of allied businesses.

The aviation infrastructure will be developed progressively to meet the changing needs of the airport. AAC will continue to work with existing aviation businesses on the airport to encourage their long term sustainability, and will seek to attract new viable aviation businesses, where these are compatible with the vision for Archerfield.

2.1.2 Diverse aviation activity

To attract investment for development, AAC will promote growth and diversification in aviation activity by planning facilities for:

- heavier general aviation aircraft;
- operations under instrument flight rules (IFR);
- RPT; and/or
- specialist air freight activity.

2.1.3 Serving the growing needs of Brisbane and regional Queensland

AAC's vision includes catering for niche Regular Passenger Transport (RPT) service providers seeking to take advantage of the airport's unique position in one of Brisbane's most important industrial and commercial growth centres, its position close to the newly designated western and south western growth corridors, and its proximity to the Brisbane city centre.

These additional activities will require improvements to the aviation infrastructure, including the runways, taxiways, navigation aids, and tenant accommodation.

These improvements can be made progressively, and can be accommodated in a manner which is compatible with the airport's existing range of services.

2.1.4 A place for enterprises to grow

Archerfield will also play a strategic role in the development of the *South West Industrial Gateway* of Brisbane. The Gateway has been designated by the Queensland State Government and Brisbane City Council (BCC) as one of the most important industrial areas in South East Queensland.

AAC will work with BCC and the State Government to identify opportunities to attract and foster new industrial and commercial business investment that is:

- complementary to the airport;
- meets the emerging needs of the community and economy of this part of Brisbane and the designated regional growth corridors which extend to the south and to the west; and
- is consistent with the aviation activities and the use and development of land in the surrounding area.

The promotion and development of new aviation and non-aviation business at Archerfield is necessary to discharge the responsibility entrusted by the Commonwealth to AAC and to underpin growth in aviation and the efficient provision of improved infrastructure at the airport.

It will strengthen the facilities and services that are provided, and the contribution that the airport makes to the community, environment and economy of Brisbane and South East Queensland.

It will also help to harmonise the airport with off-airport development and appropriately integrate the airport with the rest of the south-west gateway to Brisbane.

2.1.5 An environmentally sustainable airport

AAC will also pursue sustainability principles, in the operation and management of the airport, and in new development.

These address:

- protection of the Oxley Creek habitat corridor;
- protection of air quality;
- capturing and reuse of rainwater;
- appropriate management of stormwater to protect downstream areas from excessive peak discharges, and from water quality impacts;
- protection of soil and groundwater from contamination;
- handling and storage of hazardous materials and waste;
- conservation of heritage values;
- efficient use of potable water;
- efficient use of energy by AAC and its tenants; and
- management of noise from land based activities at Archerfield.

These matters are addressed in the AES and in AAC's Environmental Management Procedures (EMPs).

The *Master Plan vision* is illustrated in Figure 2.

2.2 REALISING THE VISION

The Master Plan shows how the current and long term aviation development will be accommodated.

It describes the proposed improvements to aviation infrastructure that AAC has identified in consultation with stakeholders as being desirable to foster sustained aviation activity at Archerfield.

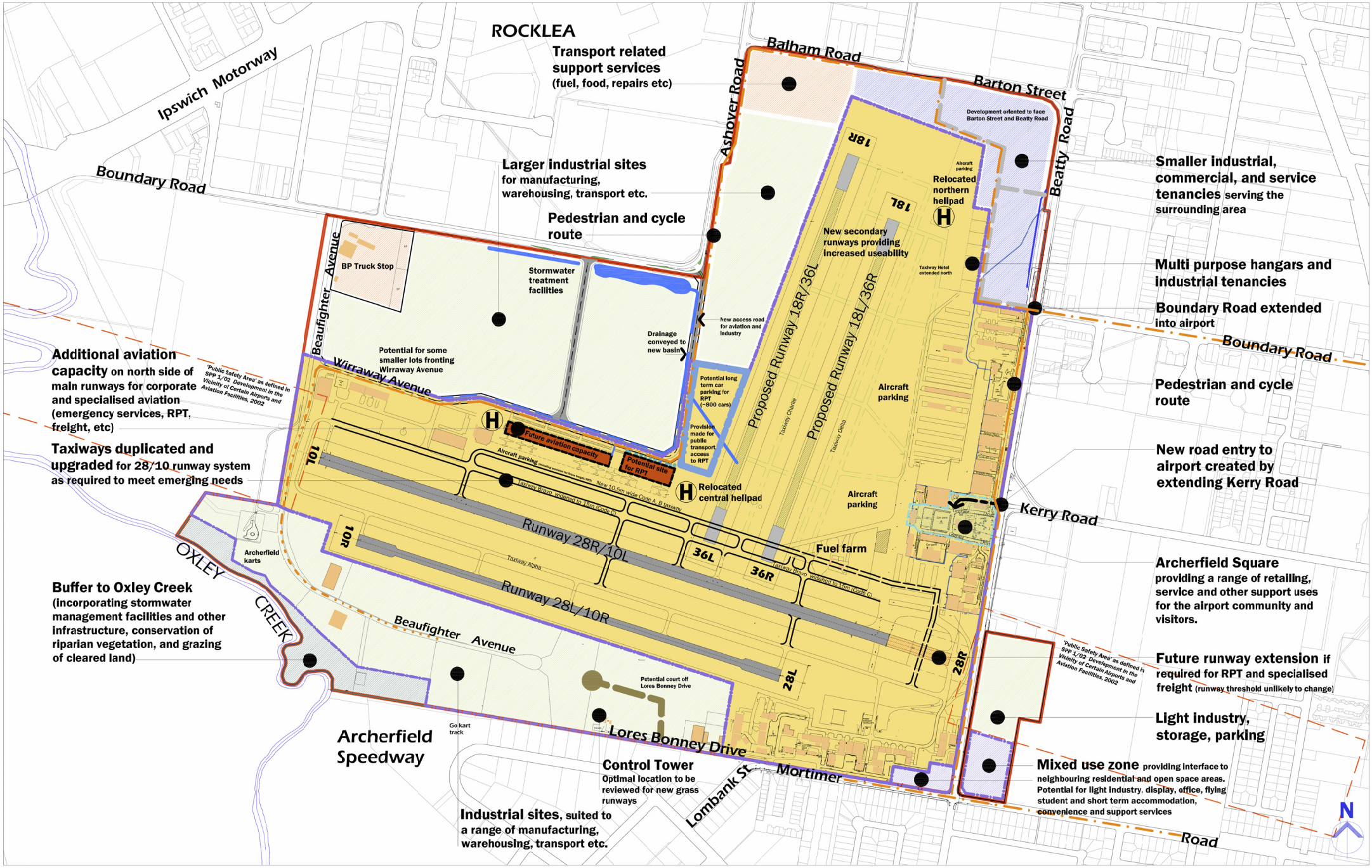
The aviation infrastructure development proposals have been designed to be implemented progressively as the airport develops.

The Master Plan also details the plans for areas that were identified by the Commonwealth prior to privatisation as being available for complementary new business development. It shows how this will be integrated with the other activities (existing and planned) on the site, and land use and development in the surrounding area.

2.2.1 Aviation infrastructure development

Proposed aviation infrastructure development includes:

- strengthening the current main 10L/28R runway to cater for larger aircraft and potential niche RPT operations;
- Increasing the length of the main 10L/28R runway by approximately 160 metres (at the eastern end) and upgrading the associated taxiways, to facilitate larger aircraft;



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 2 **Master Plan vision**

PlannedFX
Planning Environment Strategy Design

- maintaining an option to construct new, longer runway between the existing 10/28 parallel runways, potentially crossing Beaufighter Avenue;
- reorientating the secondary grass parallel runways to improve overall runway usability, particularly for flying training;
- augmenting the taxiway system to maximise runway capacity and efficient ground movement of aircraft;
- strengthening and expanding apron facilities to cater for increased aircraft numbers, and potentially heavier aircraft;
- relocating facilities such as the fuel farm and control tower, if, because of their locations, they constrain future aviation development or their relocation would improve airport operations;
- upgrading visual and navigation aids to provide an improved flying training environment;
- consolidating helicopter activity so as to improve safety by separating rotary from fixed wing operations;
- identifying and reserving terminal and apron facilities for potential niche RPT operations;
- making new, improved bases available to tenants currently occupying ageing premises, to facilitate future growth and expansion of their businesses;
- replacing or rejuvenating ageing premises.

2.2.2 New business development

AAC will seek to attract new business to the airport that will complement the existing aviation uses on the site and be compatible with State and Brisbane City Council (BCC) planning for the Archerfield area.

Potential new uses that could take advantage of the airport's unique location and facilities include:

- manufacturing industries (specialised fabrication and engineering, servicing and repair, refinishing, etc.);
- industries associated with waste reduction, materials recycling, crushing and pulverising services;
- research and development (equipment testing, prototype development and evaluation etc.);
- transport and logistics enterprises (distribution centres, container services, bulk handling, warehousing, fleet management, servicing etc.);
- education and training for aeronautical and transport related sectors (flying schools, vehicle driver training and assessment, etc.);

- retailing of the type currently conducted in the vicinity of the airport, and retail outlets that serve the growing needs of the airport community;
- recreation and leisure, including aeronautical, entertainment and other land based recreation activities;
- office and administration uses; and
- accommodation for flying training students, tourism and visitor support services.

The Master Plan identifies a range of opportunities for the expansion of existing businesses, and the introduction of new business to the airport.

2.2.3 Implementation strategies

AAC will undertake the proposed developments in response to demand triggers and/or timeframes described in Chapter 15.

AAC will be pro active in attracting complementary developments, uses and activities to Archerfield to strengthen the viability of the airport in the short to medium term, and secure its long term success.

In conjunction with servicing agencies and relevant development interests on airport and in the district, AAC will develop progressively the infrastructure serving the airport. This will facilitate the continued successful operation of all aspects of the airport enterprise.

The planning and timely delivery of the required infrastructure will involve a commitment from a variety of organisations, including Brisbane City Council and the State Government. AAC will work with these agencies to realise the vision.

All initiatives will be underpinned by AAC's philosophy of pragmatic commercial management.

2.3 OVERVIEW OF ACHIEVEMENTS 1998-2011

Over the period 1998-2011, AAC has implemented significant projects foreshadowed in the successive airport master plans.

These initiatives have contributed to the realisation of AAC's vision for the airport. Key achievements over the planning period include:

Table 1: Summary of achievements 1998-2011

Activity	Date
Aviation infrastructure	
Repairs and reseal of Taxiways Alpha 1-9, Alpha to Bravo, and Bravo 2 to 5	2001
Repair and reseal to shoulders of Taxiway Alpha 1-5	2002
Repairs to Apron Hotel tie down area.	2004
Reprofiling and resurfacing of Runway 28L/10R with a high quality hot bitumen cement seal, and overlay of Taxiways Alpha 1 to 5.	2005

Activity	Date
Reconstruction of the airport turbine pad.	
A triple interceptor has been installed to treat water from the aircraft washdown bay. The washdown bay has been signed to encourage its use.	2002
The second wash down bay (at the eastern end of Taxiway Bravo) is no longer in use. Signage has been removed and pilots are advised to use the alternative, central facility.	2002
Repairs to northern taxiways and Taxiway Juliet.	2006
Installation of new security fencing, automated gates and CCTV around the perimeter of the airside area.	2007
Reconstruction of Taxiway Juliet.	2008
Reseal of 28R run up bay.	2008
Repair and reseal of Taxiway Echo, Taxiway Alpha 7 and the engine test pad.	2009
Reconstruction of apron drainage near Hangar 113.	2010
Construction of a new stormwater drain running along taxiway hotel adjacent to the terminal building	2011
Complementary development	
Construction of a new hangar and headquarters for EMQ (previously known as QES) on Wirraway Avenue.	2003
Development of new corporate hangars on Wirraway Avenue	2006
Construction of Site 235 hangar complex.	2006
Development of a new warehouse and office on Beaufighter Avenue by AAC.	2008
Repair and seal Access A at the 500 sites.	2008
Purchase and refurbishment by AAC of the neglected historic Airport Terminal building, which is now the headquarters for AAC, reinstating it once again as a key feature of the airport.	2009
Environmental management system	
Preparation of new airport *Environmental Management Procedures* (EMPs).	2003
Flora and fauna	
Fire Ant control has been undertaken by helicopter and motorcycle broadcasting.	2001 onwards
Creation of a 'Greenspace-Environmental Protection' zone in the south west part of the airport, adjacent to Oxley Creek to provide a permanent buffer.	2009
Ground water	
The annual groundwater monitoring program by AAC has continued, with progressive updating and enhancement of the sampling wells, and ongoing review of findings.	Ongoing
Hazardous materials and waste management	
AAC has maintained since 2003 an up to date register of asbestos in AAC buildings on the airport. Buildings have been added to the register as they come into AAC ownership.	2003 onwards
A management plan and risk assessment was added to the asbestos register.	2006
AAC has included in its tenant inspections consideration of materials storage, handling, waste management, and disposal.	Ongoing
Heritage	
AAC has supported the restoration works by Friends of God's Acre Inc, including with donation of funds and provision of maintenance services over the past 12 years.	1998 onwards
AAC restored the Shell building	2001
The *Cultural heritage assessment and management plan* for the airport was	2001

Activity	Date
completed.	
AAC purchased and refurbished the neglected Airport Terminal building and relocated its administration offices to the upper floors of the building	2009
Infrastructure	
Electricity supply has been upgraded to better cater for existing users, and new projects on the airport.	
Noise	
The former QES (now EMQ) helipad and the second helipad previously located in the central part of the Beaufighter precinct (near the Control Tower) were decommissioned. The new helipad is located near Wirraway Avenue, which is at least 1.2km away from the nearest residential properties in Mortimer Road and more than 1.4 km from the nearest house to the south-west (on the other side of the Oxley Creek/Blunder Creek valley). One of the former helipads was 150 m from the nearest house.	2003
Noise emissions from tenancies on airport are managed in accordance with the EMPs and any site environmental management plan in place for their operation.	Ongoing
Roads and car parking	
Wirraway and Beaufighter Avenues were reconstructed and extended.	2000
Barton Street was created, linking Beatty Road to Balham Road across the north of the airport. The land was gifted by AAC to BCC with the agreement of the Commonwealth.	2007
The long-term carpark was constructed	2007
Qantas Avenue, Ditchmen Avenue and Lores Bonney Drive were resurfaced.	2008-9
Street lights installed on Lores Bonney Drive, Beaufighter Avenue and Wirraway Avenue	2008
Soil contamination	
The underground storage tanks at the Shell Building were decommissioned and the site remediated. These works followed on from the closure and remediation of the former Airport Rescue and Fire Training Area (1994) and the former battery recycling site (1997).	1998
Underground fuel tanks at the BP truckstop have been replaced and remediation undertaken by BP (with ongoing monitoring in place)	2006
Surface water management	
The former open drainage line through the Beaufighter, Boundary, Runway and Beatty precincts (which was subject to significant scouring) has been piped, and silt traps and dissipation structures installed to moderate peak flows and manage water quality prior to discharge to Oxley Creek.	2001
A significant new stormwater detention basin has been constructed in the Beaufighter precinct, treating stormwater prior to its discharge to the Oxley Creek.	2001
A sedimentation basin was incorporated in the Queensland Recycling facility on Beaufighter Avenue to treat runoff from the stockpile areas prior to discharge to the main drainage system on airport. Water is recycled for dust suppression and irrigation purposes.	2001
The open drain running north-west from the Runway precinct, under the 04/22 runways to Boundary Road has been upgraded with the piping of the section near the runways, and the creation of a detention basin in the Boundary precinct. This modulates peak flows entering the drainage system through Rocklea, which ultimately discharges to Oxley Creek approximately 2 km downstream of the airport.	2008
Stormwater tanks have been provided for the new corporate hangars and	2007-8

Activity	Date
EMQ premises on Wirraway Avenue, and the new warehouse constructed by AAC on Beaufighter Avenue to retain stormwater for use on site, and assist with reducing peak discharge volumes to Oxley Creek.	
Small rock landscaping has been introduced to localised sections of open drains showing evidence of minor soil erosion.	Ongoing
Surface water quality monitoring in open drains and at drain outlets has been undertaken on an annual basis.	Ongoing
Sustainable use of natural resources and energy	
The airport has secured a number of businesses that recycle materials and equipment for reuse in construction and manufacturing. These include Veolia Environmental Services, and Queensland Recycling, which has operated successfully a major concrete recycling operation in the Beaufighter/Mortimer Precinct. These operations promote the reuse of resources, and reduce the energy required to produce these raw materials.	1998 onwards
Rainwater tanks have been installed by AAC for the new corporate hangar development and EMQ premises on Wirraway Avenue, and the warehouse and office on Beaufighter Avenue.	2007-8
Runways have been irrigated from stormwater detained on site, rather than potable water from the metropolitan water supply.	2008
Efficient water fittings have been installed in AAC buildings, including the refurbished Airport Terminal.	2008
Water meters have been upgraded to improve monitoring of consumption.	2008
AAC developed a *Water Efficiency Management Plan* (WEMP) in accordance with Queensland Water Commission requirements, in consultation with tenants and Brisbane Water. Efficiency measures are being implemented progressively.	2008
AAC has implemented energy efficient air conditioning, lighting, and specified low VOC paint and sustainable floor coverings for its refurbishment of the Airport Terminal.	2009

3 Regional context

This chapter describes the strategic context of the airport; and the factors that influence its role and function as part of the national aviation network, and a significant land use and transport hub in South East Queensland.

3.1 AIRPORT LOCATION

The airport is located close to the heart of Brisbane, and is approximately 12 kilometres by car south-west of the Brisbane Central Business District (CBD).

It is in one of the larger, mainly industrial areas of Brisbane, at the south—west gateway to the City.

The location of Archerfield in a regional context is shown in Figure 1 *Airport location*. The airport and its surroundings are shown in Figure 3 *Airport context*. Surrounding land use is shown in Figure 10 *Airport land use context*.

3.2 ROLE AND FUNCTION RELATIVE TO OTHER SOUTH EAST QUEENSLAND AIRPORTS

The airfields within approximately 100 km of Archerfield Airport are shown in Figure 1 *Airport location*.

Archerfield is a strategic resource of irreplaceable value to South East Queensland.

As a reliever of the congestion of incompatible aircraft types at Brisbane, and to a lesser extent at Gold Coast and Sunshine Coast airports, it plays a vital role in the integrated operation of aviation within the region.

Experience shows that Archerfield rarely receives aircraft originally destined for Brisbane, Gold Coast or Sunshine Coast airports, and when it does, the craft are not larger than a 20 seat commuter plane.

As Brisbane's metropolitan airport, Archerfield ensures that small aircraft traffic is kept out of Brisbane Airport. This complementary role allows Brisbane Airport to utilise to maximum efficiency its airspace for larger aircraft involved in domestic and international travel.

Should other facilities close or reduce their light aircraft activity then Archerfield would be able to absorb the relocation of complementary operations.

Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 3 **Airport context**

PlannedFX
Planning Environment Strategy Design

3.2.1 Brisbane Airport

Brisbane Airport is the main airport for the region. It is located on the north—eastern side of Brisbane, and is 13 kilometres by road from the Brisbane Central Business District.

The airport operates as a hub for interstate, intrastate and international airline routes. The airport is a significant gateway to South East Queensland and is also a major business centre, consistent with its vision as being both a 'city airport' and an 'airport city'. It is also the Australian base for Virgin Airlines.

Archerfield is vital to the efficient operation of Brisbane Airport and is an essential component to the Brisbane aviation basin. This complementary role allows Brisbane Airport to cater for larger aircraft involved in domestic and international travel and freight.

3.2.2 Gold Coast Airport

This airport is located at Coolangatta on the Gold Coast, approximately 80 kilometres south of Archerfield. It caters for domestic services and some international passenger and commuter services.

3.2.3 Sunshine Coast Airport

Sunshine Coast Airport is located near Maroochydore some 107 kilometres north of Archerfield. It carries significant commuter traffic between Brisbane Airport and the Sunshine Coast providing connections to domestic trunk services and to a lesser extent international services.

The majority of air traffic is general aviation and thus the airport is a serious competitor to Archerfield.

3.2.4 RAAF Base Amberley

Amberley is a Commonwealth Defence facility that is in the vicinity of Archerfield.

3.2.5 Small airports to the north and north-west of Archerfield

Small airports servicing general aviation activity are located at Redcliffe, Watts Bridge, Caboolture and Caloundra.

Redcliffe, Caboolture and Caloundra airports are owned and operated by their local councils. Watts Bridge is privately owned and operated and its focus is on recreational and sports aviation.

3.2.6 Small airports to the west and south-west of Archerfield

Toowoomba and Warwick airports and Boonah airfield are also council owned and operated. They service general aviation activity.

3.3 STRATEGIC INFLUENCES

The current and future form, role and operation of Archerfield Airport are shaped by:

- The overall objective of the airport providing a key aviation service as part of the network of metropolitan airports across Australia;
- State policies for aviation; road, sea and air transport; the development of communities in Queensland; and for land use and development (in SEQ in particular);
- Regional and local planning policies, strategies and controls;
- Market conditions, in aviation, and in land use and development;
- The history of land and airside use of the airport, and the occupation/leases/tenancies;
- The site conditions, opportunities and constraints;
- Any constraints arising from surrounding land use, or environmental conditions;
- Changes arising from the environment, including the influence of climate change on the site and the airport operation; and
- Market opportunities, including emerging possibilities for growth in various aviation services, and development of new enterprises that will contribute to Archerfield being a strategically significant airport with a sustainable future.

The following describes the relevant provisions of state, regional and local planning policies and strategies, and highlights the implications these have for the airport now and into the future.

3.4 QUEENSLAND STATE GOVERNMENT

3.4.1 Aviation strategy

Queensland Government has adopted a statewide aviation strategy, which is expressed in the following plans:

- Queensland Tourism and Commercial Aviation Plan;
- Queensland Aerospace Industry Development Plan; and
- Queensland Airports and Regulated Air Transport Plan.

The '*Queensland Airports and Regulated Air Transport Plan'* (December 2002); *State Planning Policy 1/02 'Development in the Vicinity of Certain Airports and Aviation Facilities'* (May 2002); and the associated guidelines (June 2002) are of particular relevance to this Master Plan for Archerfield.

The *Queensland Airports and Regulated Air Transport Plan* describes the following vision for aviation in Queensland:

> *This plan envisages an air transport system that is responsive to the market, has the capability of competing effectively, is supported by appropriate planning and is able to serve the social, economic and access needs of communities in Queensland.*

The plan includes the following objectives:

Support for rural and remote air services

To ensure the provision of air services to meet accessibility and mobility needs of rural and remote transport- disadvantaged communities in Queensland.

Support for rural and remote airports

To facilitate the provision of sustainable and cost effective air transport infrastructure to meet basic access and regional development needs in rural and remote communities.

Planning for air transport facilities

To influence regional and local planning around significant airports and aviation facilities.

Stakeholder involvement

To enhance the contribution of key stakeholders in the delivery of our air transport requirements.

From the master planning perspective the second, third and fourth objectives are most relevant, and these also tie in to *State Planning Policy 1/02*.

3.4.2 State Planning Policy 1/02 Development in the vicinity of certain airports and aviation facilities

The State Planning Policy seeks to protect airports and aviation facilities. The policy states:

> *Queensland Transport's aviation interests lie in the planning and management of development within the vicinity of State significant airports and aviation facilities to ensure:*
>
> - *The protection of airports from incompatible uses or works that may adversely affect their long term safety and operational efficiency;*
> - *The protection of the amenity of communities in the vicinity of airports by promoting uses and works compatible with predicted long term noise levels; and*
> - *The uses and works proposed near the ends of runways are compatible with public safety.*

Archerfield airport is one of the airports of State significance identified in SPP 1/02.

The policy applies to land in the vicinity of the airport and in particular

- the operational airspace;
- land in the vicinity of the aviation facilities that are located on and off airport;
- within the area defined by the 20 ANEF; and
- within public safety areas defined at the ends of each main runway.

The policy does not however apply to the airport itself, or to aviation facilities.

The policy is applied in relation to:

- assessment of development applications;
- making or amending of planning schemes; and
- designation of land for community infrastructure.

The policy seeks to ensure that planning strategies for land around airports protect airport efficiency and viability, avoid limitations to aircraft operations, protect development (and occupiers) from adverse effects of airport operations, and protect public safety.

The policy requires that planning schemes have regard to the approved ANEF for each airport. It encourages (at section 3.19 in the guidelines published with the policy) the use of a practical capacity ANEF as it better depicts potential effects and therefore allows for better planning decisions to be made in relation to the land-use around the airport. The policy says that the planning scheme can set higher standards than set out in SPP 1/02 as this will provide for better protection of the airport.

The State Minister for Planning and Local Government needs to be satisfied that planning scheme changes and development approval decisions reflect this policy.

Further discussion regarding SPP 1/02 can be found in section 14.6.1.

3.4.3 Toward Q2: Tomorrow's Queensland

The Queensland Government has set out a long-term vision for communities across Queensland. It sees these communities as being:

- strong through a diverse economy powered by bright ideas;
- green, protecting lifestyle and the environment;
- smart, through world-class education and training;
- healthy (with the objective that Queenslanders are Australia's healthiest people); and
- fair (supporting safe and caring communities).

Relevant aspects of the State planning agenda are reflected in the regional plan for South-East Queensland.

3.4.4 South East Queensland Regional Plan 2009-2031

From a regional perspective the *'South East Queensland Regional Plan (2009-2031)'* (SEQRP) provides the principles and priority actions to protect and enhance the region's environmental, social and economic assets.

SEQRP is the Queensland Government's plan to manage growth and protect the region's lifestyle and environment. It has been prepared in consultation with the Commonwealth, and Local Governments in the region (including Brisbane City Council).

The vision for the region is a future that is sustainable, affordable, prosperous, liveable and resilient to climate change.

The plan provides the framework for managing growth, land use and development in the region. It responds to issues such as continued high population growth, traffic congestion, climate change and employment generation. The plan balances population growth with the need to protect the lifestyle that residents of South East Queensland value and enjoy.

The first regional plan for south-east Queensland (for the period 2005-26) was in draft form when the current airport master plan (for the period 2005-2025) was prepared. During 2008-09 the Queensland Government undertook a review of the *SEQ Regional Plan 2005-26* to respond to growth management issues that had emerged since its release. The updated plan is now in operation.

From the perspective of Archerfield Airport, the regional plan includes important guidance on such matters as the preferred location of urban growth in the SEQ region, planning for efficient freight services, and coordinated air and sea transport.

Growth corridors

Urban development will be confined within a defined footprint which will contain urban growth and promote a higher density urban form.

The regional plan identifies the need to cater for 156,000 additional dwellings in the Brisbane City Council area by the year 2031.

The majority of this additional growth will be focused on regional activity centres outside the Brisbane CBD, however the plan also identifies opportunities for additional infill development.

Outside the Brisbane Council area the plan identifies two major growth corridors being the Western Corridor and the South Western Corridor.

The Western Corridor extends from Goodna (which is less than 10 km to the south west of Archerfield) to Grandchester (approximately 30 km beyond Ipswich).

In this corridor approximately 118,000 new dwellings will be required by the year 2031, with the Ipswich CBD strategically located to function as the principal administrative, cultural and community centre. The growth area will be supported by employment at Springfield, Ripley, Ebenezer-Willowbank, Swanbank, New Chum, Bundamba, Wulkuraka industrial area, Carole Park, the RAAF Base Amberley, and the Amberley aerospace and defence support centre.

The South Western Corridor is located to the south of Archerfield Airport in Logan City. It is between the existing urban area of Logan and the southern boundary of Logan City. This growth corridor is adjacent to existing urban services, the Mount Lindesay Highway and the Brisbane to Sydney rail corridor. It is expected to cater for regionally significant levels of residential and employment growth, in a series of communities linked by a subregional public transport network and roads to Greater Logan, Brisbane, the Gold Coast and Ipswich. The plan estimates that 70,000 additional dwellings will be required by 2031.

These corridors will make use of significant areas of available land and reduce development pressure on the coast. New development in these areas is expected to incorporate significant new employment precincts.

Archerfield Airport is well placed to accommodate the aviation requirements for these growing areas, and the transport and other business needs that will be generated.

Employment

The plan seeks (in part 9.1) a diversified regional economy that retains local jobs and builds on regional and subregional competitive advantages and specialisations.

It also seeks to provide sufficient land for business and industry to enable diversified, broad-based, future economic and employment growth across the region (part 9.3).

The plan includes the following policies that are relevant to Archerfield (and the surrounding employment area):

- protect sites and areas suitable for enterprise location from incompatible development;
- protect and ensure the long-term security of transport terminals (including ports), other utilities and special uses; and
- encourage the relocation of large-scale industrial, warehousing, transport and storage businesses from inner suburbs to release these sites for higher and better use.

The supporting discussion highlights the importance of strategically located land in areas with good motorway, regional arterial, airport or rail access. This is a description that fits comfortably with Archerfield Airport and the surrounding employment precinct. It says that this land should be secured for

business and industry serving the wider region, or importing and exporting goods and services outside South-East Queensland.

The plan identifies the Archerfield/Acacia Ridge/Rocklea employment area as the *South West Industrial Gateway*, which is one of four 'enterprise opportunity areas' in the City of Brisbane.

Infrastructure

Supporting infrastructure will be developed progressively, in accordance with the *South-East Queensland Infrastructure Plan and Program* (SEQIPP).

There are plans for further upgrading of the Ipswich motorway (which passes Archerfield), and providing additional capacity for the Ipswich railway line.

The State (through the Department of Transport and Main Roads) is also investigating the feasibility of developing additional rail capacity between Salisbury and Wooloowin that would enable significant improvements to south east Queensland's regional rail network.

Known as the Cross River Rail project, the current scope includes:

- a new north–south rail line in Brisbane's inner city including a tunnel under the Brisbane River connecting to the existing southern rail network south of Fairfield and to the existing northern rail network via the Exhibition loop;
- additional above ground tracks and infrastructure to allow for increased frequency of passenger and freight movements;
- new underground inner city train stations in lower Albert Street, Roma Street Station, Woolloongabba and the Boggo Road Urban Village precinct; and
- a possible upgrade to the surface Exhibition Station.

An Environmental Impact Statement is being prepared and is expected to be released for formal public comment in 2011.

The project has the potential to enhance rail access to the South West Industrial Gateway.

Transport and freight

The plan seeks to enhance South East Queensland's position as the major national and international freight logistics centre servicing the Australian east coast.

It recognises that freight movements across Queensland are forecast to double by the year 2020 and that there will be rapid growth in South East Queensland with expanding import and export activities in the Australia TradeCoast area (including Brisbane Airport and Port of Brisbane). It notes that the ability to easily move freight into and around South East Queensland will be essential for economic growth.

The rail freight initiatives (in part 12.5 of the plan) include expanding the capacity of the Acacia Ridge rail terminal, and increasing rail capacity through the metropolitan network to the Port of Brisbane. The Acacia Ridge rail terminal is approximately 1.6 km to the east of Archerfield Airport.

The initiatives for coordinated air and sea transport in part 12.6 of the plan seek to provide efficient air and sea transport to service both freight and passenger needs in South-East Queensland.

The policies that underpin it include:

- supporting development of regional airports as significant economic and social links for regional communities;
- providing transport infrastructure to support the primary role of regional air and sea ports; and
- protecting and enhancing the freight routes to the Australia TradeCoast.

The plan recognises the important role that airports play in the economic and social fabric of South-East Queensland, and that increasingly the airports are a focus for a range of employment and land use activities.

3.4.5 Consistency with the State plans and policies

The Queensland Government is committed to the continued operation and growth of Archerfield Airport. It has identified the airport as being of State significance and recognises that it is an important part of the aviation/transport infrastructure of South East Queensland.

The State Planning Policy 1/02 encourages a cooperative approach between airport operators, all levels of government and other relevant stakeholders. It recognises the need to balance airport activities with surrounding land use, taking into account both local safety and amenity issues, and the safety and operational requirements of the airport operator.

Principles underpinning the State agenda include:

- Brisbane City Council is expected to consult with Archerfield Airport Corporation, airline operators, adjacent local authorities, other government agencies and the community when considering planning scheme provisions for land adjacent to Archerfield.
- Any strategic plans, planning schemes or amendments relating to land around Archerfield should provide for adequate control over land use and development. These should take into account issues such as height control and noise so that the present and future operational requirements of the airport and the safety and amenity of the community are not compromised.
- Council is expected to safeguard through its strategic planning, sites for future aeronautical facilities based on an assessment of future needs and roles.

- Council is expected to provide for aviation-related industries and services to locate on land adjoining aerodromes. In the case of Archerfield, past planning initiatives by Council have ensured that there are many opportunities for industry and related activities to establish around the airport. As was foreshadowed by the Commonwealth and the FAC prior to privatisation, the industrially zoned land in the Acacia Ridge/Rocklea/ Archerfield industrial precinct is now largely developed (or otherwise committed), and the opportunity has emerged for non-aeronautical land on the airport to be developed for these complementary purposes.
- Brisbane City Council and neighbouring councils are also expected to take into account Archerfield's operational requirements, including obstacle clearances, safety, protection from light emissions, and provision of appropriate buffers from noise when considering planning applications (for rezoning, land use, development or subdivision).
- Local authorities are encouraged to use by-laws, or ordinances to ensure that any adverse effects of aerodrome operations on adjacent residents or other sensitive uses are minimised.

The Master Plan is consistent with the State and regional planning framework.

The Master Plan:

- provides for the sustainable future of the airport as a base for aviation, with an emphasis on flying training, charter, emergency services, Regular Passenger Transport and related aviation activities; supported by a range of complementary land uses;
- will add essential economic stimulus to the airport business;
- provides a framework for the timely and efficient development of airport infrastructure, yet retains the flexibility to respond to future developments in aviation that will emerge in the volatile marketplace over the 20 year planning horizon;
- promotes an integrated approach to airside and non-airside land use planning;
- includes information about the operational requirements and effects of the airport, including details concerning airspace protection, public safety areas and anti-aircraft noise management, to assist Council with the responsible management of surrounding land use;
- has full regard to conservation of the natural and built environment; and protection of soil, air and water quality (in conjunction with the AES);
- facilitates environmental awareness by all who conduct business on the airport (through the AES and related procedures);
- will ensure environmental accountability for actions on site, through the Environmental Management Procedures, Environmental Management Plans and regular reviews and reporting to the Commonwealth Government.

This Master Plan identifies the planned airside facility requirements for Archerfield. It confirms that there is no immediate requirement to expand the aeronautical facilities beyond the current airport boundaries. It also clarifies the planned long term role and function of Archerfield as a major general aviation airport in a state and national context, and a significant hub for transport, industrial and related commercial enterprises serving the south east region of Queensland.

AAC is committed to maintaining a good working relationship with the Queensland Government, to ensure that there is a full appreciation of all relevant issues, and a coordinated approach is taken on matters of common interest.

Archerfield Airport will continue to work cooperatively with State Government in applying the latest relevant Queensland State Planning Policy on planning for aerodromes and other aeronautical facilities, and associated guidelines, where these are generally consistent with the principles and concepts underpinning the Master Plan.

3.5 BRISBANE CITY PLAN AND LOCAL PLANS

The Brisbane City Plan provides a performance based planning scheme for the City.

City Plan was prepared under the Queensland *Integrated Planning Act 1997* (IPA). The IPA has now been superseded by the *Sustainable Planning Act 2009*.

3.5.1 Structure of the City Plan

The City Plan has four main parts which are summarised below.

The Strategic Plan

This states the vision for the City and broad policy, and sets the parameters for general development policy.

It includes *Brisbane the Livable City*, which underpins the Council's corporate programs; *Citywide Desired Environmental Outcomes*, balancing ecological sustainability components; and *Elements of the City*, which describe the desired overall land use structure to the year 2011.

Elements include Brisbane green space system, residential neighbourhoods, industrial locations, centres, movement system, native title, and heritage.

The Plan is particularly relevant to the assessment of development that may result in major or cumulative impacts, especially development that the City Plan has not anticipated.

The Plan is supported by a series of planning scheme policies, which provide guidance for assessment of development against the Area provisions, Local Plans and applicable codes.

Area provisions (or zones)

These provide the statutory means to achieve the vision for the City, through zones and standards.

The Area (or zoning) provisions define *Desired Environmental Outcomes* (DEOs) for each zone; and identify exempt, self-assessable and assessable development;

Local Plans

Local (or Neighbourhood) Plans provide a local vision for an area. These plans refine the scheme provisions for an area. They identify and address local issues and detail the desired character for the area.

Local Plans are implemented by incorporating the statutory provisions of the Local Plan into the City Plan. Where Local Plan actions relate to Council responsibilities, the Local Plan also provides an important input to the annual business planning process undertaken by Council.

Development Codes

Development Codes apply to self assessable, code assessable and impact assessable development. The City Plan includes codes for a wide range of matters.

Those of relevance to Archerfield include acid sulphate soils; biodiversity; community use; energy efficiency; heritage place; industrial amenity and performance; industrial design; landscaping; light nuisance; service station; services, works and infrastructure; stormwater management; structure planning; subdivision; telecommunications tower; transport, access, parking and servicing; waterway; and wetland

3.5.2 Implications for Archerfield

For the avoidance of any confusion or doubt, it is important that all parties understand that the Commonwealth has the power and responsibility for all planning decisions on the site.

These decisions are guided by the Master Plan, which includes a framework for land use and development. The land use and development aspects of the Master Plan have regard to the City Plan, as well as other State, regional and Local provisions.

Key aspects of the City Plan of relevance to the Master Plan are summarised below.

Land use

The majority of the airport is designated a '*Special Purpose Centre-SP6 Airport Area'*.

This zoning recognises that the airport is a special mix of activities and development which does not conform to a single land use classification (such as 'industrial' or 'business'). Placing this zone on the airport gives flexibility for the airport to develop and evolve as its business and operational needs change.

The section of the airport at the southern end of Beatty Road (north-east of the corner of Beatty Road and Mortimer Road) is designated *'Light Industry'*, and allows for industry and related uses that are compatible with the industrial land along the east side of Beatty Road, the neighbouring residential area on the south side of Mortimer Road (adjacent to the south-east corner of the airport), and the public open space to the east.

The land to the south-west of the airport, that forms the wedge between Oxley Creek and Blunder Creek, is part of a rural area that extends south from the Brisbane River, widening towards the southern outskirts of the urban area of Brisbane.

All other land abutting the airport is designated for industrial purposes, consistent with its current use. The surrounding land use zoning is shown in Figure 10 *Airport land use context*.

The Brisbane City Plan identifies the Brisbane-Ipswich corridor and the Australia TradeCoast as the two major industrial areas for Brisbane. The Brisbane-Ipswich corridor extends to the south west of the City and includes Archerfield, Acacia Ridge and the developing areas of Wacol and Darra.

Multi purpose centres (which include retailing, office, community facilities and other compatible activities) in the Acacia Ridge/Archerfield areas include:

- the Elizabeth Street Shopping Centre (at the intersection with Beaudesert Road, approximately 2 km from the airport)
- the Acacia Market Place Shopping Centre (on the east side of Beaudesert Road, approximately 1.2 km from the airport).

There is also a recently developed bulky goods complex 1km west of the airport on Ipswich Road. This includes Harvey Norman, WOW sight and sound, Plush, R.T. Edwards, The Good Guys and other similar retail outlets.

Local, smaller convenience centres in proximity to the airport include the shops on the south-west corner of Mortimer and Beaudesert Roads, the corner of Granard and Beatty Roads and at Boundary Road, Coopers Plains (at the railway station).

There are no convenience or multi purpose retail facilities within walking distance of most of the airport.

Transport

The City Plan includes a road hierarchy. The road network serving Archerfield is categorised as follows:

The *Motorway* designation applies to Ipswich Road, to the north west of the airport, Logan Motorway (further afield to the south) and South East Freeway (to the north east of the airport).

Ipswich Motorway, Granard/Riawena Road and the Gateway Motorway are National Highways under the management of the Queensland Department of Transport and Main Roads (DTMR) and provide a strategic link to the Port of Brisbane. Their strategic importance to south-east Queensland is also highlighted in the *South East Queensland Regional Plan 2009-2031*.

The *Main arterial routes* (carrying 20,000+ vehicles per day) in the vicinity of the airport are:

- Ipswich Road, north of its intersection with Granard Road;
- Granard/Riewena Road;
- Beaudesert Road;
- Boundary Road, east of Beaudesert Road;
- Learoyd Road.

Suburban routes, which constitute a lower order of road to the arterial routes, and carry 10,000 to 20,000 vehicles per day, include:

- Boundary Road, between Beatty Road and Beaudesert Road;
- Mortimer Road, between Beatty and Beaudesert Roads;
- Beatty Road.

District Access Routes, which carry district traffic of 10,000 or less vehicles per day, include Kerry Road, Boundary Road (west of the airport) and Ashover Road.

Council is pursuing an integrated approach to transport, including addressing road network requirements, provision of improved public transport (including public transport interchanges), increasing the proportion of cycling and pedestrian trips (by encouraging the provision of bikeways and pedestrian ways linked to centres and public transport), and management of car parking.

Many of these aspects are reflected in the Acacia Ridge/Archerfield Neighbourhood Plan which is discussed later.

Heritage

The City Plan encourages the conservation of heritage places and heritage precincts to retain their significance for the benefit of present and future communities.

Council has a citywide heritage register, and a Heritage Place Code that is used in the assessment of any development proposal affecting heritage places. It has identified the airport terminal building, God's Acre Cemetery, and hangars.

The Commonwealth retains jurisdiction to decide heritage matters on airports. This has been done to facilitate the regeneration of airport infrastructure. Under this system, God's Acre Cemetery and the Airport Administration Building/Terminal are identified as places of historic significance.

Environment

The City Plan identifies a network of waterway corridors and wetlands.

The principal elements of relevance to the Master Plan are the main diagonal drainage system that runs south-east to north-west through the middle of the airport, and the Oxley Creek open space system that abuts the airport to the south west.

AAC recognises that the Oxley/Blunder Creek system is a regionally important open space and fauna habitat and has included in the Master Plan an open space buffer on airport land adjacent to the creek. The boundaries of the buffer area have been determined in consultation with the Commonwealth departments of Infrastructure and Transport (DIT); and Sustainability, Environment, Water, Population and Communities (DSEWPC) during the preparation of the 2010 version of the Airport Environment Strategy.

The land has been designated as an 'open space buffer' in Figure 2 *Master Plan vision*, and zoned *Greenspace-Environmental Protection* in Figure 17 *Airport land use zoning*. The cleared land in the buffer area will continue to be used for grazing. The area will also continue to accommodate important stormwater management works including a major detention basin. This will provide an appropriate long term interface between airport activities and the Oxley Creek open space corridor.

Dangerous light zones

The City Plan maps include dangerous light zones that apply to the areas around the airport, on the alignment of the main runways.

It is understood that these zones are consistent with the restricted light zones shown in Figure 18.

AAC supports the inclusion of these provisions in the City Plan and will continue to work with BCC to ensure that these requirements are implemented.

3.5.3 Airports planning scheme policy

BCC has included in the City Plan an 'airports' policy to:

- *maintain an acceptable environmental impact on the community from aviation activities*
- *ensure the safety and efficiency of aviation operations in and around Brisbane.*

The policy requires that development in the vicinity of Archerfield Airport be consistent with *State Planning Policy 2/92—Planning for Aerodromes and other Aeronautical Facilities* (now replaced by *State Planning Policy 1/02*

Development in the Vicinity of Certain Airports and Aviation Facilities, May 2002).

The policy recognises that building height and lighting are required to be compliant with the *Airports (Protection of Airspace)* and refers to the most recent approved Airport Master Plan for determining the limitations on building height and lighting.

Noise attenuation measures are required to be provided in new developments where a site is within a noise exposure contour of 20 ANEF or greater in accordance with *AS2021 Acoustics—Aircraft Intrusion—Building Siting and Construction*.

The policy defers to the most recent approved Australian Noise Exposure Forecast (ANEF) for the airport for the purpose of determining the limitations of aircraft noise on land use and buildings. The current ANEF for Archerfield is shown in Figure 14.

3.5.4 Acacia Ridge/Archerfield Neighbourhood Plan

Brisbane City Council has just undertaken a review of the Neighbourhood Plan for Acacia Ridge/Archerfield.

The introduction to the July 2010 version of the Neighbourhood Plan describes the area as being:

> *....comprised of a number of distinctive established areas of industrial uses and residential communities. The industrial uses include a variety of manufacturing, transport, light aircraft and commercial airport operations and technical and trades training employment opportunities of regional significance. Established residential areas consist of households with a strong emphasis on affordable homes, accessible parks and a strong community character.*

The plan describes the airport as:

> *Archerfield Airport provides a focus for light aircraft and commercial aircraft activities, (including but not limited to private and commercial flights, pilot training and aircraft servicing).*

The plan acknowledges the ongoing operation of Archerfield Airport and related aviation activities and services.

The intent of the plan is to:

- *support the continuing significance of this employment and transport hub within the region and*
- *improve housing choice and diversity in well located and serviced locations.*

The provisions relevant to the airport are summarised below.

Industry

With respect to industry, the plan notes that this area supports a major industrial and freight transport node of citywide and regional significance that provides a broad range of industrial and transport employment.

It supports future industrial development that supports the function of the airport and has a nexus with the surrounding industrial/transport services corridor.

The plan acknowledges the need to provide appropriate buffers between industrial and more sensitive uses (such as residential).

This is of particular relevance to the south-east corner of the airport, where there are existing houses on Mortimer Road, opposite the airport industrial areas and the vacant airport land that is on the north east corner of Mortimer Road and Beatty Road.

Activity centres

The plan highlights two suburban activity centres near the airport. These are:

- a convenience centre on the east side of Beaudesert Road between Kerry Road and Mortimer Road (approximately 1.2 km from the airport); and
- the higher order centre developed around the intersection of Elizabeth Street and Beaudesert Road, approximately 2 km to the south-east of the airport.

There are no activity centres shown in the areas immediately adjacent to the airport, including the employment areas to the north (to Granard Road) or to the north-west and west (to Ipswich Road).

Given the distance separating the airport from these centres, and the plans for growth in employment and visitors to the airport (and to the surrounding employment areas), there may be scope for some small scale retail facilities on the airport to cater for day to day needs of the airport, and the adjacent employment and residential areas.

Pedestrian and cycle network

A network of pedestrian and cycle routes has been developed to facilitate access to retail and commercial services, public transport, education and recreation facilities. The main routes are along Ipswich Road, Granard Road, and Beaudesert Road.

The Neighbourhood Plan identifies Boundary Road and Mortimer Road as 'local desirable cycle routes'. It indicates that Beatty Road provides for localised north-south access off the western ends of Boundary and Mortimer roads. It does not however show Beatty Road as a north-south pedestrian/cycle corridor.

Road network

The Neighbourhood Plan highlights that Ipswich Road, Granard Road, and Beaudesert Road serve as primary freight routes.

Boundary Road (east of the airport), Mortimer Road, Beatty Road, Barton Street, Ashover Road and Boundary Road (west of the airport) are all

important secondary freight routes, as identified in the *Transport Plan for Brisbane 2008-2026*.

Beatty Road has been designated as a strategic north-south link, joining Granard Road (north of the airport) to Sherbrooke Road (south of the airport) and then to Learoyd Road.

This designation recognises the exponential growth of traffic on Beatty Road throughout the past two decades.

Oxley Creek

The Neighbourhood Plan highlights the importance of Oxley Creek as a regional open space and habitat corridor.

This is addressed in the designation in the Master Plan (and the AES) of a buffer zone along Oxley Creek, the stormwater management measures that have been implemented by AAC in recent years, and the ongoing environmental management initiatives that are included in the AES and EMPs.

Mortimer Road Park

This substantial open space is located on Mortimer Road and next to the south-east corner of the airport.

The Neighbourhood Plan says that the park will continue to develop as a district recreational facility. The Plan includes measures to manage vehicle access to the park, and provide appropriate interfaces to surrounding land.

3.6 STRATEGIC STRENGTHS OF ARCHERFIELD AIRPORT

Aviation

- Archerfield is soundly positioned as the stable airport hub for flying training, aircraft charter, light aircraft, emergency services, specialised freight, and privately operated aircraft in South East Queensland;
- the range of aviation uses at Archerfield complement those at Brisbane Airport;
- the scale and quality of airside facilities provide the flexibility to accommodate a range of flying activities;
- it has long established airport protection measures in place to ensure that the operation is not constrained by surrounding land use or development (including measures to maintain obstacle clearances, protect the airport from adverse light impacts, and clearly indicate potential noise impacts);
- the metropolitan location minimises the distance that Brisbane based pilots (and trainees) have to travel to get access to high quality aviation facilities;

- there are a number of opportunities to develop accommodation for trainee pilots on the airport site, further strengthening the attractiveness of the airport to interstate and overseas students;
- Griffith University is linked both traditionally and by proximity. Undergraduate and postgraduate aviation courses, like the Bachelor of Aviation, are offered at the nearby Nathan campus;
- its proximity to the Brisbane CBD hospitals and other facilities, and excellent road access makes it an attractive base for emergency services;
- it is the home of established aviation businesses and organisations which all contribute to the richness of the airport community;
- Archerfield is one of three assembly bases for Cirrus aircraft worldwide. It supports the full range of the Cirrus aircraft family. The introduction of the Cirrus Very Light Jet is timetabled for 2011/12;
- the airport has unique characteristics that make it an appropriate base for niche RPT services which may not require access to, or may not be welcomed at, the major airports in the region. It is in a convenient location close to the Brisbane CBD, and to the substantial existing enterprises in the South West Industrial Gateway;
- it is on the 'inboard' side of the Western and South Western growth corridors of Brisbane, which will accommodate the planned growth of Brisbane over the next 20 or more years. It is positioned to service the air transport needs of a growing residential population, as well as the transport and business needs of the range of enterprises that are being sought in these areas; and
- AAC is committed to fostering continued growth in sustainable aviation activity at Archerfield, and to attracting compatible activities that will underpin this.

Sustainability

- The potential environmental impacts of the airport are well managed, in accordance with the AES;
- The airport is addressing sustainability aspects in new development, and in its own projects involving refurbishment and reuse of historic buildings;
- The airport can be accessed by public transport, and BCC has in place plans to further improve this through enhancement of the cycling and pedestrian network throughout the Acacia Ridge/Archerfield area, and links to Coopers Plains railway station, which in turn connects to greater Brisbane; and
- The airport is close to significant open space areas, including the Oxley Creek corridor (to the south) and the main district scale open space on Mortimer Road, that serves the Archerfield area.

4 Economic significance

4.1 ECONOMIC IMPORTANCE AND POTENTIAL OF ARCHERFIELD AIRPORT

Archerfield is a strategic aviation airport serving Greater Brisbane.

It serves as the base for private flying, a number of pilot training schools, charter flight companies, Emergency Management Queensland, Royal Queensland Aero Club, Cirrus Aircraft Australasia, and a range of supporting businesses.

The airport is a significant transport infrastructure asset for Brisbane and South East Queensland. It provides economic benefits to the state and regional economy.

The airport has an important role as a transport hub that facilitates regional and remote development.

Analysis underwritten by the Brisbane City Council in 2001 revealed an estimated 668 people employed in firms operating at the airport and flow-on employment of more than 900 people.

The survey estimated that the Archerfield Airport contributed a minimum of $192 million to the Brisbane region economy (in 2001). This was comprised of $110 million in direct effects of production from industries located at Archerfield Airport and $82 million in indirect or flow-on figures.

4.1.1 Airport enterprises

The airport currently accommodates approximately 95 businesses employing hundreds of people.

The flying training activities cater for both domestic and international flying students.

The international flying students are estimated to contribute approximately $3.5Mper annum in export earnings for the state, and for Australia.

There are also many external businesses that provide services to the enterprises based on the airport, and to the people working or visiting Archerfield.

4.1.2 South West Industrial Gateway

In conjunction with the preparation of this Master Plan, BCC has undertaken an analysis of the role of Archerfield as part of this strategic industrial area of Brisbane.

The analysis has found that the airport is a key asset to the South West Industrial Gateway. It complements the freight connections at the Acacia Ridge rail freight terminal (which are to be upgraded) and the expected growth of industrial activity in this part of Brisbane.

The Gateway area overall is considered by BCC to be a strategically important area for future industry serving the needs of Brisbane and the region. Further industrial development in the Gateway is also seen as being complementary to the economic performance of Australia TradeCoast.

The strategic role of the airport as part of this industrial area is assessed by BCC as being complimentary to the planned expansion of flying training and passenger services at Archerfield.

BCC has advised that the airport is well placed to cater for freight and short haul business travel services that would be attractive to existing enterprises in the Acacia Ridge/Archerfield/Rocklea area, and investors looking for strategic industrial locations in Brisbane.

The airport therefore has the potential to contribute to Brisbane's long-term economic growth and development by increasing the attractiveness of the City to domestic and overseas companies looking to invest in Brisbane.

5 Aviation activity and forecasts

5.1 AVIATION ACTIVITY AT ARCHERFIELD

Archerfield caters for all types of general aviation fixed and rotary wing aircraft operations including:

- flying training;
- charter, for passengers and freight;
- aerial work;
- private and business flying;
- recreational and sports aviation; and
- emergency services flying.

Flying activity is supported by a range of established on-airport businesses which provide:

- fuel supply services;
- aircraft maintenance (civil, emergency services, and military);
- non destructive testing and shot peening;
- hangarage;
- warehousing;
- aircraft, components and materials sales;
- aircraft painting and refurbishment;
- communications;
- insurance services;
- fixed base operator services;
- accommodation for clubs and organisations;
- office based services; and
- food and other supporting retailing.

5.2 AIRCRAFT MOVEMENTS

Aircraft movements have been adopted throughout the western world as one of a number of yardsticks to indicate the "busyness" of aviation facilities when the usual criterion of passenger numbers can't readily be applied.

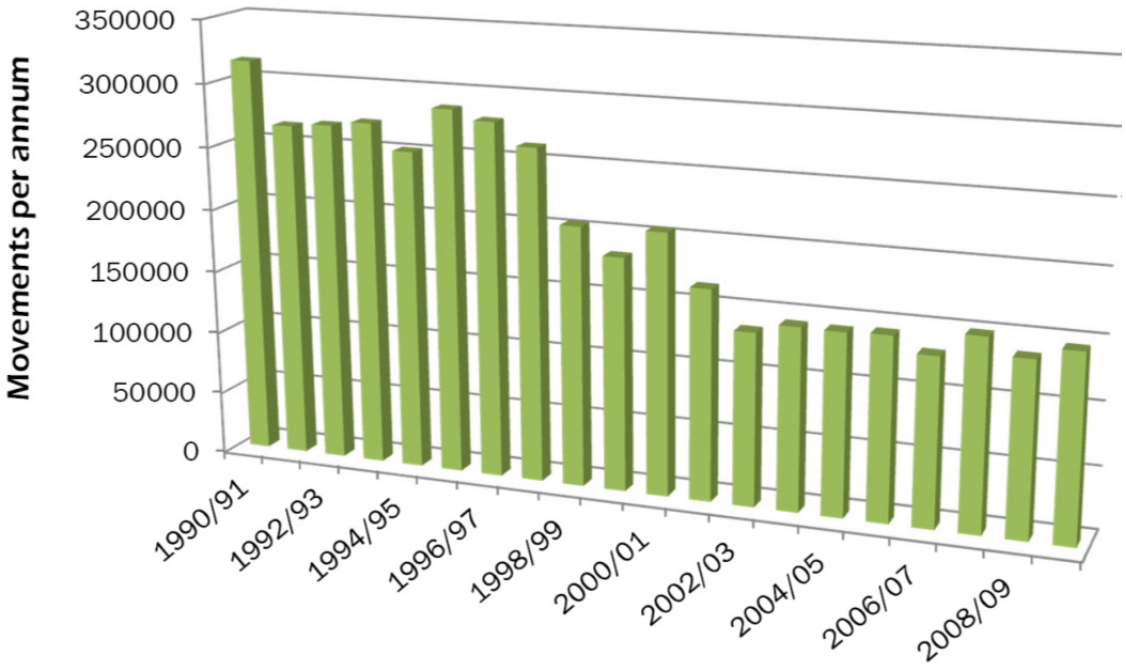
Aircraft movement figures alone are fairly limited in their usefulness for airport master planning. Aggregated annual figures do not show changes in the composition of the aircraft fleet over the years, or changes in the type or purposes of flights. Indeed, until the introduction of Location Specific Pricing for full stop landings at Archerfield in 1998, there was no need or incentive to verify any of the data.

An independent analysis of official movement figures after the advent of Location Specific Pricing found that they consistently exceeded recorded movements by significant margins, so comparisons of pre-privatisation and post privatisation figures need to be conducted with circumspection.

At the time of privatisation (19th June, 1998), there were 226 aircraft recorded on the field. In September 2010 there were 240, so with that in mind as a moderator, there is still value to be gleaned from the records that are available.

Airport records show that in the late 1980's through to 1991 the annual aircraft movements at Archerfield peaked at over 300,000.

The annual rate fluctuated between 250,000 and 300,000 flights per annum during the 1990s, and has ranged between 133,000 and 151,000 over the period 2002 to 2010.



Annual 24 hour aircraft movements, 1990-2010

The graph above shows total movements for each year over the past 20 years.

In 2002, AAC started recording aircraft movements on a 24 hour basis. Prior to then, movement data was only collected during tower hours.

To assist with comparing the data, the 1991-2001 tower counts have been adjusted by adding 10.4% to produce the estimated 24-hour count for each year over the period 1990 to 2002. This percentage increase is the average difference between 24 hour movements and the tower records since 2002.

Factors that have impacted on flight numbers have included:

- the Asian economic crisis in 1997;
- Airservices Australia (AsA) pricing policy. The introduction of a Location Specific Charging Regime coincided with privatisation. The practical effects of this decision have escaped scrutiny.

  The current AsA charge for Tower services at Archerfield Airport ($12.69 per tonne) is more than double the AsA charge for Tower services at Brisbane Airport ($5.83 per tonne). In comparison, Archerfield Airport Corporation charges, for the use of the runways and taxiways, are considerably less than those charged for comparable aircraft at Brisbane Airport. However, the imbalance of the AsA Tower charges completely negates this advantage. AsA is reviewing its policy. Among the options under consideration is that of a basin charge;
- airport privatisation in 1998, and the necessity to recover costs for services provided;
- the Mobil Avtur fuel contamination event in early 2000 resulting in the grounding of 1000's of piston engine aircraft across eastern Australia;
- the emergence of terrorism and related security concerns in the aviation industry following the September 2001 attacks on the USA World Trade Centre buildings and the Pentagon;
- the increasing use of simulators for pilot training;
- the quite remarkable growth of an interconnected network of low cost carrier services throughout the nation;
- volatility in the value of the Australian dollar (which has impacted on the attractiveness of Australia as a location for training of overseas pilots); and
- changes in the types of aircraft flying at Archerfield.

Since the 2005 Master Plan was approved, the unpredictability of annual flight numbers has continued.

There was initially growth in general aviation, particularly flying training, in response to the worldwide shortage of pilots. The gradual increases observed were followed by a decline in flights in 2008/09 which coincided with the severe global economic downturn.

Table 2: Aircraft movements

	Tower	AAC

Year	Aircraft	Helicopter	Other	Hours	24 hour
1990/91	248,997	36,694	136	285,827	315,553
1991/92	217,394	23,943	52	241,389	266,493
1992/93	213,404	29,842	567	243,813	269,170
1993/94	231,172	15,553	657	247,382	273,110
1994/95	217,249	10,652	1,399	229,300	253,147
1995/96	241,585	18,778	805	261,168	288,329
1996/97	233,080	20,702	712	254,494	280,961
1997/98	218,862	18,862	1,044	238,768	263,600
1998/99	159,615	26,355	682	186,652	206,064
1999/00	147,682	19,566	336	167,584	185,013
2000/01	176,928	9,960	840	187,728	207,252
2001/02	147,360	3,358	724	151,442	167,192
2002/03	126,348	3,376	548	130,272	137,276
2003/04	119,660	2,748	552	122,960	144,942
2004/05	140,888	3,528		128,777	144,416
2005/06	141,548	4,060		127,403	145,608
2006/07	127,976	5,640		119,465	133,616
2007/08	147,018	4,687		135,502	151,705
2008/09	134,991	3,490		119276	138,481
2009/10	142,718	5,062		125,137	147,780

NOTE: The 'AAC 24 hour movements' for the period 1991-2001 (shaded light green) are estimated and are provided for illustrative purposes only. The 'tower hours' figures shaded blue are from AAC records.

The flight numbers have strengthened over the past year. Overall, the flight numbers in 2009/10 were about 2100 (or 1.5%) greater than for 2005/06.

Helicopter movements have averaged around 3% of total movements over the past 10 years, with an annual low of 1.9% and a high of 4.6% in that period. In the previous 10 years the movements were higher, averaging 8.3% of the total movements.

The global economic conditions prevailing since late 2008 affected aviation worldwide. It constricted discretionary spending, particularly on travel and leisure activities.

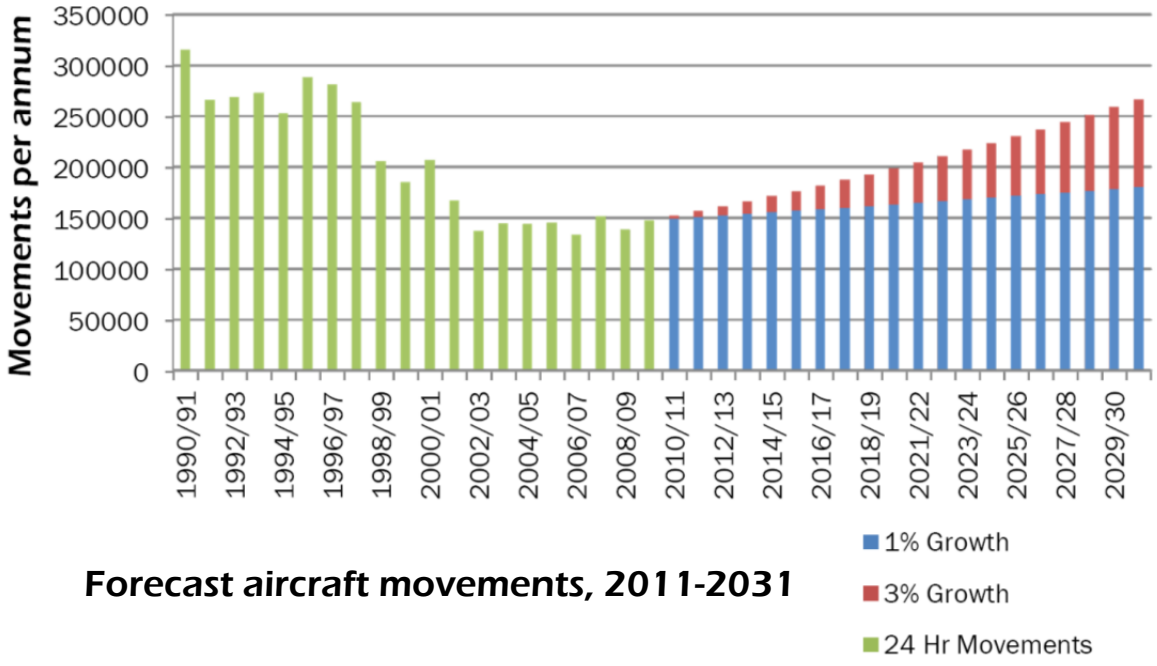
The reduced availability of capital has also had significant impacts on business investment, for both existing and new enterprises. It has constrained investment in aviation, and for non-aviation developments.

5.3 FORECAST AIRCRAFT MOVEMENTS

The significant variation in flight numbers over the past 20 years shows how difficult it is to forecast future activity at Archerfield (or any other general aviation airport). The overall trend of movement figures at Archerfield for the past three decades has been downward, however the flight numbers have become more stable over the past 10 years.

The growth trends are sensitive to domestic conditions, and changes in the global, national and regional aviation industry.

Many of the factors influencing the activity levels are unpredictable, and it is conceivable that the historic trend will reverse. The airport is a rare and irreplaceable resource. The Master Plan seeks to preserve its capacity to cater for growth in aviation, and to ensure that future potential remains protected. With this in mind, AAC has developed two growth scenarios as illustrated below.



Forecast aircraft movements, 2011-2031

Historic data from 1990 to 2010 is shown in green. A low growth scenario (at an annual rate of 1%) is shown in blue, and a higher growth scenario (at 3%) is shown in red.

For master planning purposes, the higher growth rate has been adopted for the assessment of any external effects of aviation activity. This is particularly relevant to the assessment of the potential noise exposure from aircraft in flight over the 20 year planning period.

5.3.1 Influences

Some of the significant variables that could influence the forecast for aircraft movements for the airport are:

- global and regional economic conditions;
- the pricing policy of Airservices Australia for control tower services at Archerfield;
- investment by existing flying schools in expansion and upgrading of their training fleet, and in other equipment including simulators;
- the strength of the flying training market, and the attractiveness of Archerfield to overseas students;
- the attractiveness of Archerfield for helicopter flying training, and for other helicopter use;
- growth in emergency services flying at Archerfield; and
- other regional, local and community airports may wish to compete for the general aviation business that currently exists at Archerfield Airport.

AAC is committed to facilitating the continued success of the airport for the long term.

It has in place a number of strategies to strengthen the aviation business, attract appropriate airport users, and foster complementary uses of the airport where these will positively contribute to the improved viability of the airport.

5.4 AIR FREIGHT

With its metropolitan location, positioned amidst a substantial and growing industrial area (and one of the largest in Brisbane), the airport is well placed to provide specialised air freight.

Accessible to the main road links to Brisbane and interstate, and the rail freight terminus at Acacia Ridge, the airport also has the potential to act as a transport interchange for land and air freight.

AAC, in consultation with BCC has identified an opportunity for growth in freight that services the needs of remote regional areas, including the mining industry. These customers require rapid response from expert technicians and a quick supply of replacement parts for plant and machinery breakdowns.

The *Practical Capacity ANEF* has allowed for 80 freight movements per week in recognition of this.

The Master Plan also provides the opportunity for the progressive development of freight and supporting uses, in a number of the development precincts on the airport.

5.5 REGULAR PASSENGER TRANSPORT

In the early days of Archerfield Airport it was Brisbane's main regular passenger transport (RPT) airport. With the establishment of Brisbane Airport in its current location, the role of Archerfield as a RPT facilitator was phased out.

At present the airport has a small but significant volume of passenger traffic from charter operations provided by existing businesses on the airfield.

Passengers are typically construction or mining crews travelling to a remote location, or small teams of executives travelling regionally or interstate. Politicians and VIPs also take advantage of the services provided by the businesses at Archerfield, and the convenient and readily accessible location of the airport.

Over the past 12 years a number of operators have proposed bringing RPT back to Archerfield. Their plans have included linking capital city secondary airports.

AAC has an open mind and would welcome such proposals if their long term viability can be demonstrated.

The *Practical Capacity ANEF* (Figure 14) has allowed for 12 arrivals and departures a day, or around 9000 movements per year by aircraft similar to the Dash 8-Q400 and Embraer 170 over the 20 year master plan period. The previous 2019 ANEF allowed for 8 arrivals and departures per day, and assumed that some would use the secondary runways. With this master plan, AAC proposes that all RPT movements will be confined to the main runway.

Passenger numbers for a RPT service could be around 4- to 500,000 per annum.

This would represent less than 2% of the total airport flying activity, but would contribute significantly to the aviation services provided at Archerfield.

The airport would require certification before RPT operations above 30 passengers commenced.

Consultation with affected stakeholders, including through means such as the Community Aviation Consultation Group, would occur prior to the introduction of any RPT services operating from Archerfield. This consultation would address any potential implications including for aircraft noise, ground access and use of surrounding roads, adequate provision for on-airport parking, and any effects on other airport operations.

5.6 IMPLICATIONS FOR THE MASTER PLAN

The Master Plan preserves the opportunity for RPT traffic and growth in air freight.

It includes measures for the progressive upgrading of runways, taxiways, aprons and related facilities if justified by a commitment by a viable RPT operator.

The Master Plan gives also the flexibility for a RPT operator to run the service from either the existing terminal building, or potentially from a new purpose built terminal facility and car parking area which could be developed adjacent to (and on the north side of) the main 28R/10L runway, in the vicinity of the corporate hangar complex. This is shown in the *Master Plan Vision* (Figure 2),

the *Beatty and Mortimer Precinct Structure Plan* (Figure 19) and the *Boundary and Wirraway Precinct Structure Plan* (Figure 21).

The *Practical Capacity ANEF* and the N70 plans include provision for RPT traffic and freight. It should be noted that the types of aircraft used for RPT services and freight will not use the secondary runways, so will not contribute to the forecasted noise exposure of the realigned secondary grass runway complex.

6 Aviation facilities

6.1 EXISTING AVIATION FACILITIES

The existing airport layout is shown in Figure 3 *Airport context* and Figure 4 *Existing airport layout.*

6.1.1 Runways

Archerfield Airport has two sets of parallel runways. The 10/28 parallel runways (approximately east-west) and full-length parallel taxiways have sealed pavements. Runway 10L/28R and the supporting taxiway are equipped with pilot activated lighting.

The secondary direction 04/22 parallel runways (approximately north-east/south-west) and taxiways are unsealed except for the runway thresholds.

The runway facilities are summarised as follows:

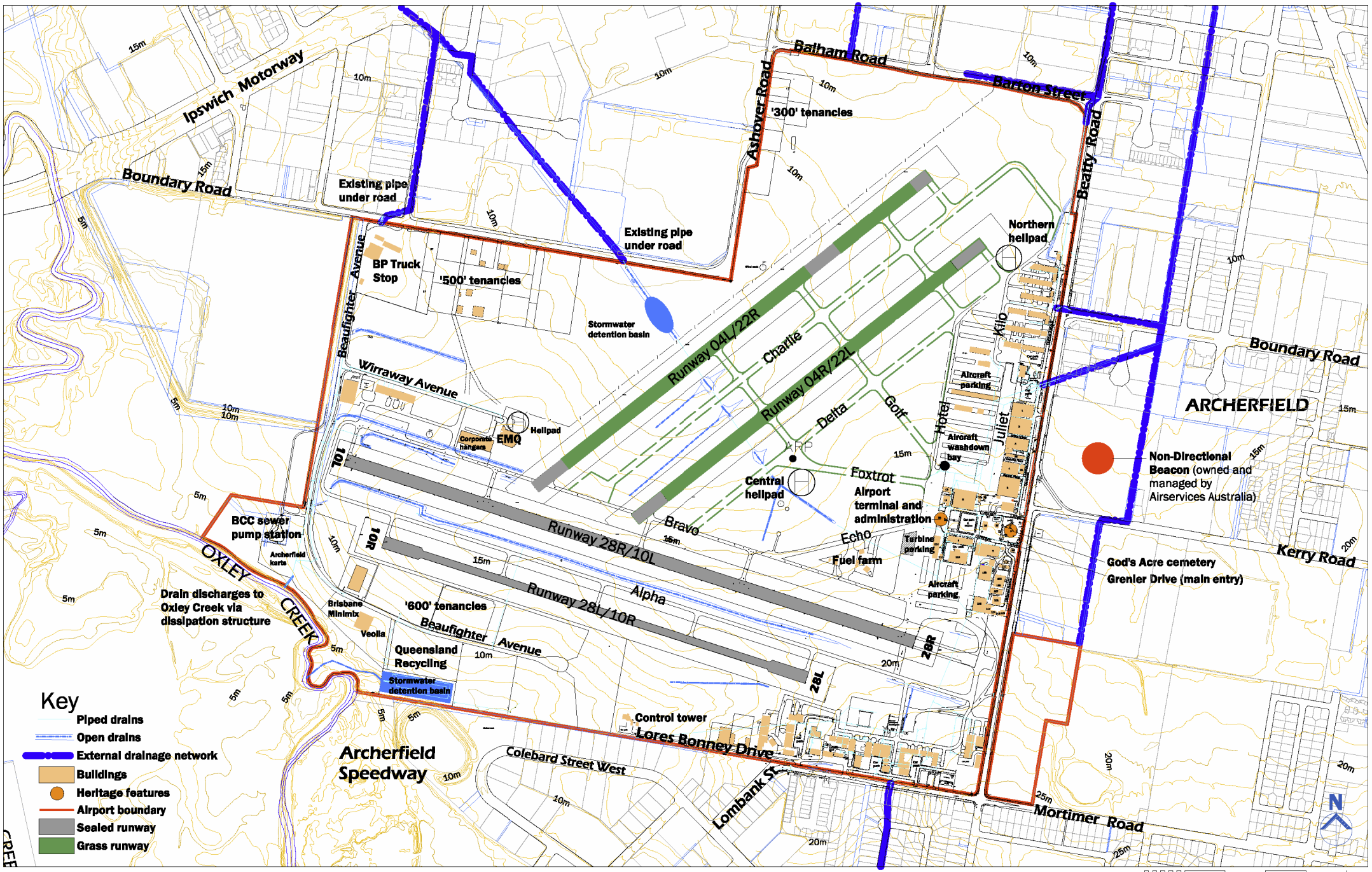
- runway 10L/28R is sealed, 1481 m long, 30 m wide and has a Pavement Classification Number (PCN) of 6;
- runway 10R/28L has an unrated pavement, 1100 m long and 30 m wide, the central 18 m of which is sealed with 6 m of gravel on either side;
- runway 04L/22R has an unrated natural surface, 1245 m long and 30 m wide; and
- runway 04R/22L has an unrated natural surface, 1100 m long and 30 m wide.

Runway thresholds are displaced as follows:

- 10L by 10 m;
- 28R by 51 m; and
- 22R by 290 m.

While aircraft with an Aircraft Classification Number (ACN) greater than 6 can operate on runway 10L/28R subject to a pavement concession from AAC, continual use by such aircraft will significantly reduce the life of the runway and associated taxiway and apron surfaces.

The natural surface 04/22 runways, particularly the central section of 04L/22R become wet and soft because of their location in the low lying part of the airport and are unserviceable more than 25% of the time.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 4 **Existing airport layout**

PlannedFX
Planning Environment Strategy Design

AAC is seeking to address this issue with the proposed realignment of the 04/22 runways.

6.1.2 Primary taxiways

Parallel taxiways serve each runway and there are connecting taxiways to other parts of the airfield. The taxiway network is shown in Figure 4 and caters for Code A aircraft.

The key dimensions of the primary taxiway system are set out in the table below.

Table 3: Primary taxiways

	Length (m)	Width (m)
Alpha	1,881	7.5
Bravo	1,482	7.5
Charlie	1,340	7.5
Delta	1,361	7.5

6.1.3 Aprons

There are two main apron areas on the airport. Apron Hotel has an area of 14,000 m^2 and has an asphalt sealed surface. It has 34 aircraft tie down parking positions provided with steel cable supports.

Apron Juliet is 7,000 m^2 in area and is of concrete construction with an asphalt sealed surface in places. This is the higher strength pavement. There are 67 grass aircraft tie down positions adjacent to Apron Juliet.

6.1.4 Aircraft parking

Aircraft parking with tie downs is currently available for 200 fixed wing aircraft. These parking areas include both sealed pavement and grass areas.

6.1.5 Helicopter facilities

There are three helipads, one located at the EMQ facility (on Wirraway Avenue), the central helipad, located south of Taxiway Foxtrot and the northern helipad, located adjacent to the north eastern end of Runway 04R/22L. There are separate parking areas for helicopters.

6.1.6 Engine run-up locations

Helicopters are directed to pod Tango for run-up.

Jet engine testing is only allowed at the run-up bay to Runway 10L.

In dry weather truck based dynamic engine testbeds are directed to pod Tango, and in wet weather to the threshold of Runway 04R (via Taxiway Bravo).

6.1.7 Visual and navigational aids

Runway 10L/28R is equipped with pilot activated, medium intensity runway lighting. There are two illuminated wind indicators.

Airservices owns the land and owns and maintains the Non-Directional Beacon (NDB) located on land adjacent to the airport at the corner of Beatty and Kerry Roads (and shown in Figures 3 and 4). It operates as an aid for Archerfield and the outer locator for Brisbane Airport instrument landing system (ILS) approach.

6.2 AIRCRAFT CHARACTERISTICS

6.2.1 Based Aircraft

There are currently around 230 aircraft based on the airport.

Currently the type of aircraft that use the airport ranges from the small Cessna 152 to Citation X craft. In the future it is expected that aircraft ranging from Jabiru to the ATR 72-600 and even the Embraer Commuter aircraft and Cirrus VLJ could operate out of Archerfield

Over the coming years, it is also anticipated that the aircraft fleet at Archerfield will be modernised progressively by users.

It is expected that, consistent with trends around the world, as newer models replace old aircraft there will be an improvement in reduced operating noise and fuel consumption.

6.3 AIR TRAFFIC MANAGEMENT

6.3.1 Airservices Australia

Air Traffic Control (ATC) services are currently provided from Archerfield Control Tower from 7 am to 5 pm daily.

Tower operation allows for maximum usage of the runways, and its continuation is a key issue for the sustained success and growth of general aviation activity at Archerfield, and flying training in particular.

6.3.2 General Aviation Airport Procedures to Class D

On 3rd July 2010 Archerfield Airport transitioned to Class D Airspace. Prior to this, the airport operated under GAAP since the early 1980's. A number of

minor changes were associated with this transition including the requirement for pilots to seek ATC approval before entering the manoeuvring area.

Fixed wing aircraft approach and departure paths are shown in Figures 5 and 6. Helicopter approach and departure paths are shown in Figures 7 and 8. Training circuits are shown in Figure 9.

6.3.3 Common Traffic Advisory Frequency

Outside of ATC hours Common Traffic Advisory Frequency (CTAF) procedures apply which allow only one runway to be active.

6.3.4 Future changes to Brisbane Airport airspace

Brisbane Airport Corporation has highlighted that changes to the airspace around Archerfield will be required when the New Parallel Runway commences around 2019/2020.

Training areas at Archerfield Airport will be affected with the lowering of airspace base altitude from 3,500 ft and 4,500ft to 2,500ft. Arrivals and departures will not be affected. Arriving aircraft may benefit from having Class C protection for longer on descent. Currently aircraft leave Class C at 3,500ft and will be in controlled airspace until 2,500ft with the airspace changes.

6.4 AIRPORT REGISTRATION AND STANDARDS

Archerfield Airport is a registered aerodrome, having met the relevant CASA requirements in April 2006.

It is currently available for use by aircraft used in RPT or charter operations which have a maximum passenger capacity of not more than 30 seats or a maximum carrying capacity of not more than 3,400 kilograms. The airport would require certification for RPT or charter operations above these levels.

Aviation facilities have generally been provided to meet the standards required for Code 3A aircraft, which cater for aircraft with a reference field length between 1200 and 1800 m, a wingspan of up to 15 m and an outer main gear wheel span up to 4.5 m.

This Master Plan preserves capacity for Code 3C aircraft should the need arise in the future.

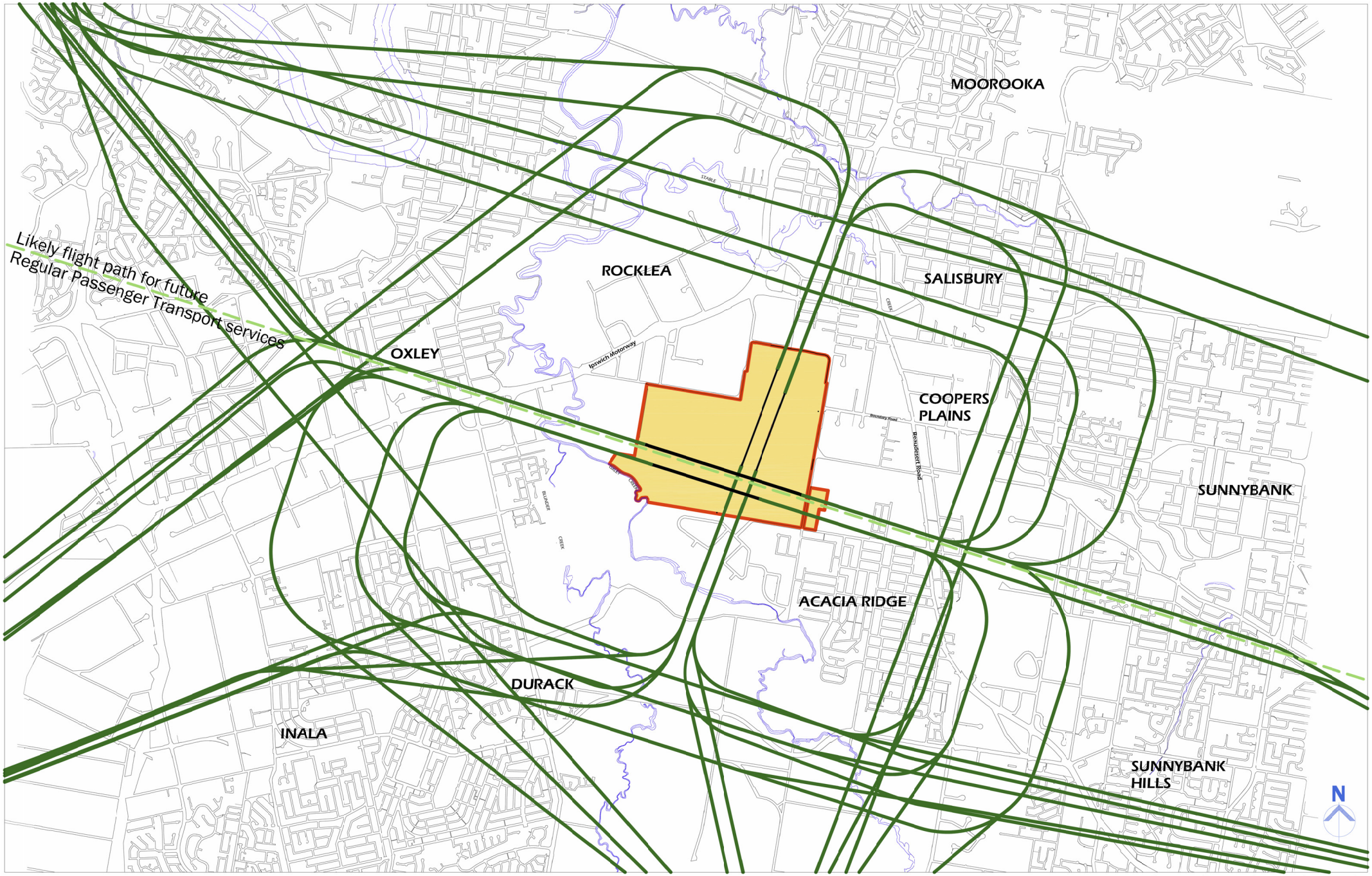
6.5 AIRPORT SECURITY

AAC has undertaken a risk assessment and developed and implemented a Transport Security Program (TSP) for the airport in accordance with the *Aviation Transport Security Act 2004.*

A number of security measures have been put in place including:

- 1.8 m high chainwire fencing topped with 3-strand barbed wire surrounding the entire airside area;
- 11 high security pedestrian gates;
- 4 high security automatic vehicle gates;
- closed circuit television (CCTV) day/night security cameras;
- optical fibre cabling; and
- intelligent mobile phone pin code retrieval system.

On 10th March 2005, Archerfield Airport was gazetted as a security designated airport.

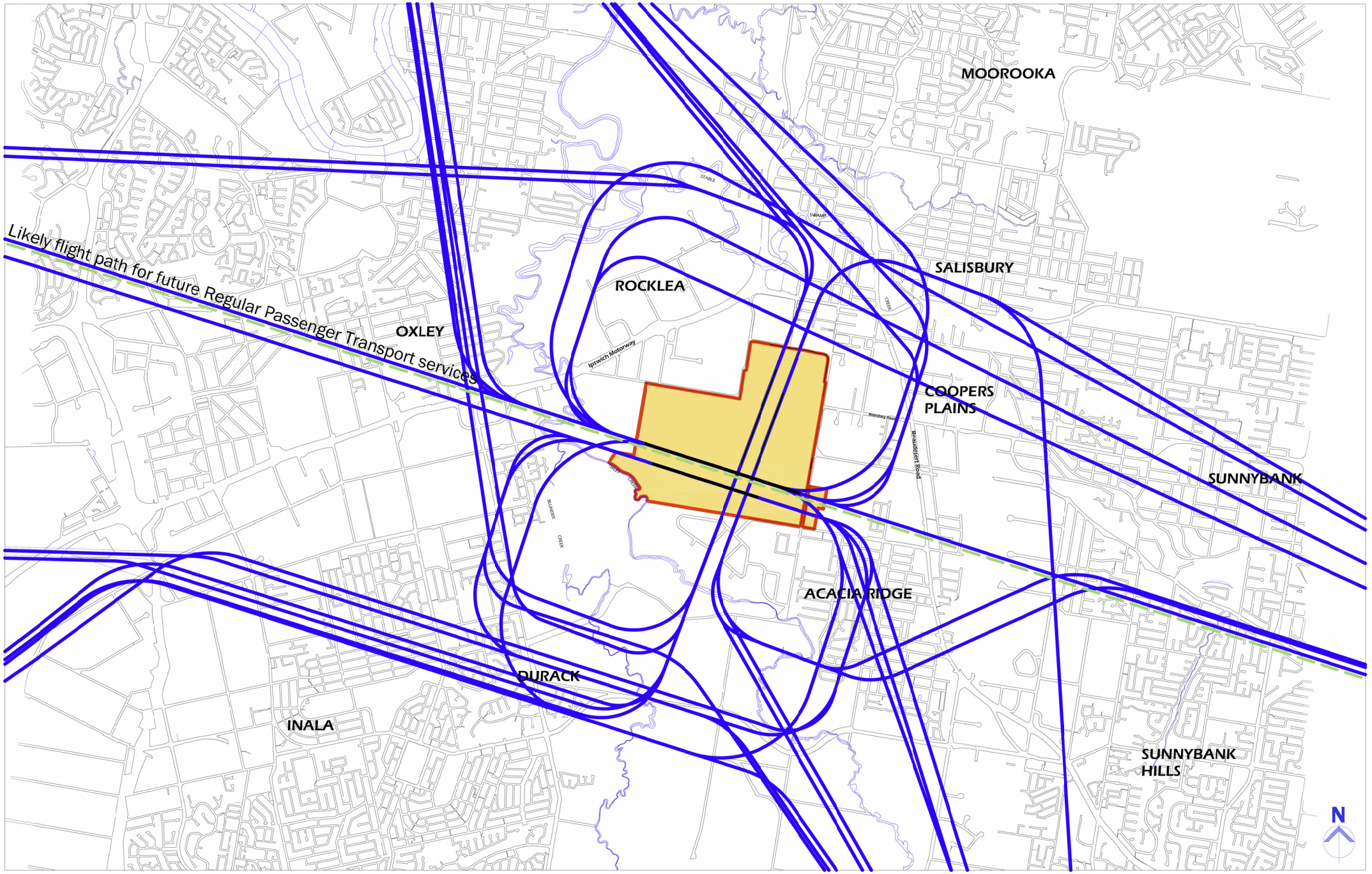


Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 5 **Fixed wing arrival flight paths**

PlannedFX
Planning Environment Strategy Design

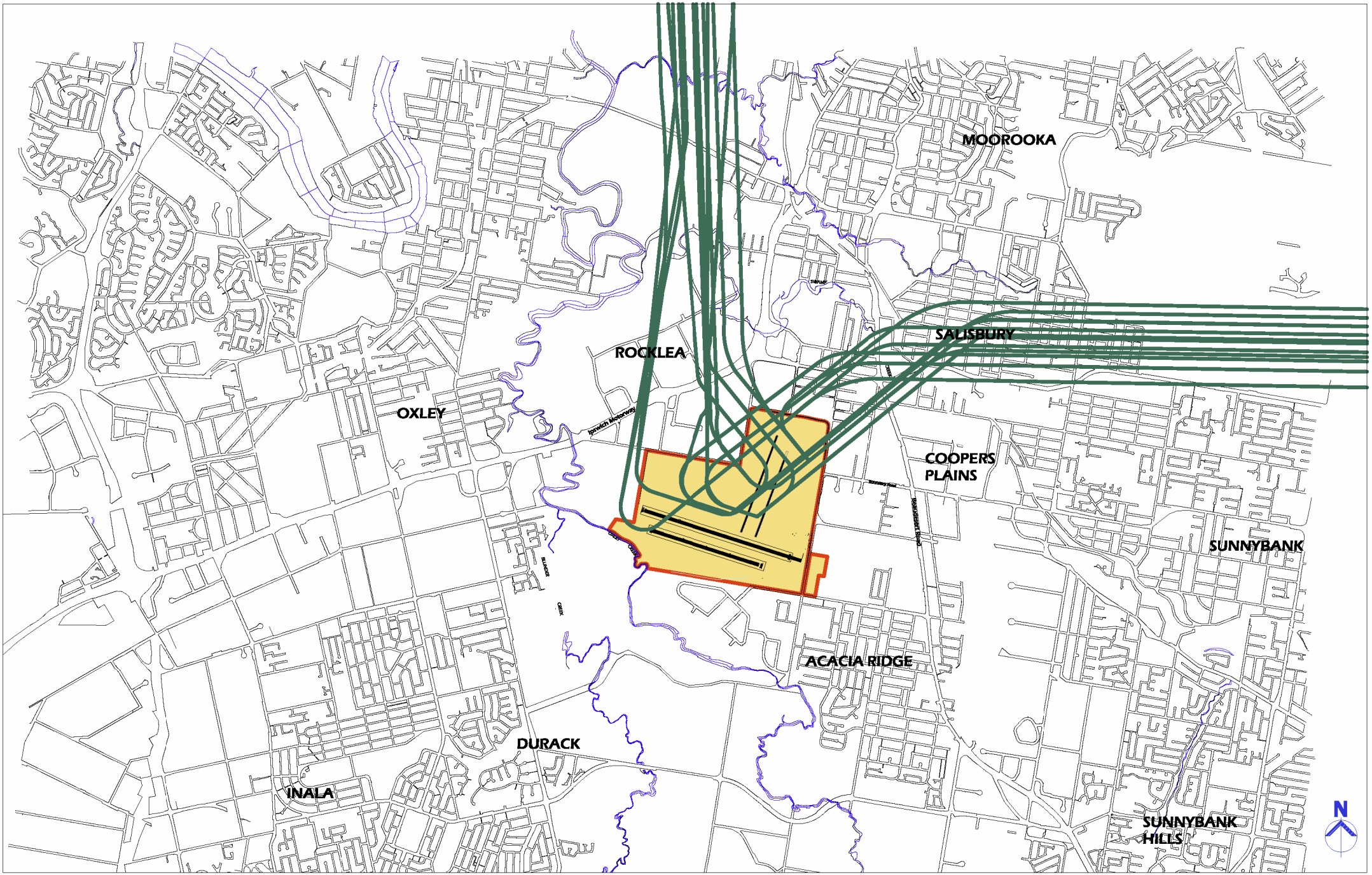


Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 6 **Fixed wing departure flight paths**

PlannedFX
Planning Environment Strategy Design

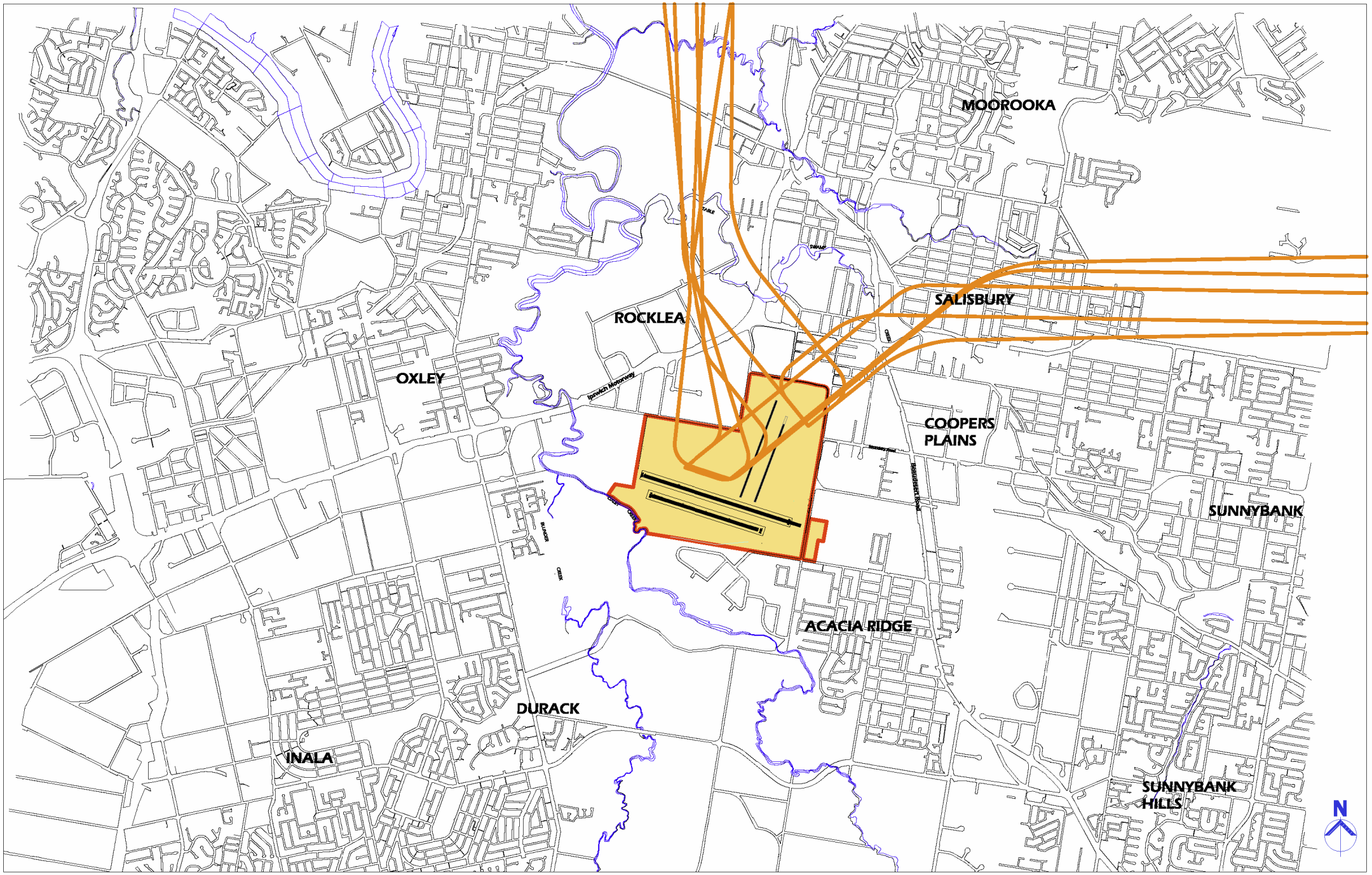


Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 7 **Helicopter approach paths**

PlannedFX
Planning Environment Strategy Design

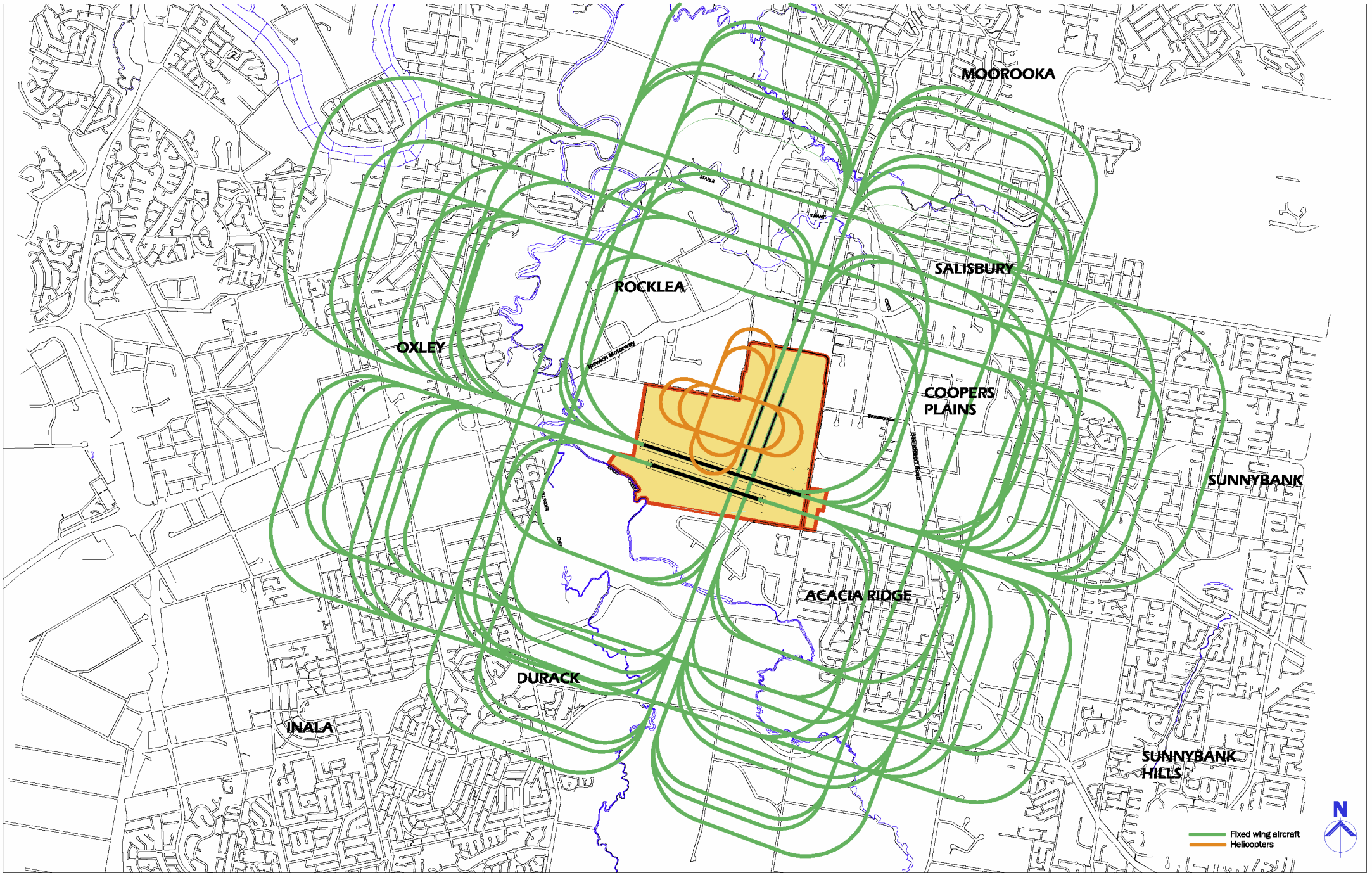


Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 8 **Helicopter departure paths**

PlannedFX
Planning Environment Strategy Design



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 9 **Training circuits**

PlannedFX
Planning Environment Strategy Design

7 Aviation development

7.1 PROGRESSIVE IMPROVEMENTS

The Master Plan provides for the progressive development of the aviation facilities at the airport, consistent with the vision for the airport.

The vision for Archerfield Airport is summarised in Figure 2.

A series of improvement projects has been identified. Each project will support one or more initiatives that will strengthen the capacity of the airport to serve the changing needs of Brisbane and the growing SEQ region.

Proposed aviation infrastructure development includes:

- reorientating the secondary grass parallel runways to improve overall runway usability;
- augmenting the taxiway system to maximise runway capacity and efficient ground movement of aircraft;
- strengthening and expanding apron facilities to cater for increased aircraft numbers, and potentially heavier aircraft;
- investigating the feasibility of relocating facilities such as the fuel farm and control tower, if, because of their locations, they constrain future aviation development or their relocation would improve airport operations;
- upgrading visual and navigation aids to provide an improved flying training environment;
- consolidating helicopter activity so as to improve safety by separating rotary from fixed wing operations;
- identifying and reserving terminal and apron facilities for potential niche RPT operations;
- strengthening the current main 10L/28R runway to cater for larger aircraft and potential niche RPT operations;
- Increasing the length of the main 10L/28R runway by approximately 160 metres (at the eastern end) and upgrading the associated taxiways, to facilitate larger aircraft;
- maintaining an option to construct a new longer runway between the existing 10/28 parallel runways, potentially crossing Beaufighter Avenue;

- making new, improved facilities available to tenants currently occupying ageing premises and/or allowing them to expand their businesses.

These initiatives are shown in Figure 2 *Master Plan vision*.

The timing of specific projects is dependent on the need being demonstrated and further investigations and design. The triggers for the main projects are set out in Chapter 15 *Implementation*, and will be monitored by AAC on an ongoing basis.

The detailed design and any approvals required for a specific project will be resolved in accordance with the processes described in Chapter 15, and the relevant provisions of the AES. In a number of cases, the proposals will be subject to approval by the Minister of a Major Development Plan.

7.2 SECONDARY GRASS RUNWAYS

The secondary grass runway system is provided for the amenity of a minority of cross wind limited, light aircraft when prevailing wind conditions prevent their safe use of the main runways.

Analysis of wind conditions over the past 20 years shows that the runways are required for approximately 12% of the time by these aircraft. Over the same period, the existing grass runways have been closed for approximately 27% of the time due to rain.

The susceptibility of the runways to being rain affected has significant implications for the light aircraft usage of the airport and for the flying schools in particular. There are times when the schools are unable to fly due to the combined effects of unfavourable wind and waterlogging.

AAC has identified this as a significant issue, impacting on the sustainable growth of flying activity at the airport, and has focused on addressing this as soon as practicable.

The limitation of the existing runways has been highlighted by recent flood events. During the flood peak in January 2011, a portion of runway 04L/22R was submerged. Before and subsequent to this event, both runways 04L/22R and 04R/22L were continuously unavailable for a period of seven months. This was partly because Air Traffic Control regards use of a single grass runway as an operational issue. Hence, when 04L/22R becomes inoperable, both secondary grass runways are closed.

AAC has investigated various options for improving the usability of the secondary grass runways.

The preferred solution, developed in consultation with stakeholders including the flying schools, CASA and Airservices Australia, is to improve runway usability by moving the grass runways out of the low lying flood prone areas and realigning them to better cater for local wind conditions.

The realigned and improved runways should provide an increase in overall runway usability of 3.1 percentage points (to 99.43% or an additional 11.3 days per annum) for light aircraft.

Due to the high degree of variance across their longitudinal surfaces, the existing grass runways do not conform with current ICAO standards. The proposed realignment to a bearing of 01/19 will improve their usability and safety by bringing them up to current standards, moving them away from low lying areas and decreasing the effects of crosswinds.

They will continue to only be used by light aircraft, and only during daylight hours.

The proposed realignment of the secondary grass runways will be further examined when a Major Development Plan (MDP) is prepared for this project.

The MDP process will include additional investigations and design, and further consultation with potentially affected stakeholders, as discussed in section 14.7.1.

More information about the benefits associated with the realignment can be found in section 14.7.6.

7.3 LONGER TERM PROJECTS

The Master Plan also foreshadows the longer term option for a new runway aligned parallel to the existing main runway, to cater for larger aircraft should the need arise in the future.

This would replace a similar runway that was in place earlier in the airport's history, and may potentially extend west over Beaufighter Avenue which is an AAC road located on airport land.

Any new or extended runway will be confined to land under the control of AAC.

Before any new runway could be constructed, a Major Development Plan would have to be prepared and be approved by the Minister. Detailed plans and assessments would be required, and the plans would be subject to consultation with a range of stakeholders, including BCC.

8 Airport land use

8.1 LAND USE CONTEXT

8.1.1 Existing conditions

The airport site has an area of approximately 257.7 hectares.

It is an important part of the Archerfield/Rocklea/Acacia Ridge area, in an industrial and transport services corridor of regional significance.

Surrounding land use is shown in the *Airport context* drawing (Figure 3) and the *Current airport land use context* plan (Figure 10). Existing conditions on the airport are shown in Figure 4.

The majority of land use around the airport is industrial or commercial.

Industrial areas are located to the north, north—west, east and south of the site. Along the northern and western boundary is a general and heavy industrial area that runs parallel with the Ipswich Motorway. Industrial estates are also adjacent to the eastern boundary of the airport, along Beatty Road.

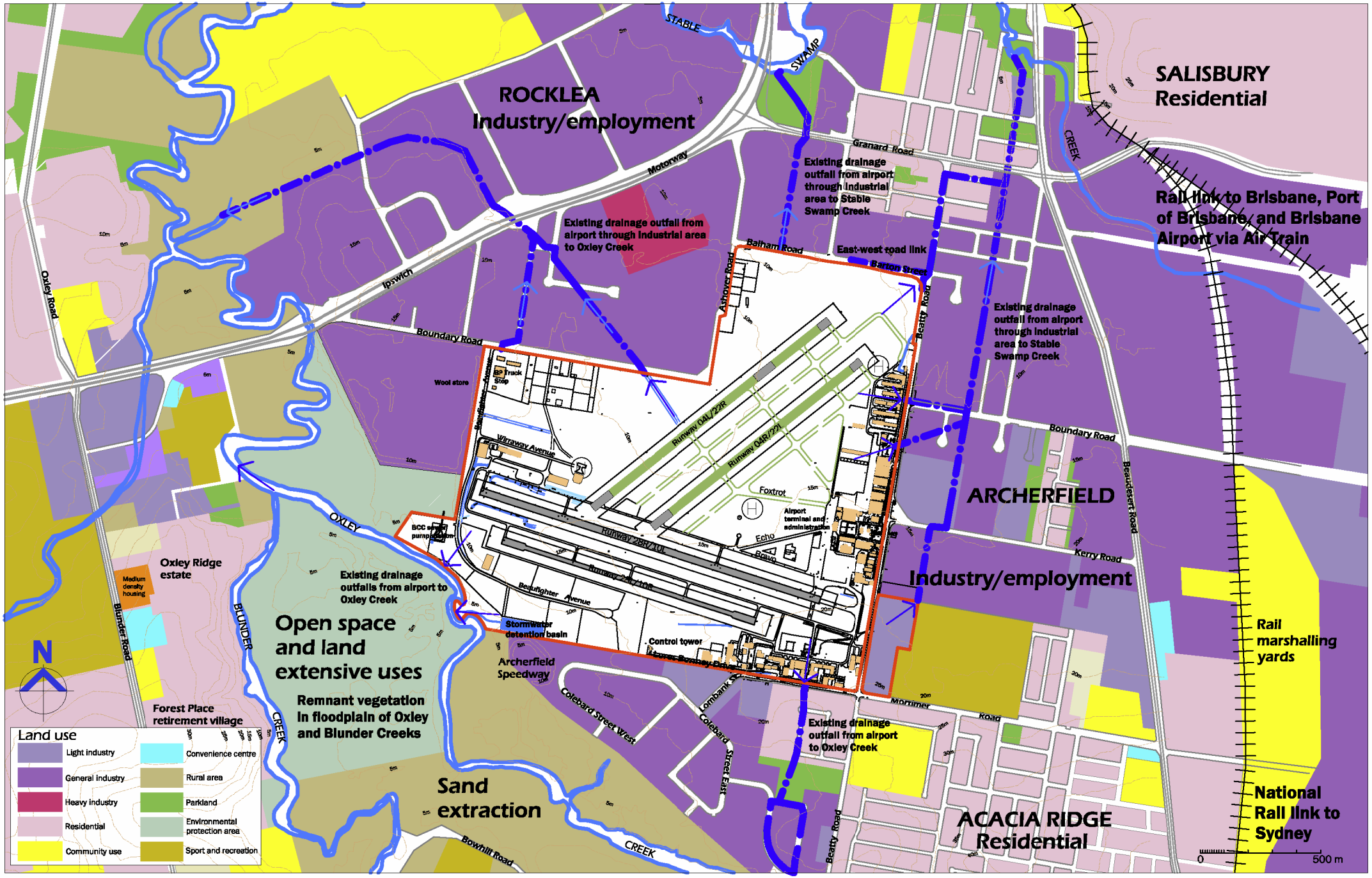
The industrial estate of Archerfield is adjacent to the southern boundary. In addition to industrial uses, this area also houses a speedway and extends to the open space along the Oxley Creek.

The residential area of Acacia Ridge is located to the south-east of the airport, across Mortimer Road.

The residential suburb of Salisbury is located to the north east of the airport, beyond the industrial area. Some of the dwellings in Salisbury are located on a hillside facing the airport and are under the flight paths for the existing secondary grass Runways 04L and 04R. The closest dwellings are about 1km from the north-east corner of the airport.

To the west and south are the Oxley Creek and associated floodplains. This, in conjunction with the nearby Blunder Creek forms part of a regional habitat link and waterway running through the south—west urban area of Brisbane, to the Brisbane River. Also in this area are the Brisbane City Council Sewer Pumping Station, and the Woolsheds located on Boundary Road.

The area between the Oxley and Blunder Creeks is an important sand resource, and there is active sand extraction underway on the south side of Oxley Creek, on Bowhill Road approximately 800 metres from Mortimer Road (to the south of the airport).



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 10 **Current airport land use context**

PlannedFX
Planning Environment Strategy Design

The airport has been operating in this location since the 1930's and has been well protected by the aviation, land use, transport and economic development policies, strategies and controls administered by Queensland State Government, and Brisbane City Council.

8.1.2 Other potential developments in the surrounding area

The recently approved Acacia Ridge/Archerfield Neighbourhood Plan identifies a pocket of new residential development on the north side of Mortimer Road, more than 830 metres to the east of Beatty Road.

This emerging area is under the flight paths for the 28/10 runways and is within the 25 ANEF contour. This area may be impacted by existing aircraft noise, so the development will need to address acoustic protection requirements in the siting and design of any dwellings.

This area is also partly within the 1000m long public safety area for the main runway, as described in Annex 3 to *State Planning Policy 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities*. The implications of the public safety zone will need to be considered by BCC and prospective developers when they prepare plans for this new residential area.

There is also a proposed residential development on the south side of Oxley Creek (to the south-east of the airport). Advice from Council indicates that this proposal is outside the 20 ANEF contour.

8.1.3 Pre-existing leases, licences and easements

When Archerfield Airport Corporation became the airport-lessee company for Archerfield Airport in 1998, it assumed certain pre-existing obligations under various leases and easements.

While some of those pre-existing interests have now expired, others remain. In particular, Archerfield Airport Corporation notes that there are pre-existing interests in the form of leases with some general aviation and other tenants at the airport; statutory authorities; and easements for other utilities and works.

The easements include those related to the BCC sewer pump station adjacent to Oxley Creek; and an easement for an earthen flood protection bund constructed along the west side of Beaufighter Avenue as part of the woolshed development on the neighbouring land (off airport).

With regard to other pre-existing interests at the airport, AAC will for the remainder of their term or earlier termination, and subject to their terms, comply with them to the extent it is legally obliged to do so.

8.2 AVIATION DEVELOPMENT

Aviation developments at Archerfield include 71 hangars (most being able to accommodate multiple aircraft), with some privately owned and the remainder owned by AAC.

The facilities are mainly used as aircraft hangars and workshops. Facilities also include flying schools, the recently renovated historic passenger terminal/administration building, and the control tower which is located mid way along the southern boundary (off Lores Bonney Drive).

There are over 95 aviation and non-aviation businesses on site employing hundreds of people.

9 Airport protection

9.1 BACKGROUND

The Commonwealth Government requires the adoption of the Australian Noise Exposure Forecast (ANEF) system for determining land use compatibility around Australian airports.

In addition, the maximum height of obstacles allowed in proximity to each airport is defined in the prescribed airspace for the airport.

9.2 PRESCRIBED AIRSPACE

Prescribed airspace is defined under the *Airports (Protection of Airspace) Regulations* as airspace above any part of either the *Obstacle Limitation Surfaces* (OLS) or the *Procedures for Air Navigation Services—Operations* (PANS-OPS) surfaces, whichever part represents the lower airspace, for any airport.

Figure 11 identifies the current OLS/PANS-OPS for the airport. Figure 12 shows the OLS/PANS-OPS for the airport once the secondary runways have been realigned.

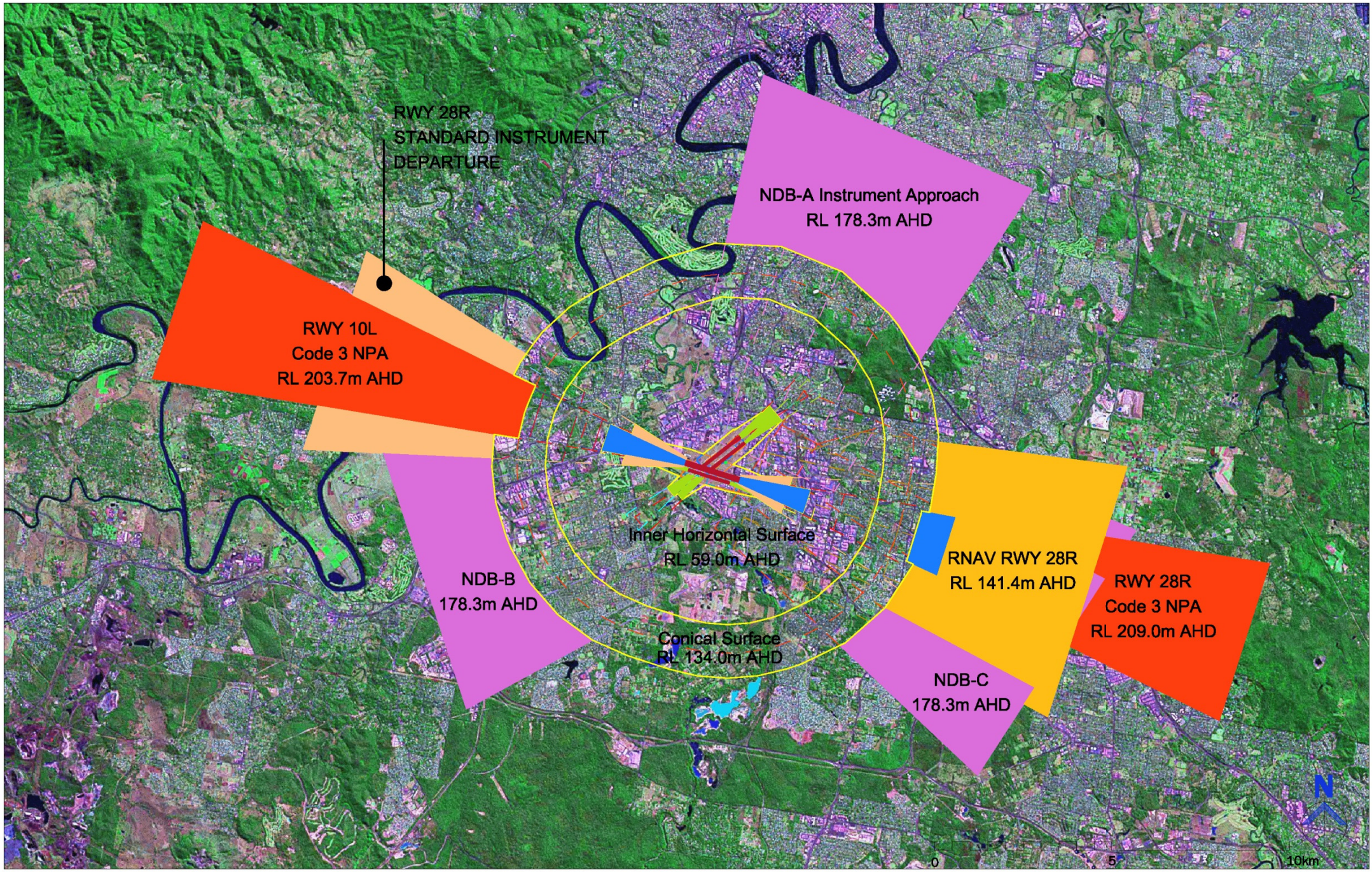
For the continued safe operation of the airport surrounding development must comply with the height maxima specified in the OLS.

Any existing incursions into the OLS, are documented in appropriate publications for pilots.

Future requirements

Protection of airspace from unacceptable intrusions is of fundamental concern to AAC. Accordingly, AAC will continue to work closely with BCC and the State Government to ensure that the planning controls relevant to areas around the airport contain sufficient safeguards, and that any specific development applications are assessed for potential impact on the airport.

AAC will continue to provide to these agencies and to the proponent of any proposal advice on airport operational aspects, design and development requirements to ensure that all future development complies with these requirements.

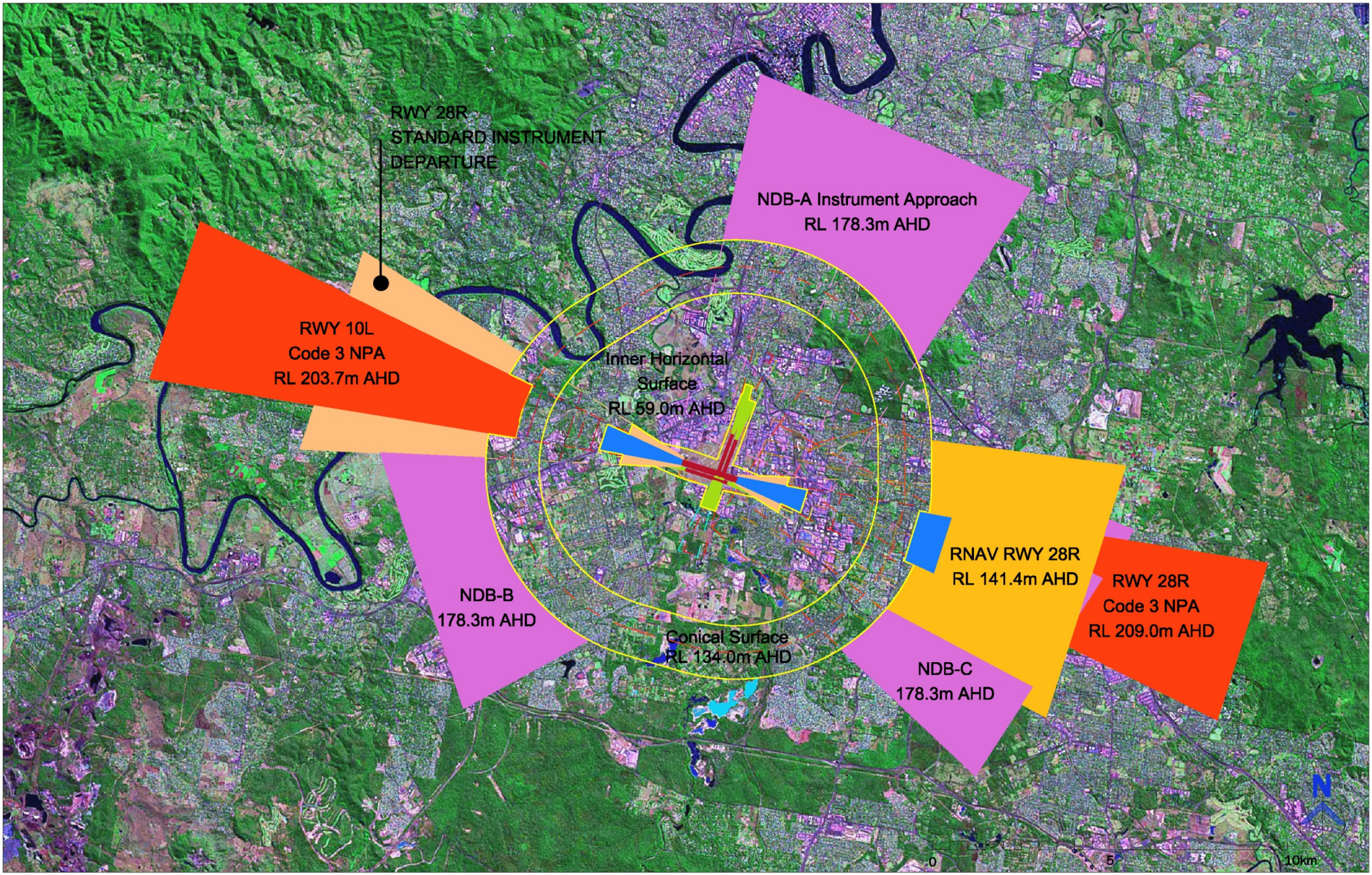


Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 11 **Current OLS/PANS-OPS surfaces**

PlannedFX
Planning Environment Strategy Design



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 12 **Future OLS/PANS-OPS surfaces**

PlannedFX
Planning Environment Strategy Design

BCC is required under State Planning Policy SPP 1/02 to ensure that current airspace protection requirements are reflected in the planning scheme. Should there be any change to the airspace AAC will advise BCC.

9.3 RESTRICTED LIGHT ZONES

These zones, shown in Figure 13, identify areas close to Archerfield Airport in which inappropriately sited or aimed lighting could cause safety hazards to aircraft. Potential light sources include security lighting, street lights and illuminated sports fields.

The zones have been defined to protect pilots from being dazzled by lights, or being confused by light patterns that look similar to approach or runway lighting.

Future requirements

CASA has prepared guidelines *'Lighting in the vicinity of Aerodromes-Advice to Designers'* to assist with the design and installation of lighting in the defined zones.

Additional information about lighting is also contained in the *Light nuisance code* prepared by BCC and included in the Brisbane City Plan; and in relevant Australian Standards including AS4282-1997 *Control of the obtrusive effects of outdoor lighting* and AS 2560- 1994 *Guide to sports lighting*.

9.4 FORECAST NOISE IMPACT—ANEF

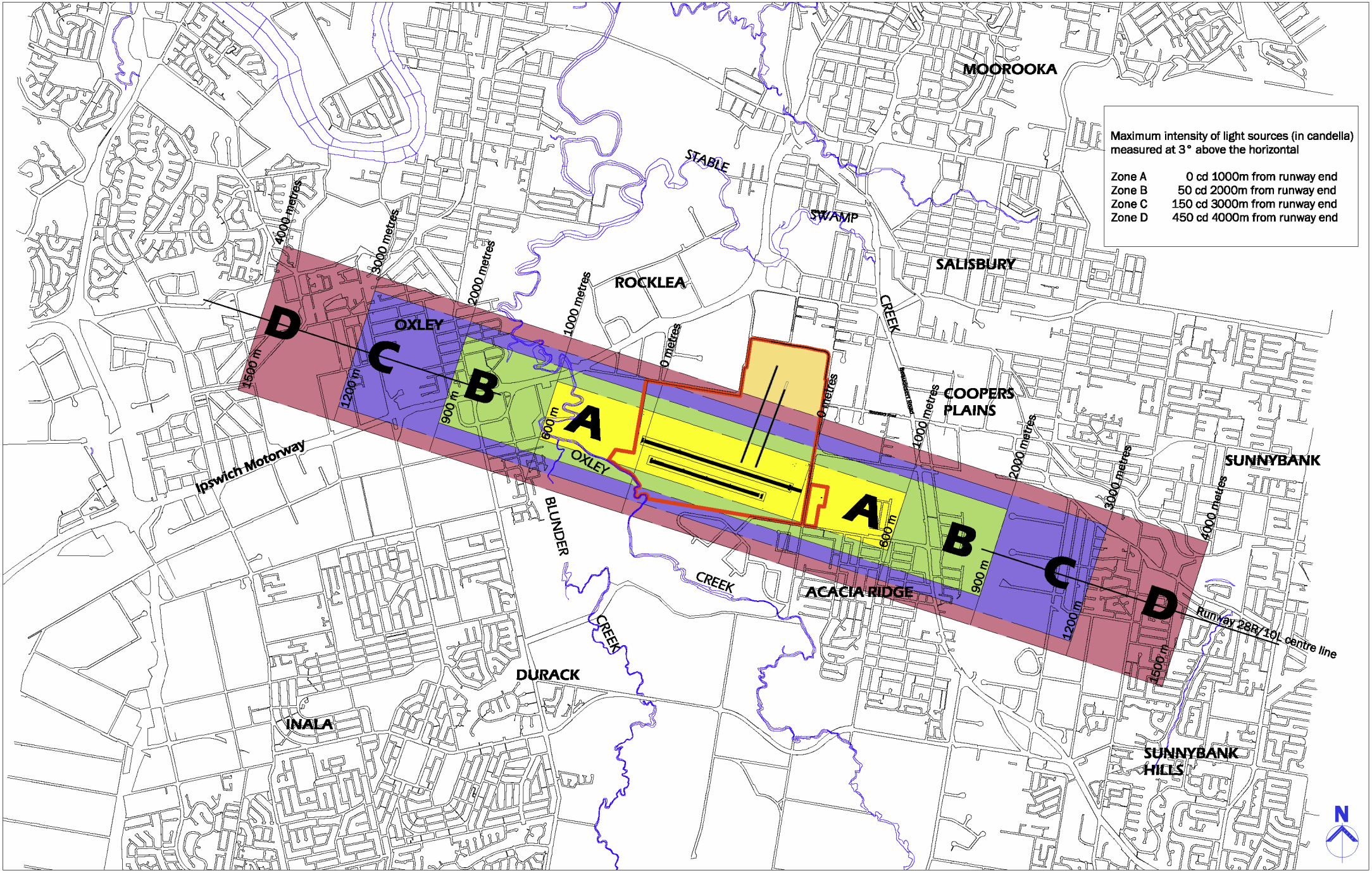
9.4.1 ANEF mapping for Archerfield

Noise impacts are illustrated by Australian Noise Exposure Forecast (ANEF) mapping, prepared for the larger metropolitan and regional airports Australia-wide.

The ANEF system is the basis of Australian Standard AS 2021-2000 *Acoustics-Aircraft noise intrusion-Building siting and construction.* The ANEF for each airport is reviewed and endorsed by Airservices Australia as a measure to guide land use planning around airports.

The modelling takes into account:

- the intensity, duration, tonal content and spectrum of audible frequencies of the noise of aircraft take offs, landings and flyover;
- the forecast frequency of aircraft types and movements on the various flight paths, including flight paths used for circuit training; and
- the average daily distribution of aircraft arrivals and departures in both day time (7:00am to 7:00pm) and night time (7:00pm to 7:00am).



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 13 **Restricted light zones**

PlannedFX
Planning Environment Strategy Design

Forecast noise levels are mapped as a series of contours extending out from the runways. The ANEF contours show land areas that are expected to be exposed to aircraft noise. The higher the ANEF value, the greater the noise exposure expected.

9.4.2 Practical capacity ANEF

For this Master Plan, AAC has prepared a *Practical Capacity ANEF* and this is shown in Figure 14. The ANEF was endorsed by Airservices on 6 August 2010.

The ANEF which it replaced was approved in 2000 and showed forecast noise impacts to the year 2019.

The current ANEF takes into account existing standards, the projected aircraft flight numbers at practical airport operating capacity, the projected movement patterns (including the planned re-alignment of the secondary runways, anticipated by 2015), and likely aircraft mix.

It is based on the assessment of practical capacity undertaken by Randl Pty Limited, rather than on any projections for usage derived from modelling of growth.

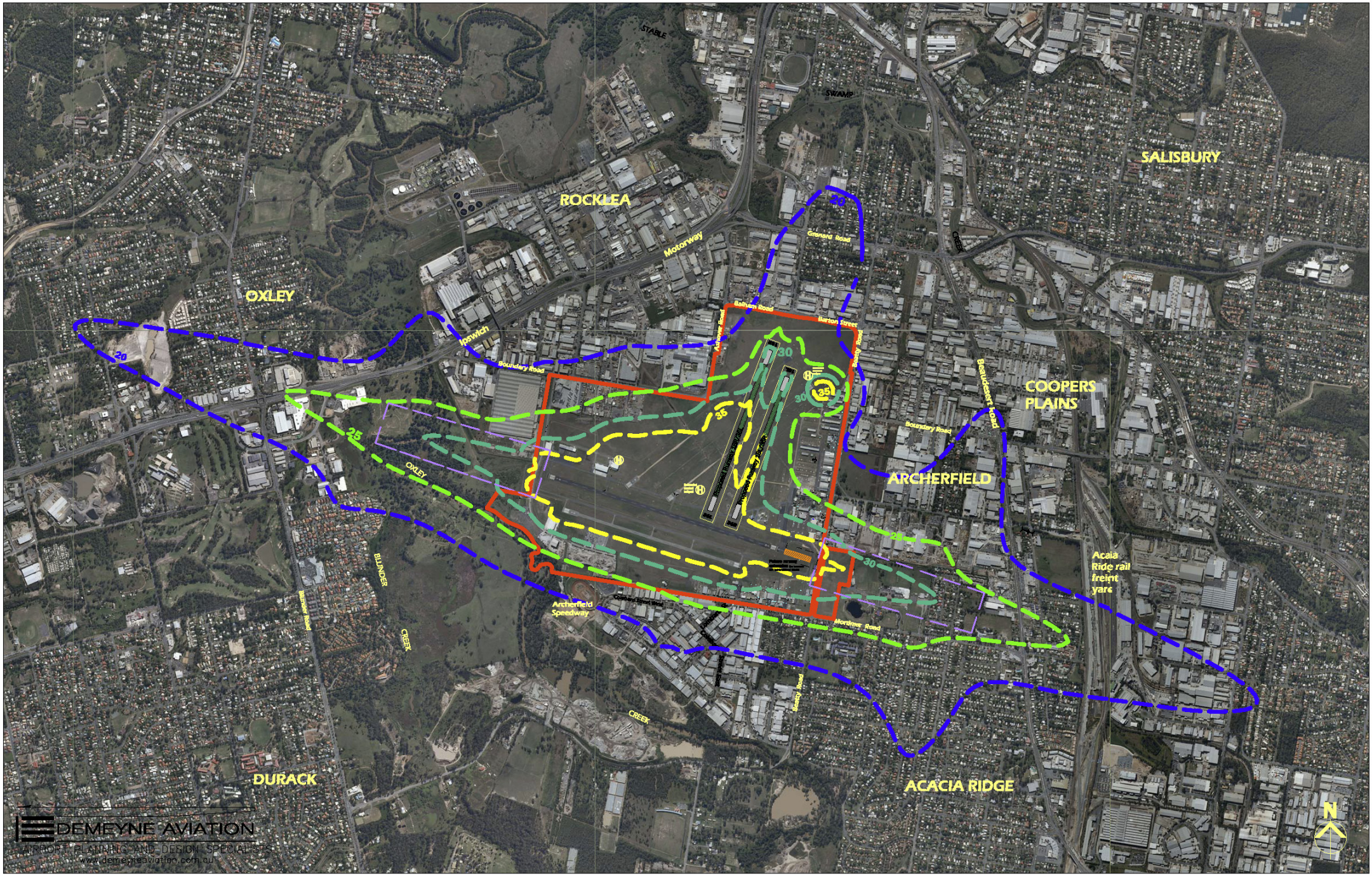
The ANEF contours reflect the practical flight capacity of the airport, which has been assessed by Randl Pty Limited as 460,200 flights per annum (with 425,000 of these being fixed wing aircraft and 35,200 being helicopters).

The airport is currently catering for approximately 150,000 flights per annum, and over the course of the next 20 years is expected to handle between 180,000 and 270,000. At that time the aircraft movements will be up to about 56.5% of the airport's practical capacity.

The ANEF is therefore a very conservative illustration of the likely noise from aircraft by the year 2031.

The ANEF also assumes that:

- The realignment of the grass runways occurs around the time that the airport is catering for approximately 175,000 movements per annum.
- Runway 10L/28R (the main runway) will be extended around 160 metres to the east, while retaining the 28R threshold in its current location (at the eastern end of the runway), a displacement of 212 metres. The runway extension is assumed to occur by about 2021.
- The central helicopter landing pad will be relocated to the west of the new grass runways around the time that the airport is catering for approximately 175,000 movements per annum. It will be more central to the airport and within the Wirraway precinct, which is designated for future aviation development.



DEMEYNE AVIATION
AIRPORT PLANNING AND DESIGN SPECIALISTS
www.demeyneaviation.com.au

Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 14 **Practical capacity ANEF**

Extent of Public Safty Area as defined in StatePlanning Policy SPP 1/02

PlannedFX
Planning Environment Strategy Design

- The new grass runways will be used during the day only. No night movements will be associated with these runways.
- The noise emissions from any aircraft flights at night-time (7pm to 7am) are multiplied by a factor of four in the ANEF modelling, in recognition that people are generally more sensitive to aircraft operations at night.
- Freight and potential Regular Passenger Transport (RPT) movements are included in the modelling for the 10/28 runways only.
- Allowance has been made for a slight increase in the proportion of night General Aviation movements when the airport is operating at maximum capacity. The night movements are forecast to increase from 5.7% to 6% of total movements at practical capacity.
- The aircraft fleet will progressively be modernised, and the ANEF reflects the reduced noise emissions from the newer aircraft.

The possibility of a new 10/28 runway was not included in the ANEF model as it is a long-term (> 20 years) preliminary concept only, and it is not possible to be definitive at this time about the location or length of the runway. The 20 ANEF would however not be expected to change significantly, given the alignment of the existing runways and the types of aircraft that will be operating at Archerfield.

Further discussion on noise and the *Practical Capacity ANEF* is provided in section 14.11.

A full explanation of the modelling methodology and the outputs is provided in the *Archerfield Airport ANEF Report* prepared by Randl Pty Limited (May 2010).

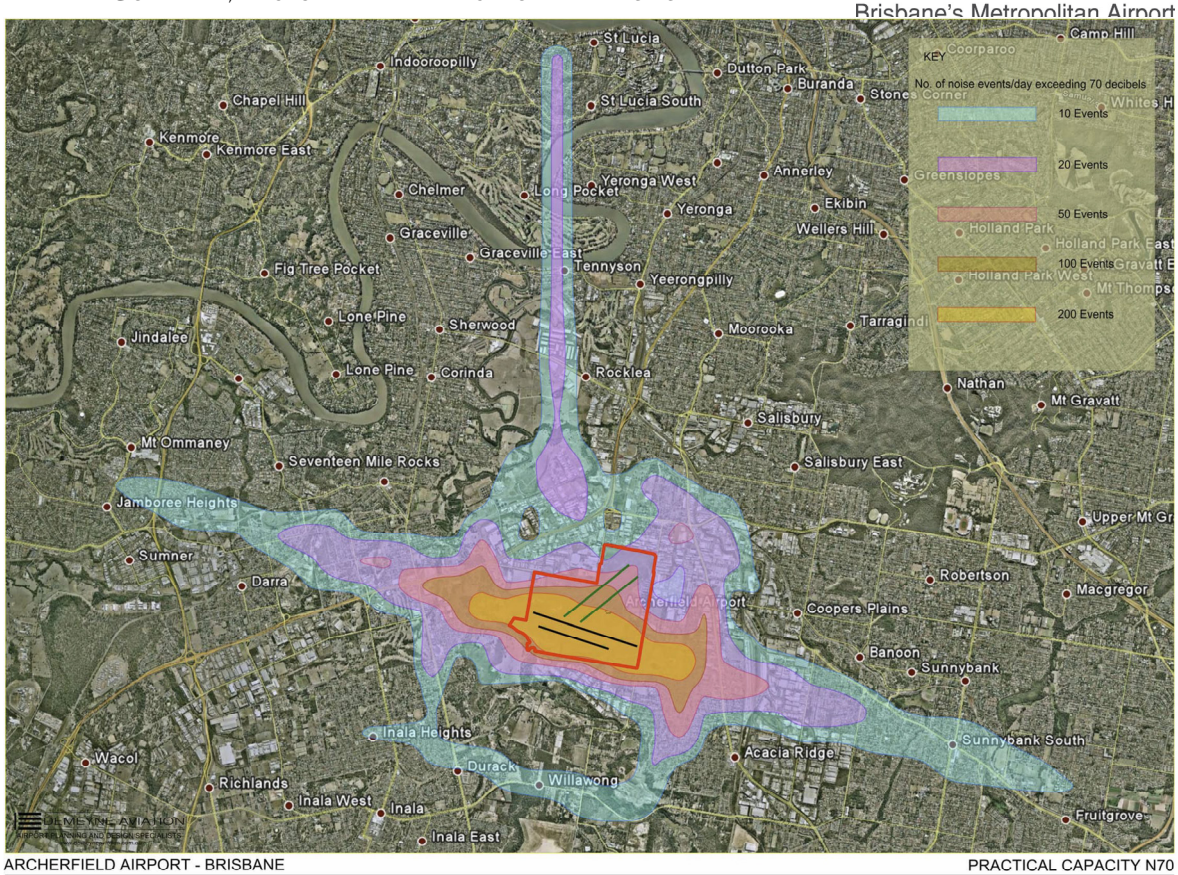
9.5 N70 MODELLING

To assist with interpreting potential noise impacts from aircraft, an 'N70' model has also been prepared, for both the existing runway configuration and the realigned secondary runways. These are shown in Figure 15.

The 'N70' mapping shows the predicted average number of noise events per day above 70 dB(A) for a particular location.

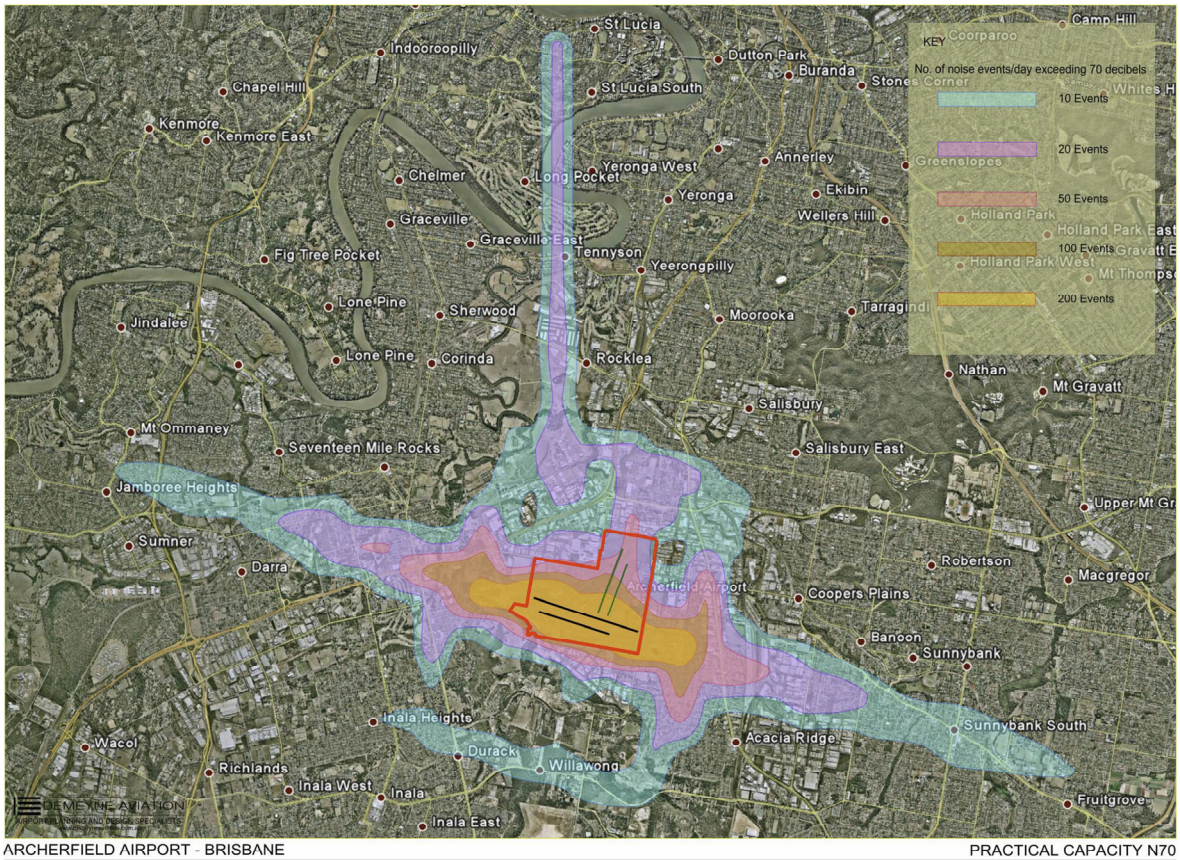
The 70dB(A) level is the industry standard for assessing noise events that are likely to cause interruptions to conversation or with listening to the radio or the television.

Australian Standard AS2021 *Acoustics—Aircraft noise intrusion—Building siting and construction* specifies 60 dB(A) as the indoor design sound level for normal domestic dwellings. External noise will be reduced by approximately 10 dB(A) by the fabric of a house with open windows.



ARCHERFIELD AIRPORT - BRISBANE
PRACTICAL CAPACITY N70
EXISTING RUNWAY CONFIGURATION

1000 0 1000 2000 3000 4000 5000 6000 METRES



ARCHERFIELD AIRPORT - BRISBANE
PRACTICAL CAPACITY N70
PROPOSED RUNWAY CONFIGURATION

1000 0 1000 2000 3000 4000 5000 6000 METRES

Figure 15 **N70 contours**

Typical conversations occur around the 60-65 dB(A) range. Aircraft noise is less likely to be noticeable where background noises are present, for example from domestic air conditioners, nearby traffic, or during winter when windows typically are closed.

N70 modelling shows the expected frequency of noise events in excess of 70dB(A) for:

- the practical capacity with the existing runway configuration; and
- the practical capacity with the proposed realignment of the secondary runways.

The mapping shows the number of times in any 24 hour period that noise in excess of 70 dB(A) is expected to occur.

In addition, any aircraft flights conducted at night-time (7pm to 7am) are assigned a four-fold increase in noise levels within the design of the ANEF. This ensures that noise issues associated with night-time movements are taken into account and given due representation in the final contours.

It is important to note that there will not be any night-time noise associated with the secondary grass runways, as these are not used outside daylight hours. These runways will also not be used by larger aircraft, such as for RPT or freight.

The northern corridor that appears on both N70 maps relates to the helicopter flights (by EMQ) between Archerfield and Brisbane CBD.

Potential changes to noise patterns and other aspects of the proposed realignment of the secondary grass runways will however be further examined when a Major Development Plan is prepared for this project.

The MDP process will include additional investigations and design, and further consultation with potentially affected stakeholders, as discussed in section 14.7.1.

Further discussion regarding the benefits associated with the realignment can be found in section 14.7.6.

9.6 OTHER NOISE SOURCES

Noise from an airport (other than discussed above) may be caused by a number of activities.

Issues that have been addressed in the AES include:

- ground running of aircraft;
- noise from aircraft parked near buildings;
- operation of engine test cells;
- construction operations; and

- road traffic movements.

These may affect the area immediately surrounding the airport.

9.7 MANAGEMENT

Current and proposed noise management initiatives and procedures adopted by AAC are discussed in the AES.

Initiatives that AAC will take associated with airport noise issues include:

- working with AsA to identify and implement solutions to any noise complaints, where these relate to AAC's areas of direct responsibility as airport operator;
- directing ground running aircraft and testing activities to appropriate locations to minimise potential impact on surrounding areas;
- monitoring and reviewing airport facilities with the view to minimising the noise impact on the community;
- ensuring if a significant issue arises that appropriate consultation processes are put in place to resolve the issue;
- working with BCC and other relevant government agencies to ensure that structures built near the airport have taken noise into consideration and that off airport land is appropriately zoned, consistent with the noise exposure anticipated around the airport; and
- assisting neighbouring landholders with advice on airport operations, and in particular, options for minimising potential noise impacts on the use or development of their land.

10 Transport and access

10.1 OVERVIEW

The airport is highly accessible to ground transport, including roads and the passenger and goods rail network (Figure 3).

It is within 500 m of the Ipswich Motorway (to the west and north west) which is part of the national highway network and connects to Brisbane City, and to Ipswich (and ultimately to Sydney and beyond).

The airport is also approximately 1.6 km from the National Rail main rail freight terminus at Acacia Ridge, on the Brisbane to Sydney line.

10.2 DISTRICT AND REGIONAL ROAD NETWORK

The regional road system comprises Beaudesert Road (to the east), Granard/Riawena Roads, and Ipswich Motorway.

Granard Road and Ipswich Motorway are part of the National Highway system. These highway corridors are of national strategic importance and are funded by the Commonwealth Government.

The regional road system provides linkages north to Brisbane via South East Freeway or Gateway Motorway, south east to the Gold Coast via the Pacific Highway or inland to Sydney via Ipswich.

The airport has direct access to Barton Street, Mortimer, Beatty, Balham, Ashover, and Boundary Roads, all of which are important local collector and distributor roads within the Archerfield/Acacia Ridge/Rocklea district. These roads in turn feed to the main regional road network.

On the east side of the airport, Kerry Road provides an additional direct route east to Beaudesert Road.

The National Freight rail yards are on the east side of Beaudesert Road, and there is an existing main truck access point off the eastern end of Kerry Road.

10.2.1 Network traffic volumes and distribution

Roads adjoining the airport carry high traffic volumes.

BCC traffic counts show the following two-way volumes over 24 hours on a weekday.

Table 4: 24 hour traffic volumes on surrounding road network

Location	Total vehicles (both directions) 2005
Beaudesert Road (at Mortimer Road)	29,638
Granard Road (at Beaudesert Road)	36,599
Mortimer Road east of Beatty Road	12,500
Kerry Road east of Beatty Road	9,700
Beatty Road	16,960
Ashover/Boundary Road (west of airport)	4,190
Boundary Road at Beatty Road (east of airport)	8,750

The road system serving the local industrial and nearby residential areas has developed around the airport and the natural feature of the Oxley Creek.

The airport is roughly in the middle of a triangle bounded by Beaudesert Road, Granard Road, the Ipswich Motorway and the Oxley Creek.

Land used for the creation of the Barton Street link between Beatty Road and Balham Road was gifted by AAC to BCC with Commonwealth approval. The road link has provided significant improvements to east-west connectivity in the vicinity of the northern part of the airport. This project was implemented with the involvement of AAC, BCC, the State Department of Transport and Main Roads and the Commonwealth (as owner of the land required for the road).

This has been beneficial to traffic movements through the Archerfield area, particularly in providing some relief to the heavily congested Granard Road. It has also provided additional options for access to Ipswich Motorway. East-west traffic now has the option of accessing the motorway at either Boundary Road (to the west of the airport) or at Granard Road (to the north-west).

Whilst this improvement is welcome, there are other existing shortcomings in the surrounding road network that AAC would like to see addressed.

Beatty Road in particular is carrying high traffic volumes. The current road configuration (including the road cross section and intersection treatments) is inadequate and raises concerns about safety and efficiency particularly with regard to access to the airport and other properties along Beatty Road.

Further discussion about surrounding roads and ground access is provided in section 14.8.

10.3 PUBLIC TRANSPORT

The airport is served by a number of bus routes including:

- the 110 and 115 CityXpress bus services which run from Sunnybank Hills and Forest Lake via Salisbury Train Station to the City;

- the 122 service that runs from Inala to Garden City Shopping Centre via Coopers Plains Train station and Griffith University; and
- the 117 service which runs from Acacia Ridge to the City.

The Beenleigh Rail Line passes approximately 2km to the north east and east of Archerfield Airport, and the closest stations are at Salisbury and Coopers Plains. This rail provides access to the Gold Coast, Brisbane CBD and to Brisbane Airport (via the regular Airtrain service).

There is an existing bus stop on Beatty Road, adjacent to the main airport entry at Grenier Drive.

Depending on the needs of workers and visitors to the airport, passenger numbers, and the operational requirements of the bus operators, there may be scope for these routes to be extended into the airport.

AAC will consider any feasible proposals for this, and will take into account bus access requirements in the design of new roads on the airport.

10.4 PEDESTRIAN AND CYCLE NETWORK

The *Acacia Ridge/Archerfield Neighbourhood Plan* includes in Map C to the Plan, details of the priority cycle routes in the vicinity of the airport.

The plan identifies Boundary Road (east of the airport) and Mortimer Road as 'local desirable cycle routes' and indicates that Beatty Road provides for localised north-south access of the western ends of these roads. It does not however show Beatty Road as a north-south cycle route.

In the area to the west and north of the airport, the Neighbourhood Plan shows Ipswich Motorway and Granard Road as cycle routes. These are part of the SEQ cycle plan. No other routes are shown to the north or west of the airport. District and local connections would therefore be carried on the existing road network.

The east-west routes along Boundary Road and Mortimer Road will facilitate pedestrian and cycle movement through the Archerfield and Acacia Ridge neighbourhood, and have the potential to also provide links to Coopers Plains railway station, 2km to the east.

AAC has identified with BCC the opportunity to encourage pedestrian and cycle access to and within the airport.

AAC has considered options for extending this network to the airport. The runway complex and airside areas provide a constraint to north-south or east-west connections through the middle of the airport site. Security, topographic features, stormwater and flood management, environment conservation and runway protection issues make it impractical to provide a link along the Oxley Creek.

There is however the opportunity to incorporate pedestrian and cycle access along the upgraded road network planned around the airport perimeter and

within each precinct. These opportunities have been highlighted in the Precinct Structure Plans in Chapter 12.

Subject to further assessment and discussion with BCC, pedestrian/cycle paths will be provided for along Balham Road/Barton Street and Ashover/Boundary roads when these are upgraded to cater for the development of adjacent airport precincts.

It is also intended that the new roads in the Barton, Ashover and Boundary precincts will include cycle lanes in accordance with BCC standards. Cyclists will also be able to travel along Beaufighter Avenue, to the tenancies in the Beaufighter precinct.

10.5 RAIL FREIGHT SERVICES

The national freight line between Brisbane and Sydney runs to the east of the airport. The main rail yards are located at Acacia Ridge, approximately 1.6 km to the east of the airport.

The airport has some freight activities, but these are not a significant component of the airport business. There is potential for this to grow. The location, flat topography and good road access available to the airport provide opportunities for development of freight storage, handling and distribution facilities.

10.6 INTERNAL ROAD ACCESS

The existing road network on the airport is shown in Figure 4 *Existing airport layout*.

These roads include:

- Beaufighter Avenue, which extends south from Boundary Road and then south east into the middle of the Beaufighter precinct;
- Wirraway Avenue, which provides access to the Wirraway aviation precinct (which includes the new corporate hangars and the EMQ facility) and the south side of the Boundary Road Precinct;
- Lores Bonney Drive, which extends west from Mortimer Road to the control tower and also provides access to the tenancies in the eastern part of the Beaufighter precinct;
- Grenier Drive, which forms a loop road off Beatty Road, just south of the intersection with Kerry Road, and gives access to the airport terminal building and the main car parking area, in addition to Gods Acre Cemetery and the range of tenancies in this part of the airport; and
- service roads along the west side of Beatty Road, both to the north and south of Grenier Drive. The service roads provide frontage access to the tenancies along Beatty Road and contain substantial areas of indented car parking.

The main internal roads are constructed and sealed and provide all-weather access to the airport facilities, tenancies and parking and loading areas.

10.7 CAR PARKING

The airport currently has six main on site car parking areas.

These are:

- the long-term carpark (approximately 56 cars);
- on the Royal Queensland Aero Club leasehold (68 spaces);
- in the south east part of the site, accessed off Mortimer Road, (approximately 30 cars behind the former Queensland Emergency Services hangar);
- adjacent to Buildings 612 and 618 (approximately 24 cars);
- between the Airport Terminal building and God's Acre cemetery (approximately 110 cars); and
- 'on street' parking, particularly in the service road parallel to Beatty Road (which currently has indented bays for about 125 cars, and room for additional parking if necessary).

Notwithstanding the above facilities, irregular parking on footpaths and public areas occurs. This matter is currently being reviewed and options to regularise this are being considered including the introduction of paid parking.

10.8 FUTURE REQUIREMENTS

10.8.1 Future requirements for regional road access

The sustainable growth of the airport is reliant on there being direct, safe and efficient road access to the site.

AAC will continue to work with the State and Commonwealth to encourage improvements to the regional road network to enhance the accessibility of the airport.

10.8.2 Future requirements for district road network

The airport master planning process, investigations underway by the State Department of Transport and Main Roads and the recent review of the Acacia Ridge/Archerfield Neighbourhood Plan (by Brisbane City Council) have provided an opportunity for government, AAC and others to identify potential solutions to current network limitations.

AAC anticipates that based on existing traffic Beatty Road will need to be widened in the short term, and that improvements will need to be made to the intersections at Boundary Road, Kerry Road and Mortimer Road.

With this in mind, AAC has commenced discussions with Brisbane City Council to identify how this can be achieved in a timely and equitable manner.

In terms of the potential land requirements, AAC will ensure that any necessary road widening is taken into account in the more detailed planning to be undertaken for the precincts along Beatty Road. Opportunities for this have been identified in the *Beatty and Mortimer Precinct Structure Plan*, and the *Barton Precinct Structure Plan*, and are discussed in Chapter 12.

Upgrading of Beatty Road

Beatty Road adjacent to Archerfield Airport is an undivided two-way road. The road pavement width varies along its length, and some sections have kerb and channel, while others have gravel shoulders.

Qantas Avenue has been developed along the Beatty Road frontage of the airport, adjacent to the more intensively developed areas. It functions as a service road and provides flexible access to AAC land. It allows for development to face to Beatty Road without constraining property access, congesting the main thoroughfare with parked vehicles or causing traffic safety problems. It also caters for a large number of on site car parking spaces.

The adjacent industrial area on the east side of Beatty Road is now largely developed and Beatty Road is well used by local and district traffic making its way through the Archerfield area.

The road carries high volumes of traffic, and at peak times airport users and visitors experience difficulty in gaining access to the site.

With this in mind, AAC is planning for reconfiguration of the main entry to the Airport Terminal and Archerfield Square, off Beatty Road.

AAC has assembled land opposite Kerry Road with the intention of creating a new entry to the north of the existing access at Grenier Drive (northern leg). At this stage it is envisaged as being aligned with the signalised intersection at Kerry Road (Figure 19). The final feasibility of this will be resolved through further design, in conjunction with BCC.

BCC has identified a key opportunity for Beatty Road to be upgraded to cater for existing and projected traffic through widening and intersection improvements.

Issues to be resolved include:

- determining the appropriate design of the upgraded road, to cater for current traffic and the ultimate development envisaged for the airport and surrounding areas;
- ensuring appropriate access to each of the airport precincts that are adjacent to or accessed from Beatty Road; and
- equitable funding of land acquisition and road construction.

As a key landholder in the locality, AAC will participate in any properly convened process to progress this upgrading to an equitable solution.

Potential east-west arterial link

In recent discussions with the State DTMR, the possibility of creating an arterial road linking Boundary Road across the airport has been raised. This was shown in past master plans, but was removed from this plan as it was not reflected in the recently completed *Acacia Ridge/Archerfield Neighbourhood Plan* (BCC 2010), and had not been proposed by either BCC or State Government in any of the forums convened to discuss the emerging 2011-2031 plan.

AAC is cognisant of the social responsibilities entrusted to it by the Commonwealth. The Corporation will consider all reasonable proposals to improve surrounding roads for the benefit of the total community so long as they do not significantly disadvantage the airport itself or the community it serves.

As DTMR has suggested, if a link was to be created, it would need to be through means of a tunnel, to allow for the continued operation of the cross wind runways and other aviation facilities.

There are significant issues to be addressed before this idea could be considered by AAC to be credible and feasible.

Of particular importance is ensuring that the link does not have deleterious effects on the operational aspects of the airport and in particular the grass runways. Factors that will require consideration will include the intended scale and alignment of the link, the proposed location of portals, impacts on AAC land, implications for existing tenants, and for proposed developments.

AAC will continue with the preliminary discussions with DTMR and BCC, and should the preliminary issues be resolvable, the project can progress to consideration of potential routes (and the assessment of these), and clarification of the range of consequential issues that will determine the feasibility of this idea.

10.8.3 Improvements for access to new airport developments

AAC also recognises that there may be a need to upgrade access points to roads servicing the airport to cater for increased traffic generated by developments proposed on the airport.

The Master Plan includes structure plans for the airport development precincts. These plans include concepts for the provision of new and upgraded access to the airport from the surrounding road network. The detailed design of these proposed works will be resolved in consultation with BCC and other relevant authorities.

Where there is a direct link between an AAC development proposal and the need for adjacent road upgrades, AAC will negotiate an appropriate

contribution towards the improvement works. This contribution could include the setting aside of land required for road widening and intersection upgrades, subject to the agreement of the Commonwealth.

AAC anticipates entering into an agreement with BCC, setting out the protocols for assessing any development infrastructure requirements on a precinct by precinct basis, and the calculation of any development contributions that might be warranted.

10.8.4 Internal roads

The existing internal roads provide appropriate access to existing tenancies, and have the capacity to cater for planned development in the majority of precincts (or can be extended to do this).

At this stage the primary focus is on addressing with BCC the existing limited capacity of Beatty Road to safely and efficiently carry through traffic past the airport, problems with access to the airport from Beatty Road, and on ensuring that appropriate provision is made for road access to the airport precincts.

The Master Plan shows conceptually the opportunities for widening Beatty Road and providing improved access to the airport. The precinct plans also show opportunities for safe and efficient access to the developing areas of the airport, from the surrounding road network.

AAC will continue to work with BCC, the State Government and the Commonwealth, to identify and implement appropriate road and site access improvements.

The more detailed design of road access requirements for each development precinct on the airport will be resolved in consultation with BCC. This will be undertaken as part of a precinct structure planning process as each area is nearer to being developed.

10.8.5 Car parking

Future development will need to include appropriate provision for car parking for staff and visitors. Options including the scope for shared car parking facilities will be explored in any future developments.

Consideration will need to be given to additional long-term car parking should RPT services be introduced to the airport. The location and scale of this will be resolved when there is a commitment to a RPT operation, and the operating requirements are able to be confirmed.

10.8.6 Improvements to pedestrian and cycle access

AAC welcomes the proposals for improved pedestrian and cycle movement that BCC has included in the *Acacia Ridge/Archerfield Neighbourhood Plan* and will encourage BCC to develop these as part of an integrated access plan for the neighbourhood.

To supplement these initiatives and encourage safe and efficient access to the airport by visitors and workers, AAC has identified opportunities to incorporate pedestrian and cycle paths along sections of the perimeter roads, and along key roads planned within each development precinct.

AAC will ensure that appropriate pedestrian and cycle paths are incorporated in the developments envisaged in the Master Plan. These routes are shown diagrammatically in the Precinct Structure Plans. The details of these will be resolved in consultation with BCC as the plans for each precinct are further developed.

Pedestrian and cycle paths and bicycle parking facilities will be incorporated where appropriate into new development on the airport.

11 Services infrastructure

11.1 STORMWATER DRAINAGE

11.1.1 Catchment context

The airport is located in the middle to lower reaches of the Oxley Creek catchment, just upstream of the confluence of Oxley Creek and Blunder Creek. Oxley Creek discharges ultimately to Brisbane River.

The middle and lower reaches of the Oxley Creek catchment are highly urbanised. Stormwater management on the airport site needs to avoid causing detriment to water quality or flood conditions in Oxley Creek.

The airport location relative to the Brisbane River is shown diagrammatically in Figure 1. The location of Oxley and Blunder Creeks, and the alignments of the main drainage outfalls from the airport to these waterways are shown in Figure 2 *Airport context* and the *Site drainage* drawing (Figure 15).

11.1.2 Site sub catchments

Surface water runoff from the airport falls generally into one of six main sub catchments and these are shown in Figure 15.

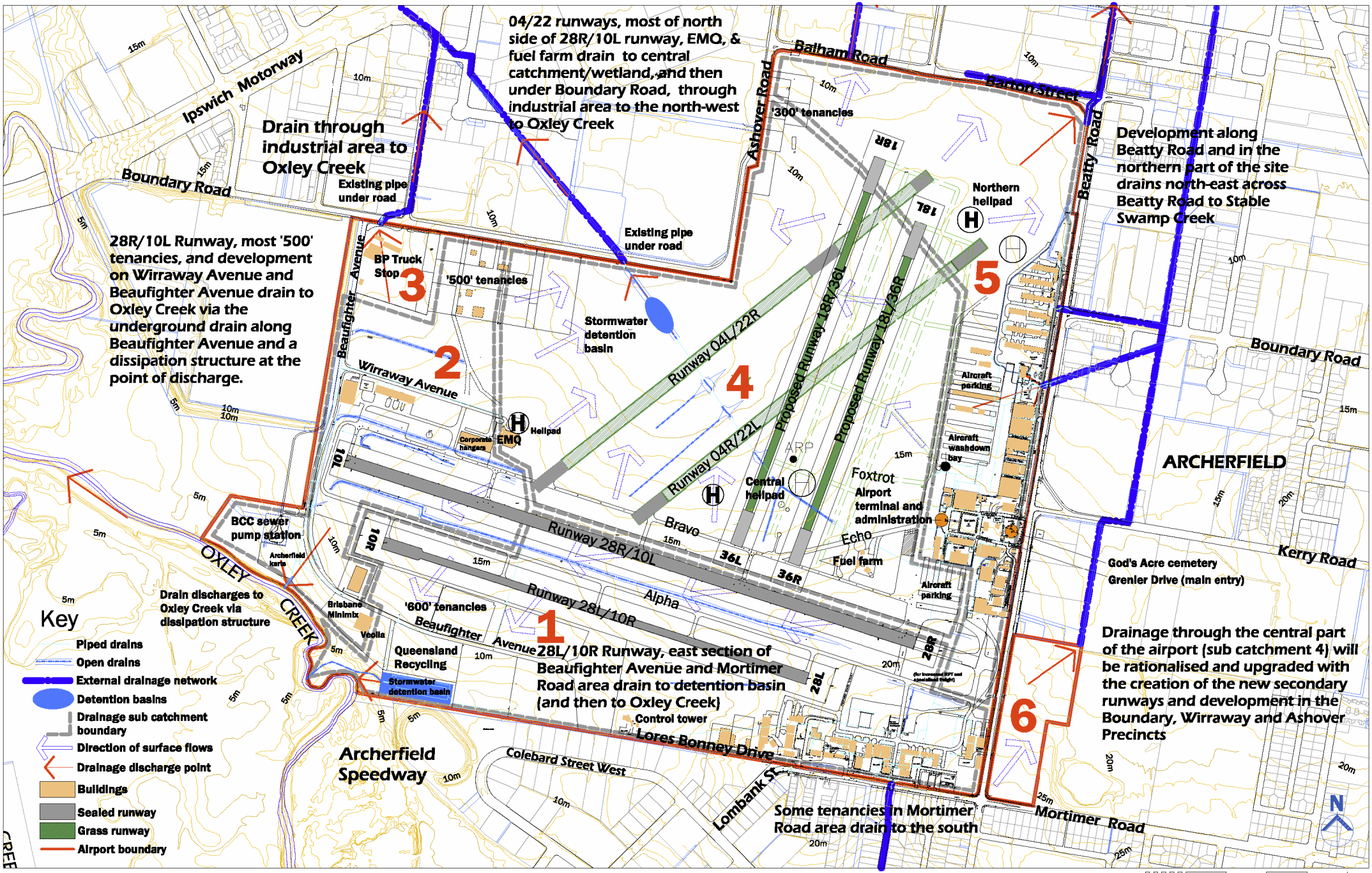
The boundaries of the sub catchments are diagrammatic, as there are few clearly defined watersheds across the site. In some cases, drainage infrastructure has been constructed such that stormwater flows will cross between the sub catchments as currently shown.

All surface water from the airport is discharged ultimately to Oxley Creek, and from there flows to Brisbane River and Moreton Bay. The northern and eastern part of the airport drains to Stable Swamp Creek (to the north) which enters Oxley Creek on the north side of the Rocklea industrial area.

1: Southern sub catchment

This sub catchment includes:

- grassed areas;
- sealed Runway 28L/10R and taxiways;
- hangars and businesses;
- open storage; and
- the control tower.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 16 **Site drainage**

PlannedFX
Planning Environment Strategy Design

This stormwater drains to the main detention basin that is located between the Queensland Recycling facility and the neighbouring Archerfield Speedway. The detention basin then discharges to Oxley Creek.

A small part of this sub catchment (fronting Mortimer Road) drains south under Mortimer Road, and through the neighbouring industrial area to Oxley Creek. This drain collects water from the eastern end of Lores Bonney Drive, and from the adjacent tenancies.

2: Beaufighter Avenue and Wirraway Avenue sub catchment

This sub catchment includes:

- the western end of the 28R/10L runway and associated taxiways;
- the majority of the '500' tenancies on Boundary Road;
- development along Wirraway Avenue; and
- development along Beaufighter Avenue, generally west and north of Queensland Recycling.

Stormwater in this sub catchment is conveyed via a piped drainage system along Beaufighter Avenue to a concrete end wall and dissipation structure prior to entering Oxley Creek.

3: BP Truckstop

Stormwater from the BP Truck Stop site on the corner of Beaufighter Avenue and Boundary Road discharges to a drain at Boundary Road that runs north through the Rocklea industrial area before joining to the main drain to Oxley Creek.

4: Central sub catchment

This sub catchment comprises the grassed areas associated with the 04/22 runway complex, most of the northern half of the 28R/10L runway, the fuel farms, and aircraft parking positions.

The majority of storm water in this sub catchment is collected by an on airport drainage system that falls north-west under the 04/22 runways to a detention basin, and then passes under Boundary Road. From there the drainage runs through the neighbouring industrial area, under the Ipswich Motorway to Oxley Creek.

5: Eastern sub catchment

The fifth catchment on airport is the eastern and north eastern area fronting Beatty Road and Barton Street.

The stormwater run-off from this area enters the Brisbane City Council drains that run parallel with Beatty Road. At three locations along Beatty Road there

are drains under the road that take stormwater to the east and then north to Stable Swamp Creek.

This part of the sub catchment is reasonably intensively developed, with extensive impervious areas (building roofs, roads, sealed aircraft parking, and manoeuvring areas).

The balance of the sub catchment has at present less impervious surfaces. Stormwater from development planned for this area could potentially discharge to points on Barton Street and Balham Road (subject to design investigation, and approval by BCC).

6: Beatty Road South

The vacant airport land on the north-east corner of Beatty Road and Mortimer Road drains to the north-east. It discharges to the main drainage line that runs parallel to Beatty Road, to Stable Swamp Creek, and then to Oxley Creek.

11.1.3 Future requirements

The recent substantial drainage works in the south western part of the airport have been implemented to cater for the scale of development envisaged for the Beaufighter precinct, and the western half of the Boundary Road precinct.

Drainage works have also been implemented along the drainage line that runs diagonally through the central aviation area, under the existing 04/22 runway complex and through the eastern part of the Boundary Road precinct and the Balham Road precinct. These works have included piping of sections of the drain (adjacent to the runways) and the creation of a stormwater detention basin near Boundary Road.

Specific drainage requirements of any new development will be assessed at the development planning stage, prior to approval being given.

Issues to be addressed in the precinct plans and in approvals for individual developments will include:

- ensuring that there is adequate capacity in drainage facilities to cater for peak flows following storm events, without causing unacceptably high storm flows in downstream areas off airport;
- ensuring that there is appropriate provision for protecting water quality in downstream areas (and the Oxley Creek/Blunder Creek system in particular), from potential sources of pollution including sediment laden runoff, or runoff from areas that could hold contaminated material such as oil or grease; and
- providing appropriate spill control procedures to ensure that in the case of a spill incident, discharges off site can be intercepted.

For the 'greenfield' development precincts, AAC will monitor the adequacy of its overall drainage concept for each precinct. It will ensure that main drainage paths through each precinct are protected, and identify in each

instance the location and function of any additional stormwater detention, water quality or spill interception facilities.

The plans for the eastern half of the Boundary precinct and the eastern end of the Wirraway precinct will require some reconfiguration (and possibly augmentation) of the existing central drainage works. This will be addressed with BCC as part of the detailed planning for these precincts.

The specific drainage requirements for the proposed realigned secondary runways will be determined during the further, detailed design of the runways. The drainage design will be evaluated in consultation with BCC and other stakeholders over the course of the assessment of the Major Development Plan for these works.

During construction of developments, actions will be taken to manage construction activities to avoid discharging sediment or other pollutants to the Oxley Creek. These matters will be addressed in *Environment Management Plans* prepared in accordance with the Airport Environment Strategy.

11.2 SEWER

The airport is serviced with reticulated sewer and is connected to the metropolitan network (including for trade waste).

BCC has a sewer pump station in the south-west corner of the airport, adjacent to Oxley Creek. This services the majority of the site.

At this stage the undeveloped area along Ashover Road and Balham Road in the north-west corner of the airport is not sewered. Due to topography, this area appears to fall into a different sewer catchment from the balance of the airport.

Liquid waste is managed and disposed of in accordance with Trade Waste requirements.

Future requirements

Sewerage requirements will be resolved with Brisbane City Council for each development, having regard also to the ultimate scale and distribution of development envisaged in the Master Plan.

The specific requirements for the currently unsewered area in the north-west part of the airport will be resolved in conjunction with BCC prior to any development requiring sewer connections.

Trade waste requirements are addressed in the AES, and in EMPs for new developments that require these services.

11.3 ELECTRICITY

The airport is connected to the Brisbane grid. Electricity is supplied directly to the airport substations, and the airport distributes the electricity to tenants on serviced sites.

Infrastructure includes:

- a 500 kVA transformer substation at the BP Truckstop on Boundary Road;
- a 300 kVA transformer serving developments in Wirraway Avenue;
- a 500 kVA transformer substation at the Veolia Environmental Services site, serving developments in Beaufighter Avenue;
- a 300 kVA supply to the BCC sewage pump station near the Oxley Creek;
- a 200 kVA and a 300 kVA transformer in the south east of the site, near Mortimer Road;
- a 300 kVA transformer at the fuel farm;
- a 750 kVA substation and a 75 kVA diesel powered standby generator (for essential power only) to the east of the Airport Terminal building; and
- a 200 kVA substation serving the tenants on Beatty Road, opposite Boundary Road (on the east side of the airport).

Future requirements

Electricity services to the airport will be extended progressively to cater for developments highlighted in the Master Plan.

Energex has advised that in order to cater for the proposed increase in industrial density in the area, a substation will be required. The provision of this will be resolved with Energex when required.

The Airport Building Controller (ABC) will require certification of compliance by the electrical services engineer or contractor responsible for additions or modifications to the tenant's electricity services (within their individual tenancy) when the ABC is involved in sign off of a development application.

11.4 TELECOMMUNICATION SERVICES

Telstra provides telecommunications to the airport, and the reticulation is the responsibility of AAC. There are no known capacity constraints that would impede the progressive implementation of development of the airport.

Future requirements

Telecommunications infrastructure will progressively be upgraded to meet the needs of airport developments.

11.5 GAS

There is no reticulated gas supply at Archerfield Airport.

11.6 WATER SUPPLY

Brisbane City Council supplies water to fixed points on the boundary of the airport. AAC then distributes it via an infrastructure network that it owns and maintains.

Future requirements

Water supply requirements for developments will be planned and provided in consultation with Brisbane City Council.

11.7 SUSTAINABLE USE OF NATURAL RESOURCES AND ENERGY

Efficient use of energy and water at Archerfield will become increasingly important in coming years.

Water scarcity is expected to be more prevalent due to climate change and increasing demand for water to serve population and economic growth in South-East Queensland.

Energy usage will also become a significant issue, from the perspectives of cost, and carbon emissions in particular.

Future requirements

AAC is committed to:

- achieving best practice efficiencies in water and energy use in new enterprises;
- promoting the use of renewable energy (including on site generation where feasible); and
- encouraging progressive improvements in existing AAC operations and tenancies.

The unmetered extraction of potable water from fire mains for grass runway watering ceased immediately after privatisation. Subsequently the practice by some tenants of tapping into fire mains to wash aircraft and clean hangar floors has been stopped.

A water basin within a natural flow path through the central section of the airport has been created, and water is now harvested from this source for all airport maintenance and construction activity.

An irregularity with aircraft wash-down bays was also identified after privatisation. Residue from each of the two bays drained directly to stormwater. A central aircraft wash down facility was equipped with triple

interceptor diversion to sewer, and all aircraft washing activity is now conducted at this service point.

In 2008 AAC commissioned a *Water Efficiency Management Plan* (WEMP) for the airport. The WEMP included a detailed assessment of past and existing water usage, and identified opportunities for more efficient use of water.

AAC has subsequently implemented a range of works to reduce potable water consumption including installation of water efficient fittings in its own facilities; and provision of rainwater tanks in the new developments it has undertaken including the corporate hangar complex and the office and warehouse on Beaufighter Avenue.

AAC will work with existing and new tenants to achieve greater efficiencies in the use of natural resources where practicable.

The provisions for this are addressed in the AES and in the airport Environmental Management Procedures.

12 Airport developments

12.1 GENERAL

This section of the Master Plan describes the planning approach and proposed developments. Building on the vision described in Chapter 2 (and illustrated in Figure 2), it sets out:

- AAC's airport development objectives;
- the land use zones for the airport;
- The eight airport precincts, and the development and use focus for each;
- airside improvement projects for the Runway, Wirraway, Mortimer, and Beatty precincts, including the proposed reconfiguration of the 04/22 runways to provide for improved useability of the runways and the surrounding land, and longer term plans for further enhancement of the 28/10 runways;
- the use and development parameters for each of the other four development precincts; and
- infrastructure provision required to support these initiatives, and proposals for improvements to ground access.

Precinct Structure Plans have been prepared for each part of the airport. These illustrate how the Master Plan vision could be achieved, and how the plans can be integrated with other proposals on, and off the airport.

12.2 DEVELOPMENT OBJECTIVES

AAC has set the following overarching objectives for development of the airport:

- to nurture, maintain and where necessary expand airport capacity;
- to establish a complementary balance between aviation, industrial and related developments;
- to enhance, promote and support the aviation image of the airport;
- to achieve best practice with significant developments;
- to be a good neighbour;

- to complement key objectives identified by State and Local Government authorities;
- to work with government and the local community to achieve the ecologically sustainable development of airport land;
- to identify and attract significant developments for aeronautical sites; and
- to attract significant industrial and related developments for identified non aeronautical sites.

12.3 LAND USE ZONES

Figure 16—*Airport Land Use Zoning Plan* shows the five land use zones (termed 'Areas' under the Brisbane City Plan) proposed for the airport to the Year 2031.

The provisions for each of the 'Areas' is generally consistent with the Brisbane City Plan.

The following is additional commentary to outline the specific requirements or proposals for each Area.

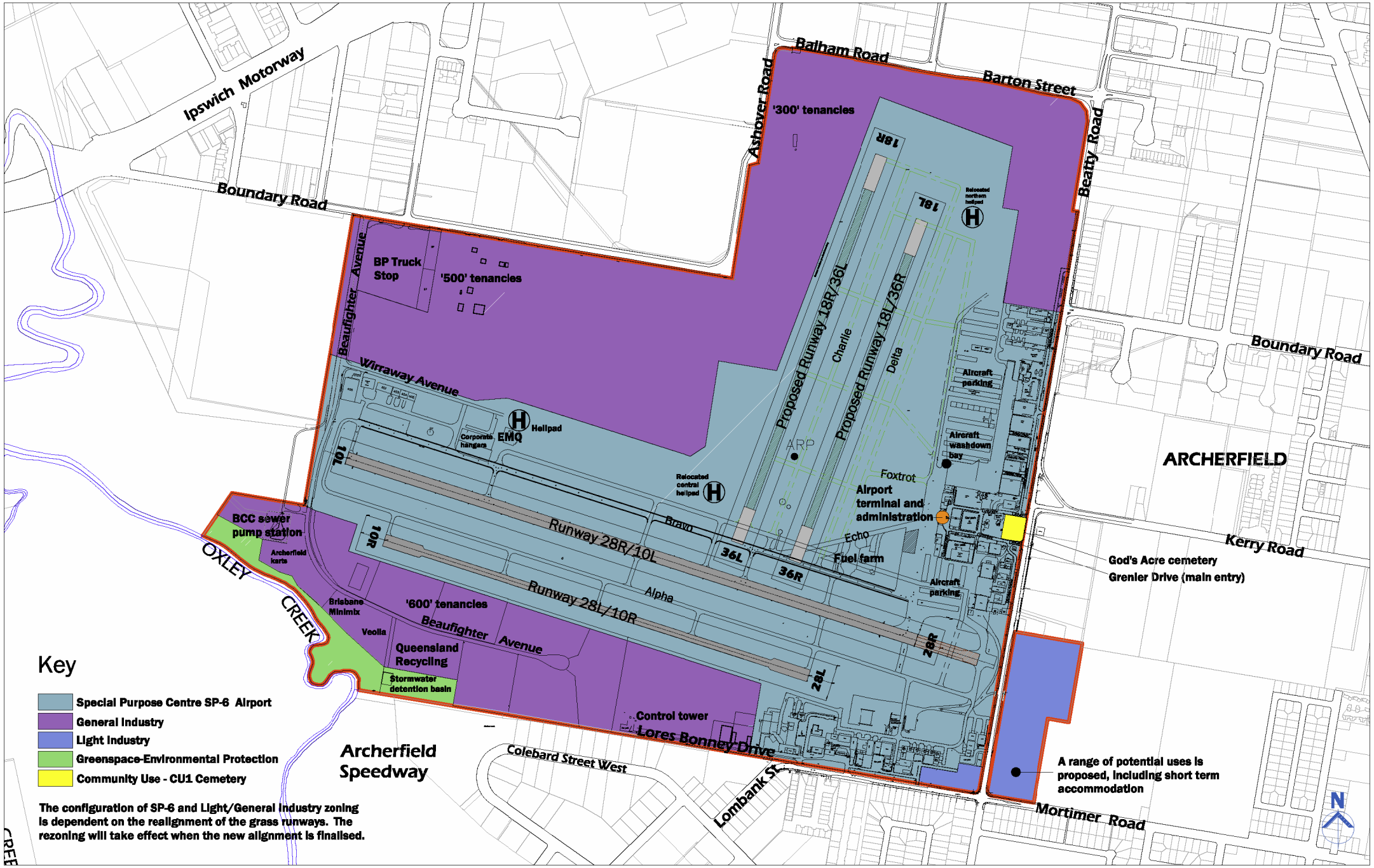
12.3.1 Special Purpose Centre SP-6 Airport

This designation applies to the airside and related parts of the airport, and extends east to Beatty Road and south to Mortimer Road.

The principal purpose of this zone is to provide facilities for the safe and efficient operation of the airport. In designated aviation movement areas (focused on the runways, taxiways and other airside facilities) there may be supporting infrastructure such as fuel storage, navigation aids and air traffic control facilities provided.

Within this zone the following aviation and related industries and services are expected:

- flying school operations;
- RPT and charter operators;
- high technology aviation industries;
- aircraft servicing, maintenance and development enterprises;
- fuel services;
- hangars;
- campus or motel style accommodation for flying training;
- aviation sales and services;
- aircraft manufacturing and assembly;



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 17 **Airport land use zoning**

PlannedFX
Planning Environment Strategy Design

- convenience retailing and supporting services;
- aircraft parking; and
- supporting car parking and service vehicle areas.

Accommodation will be segregated from industrial activities both on and off airport, and will support the flying schools and other training and emergency services uses.

Land within this zone will be available for interim uses when not required for aviation activities. Uses may include those similar to those in the General Industry and Light Industry zones.

Assuming similar terms and conditions with any non-aviation related proposals, priority will be given to aviation related tenancies when leases expire within this zone.

12.3.2 General Industry Area

Archerfield Airport includes more than 75 hectares of land that is not required in the long term for airside or aviation purposes.

AAC will facilitate the progressive development of this land for complementary aviation uses, industrial and related commercial uses, educational, recreational or other activities appropriate to the location and site characteristics, in accordance with AAC's vision for Archerfield.

This area will facilitate the development of a range of facilities and industries with particular emphasis placed on developments associated with:

- aviation industry;
- transport industry;
- manufacturing industry;
- industries and other uses (recycling etc) requiring buffer distances to more sensitive uses (such as residential);
- major warehousing and storage;
- accommodation services;
- small industrial units;
- high technology industries including aviation developments;
- commercial and retail uses required to support the airport uses, and land use in the surrounding area;
- aviation and related education and training; and
- recreation, leisure and tourism.

The location of the airport, the mix of land uses on airport, and the opportunities provided by the scale and style of development envisaged in the Master Plan point to an opportunity to also develop some commercial and retailing facilities.

AAC sees these as including:

- convenience retail and food shops for airport visitors and personnel;
- factory outlets for discontinued stock, product seconds and other items not normally available in retail stores;
- direct sales from businesses locating on airport due to their aeronautical, technical, engineering, research or development focus;
- businesses selling aircraft, heavy machinery, motor vehicles, boats, timber or other building materials; and
- other like facilities.

It is envisaged that such activities will be provided either in open sites, or in large industrial/warehouse 'shells' and/or smaller premises appropriate to the type of goods sold.

These retailing uses will be of a type and scale that complements, rather than transforms, the retail hierarchy of the region.

A high standard of building quality and presentation will be required by AAC for any developments of this nature.

12.3.3 Light Industry Area

The land in the south eastern part of the airport is close to residential and open space areas. This area provides a transition between the airport activities and the more sensitive neighbouring uses. The Precinct Structure Plan suggests a range of potential uses for the sections closest to Mortimer Road.

These include the possibility of providing flying student accommodation or other short term accommodation, which whilst it might not be consistent with light industrial zoning in normal circumstances, could be appropriate. This will be resolved when specific plans are prepared for this part of the precinct.

12.3.4 Greenspace-Environmental Protection Area

The 'Greenspace-Environmental Protection' designation has been applied to approximately 4.3 ha of land adjacent to the Oxley Creek.

Due to airport security requirements this area cannot be made accessible to the public. Instead, it will serve as a buffer between the Oxley Creek and the airport developments.

The area contains a major stormwater detention basin constructed by AAC in 2001, and includes vegetation along the banks of the Oxley Creek which will be retained.

The balance of the land has for many years been managed by grazing, and this will continue.

12.3.5 Community Use-CU1 Cemetery

The Brisbane City Plan includes a zone specifically for cemeteries. This can be applied to God's Acre.

12.3.6 Area boundaries

Where there is a boundary between the Special Purpose Centre (Airport) Area and other areas, some flexibility will be exercised where required to cater for appropriate aviation uses and developments.

12.4 AIRPORT PRECINCTS

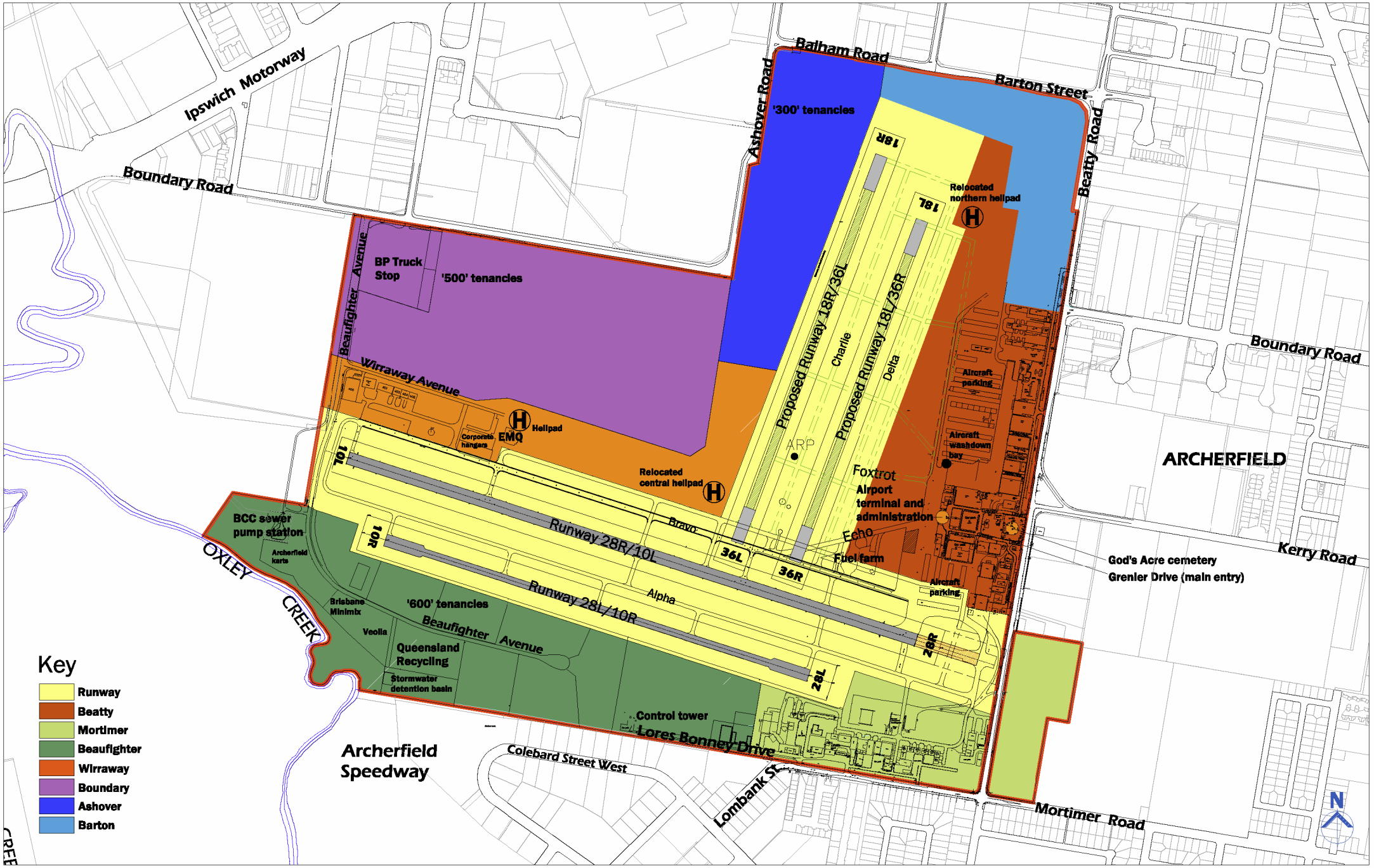
The Master Plan divides the airport into eight precincts as shown in Figure 18.

These precincts are:

- **Runway**—which is all of the land used (or proposed) for runway and primary taxiway purposes.
- **Beatty**—the land generally fronting Beatty Road, between Boundary Road and the main 28/10 runways.
- **Mortimer**-land in the south-east corner of the airport, including the section on the east side of Beatty Road.
- **Beaufighter**- including land along Mortimer Road west to Oxley Creek, and north to the main runway complex.
- **Wirraway**-comprising all of the existing and future aviation land between Wirraway Avenue and the main and secondary runways.
- **Boundary**—located on the south side of Boundary Road, and bordered to the west by Beaufighter Avenue, to the south by Wirraway Avenue, and to the east by the secondary runway complex.
- **Ashover**-all of the land between Ashover Road and the realigned secondary runways, and north of the Wirraway Precinct.
- **Barton**-the land on the corner of Barton Street and Beatty Road.

The primary functions and future plans for each of these precincts are discussed below and are illustrated in the Precinct Structure Plans.

This precinct includes all of the land required for the existing main 28/10 runways and realigned secondary runway complex.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 18 **Development precincts**

PlannedFX
Planning Environment Strategy Design

12.5 RUNWAY PRECINCT

12.5.1 Concept

Runway 28R/10L

In 1996 this runway was reprofiled and resurfaced. On completion of these works and after an engineering assessment the runway was given a PCN rating of 6.

If the current aircraft traffic mix continues to operate this runway is not expected to require resurfacing within the next five years.

The current length and width is considered adequate for present and future requirements, with the exception of sustained increased usage by larger aircraft (for example due to the introduction of RPT, additional larger freight aircraft, or similar changes).

The Master Plan includes plans for lengthening and strengthening this runway, in the event that larger aircraft commence regular operations at Archerfield.

There will also be the probability that the overrun area identified as Alpha 10 will be widened to suit the runway width. There will be the need to update/upgrade the runway lighting in the future with the possible installation of a PAPI system.

Runway 28L/10R

This runway was reprofiled and resurfaced in March 2005. The new surface is of a high quality and is expected to be satisfactory for at least the next 10 years.

Primary Taxiway Bravo

When larger aircraft operate at the airport there is a concern that taxiway Bravo which runs parallel to runway 28R/10L is not wide enough.

Aircraft wishing to avoid using taxiway Bravo conduct a tight 180-degree 'U-turn' at the end of the main runway and then use the runway for taxiing. When larger aircraft do a 'U-turn' the aircraft's nose wheel causes rapid wear to the runway surface.

To improve the functionality of the runway it is therefore envisaged that within the 20 year program of works, taxiway Bravo and connecting taxiways/holding points Bravo 2, Bravo 3, Bravo 4 and Bravo 5 will have the sealed sections strengthened and widened to 15 metres.

Secondary runways

Runways 04L/22R and 04R/22L are grassed and unrated. The runways are only used in dry weather conditions, as they are not useable following wet weather.

It is AAC's intention to progress the proposed realignment of these runways within the next five years to improve the usability of the runway system for flying training in particular. The proposal involves the construction of two new grass runways, aligned to 01/19 (but designated 18/36 to avoid confusion with Brisbane Airport's main runway). One has a planned length of 920m and the other, 1020m. The final length and layout of each runway will be determined in the detailed design to follow, and will be assessed through a Major Development Plan (MDP) process.

The proposed alignment and supporting taxiways is shown in the plans in this report. Further information about the design is provided in the technical studies undertaken for AAC in the development of this Master Plan.

Under the current provisions of the *Airports Act*, the realignment of the secondary runways will be subject to assessment and approval by the Minister via a Major Development Plan. The proposals for the Wirraway and Beatty precincts are dependent on the successful implementation of the realigned secondary runways.

Related developments

The *Master Plan vision* (Figure 2) and the relevant precinct plans show also the following proposals for improved aviation facilities, tied to the realignment of the secondary runways, and growth in aircraft movements:

- the northern and central helipads will be relocated to be compatible with the new runways and taxiway network;
- Taxiway Bravo will be widened to 15 metres (Code C)
- a second parallel taxiway (Code A B, 10.5m wide) will be developed to the north of Taxiway Bravo if required;
- opportunities will be provided for the development of additional aircraft parking and hangarage, responsive to demand;
- Taxiway Hotel will be extended north to link to the new 18L threshold;
- capacity for the development of new hangars will be provided in the north, adjacent to the new northern helipad, and the multipurpose industrial units proposed in the Barton Precinct;
- consideration will be given to the relocation of the fuel farm; and
- additional capacity for new facilities to the east of the existing EMQ hangar will be provided which may be suitable for RPT, corporate or specialised freight.

12.5.2 Visual and non visual navigational aids

It is anticipated that over the next few years Global Positioning Systems (GPS) will become a primary navigational aid for light aircraft operations. A GPS

approach procedure (RNAV (GNSS)) has been prepared for airport operations in anticipation of this expected technological evolution.

This could result in a GPS augmentation system, such as a GBAS ground station being installed at the airport. Some flexibility will need to be exercised in determining the optimum location for such facilities, including outside the Beatty or Runway precincts.

To assist with visual approaches in poor conditions and to improve the quality of aviation facilities provided at the airport consideration will be given to providing a visual slope indicating system (either a Precision Approach Path Indicator (PAPI) or T-VASIS/VASIS, or other) system for the 28R/10L runway. These are important tools to aid pilots during visual flight at medium to short final approach to landing, especially at night.

The installation of a PAPI (or similar system) in combination with expected growth in GPS procedures would improve the accessibility of the airport in poor meteorological conditions. It would also provide to the flying training industry a more marketable product when promoting the airport as the preferred location to learn to fly.

All existing runway and taxiway lighting facilities are subject to cyclical inspection and renewal as required.

Before any new navigation system is introduced at the airport, the Civil Aviation Safety Authority (CASA) must approve the facilities and procedures.

12.6 BEATTY PRECINCT

The Beatty Precinct extends along the Beatty Road frontage of the airport and is bounded by the main runways to the south, the proposed secondary runways to the west, and the Barton Precinct to the north (Figure 19).

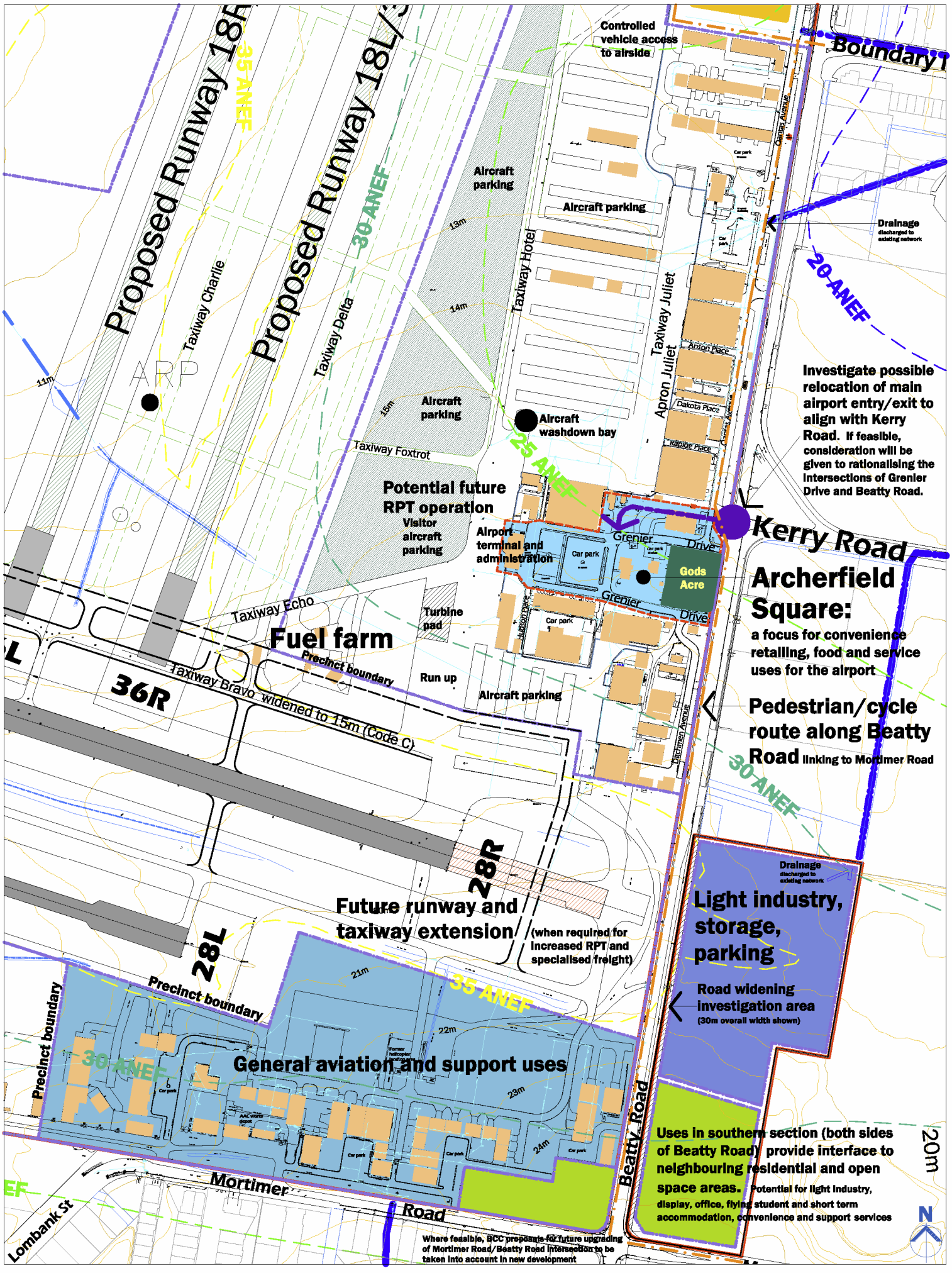
This precinct is currently zoned General Industry but will be rezoned to Special Purpose Centre SP-6 (Airport) following the realignment of the secondary grass runways.

The Precinct contains a substantial number of aviation businesses, and is also home to the Airport Terminal, and God's Acre Cemetery.

12.6.1 Concept

This land has exposure to both aeronautical and non-aeronautical areas, and offers a wide range of possibilities for growth of existing aviation uses and other tenancies, and new development focused on enhancing the airport. It is a primary address for the airport.

The 'gateway' location of the Precinct (interfacing the land and air aspects of the site) means that the Precinct is likely to contain the most diverse mix of land use.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 19 **Beatty & Mortimer Precincts**

PlannedFX
Planning Environment Strategy Design

The appearance of buildings and landscaping in the precinct warrant upgrading and improvement, commensurate with the important role this precinct plays in setting the standard for the image and atmosphere of the airport.

From the southern end of Ditchmen Avenue to the northern end of Qantas Avenue there are a number of original and old structures. The age of the buildings ranges from several years to over sixty years old. It is envisaged that a number of these structures will be redeveloped.

To this end, AAC will over the 20 year horizon of the Master Plan facilitate the progressive upgrading or redevelopment of many of the existing buildings, and creation of a number of new high standard aviation facilities.

An overall upgrade of the standard and presentation of buildings is planned. Options for this could include replacement of Buildings 101 through to 117 on Ditchmen Avenue with new structures, or refurbishment of serviceable buildings. Hangars could be redeveloped with new office accommodation or totally relocated.

Specific areas include:

- the area from Hangar 1 to Hangar 5, which is likely to be ultimately redeveloped or refurbished to provide quality, modern accommodation with a high standard of presentation;
- the area to the north of the proposed Boundary Road intersection will eventually be totally redeveloped. All existing hangars will be removed or relocated; and
- the Ditchmen Avenue frontage to Beatty Road will be rejuvenated.

AAC will respect and where appropriate conserve historic elements in the overall redevelopment of the airport. Particular attention will be paid to the Airport Terminal and Administration building and God's Acre Cemetery.

AAC will continue to work with God's Acre Restoration Committee and BCC (lessee of the Cemetery) and the broader community in improving the cemetery and promoting it to the local community and visitors.

AAC is also sensitive to the need to retain other historic landmarks where adaptive uses can be found or their removal would otherwise contribute to the significant loss of past history.

AAC also recognises that a number of older buildings on the airport are no longer suited to modern aircraft and are inefficient in terms of their layouts for modern aviation related purposes.

In order to ensure Archerfield continues to attract aviation tenants of a high calibre and the airfield continues to regenerate, development options will be canvassed when approached by prospective aviation tenants.

Each development will be assessed on an individual basis, taking into account the tenant's requirements, the historic significance of the building, its

potential for adaptive reuse, refurbishment, removal or relocation. Buildings containing asbestos will be handled in accordance with the AES.

Existing uses will remain, in accordance with lease conditions. In cases where leases expire, or new proposals are put forward, priority will be given to aviation-related tenancies, and for tenancies that provide services required by airport businesses, users and visitors. Examples include convenience retailing and service businesses (eg food, etc) that are inadequately catered for on the airport or in the surrounding area.

Leases in the SP-6 area will be negotiated on commercial terms (as at present). Land within this zone will be available for interim uses when not required for aviation activities. Uses may include those similar to those in the General Industry and Light Industry zones.

12.7 MORTIMER PRECINCT

The majority of this precinct is currently zoned General Industry but will be rezoned to Special Purpose Centre SP-6 (Airport) Area following the realignment of the secondary grass runways.

The sections adjacent to Beatty Road have been included in the Light Industry Area.

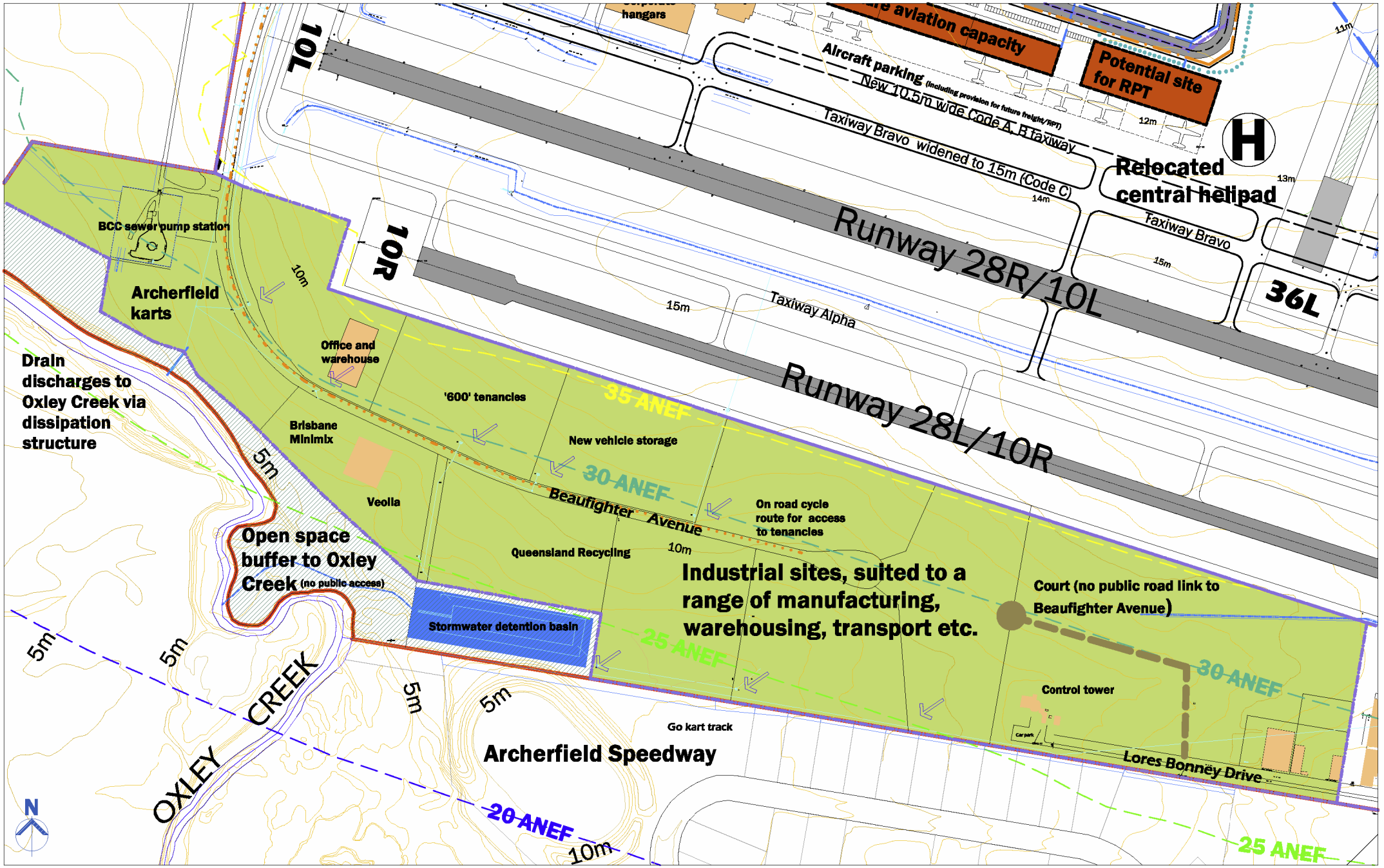
12.7.1 Concept

At the north east corner of Mortimer and Beatty Roads there is a 5.8 ha site severed from the airside area by Beatty Road (Figure 19).

This land has some limitations because of topography, safety clearances at the eastern end of the runways, noise impacts from aircraft, and height restrictions required to maintain acceptable obstacle clearance to the airspace.

The section fronting Mortimer Road, on the west side of Beatty Road would also be suitable for uses that are compatible with the adjacent residential area, and also with the established aviation and industrial uses in this part of the airport.

The southern part (fronting Mortimer Road, and the Beatty Road corner) has the potential to be developed for a range of purposes that are compatible with the residential area to the south, and the open space to the east. Options include accommodation for flying students (or other short term visitors), light industry/display uses, offices, or convenience retail and other support uses. The balance of this land which is opposite the end of the main runway could suit light industry, storage, or parking.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 20 **Beaufighter Precinct Structure Plan**

PlannedFX
Planning Environment Strategy Design

This land is close to the residential area (south of Mortimer Road) and the open space to the east of the precinct. It is also abutted to the north by industrial uses along Beatty Road, and a substantial open space to the east (Mortimer Park).

The potential impacts on these areas of proposed developments will be identified and addressed by consideration of building design and landscaping at the planning and development stage.

Development will be required to comply with height limitations, due to its proximity to the end of the main runway. Depending on the proposed uses of the land, it might also be necessary to incorporate acoustic treatment of buildings.

12.8 BEAUFIGHTER PRECINCT

The Beaufighter precinct is zoned in two parts.

The majority of the precinct is sited between the main runway complex and the adjacent industrial area (including Archerfield Speedway) to the south of the airport (Figures 2 and 20).

The south western section of land adjacent to Oxley Creek has been identified in the AES and the Master Plan as a buffer zone to Oxley Creek. It has an area of approximately 4.3 ha and is included in the Greenspace-Environment Protection Area.

The balance of the land, which is in the process of being developed for industrial purposes, is included in a General Industry Area.

12.8.1 Concept

Stages one and two of this estate have been completed with the following being provided:

- Beaufighter Avenue has been extended south and east with all underground services provided.
- Nine 2 hectare development sites have been released.
- Major tenants are QLD Recycling, Boral Industries (Concrete batching plant) and Collex Waste Management.

This area of the airport requires special attention to ensure that developments, and activities carried out on the land do not have any detrimental impacts on the visual qualities or habitat value of nearby Oxley Creek.

An open space buffer, incorporating land along the Oxley Creek and the main stormwater detention facility, has been established along the southern edge of the precinct.

Road vehicle access is provided from both the east and the north, as shown in Figure 20. Access from the east will be via Lores Bonney Drive (which extends from the western end of Mortimer Road). Access from the north is via Beaufighter Avenue, which can be further extended as required to service new developments.

Given the proximity of this precinct to the Oxley Creek environs, appropriate stormwater management measures have been put in place to protect the creek from undue increases in peak stormwater flows following storm events.

The works now completed include upgraded drains (piped and open swales) throughout the airport sub catchments, construction of a substantial detention basin adjacent to the Queensland Recycling site, and installation of gross pollutant traps.

12.9 WIRRAWAY PRECINCT

This precinct is included in the Special Purpose Centre SP-6 Airport Area. It is immediately adjacent to the main runway (Figure 21).

Since the first Master Plan, development in this locality has included the new EMQ hangar development, the Flying Fighters hangar, and the corporate hangar complex developed by AAC.

The upgrading of Wirraway Avenue has also provided road access to this part of the airport, and improvements to drainage have enhanced the potential for further development of this land.

12.9.1 Concept

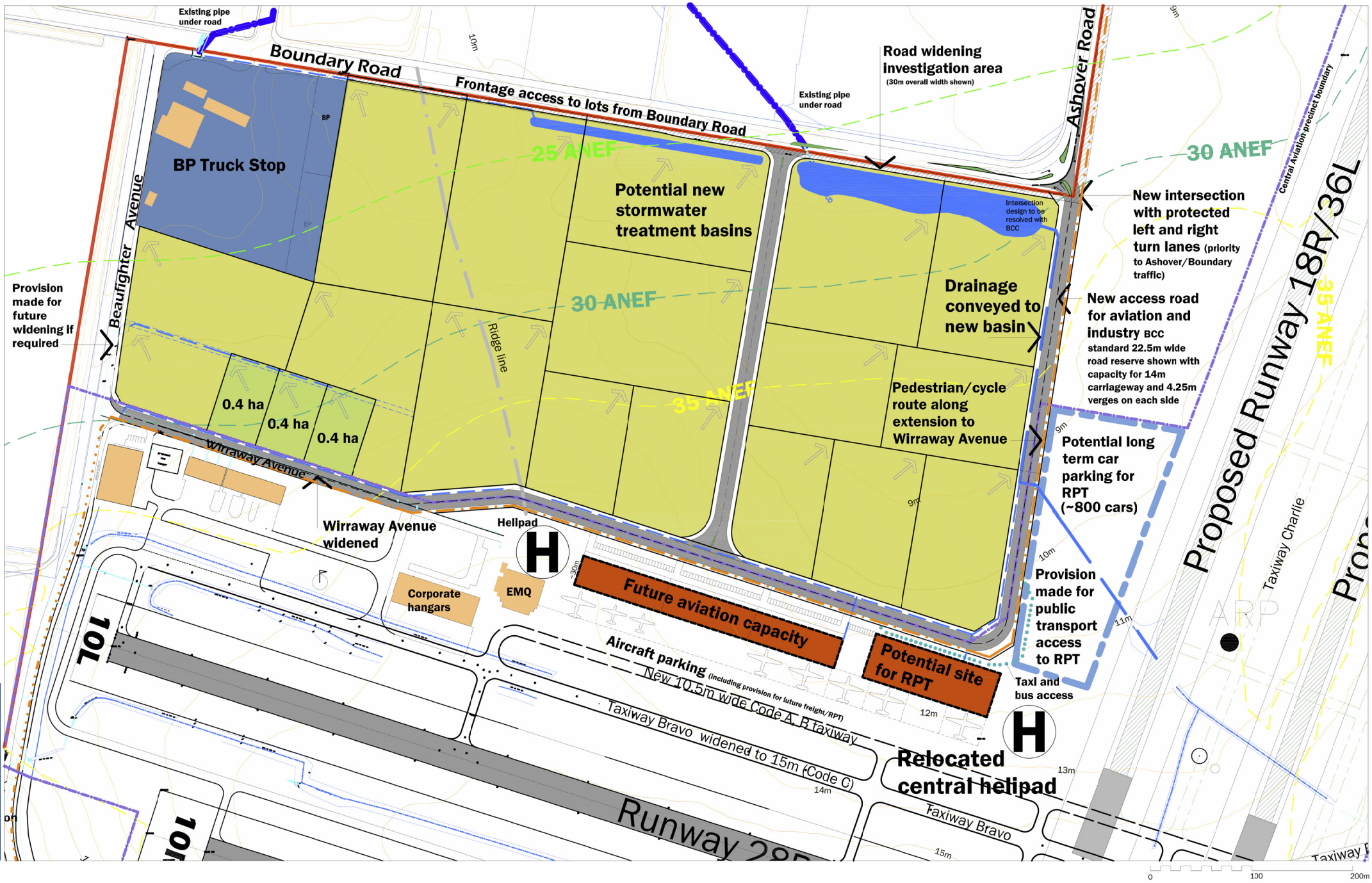
This area is designated for further development for specialised aviation purposes, compatible with the established uses.

Wirraway Avenue will be extended eastward along the northern side of the precinct, and will link ultimately to Ashover Road. The road network will provide direct access to the main roads around the airport, and to the regional network including Ipswich Motorway.

The precinct structure plan provides capacity for new facilities between the EMQ hangar and the proposed runway 36L/18R. This could be suited to RPT, corporate or specialised freight.

An area has also been designated for long term car parking, in addition to parking that is shown adjacent to the planned developments. This parking area could be expanded if required.

The relocated central helipad is shown adjacent to the potential RPT site. There is scope for helicopter parking and the provision of supporting services in conjunction with this new facility.



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 21 **Boundary and Wirraway Precincts**

PlannedFX
Planning Environment Strategy Design

The realignment of the secondary grass runways provides a number of opportunities to cater for aviation growth in this precinct. These are discussed in more detail in Section 14.7.6

12.10 BOUNDARY PRECINCT

The precinct is included in the General Industry Area.

12.10.1 Concept

At present this precinct includes the BP Truck Stop on the corner of Beaufighter Avenue and Boundary Road. There are also a number of transitional tenancies developed along Boundary Road.

There is scope for the land in this precinct to be developed with quality tenancies providing a range of commercial and industrial uses including support services to the transport industry.

The precinct is accessed via Boundary Road, Beaufighter Avenue and Wirraway Avenue. Wirraway Avenue has in recent years been reconstructed and resurfaced by AAC. New infrastructure services (including upgraded power) have been provided.

The Precinct Structure Plan for the Boundary and Wirraway precincts (Figure 21) provides for the development of a road extension from Wirraway Avenue north to Boundary Road (at Ashover Road).

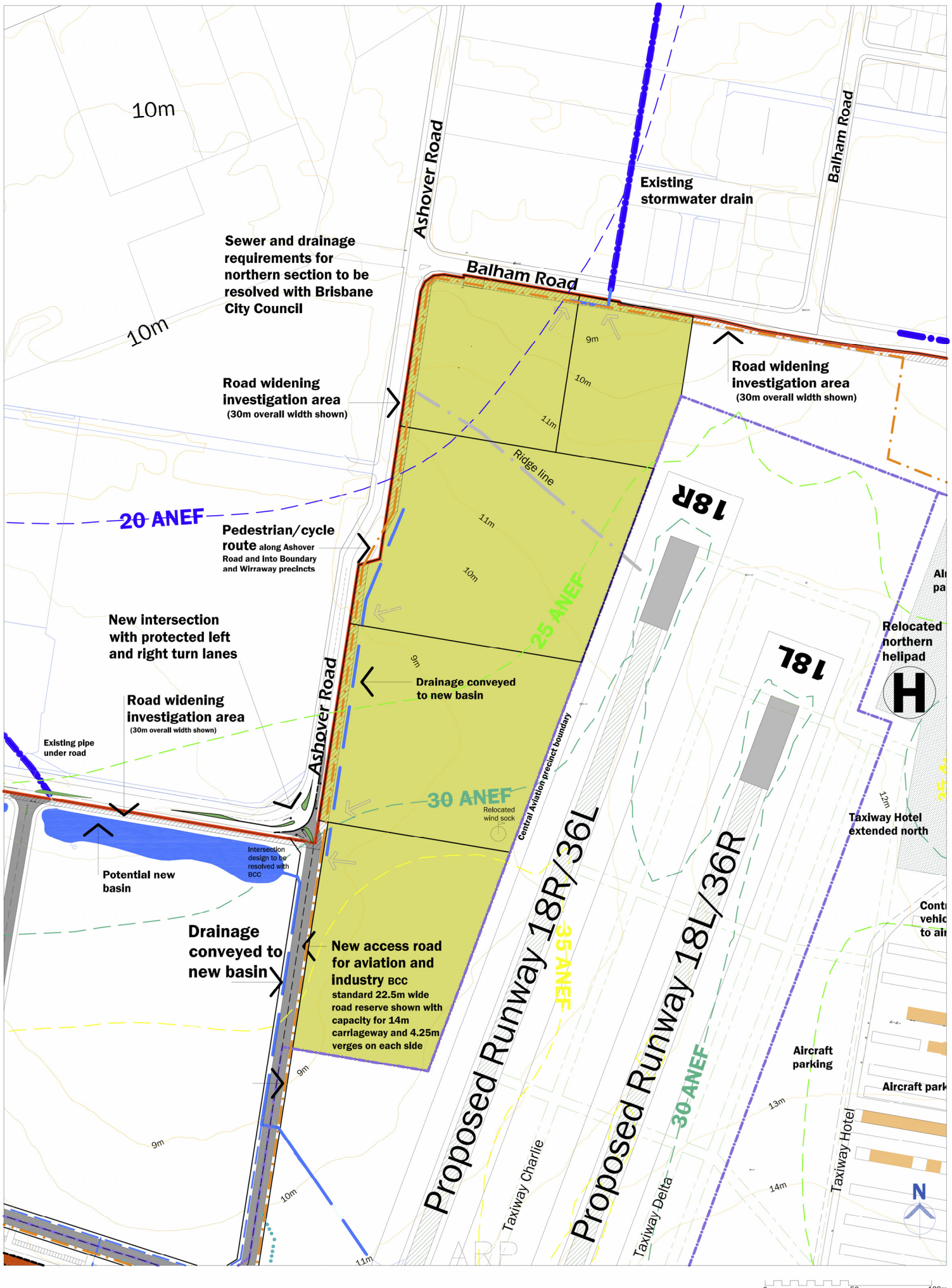
The intersection at Ashover Road is intended to cater for all required turning movements, to give the maximum flexibility for access, without unduly impacting on the traffic on the external roads.

Larger industrial lots are proposed, utilising road frontage along Boundary Road, Beaufighter Avenue and Wirraway Avenue. There is the potential for these lots to be either amalgamated (for larger scale uses) or further subdivided according to market needs.

The need to set aside land for the future widening of the Boundary and Ashover Road reservations has also been identified for investigation. AAC will discuss this further with BCC and other relevant parties, as the plans for the precinct evolve.

The Precinct Plan includes provision for further drainage works, to capture and manage stormwater from the Precinct and the adjacent area of the airport, prior to it being discharged to Oxley Creek (either via the upgraded drainage in Beaufighter Avenue or via the drainage network that runs in a north-westerly direction through the Rocklea industrial area).

The drainage works required could include the provision of swales, or a further detention area. These facilities will cater for control of peak storm related flows from the ultimate development in the Precinct, and assist with maintaining acceptable water quality in the flows discharged into the local



Archerfield
Brisbane's Metropolitan Airport

Archerfield Airport Master Plan 2011-2031

Figure 22 **Ashover Precinct Structure Plan**

PlannedFX Planning Environment Strategy Design

drainage system. For illustrative purposes a stormwater basin has been shown at the low point adjacent to Boundary Road. These proposals will be further developed in consultation with BCC.

12.11 ASHOVER PRECINCT

The Ashover Precinct is included in the General Industry Area.

12.11.1 Concept

This precinct has similar characteristics to the Boundary Precinct. It enjoys excellent road access and is in the middle of the long established Rocklea industrial area. It also features as the main access point to the State Government's proposed cross-over, linking Ashover Road to the Ipswich Motorway.

The Ashover Precinct Structure Plan (Figure 22) shows that the land is likely to be developed in a series of lots along Balham Road, Ashover Road, and the proposed southerly extension of Ashover Road to Wirraway Avenue.

The precinct falls into two main drainage sub catchments. Stormwater and sewer requirements will be investigated in consultation with BCC.

The Structure Plan also indicates that the need for road widening along Ashover Road and Balham Road should be investigated.

12.12 BARTON PRECINCT

This precinct is included in the General Industry Area.

12.12.1 Concept

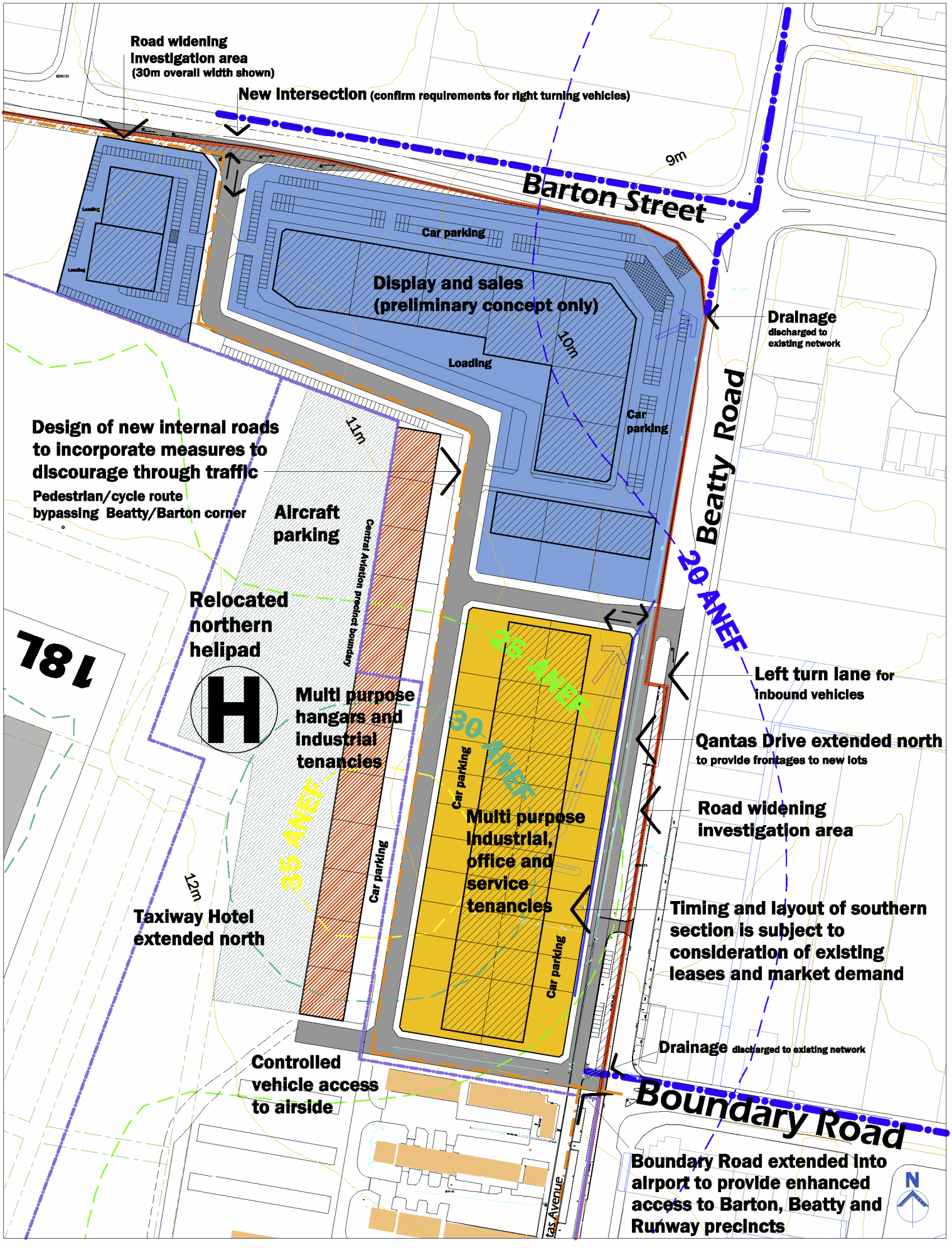
The land relates strongly to the surrounding industrial area along Beatty Road and Barton Street, off airport. It also has a direct interface to the northern end of the Beatty Precinct, and to the reconfigured secondary runways.

The concept for this precinct (Figure 23) provides for groups of industrial, display and sales tenancies including tenancies adjacent to the reconfigured secondary runways and relocated northern helipad that are suited to uses requiring both airside and landside access.

The sizes of the tenancies, and their anticipated usage, are similar to that of the existing developments on the opposite (east) side of Beatty Road.

Access to this land will be from Beatty Road (via an extension to Boundary Road, and a second access to the north) and from Barton Street.

The new road network will also provide improved land access to the northern end of the Beatty Precinct, enhancing the attractiveness of the new



Archerfield Airport Master Plan 2011-2031

Figure 23 **Barton Precinct Structure Plan**

Archerfield
Brisbane's Metropolitan Airport

PlannedFX
Planning Environment Strategy Design

multipurpose hangars and northern helipad planned adjacent to the secondary runways.

The development layout shown in the Precinct Structure Plan orients the new tenancies so they face the adjacent roads.

Vehicle access is controlled to three main intersections. A service road parallel to Beatty Road has been proposed, consistent with Qantas Avenue, which functions as an existing service road further to the south. This will facilitate vehicle circulation within the precinct, and minimise any impacts on the traffic flows on Beatty Road.

There is also the opportunity to provide a cycle route along the internal roads, allowing people to bypass the busy intersection of Beatty Road and Barton Street. The feasibility of this will be assessed in consultation with BCC when more detailed plans are prepared.

13 Environment

13.1 AIRPORT ENVIRONMENT STRATEGY

AAC recognises the importance of restoring, maintaining and where practical, enhancing the quality of the environment on Archerfield Airport and neighbouring areas.

These matters are addressed in the Airport Environment Strategy (AES) which forms Part 2 of this Master Plan.

The AES sets out AAC's environment policy and management arrangements, describes existing environmental conditions and issues, achievements over the past 12 years, and the plans and priorities. Under the Airports Act, the AES applies to a five year period, and is then reviewed.

On 26 March 2010, the current AES for the period 2010-2015 was approved by the Minister.

Recent changes to the Airports Act require that this AES be reviewed so that it applies to the initial five years covered by the Master Plan (2011-2016).

The AES has been revised to address this 5 year planning period. The following provides an overview of the AES, and the aspects that are of particular relevance to this Master Plan.

13.2 OVERVIEW OF ARCHERFIELD AIRPORT ENVIRONMENT STRATEGY 2011-2016

The AES *2011-2016* is an updated version of the third consecutive five year plan prepared by AAC. It addresses the management of environmental issues arising from airport activities and operations.

The AES covers the ongoing environmental management at the airport arising from the use of the airport site by AAC operations, existing tenants, new facilities, non-aviation tenants and activities and emergency events occurring on the site. It also provides the framework for responsible environmental management by airport tenants. It should be read in conjunction with this Master Plan.

The AES comprises:

- a statement of environmental responsibilities that apply to Archerfield Airport;

- a description of the Airport Environmental Management System, including the process by which AAC implements the AES and related environmental management procedures;
- the AAC corporate environment policy;
- a summary of existing environmental issues, management responses to those issues and an action plan to address them; and
- details of the ongoing consultative processes AAC uses in implementing and reviewing the AES.

It is designed to be read in conjunction with Part 1 of the Master Plan.

13.3 ENVIRONMENTAL RESPONSIBILITIES

AAC is responsible for:

- preparing the AES-the current version of which was approved in 2010;
- developing and maintaining the airport's environmental management system;
- initiating and following up on environmental reviews of relevant aspects of the airport;
- working with the *Airport Environment Officer* (AEO) and tenants to protect the environment of the airport and assist with the investigation of incidents on the site;
- liaising with environmental authorities; and
- annual reporting to DIT on progress on implementing the AES.

Responsibility for implementing environmental management measures is established through legislation. Depending on individual circumstances it may rest with the individual tenants or AAC operational personnel.

Further details of responsibilities are provided in the AES.

13.4 ENVIRONMENTAL ASPECTS AND POTENTIAL IMPACTS

The AES describes the airport environment in the following categories:

- flora and fauna;
- noise;
- emissions to air and ozone depleting substances;
- surface water;
- ground water;
- soil contamination;
- heritage;

- hazardous materials and waste management; and
- use of natural resources and energy.

For each aspect of the airport environment, the AES sets out:

- objective(s) for environmental management;
- an overview of existing conditions;
- identification of potential impacts of on-airport activities or developments;
- proposed measures to manage those impacts;
- a summary of achievements for the term 1999-2010; and
- a summary of targets for actions for the period 2011-2016.

Actions for the AES planning period (2011-2016) are summarised in the *Airport Environment Protection Action Plan*, which is part of the AES.

13.5 HERITAGE

In 2001 AAC completed the *Cultural Heritage Assessment and Management Plan: Archerfield Airport, Brisbane* (Bonhomme Craib and Associates). The brief was prepared in consultation with the Queensland Department of Environment and Resource Management (DERM, formerly EPA).

The assessment and management plan address both Aboriginal heritage and European settlement.

13.5.1 Archaeology

Archerfield's original inhabitants were the Yerongpan clan who spoke a dialect of the Turrbal language. The first Europeans arrived in the Acacia Ridge area in the 1820s but the area remained mostly rural well into the 20th Century.

With European occupation, the land was largely cleared of vegetation and used for stock grazing. The airport was established in the 1930s.

The 2001 study did not locate any sites or features of cultural heritage significance. It noted however that retention of the Oxley Creek margins as a buffer area (which are now shown as a 'conservation area' in the Master Plan) will protect any features that may exist in this part of the site.

13.5.2 European heritage

The airport developed in four historical phases, being *Pastoral* (pre 1927); *Development of air transport* (1927 to 1939); *World War II* (1940 to 1945); and *Post war*.

The airport site was originally purchased in 1855 by Thomas Grenier. The land was lightly timbered alluvial soil, and some of the best grazing land in the district. The land was subdivided into three family farms in 1862. Grenier

died in 1877 and was buried in God's Acre cemetery. The farms were sold to the Beatty family in the late 1890s and early 1900s.

In 1927 Qantas Airways test landed a DH-61 on Franklin's Farm which was located at the western side of the airport. Brisbane City Council decided that the site was suitable to be an airfield, and the Government initially acquired about 121 hectares (300 acres) of land in 1929. Two gravel air strips 1500 metres long were built and the airfield started operations. More land was purchased in 1930, 1936, 1942 and God's Acre Cemetery was purchased in 1946.

In the 1930s Qantas moved their operations from Eagle Farm to Archerfield after the first hangars were erected at Archerfield. Australian National Airways (ANA) and Trans Australia Airlines (TAA) both used Archerfield during the 1930s. The Queensland Aero Club, established in 1919, moved from Eagle Farm to Archerfield in 1931.

The Airport Terminal and Administration building was built in 1941 when Archerfield was the main airport in Brisbane. In the Second World War Archerfield became a base for the RAAF, and the United States Fifth Air Force and the Royal Dutch Air Force.

American B-17 Flying Fortresses, Kittyhawks, Dakotas and Dutch Mitchell bombers were at Archerfield. Large hangars were built on both sides of Beatty Road. There are examples of those remaining today off Kerry Road (on private land that is not part of the airport), which are now used for industrial purposes. The heritage value of those former hangars is recognised in the Brisbane City Plan.

The Mustang and Vampire aircraft of the RAAF 23 Squadron were based at Archerfield until September 1955.

Once Eagle Farm became established as the main civilian passenger centre and the RAAF moved to Amberley, Archerfield became a thriving light aircraft centre.

Archerfield Airport was Brisbane's major airport from 1930 to 1947, and has been Brisbane's main general aviation airport since 1947. It played a significant role in the development of Australia's fledgling domestic and international airmail networks, and in controlling air traffic and operations during World War Two.

God's Acre Cemetery and the Airport Administration/Terminal building have been assessed by the Australian Heritage Council as having Commonwealth heritage value.

God's Acre Cemetery

God's Acre Cemetery is located on the corner of Beatty Road and Grenier Drive, at the main entry to the airport. This historic site is one of Queensland's oldest cemeteries. The location is shown in Figure 3 *Existing conditions*.

The site was established by Thomas Grenier on the family property after the death of their 16 year-old son, Volney. It was dedicated as a cemetery in 1859, just before Queensland became a separate State.

About 230 people including descendants of the Grenier family and other members of the local community are buried in the cemetery, with the last funeral held there in 1980. The site provides an historic link to the pioneers of the district, and a valuable resource for interpreting the evolving history of the local community. 2009 marked 150 years since the cemetery was established. The occasion coincided with celebrations for the sesquicentenary of both the BCC and the State of Queensland.

The Friends of God's Acre (FOGA) is a community group actively involved in the preservation of this special place.

Airport Administration Building/Terminal

This building is listed on the Register of the National Estate (Commonwealth). It dates back to the 1940s and is still used today as the airport terminal.

Plans for the building were first drawn up in 1936, but construction did not commence until 1941. The terminal housed the airline companies, the Civil Aviation Department, the Flight Checking Department, the weather bureau and airport control personnel.

Facilities included a restaurant, restrooms, lounges, and a roof garden and reception hall. A control tower originally constructed on top of the building has since been dismantled.

AAC owns the building and has recently completed a major ecologically sustainable refurbishment, with AAC administration now headquartered on the upper levels.

The Bonhomme Craib report identifies a number of other buildings and items on airport that are of historical interest and assist with interpretation of the past use and development of Archerfield. These items are:

- Hangars 1-7;
- Fire Station (building 13);
- Shell kiosk (building 16);
- Toilets (buildings 17, 18 and 19);
- Dope building (building 21);
- Flight Training Australia (building 25);
- the Powerhouse (building 26);
- Canteen (building 27);
- Bellman hangars (buildings 105 and 110);
- G&R Ditchmen (building 107);

- Hempels Aviation (building 111); and
- remnants of wooden rail and chain mesh fencing installed in the 1930s to segregate spectators from aircraft.

13.5.3 Future requirements

There is no evidence of archaeological sites or features that require specific management at this time.

God's Acre Cemetery and the Airport Terminal and Administration building are significant historic features.

AAC has invested more than $1M in heritage projects. In 2000 AAC restored the Shell building. In 2009 AAC completed the refurbishment of the upper and parts of the lower levels of the Terminal building. The building has once again become the airport administration offices.

The Friends of God's Acre Inc. has also undertaken conservation works at the cemetery, with the support of AAC.

AAC is sensitive to the need to retain historically significant landmarks where adaptive uses can be found or their removal would otherwise contribute to the significant loss of past history.

AAC also recognises that a number of older buildings on the airport are no longer suited to modern aircraft and are inefficient in terms of their layouts for modern aviation related purposes.

In order to ensure Archerfield continues to attract aviation tenants of a high calibre and the airfield continues to regenerate, development options will be canvassed when approached by prospective aviation tenants.

Each development will be assessed on an individual basis, taking into account the tenant's requirements, the historic significance of the building, its potential for adaptive reuse, refurbishment, removal or relocation. Buildings containing asbestos will be handled in accordance with the AES.

13.6 FLORA AND FAUNA

The airport is in the lower to middle reaches of the Oxley Creek catchment, approximately 500 metres upstream of the confluence of the Oxley and Blunder Creeks. This part of the Oxley Creek catchment is urbanised, and the land along the creek is used for housing, industry, open space, and sand extraction.

In recent years Brisbane City Council has secured the land on the south side of Oxley Creek immediately to the south of the airport (extending upstream of the confluence of Oxley and Blunder Creeks) and has designated this as an 'environmental protection area' in the Brisbane City Plan. This action was taken following an unsuccessful proposal to undertake sand extraction in that area.

The south western corner of the airport has a frontage of approximately 550 metres to the creek. The airport is elevated relative to the creek floodplain, and there is some riparian vegetation on the creek banks.

The airport land further away from the creek was cleared by the early settlers, and since it became an airport in the 1930s, the site has been managed mainly as a grassed area, with extensive mowing and grazing and removal of large trees where these have infringed on obstacle clearance standards. There is some planted vegetation around the built up areas of the airport.

Past studies of the flora and fauna of the site and locality are discussed in the AES. These have concluded that it is very unlikely that there are any species of flora significance on the airport site.

13.6.1 Future requirements

The creek provides essential habitat for some native fauna, so it is essential that the creek is protected from adverse impacts from any development of the airport site.

The main potential impacts of airport activities on flora and fauna values in Oxley Creek are:

- altered surface water flow patterns (including peak flows) entering the Creek;
- water quality decline, in particular through sedimentation; lowering of pH; changes in temperature; excess nutrient loads; and pollution by hydrocarbons or metals;
- pollution from heavy industry and waste processing;
- weed and pest animal invasion; and
- vegetation removal for new development.

AAC continues to address this through a combination of appropriate stormwater management, monitoring of the quality of stormwater in the airport drainage system, environmental management for new construction, and the provision of a landscape buffer along the creek frontage.

The airport has not been subject to excessive pest animal populations, with the exception of Fire Ants which were confirmed in 2001 and have been subject to a rigorous ongoing control program since then. These aspects are addressed through the AES and EMPs.

13.7 NOISE

13.7.1 Aircraft noise

The major contributor of noise and vibration associated with airport operations is aircraft in flight.

Aircraft noise is modelled and mapped for each airport as an Australian Noise Exposure Forecast (ANEF). The ANEF shows the expected noise effects on land around the airport. It is reviewed and endorsed by Airservices Australia.

AAC has recently prepared an updated ANEF for Archerfield Airport that illustrates the practical capacity of the airport (Figure 13). This ANEF was developed in consultation with Airservices Australia, BCC and the State Government and was endorsed in August 2010. It replaces an ANEF that showed projected aircraft activity to the year 2019.

The approved ANEF provides useful information for planning decisions for land around the airport. It identifies areas that are not suitable for noise sensitive uses unless mitigating measures are implemented in the siting, design and construction of any buildings.

BCC and the State Government take the ANEF into account when they prepare the planning scheme for land around the airport, or consider development proposals near the airport.

Under the *Civil Aviation Act 1988* noise due to aircraft in flight, landing, taking off or taxiing is under the direct control of Airservices Australia (AsA). It is exempted from being the responsibility of the ALC under the *Airports (Environment Protection) Regulations 1997*.

Any complaints received concerning aircraft movements are immediately directed to the responsible officer at Airservices Australia.

The Airservices Noise Enquiry Service can be contacted by phone on 1800 802 584 (freecall), by mail at PO Box 211, Mascot NSW 1460, or by email at: *community.relations@airservicesaustralia.com*

AAC works with AsA and aircraft operators on any aspects that involve AAC's areas of responsibility or interest.

13.7.2 Other noise sources

Noise emitted from an airport (other than discussed above) may be caused by activities including:

- ground running of aircraft;
- noise from aircraft parked near buildings;
- operation of engine test cells;
- construction operations;
- noise from non-aviation activities; and
- road traffic movements.

These sound sources may affect the area immediately surrounding the airport.

Noise levels due to ground based aircraft engine activities are minimised by restricting ground running and testing procedures to appropriate locations on

the airport, distant from sensitive land uses. Evening or night time activities of this nature rarely occur.

Helicopters are directed to pod Tango for run up, jet engine testing is only allowed at the run up bay to Runway 10L, and truck based dynamic engine test beds are directed to pod Tango.

13.7.3 Future requirements

AAC investigates any complaint due to the ground running of aircraft. The approach to this is addressed in the AES and the EMPs, and is subject to monitoring for effectiveness, and periodic review.

With respect to other potential noise sources, there has not been a significant history of complaints.

Since 1999, all new leases have confirmed the environmental management obligations on tenants.

Under the current environmental management regime, tenants assessed as having the potential to generate nuisance noise are required to develop and implement a *Site Environmental Management Plan (operations)* to address potential off site effects. Implementation of these management plans will be subject to ongoing monitoring and periodic review by the Airport Environment Officer (AEO).

13.8 GROUNDWATER

Groundwater at the airport has been assessed on an annual basis since 1993. A network of groundwater monitoring wells has been developed, and upgraded over the years. Annual reviews have confirmed that the quality of groundwater meets regulated standards.

Groundwater resources in the area are not used for potable supply, and there are no known major groundwater users from this tertiary aquifer.

Potentiometric contours have indicated that the groundwater flow across the site is in a north-west direction, with the exception of the area adjacent to Oxley Creek.

Known underground storage tanks (UST's) have been located and most have been removed. Those remaining on site are required for current uses, and are managed in accordance with the AES.

More information about groundwater aspects is provided in the AES.

There is also the potential for areas surrounding the airport to impact on the groundwater conditions on airport. The past and present industrial uses, wartime developments, and the former quarry on the north side of Mortimer Road (next to the south-east corner of the airport) are all potential sources. These are being considered in the ongoing groundwater monitoring program being undertaken in accordance with the AES.

In 2006 BP advised that one of the diesel tanks at the BP Truckstop on the corner of Boundary Road and Beaufighter Avenue was found to be leaking. BP subsequently replaced all tanks and implemented a soil and groundwater remediation and monitoring program, under the supervision of an independent environmental assessor. This is subject to ongoing assessment and reporting.

Future requirements

The AES and related EMPs include measures to protect groundwater from adverse impacts arising from airport activities. These measures will apply to existing and new development envisaged in the Master Plan.

13.9 SOIL

The site geology consists of Tertiary semi consolidated sediments and basalt (Sunnybank Formation).

The soils are silty and sandy clays that overlay weathered basalt. The basalt becomes less weathered as depth increases.

It is likely that the basalt dips to the west. Underlying this is the Triassic-Jurassic Woogaroo sub-group, comprised of sandstone, siltsone, shale and conglomerate. Alluvial deposits occur along Oxley Creek (at the southwest boundary).

13.9.1 Soil contamination

In July 1993, a *Background Investigation Report* (Otek 1993) identified several potential areas of subsurface contamination associated with the airport. These included a number of USTs, scrap yards, a battery recycling operation, maintenance shops, painting facilities, and drum storage areas.

A subsequent more detailed environmental investigation (Otek September 1993) found that Benzene, Toluene, Ethylbenzene and total Xylenes (BTEX) and Total Petroleum Hydrocarbon (TPH) levels were below method detection limits in all borings tested. Metal analyses indicated elevated levels of lead at the former battery recycling facility, which has since been remediated. The study concluded that detectable concentrations of nickel, copper, cadmium, and chromium were consistent with background concentrations and were within applicable criteria. Analyses for volatiles, pesticides, and PCBs showed no concentrations above the method detection limits. The study found no adverse impact on the environment from the USTs.

The minimal localised soil contamination detected in the Otek environmental reviews is well within the current acceptable environmental standards.

The pollution from the leaking diesel UST at the BP Truckstop was contained, and affected soil was excavated to the maximum feasible extent, treated and disposed of off site. These works were undertaken under the supervision of an independent environmental assessor.

Otek, in 1993 also undertook soil sampling in the open unlined drains along the northern and western perimeters of the site. The analysis of the samples concluded that there was no detectable soil contamination. Sampling has continued over successive years.

13.9.2 Acid sulfate soils

State Planning Policy 2/02 Planning and Managing Development involving Acid Sulfate Soils applies to land at or below 5 m AHD, and in cases where land below 20 m AHD where 100 m^3 or more of soil or sediment is being removed, or land is filled with a volume of 500 m^3 or more of material and an average depth of half a metre or greater.

As part of the Brisbane City Plan, Brisbane City Council has collated information about acid sulfate soils in the Council area, and prepared a Planning Scheme policy on management of this issue (Appendix 2, *Brisbane City Plan*).

The City Plan describes acid sulfate soils as follows:

> *'Acid sulfate soils' is the common name given to soils containing iron sulfides (usually Pyrite, FeS_2) that, if oxidised, produce sulfuric acid. When exposed to air, either naturally (e.g. during a drought), through soil disturbance (e.g. dredging or excavation) or through a lowered watertable (e.g. drain construction), the sulfides oxidise to produce sulphuric acid. The disturbance of acid sulfate soils can therefore result in soil and groundwater becoming acidic.*

In Brisbane, acid sulfate soils are generally found below 5m Australian Height Datum (AHD) and in Holocene sediments (organic-rich sediments and silts). They are usually associated with coastal lowlands and estuarine flood plains. Under natural conditions the soils are usually located below the watertable.

The only parts of the airport at or below the 5 metre contour are found in the south-west corner of the site, next to Oxley Creek. The 5 metre contour is shown in the *Existing conditions* drawing.

This part of the airport is included in the creek buffer area, which will not be subject to further development.

Future requirements

If in the future any works are required in the buffer area along Oxley Creek (for example construction of additional drainage infrastructure), AAC will require preparation of an environmental management plan in accordance with the AES and the airport Environmental Management Procedures.

If substantial excavation or filling is proposed for land below 20 m AHD (for example in conjunction with the realignment of the secondary runways, or the development in the lower lying central part of the airport), appropriate consideration will be given to acid sulfate soils in the design and construction of the works.

USTs will continue to be managed in accordance with the AES.

13.10 ASBESTOS

Comprehensive surveys of buildings dating back to 1994/1995 (and reviewed regularly since then) have found evidence in older structures of some building materials likely to contain asbestos.

These materials are mostly in sheet 'fibro cement' form, used most commonly for roofing and wall cladding, and also in some other building materials including flooring, and limited instances of pipe lagging.

In 2003 Asbestos Audits Queensland Pty Ltd completed an *Asbestos Materials Report and Register for Archerfield Airport.* The report addressed all AAC buildings on the airport and included an inventory of asbestos, and recommendations for its management.

In 2006 the asbestos register was upgraded to include a risk assessment and management plan, and has been updated since then as developments occur, buildings are demolished, and buildings come into the ownership of AAC.

Many of the older buildings along Beatty Road contain asbestos and are being monitored and managed accordingly.

Future requirements

The storage and handling of hazardous materials is required to comply with relevant State legislation, and this is assessed by the AEO and AAC during tenant environmental reviews.

Asbestos will need to be addressed in any developments involving structures or other assets that have been included in the asbestos register. This is provided for in the AES.

13.11 ENVIRONMENTAL MANAGEMENT ISSUES

The principal environmental management issues at Archerfield Airport are:

- management of new development works to minimise and ameliorate impacts on the environment;
- conservation of any significant flora and habitat values along Oxley Creek (generally external to the airport site);
- protection of storm water and ground water quality from contamination by pollutants from the airport;
- encouraging the efficient use of water and energy;
- ensuring that all chemicals on airport are appropriately handled, used, stored and disposed of;
- containment and management of spills;
- appropriate containment and handling of all asbestos in buildings and plant on airport (as identified in the asbestos audit and register);

- protection of any cultural and heritage values (pre and post contact); and
- ensuring that airport tenants are aware of their environmental obligations and comply with all relevant requirements.

These matters and details of their ongoing management are addressed in the AES.

13.12 ENVIRONMENTAL MANAGEMENT PROCEDURES

AAC has prepared *Environmental Management Procedures* (EMPs). The EMPs include procedures for assessing prospective tenants, communication and consultation, emergency preparedness and response, minor and major spill response, environmental awareness and training, tenant environmental reviews, environmental reviews at the end of a tenancy, and assessment of new development works.

13.13 NEW FACILITIES

13.13.1 Environmental management process and requirements

The environmental management regime in place at Archerfield is designed to encourage the early identification of potential impacts, actions that can be taken to prevent (or minimise) impacts, and mitigation measures.

The AES describes the process by which the potential environmental effects of new aviation or non-aviation facilities will be assessed, and environment protection requirements applied.

The AES refers also to the Airport EMPs. These include a summary of potential impacts of new development, environmental objectives and targets.

The Airport Environment Officer (AEO) and Airport Building Controller (ABC) (if required) are involved in this process.

13.14 COMMUNICATION ON ENVIRONMENTAL ISSUES

AAC is engaged in a continuing program of consultation with parties involved in the airport, both on the site (tenants and operators) and external to the site.

Key aspects include:

- facilitation by AAC of the Archerfield Airport Environmental Management Forum (AAEMF);
- a rolling program of reviews of tenant operations;
- community consultation on major projects;
- regular 12 monthly reporting of environmental matters to the Commonwealth Government; and
- environmental awareness training and education.

The above matters are discussed in more detail in the AES.

AAC will also formalise the *Planning Coordination Forum* involving BCC, State Government and Commonwealth representatives, which has emerged during the process of preparing this Master Plan.

The forum provides an opportunity for discussion about strategic issues relevant to the implementation of the Master Plan and plans for the areas around the airport, and for the dissemination of information.

It has also established the *Archerfield Community Aviation Consultation Group*, which draws members from the airport and the surrounding areas, together with representatives of agencies and organisations involved in the locality. Further information about the group is provided in the following section.

14 Consultation on the Master Plan

14.1 CONSULTATION FOR THE PREPARATION OF THE PRELIMINARY DRAFT MASTER PLAN

Consultation is integral to the successful formulation and delivery of the Master Plan, and implementation of the vision, strategies and actions described in the plan. AAC is committed to frank and open consultation. It wholeheartedly embraces the opportunity to receive constructive feedback on its plans for the airport.

In the process of preparing the preliminary draft version of the *Archerfield Airport Master Plan 2011-2031*, AAC consulted with a wide range of people and organisations with an interest in the future of the airport.

AAC conducted a number of Aviation Consultative Meetings for airport tenants and operators during which elements of the Master Plan were discussed. A survey was also conducted of airport tenants and users in November 2009. The survey sought feedback on the current use of the airport and information about anticipated future use.

The liaison between AAC and the three levels of government, particularly the Brisbane City Council (BCC), evolved during the development of the Master Plan and continues to be an important element of day-to-day business.

Several meetings have been held with BCC, the State Government and the Federal Government, both individually and collectively.

Meetings with BCC have included representatives from City Planning and Sustainability and Brisbane Infrastructure.

The State Government meetings included representatives from the Department of Infrastructure and Planning, the Department of Transport and Main Roads and the Department of Employment, Economic Development and Innovation.

Meetings with the Federal Government have been primarily with the Department of Infrastructure and Transport.

Elected representatives were also kept informed. Meetings to detail the main elements of the Master Plan were conducted with the Federal Member for Moreton, the State Member for Yeerongpilly, the State Member for

Sunnybank, the Councillor for Moorooka Ward as well as the Lord Mayor and his Civic Cabinet. The Lord Mayor was hosted by AAC at Archerfield where he conducted a Civic Cabinet Meeting.

AAC liaised regularly throughout the preparation of the preliminary draft Master Plan with:

- DIT on regulatory and policy matters, and the Master Plan's direction;
- CASA on standards issues, airspace management flowing from the introduction of Class D airspace at Archerfield, airspace protection, the proposed realignment of the secondary grass runways, and prescribed airspace approval;
- Airservices Australia on airspace management flowing from the introduction of Class D airspace at Archerfield; ground movement of aircraft; impact of wake turbulence requirements on runway capacity; flight tracks; the proposed realignment of the secondary grass runways; alternative control tower locations; navigation aid requirements; future aircraft instrument procedure design; prescribed airspace approval; and ANEF approval;
- Queensland Department of Infrastructure and Planning on regional planning initiatives (including the SEQ Regional Plan), aviation planning, airport protection;
- Queensland Department of Transport and Main Roads on road and rail aspects; and
- Brisbane City Council on land use planning, road network and transport requirements, infrastructure services requirements and funding, environmental management, economic development, and noise aspects.

14.2 BACKGROUND STUDIES

14.2.1 Optimising the aviation operations

In the past several years, the Corporation has made significant investments in resources and new technologies to help better understand the aviation operations of the airport.

AAC engaged technical expert aviation engineers to analyse detailed data and to suggest improvements to help realise the full potential of Archerfield Airport.

These studies primarily focused on the utility of the secondary grass runway complex. They found that the secondary grass runways were periodically unavailable due to wet conditions, and were not optimally oriented having regard to wind patterns. For example, these runways were continuously closed for over 7 months from late 2010. This was due to rain events causing a 'Soft Wet Surface' which in effect quarantines approximately 60 hectares of the airport's total land mass.

Whilst it had been an unusually wet season following a record drought, this confirmed that a rethink was required so that this otherwise underutilised area of land can contribute to both the aviation and non-aviation activities (and therefore the economic viability) of the airport. This will enable the airport to grow, achieve its highest and best use and remain poised for aviation opportunities that present themselves in the future.

A number of options to improve the utility of the grass runways were considered, including paving them in their current positions. In accordance with CASA regulations, upgrades to runways must take into account current standards. The existing runways do not meet these current standards due to their longitudinal peaks and troughs. Dispensations that currently exist, no longer apply at commencement of upgrade works.

The runways would require approximately $1.8 million in fill alone to bring them up to current ICAO standards. On top of this, more than $6 million would be required to construct an appropriate pavement and bitumen overlay. These costs were considered exorbitant in comparison to the increased utility achieved and far too onerous to pass on to existing GA operators and airport users.

14.2.2 Grass runway utilisation and proposed improvements

A review of NOTAMs (Notices to Airmen) relevant to Archerfield was conducted in 2007 to ascertain the period of time that the grass runway complex is typically closed due to 'Soft Wet Surface' conditions.

This was initially conducted over a 9 year study period starting from privatisation in 1998. The 10 years prior to privatisation were later studied to determine any differences that may have occurred since privatisation. The year 2008 was also included in the analysis to give a 20 year sample: 10 years pre-privatisation and 10 years post-privatisation.

In depth analysis of this dimension has not been conducted for Archerfield in the past. It revealed that on average, both of the grass runways had been unavailable 26.25% of the time over a 20 year period. This data shows that on average, around one-quarter of the airport's land mass is effectively quarantined for a quarter of each year.

In addition to this study, in 2008 AAC invested in technology and reporting tools to enable an in-depth analysis of individual runway movements. For the first time in Archerfield's history, accurate data became available for individual runway usage over a prolonged period at the click of a button.

In conjunction with Archerfield Airport specific wind data and the 20 year NOTAM study, the information was analysed by a team of experts spearheaded by the principal of Randl, Rod Sullivan. Mr Sullivan has been involved with the planning of the airport since the 1970's.

The results concluded that a crosswind runway alignment would be required at Archerfield Airport, for daytime operations only, approximately 12% of the

time. This requirement is primarily to cater for ab-initio students who can sometimes find it difficult learning in crosswinds.

It was also found that in conjunction with the existing 10/28 runways, and following the removal of the 13/31 runways in the 1980's, a realignment of the grass runways was commended by wind data and their usage could be improved by rotating them around 20-30 degrees counter-clockwise.

Following these findings, and at the recommendation of Randl, AAC proposed a single, sealed crosswind runway on a realignment of 01/19 degrees. This proposal, and the reasons for it, was flagged at a number of Aviation Consultative Meetings with airport users and tenants and also during individual meetings with CASA, Airservices and Air Traffic Control during 2009.

A discussion paper was also developed which examined the required changes to operating procedures and various risks that may occur as a result of the change.

AAC requested operators, and in particular the flying schools, come forward with any issues that this proposal may create and to suggest alternative solutions for consideration.

At an Aviation Consultative Meeting in early 2010, the Archerfield Airport Chamber of Commerce Incorporated (AACCI) presented wind data to argue that realignment to 01/19 degrees would create increased crosswind conditions. The data presented was found to be unreliable as the sample locations were not site specific to the airport.

One of the major flying schools, Flight Training Australia, suggested an alternative crosswind runway configuration in October 2009.

Two hazard identification (HAZID) workshops were held with representatives from airport user groups, CASA, Air Traffic Control and Airservices Australia. The workshops considered any risks to safety that might be associated with four options for the proposed realignment of the 04/22 runways.

The various options considered for the secondary runways included the construction of a single, sealed runway to replace the existing secondary grass runways.

The workshops and subsequent analysis revealed that although CASA was comfortable with the single-sealed crosswind runway proposal, Airservices and the two major flying schools were concerned about transitioning from parallel to single runway operations.

In response to these concerns, AAC decided to abandon the initial proposal to provide a single-sealed crosswind runway and an alternative option preferred by the parties was chosen; that of providing two grass parallel runways on a bearing of 01/19 and moving them to higher ground to avoid unserviceability issues caused by 'Soft Wet Surface' conditions.

This required a number of significant changes to modelling scenarios that were in the process of being developed at the time (including the Practical

Capacity ANEF, runway capacity, and flight paths). The new proposal was presented to airport users and tenants at an aviation consultative meeting on 29th January 2010 and 16th April 2010.

A Major Development Plan, including further consultation with potentially affected stakeholders, and approval by the Minister under the *Airports Act* will be required before realignment of the secondary grass runways can proceed.

Section 14.7.1 goes into further detail regarding the MDP process required for the realignment of the grass runways.

Further discussion regarding the benefits associated with the realignment can be found in Section 14.7.6.

14.2.3 Aviation land use planning

In parallel with the work associated with the proposed improvements to the grass runway complex, AAC conducted extensive consultation and spent considerable time on land use planning issues.

This included analysis of the strategic land use context of the airport, the interfaces to surrounding land, and clarification of the role and function of Archerfield as depicted in State, regional and local planning strategies and the Brisbane City Plan.

This was seen as an essential part of the Master Planning process to ensure that future possible expansion of aviation facilities and tenant requirements are catered for, changes to runway and taxiway layouts are planned in accordance with this possible expansion; and neighbourly relations are maintained with BCC, State Government and local stakeholders.

AAC also engaged Marcom Communications to survey existing airport users and tenants about their current and anticipated future needs. It was considered important that AAC engage aviation operators early in the master plan process so that any proposed future expansions to tenant businesses that AAC was unaware of, could be catered for in the development of the Plan.

The survey was distributed in October 2009 and sought data on the nature of organisations operating from the airport, their existing facilities and the extent of utilisation, and factors influencing likely expansion.

It was also sent to Local, State and Federal representatives to inform them of the beginning of the consultation period and to invite them to contact the Corporation should they have any initial queries or concerns.

The survey found strong support for the ongoing provision and further development of aviation related activity. Given the limited number of survey respondents who noted plans for expansion however, this increase in growth will likely need to be generated from aviation businesses not yet located at the airport.

Discussions with Brisbane Airport Corporation have indicated that some of this expansion may come from their GA sector, which is likely to change following

the development of the New Parallel Runway (NPR) at Brisbane Airport in 2019/20.

From this consultation it was also clear that from a land use perspective Archerfield Airport is a major and strategic feature of Brisbane and South East Queensland, and that planning strategies and policies recognise this.

As discussed in chapter 3, the airport is an important part of the South West Industrial Gateway of Brisbane, and has the potential to make a significant contribution to the consolidation of this employment area, as a transport hub, and as a site for further development. The underutilised land on the Airport has the potential to cater for appropriate large scale tenancies that cannot be accommodated elsewhere in this district due to scarcity of land and existing development commitments.

The investigations and consultation reinforced also the importance of incorporating appropriate transitions to the surrounding area, including by matching the types of land uses with those on neighbouring land, and providing appropriate transitions in the scale and form of developments. The State and BCC have reviewed and supported these land use aspects of the Master Plan.

14.2.4 Practical capacity ANEF

Consistent with best practice (and supported by the representatives of Federal, State and Local government engaged in the master planning process), AAC commissioned Randl Pty Ltd to develop the 2010 ANEF based on Practical Capacity movements.

This was seen as an important step in ensuring the airports capacity for growth is maintained, particularly in light of recent expansion within the surrounding suburbs.

Extensive technical work was carried out based on the proposed single-sealed crosswind runway option. This was later altered to incorporate the industry preferred realigned, parallel, grass runway option. Changes to Archerfield's airspace under the transition from GAAP to Class D procedures were also incorporated.

The study was based around the mix of aircraft currently using the airfield and those expected in the future. Accurate data was gathered from reporting tools that AAC invested in, specifically for this process, to achieve a realistic outcome.

During the development of the 2010 ANEF and prior to its endorsement, AAC conducted a number of consultation sessions with BCC and State Government.

These sessions focussed around the ANEF, changes to runways including the secondary grass runway realignment, airspace changes, noise issues and traffic issues with proposed developments.

Initially, the discussions were on the changes to the proposed ANEF. Of importance was the notion that the 2010 ANEF is based on Practical Capacity, rather than a 20 year horizon. The 2010 ANEF also makes provision for the realignment of the secondary grass runways and includes noise levels associated with the current grass runway alignment up to approximately 175,000 movements. This is the predicted level of aircraft movements that will occur at the time of grass runway realignment around 2015/2016, assuming steady growth in flights as described in Section 5.

A MDP, including additional investigations and further consultation with potentially affected stakeholders will be required before realignment of the secondary grass runways can proceed.

Comments from BCC and State were taken into consideration and included in the final report that was sent to Airservices prior to endorsement of the 2010 *Practical Capacity ANEF*.

Discussions were also held regarding noise issues associated with the realignment of the grass runways along with potential issues associated with traffic on surrounding areas.

It was seen important that the community be fully aware of the changes and had the opportunity to assess the potential impacts to their properties.

Summary fact sheets were developed to address these issues. The fact sheets provided brief overviews of the major aspects of the PDMP and included; current movement figures, grass runway realignment considerations, RPT and freight options, ANEF changes, N70 noise contours (existing and proposed), land use and surrounding road issues.

14.2.5 Runways and Taxiways

To ensure the proposed realigned runways would meet the needs of current and future aircraft operations, extensive technical work and consultation with Airservices, ATC and CASA, was undertaken.

The foremost concerns were that adjoining runways and taxiway systems could cater for future growth and that ground and airspace operational issues were considered in line with Archerfield's new transition to Class D airspace.

Options for additional secondary taxiways have also been included in the Master Plan to ensure the ground movement of aircraft will not become a 'bottleneck' when movements approach Practical Capacity. Potential taxiway layouts were discussed with ATC, Airservices and CASA before their adoption into the Plan.

14.2.6 Required upgrades for future RPT and freight

Technical studies were also conducted early in the planning stages to examine the likely requirement, and alterations that would be required to existing infrastructure, for RPT operations.

Archerfield currently has approval for eight RPT arrivals and departures per day in its previous master plans. The Corporation has a desire to continue the option for RPT in the event that it is required by the greater community in the not too distant future.

The *Master Plan 2011-31* includes 12 arrivals and departures per day following conversations with RPT operators and taking into account the future growth of the region. Consultation with BCC in March 2010 also recommended that the Master Plan include options for future freight operations. With its current location within the South West Industrial Gateway of Brisbane, one of Australia's fastest growing regions, both of these scenarios are seen as likely requirements.

The reports recommended the strengthening and lengthening of the existing main runway by means of reconstruction. To avoid interruptions to operations, it suggests a newly constructed runway would be more economical and provide a more certain outcome in terms of quality, than reconstruction of the existing runway.

The upgrading of taxiway Bravo and associated linkages to the main runway to a Code C standard would also be required. These options have all been presented in the Master Plan. A MDP will be required before any of them proceed.

Consultation with affected stakeholders, through means such as the Community Aviation Consultation Group, would occur prior to the introduction of any RPT services operating from Archerfield. This consultation would address any potential implications including for aircraft noise, ground access and use of surrounding roads, adequate provision for on airport parking, and any effects on other airport operations.

14.3 EXHIBITION OF THE PRELIMINARY DRAFT MASTER PLAN

The Preliminary Draft Airport Master Plan (incorporating the AES which was approved earlier in the year) was formally exhibited for 60 business days from 15 December 2010 to 18 March 2011.

A number of key stakeholders were engaged prior to the formal exhibition beginning. These included local, State and Federal elected representatives, BCC officers, aviation authorities, aviation industry and businesses, tenants and airport users. A list of these is provided in Appendix D.

A community consultation program was held over the exhibition period. It was designed to inform, consult and engage the residents in the surrounding vicinity as well as the wider local community, along with surrounding businesses, aviation tenants and users of the airport. It sought feedback to assist with the refinement and finalisation of the Master Plan and the updated AES.

The following summarises the consultation activities undertaken.

Table 5 Summary of consultation activities

Activity	Audience	Results
Direct mail	Directly affected residents, businesses, tenants and airport users	527 local PO Boxes and 420 airport users and tenants were sent direct mail
Letterbox drop	Directly affected residents and businesses	1,330 residents and businesses at the ends of the main runways and to the north and south of the grass runways were letterbox dropped
Internet	Directly affected, indirectly affected and the wider community	Over 14,900 hits throughout the consultation period
Community Updates	Directly affected, indirectly affected and the wider community	3 Community Updates and 2 additional Information Session Updates were sent to a database of approximately 790
Information sessions	Directly affected, indirectly affected and the wider community	71 people attended the three community sessions held
Media	Directly affected, indirectly affected and the wider community	18 articles were published throughout print, broadcast, television and internet media
Advertising	Directly affected, indirectly affected and the wider community	5 ads ran throughout the consultation with a circulation reach of 890,000
Phone/Email	Directly affected, indirectly affected and the wider community	The consultation team received calls and emails and responded to requests for further information or clarification of aspects of the PDMP.
Responding to feedback	Directly affected, indirectly affected and the wider community	Further information was provided, by phone, mail, email and in face to face discussions
Consultation material display	Directly affected, indirectly affected and the wider community	Consultation material on display throughout public consultation period at the airport terminal

The program focussed on informing stakeholders of the key initiatives:

- realignment of the two secondary grass runways to improve their usage by light aircraft;
- the setting aside of land to the west of the realigned grass runways for future aviation and non-aviation development to support the airport's activities;
- the setting aside of land dedicated for long-term aviation use to the east of the realigned grass runways;
- plans for small freight and light passenger plane operations to cater for some domestic travel and to complement local business operations;

and highlighted a variety of ways that people could contact the Master Plan team, and obtain further information.

Stakeholders were informed by advertising in local newspapers, distributing media releases to news agencies and the aviation industry, sending letters to Archerfield post office boxes and aviation tenants, emailing *Community Updates* to a database of stakeholders, letterbox dropping those that may be impacted by the change in grass runway alignment and conducting information sessions within the local community.

Copies of the *Preliminary Draft Master Plan 2011-2031* and *Airport Environment Strategy 2011-2016* were made available for viewing or purchase during office hours at the AAC offices at Archerfield Airport.

The full documents, together with a series of fact sheets summarising key issues, and feedback forms were also posted on the AAC web site and made available for download.

Initially, two information sessions were planned during the exhibition period; however AAC became aware that a petition was being passed around by ARTIC (Acacia Ridge Technology Information Centre) Community Library located in Acacia Ridge. AAC met with ARTIC representatives the same day. It was agreed that a third information session to provide clarification about the Master Plan and respond to any issues would be held at a location of their choosing, the Souths Acacia Leagues Club, in a fortnight's time.

Additional invitational material was printed and given to ARTIC representatives to hand out to those that had signed the petition.

This information was also sent to Cr Steve Griffiths (Ward of Moorooka), Graham Perrett (Member for Moreton) and residents within the Rocklea area so they could distribute to anyone else who had concerns and wished to attend. The information session was also advertised in two local newspapers having a combined catchment of 152,000 readers.

The session went ahead as planned on the 10th of March with a total of 12 attendees. A number of concerns were discussed, with the focus being on RPT, freight, traffic and runway realignment.

During the last week of the exhibition period a front-page article appeared in the *Southern Star* newspaper portraying a 767 flying over the top of the passenger terminal. Although an article about the preliminary draft Master Plan was published on the front page of the same newspaper a month earlier, a number of residents were unaware of the details and became understandably alarmed by the inference that there were plans for 767s to operate from Archerfield, and that these would fly on a daily basis.

The newspaper was contacted to ask that the community be given the facts surrounding the RPT proposals, however it was too late. AAC subsequently published an article on the AAC web site giving the community a realistic view of how RPT would operate at Archerfield.

As part of the consultation program, AAC also sent fact sheet brochures and a general letter to over 1300 residents and businesses in the areas around the airport identified as being potentially affected by the proposed changes to

flight paths, N70 contour extents at Practical Capacity, or their proximity to the airport and likely turning locations at 500ft.

AAC became aware of a local action group that delivered a reply paid proforma submission to residents in Moorooka, Tennyson and Rocklea. It contained misleading information giving the impression that a "new north south runway" was being introduced that would "result in new regular aircraft pattern movements over the residences" in these suburbs.

In combination with the front page article that appeared in the Southern Star around the same time, it is understandable that many of these residents have gained the impression that RPT aircraft could be using this "new" runway and hence affect their properties.

In the final week of consultation, the Archerfield Airport Chamber of Commerce Inc (AACCI) also ran a campaign against the preliminary draft Master Plan.

Articles appeared online on *AOPA online*, *Aviation Advertiser Magazine*, *Professional Pilots Rumour Network*, and the AACCI website and provided a link to a proforma email submission.

AAC believes that the vast majority of respondents have been misled by these articles which have also neglected to mention benefits associated with the Plan such as increased land allocation for long-term aviation uses, upgrades of current runways, improvements to fixed-wing training, provision for additional taxiways, upgraded landside access, and provision for supporting land uses that complement the aviation businesses.

14.4 FEEDBACK ON PRELIMINARY DRAFT MASTER PLAN

AAC received 1070 responses during and immediately following the formal exhibition period.

The majority were in the form of two pro forma objections (arising from the Archerfield Airport Chamber of Commerce Inc; and a Residents Action Group from Rocklea, Moorooka and Tennyson). There were also two petitions (one from the Russian Orthodox Church in Rocklea, and another led by the Acacia Ridge local community library).

91% of responses were initiated by an organised campaign, 7% were from individual community members, and 2% came from local information sessions.

Submissions were also received from

- Airservices Australia
- Brisbane Airport Corporation
- Brisbane City Council, State Department of Transport and Main Roads, State Department of Local Government and Planning
- National Trust of Queensland

- Graham Perrett MP, Federal member for Moreton
- Phil Reeves MP, State Member for Mansfield
- Cr Nicole Johnston, Councillor for Tennyson Ward
- Cr Steve Griffiths, Councillor for Moorooka Ward
- Cr Milton Dick, Councillor for Richlands
- Energex Limited
- The Scout Association of Australia, Queensland Branch Inc.
- Austcopters
- Flight Training Australia
- Royal Queensland Aero Club
- Environmental Hazard Management
- Hansen Yunken
- V Squared Helicopters
- Brisbane Aero Engineers
- Air BP
- Mandalay Progress Association
- Tennyson Residents Association
- Aveo Forest Place Durack Retirement Village
- South West Chamber of Commerce Inc.

14.4.1 Key issues identified

The following topics were consistently raised in the local community feedback:

- noise (as illustrated by the *Practical Capacity ANEF* and *N70* modelling);
- traffic (from expanded aviation activity and from land based developments);
- property value impacts;
- runway realignment (primarily relating to concerns that the realignment of the secondary grass runways would have a substantial noise impact on areas currently not affected by aircraft movements);
- industrial development (and the consequences of traffic in particular);
- consultation (timing, extent);
- safety (from proposed changes in flight paths, and from the proposed main runway extension);

- Regular Passenger Transport (not a significant feature at present); and
- freight (implications of more freight movements).

Other issues were highlighted in the submissions from elected representatives, and from organisations and agencies, and these are included in the discussion below.

14.5 CONSIDERATION OF SUBMISSIONS

AAC took into account all submissions in formulating the Draft Master Plan and Environment Strategy that was submitted for assessment and approval by the Minister for Infrastructure and Transport.

The following provides a summary of the key issues raised, the changes sought, and sets out the actions that will be implemented to address this.

In many cases, this resulted in changes to various parts of the preliminary draft Master Plan, and these have been incorporated in the final approved version.

Changes were also made to the figures in the Master Plan and Environment Strategy and a list of the modifications is included at the end of Appendix D.

14.6 LAND USE AND DEVELOPMENT PLANNING

14.6.1 Implications of State Planning Policy SPP 1/02 for development and use of land around the airport

The issue/changes sought

A number of submitters were concerned that the preliminary draft Master Plan was not consistent with SPP 1/02 and also believe that they should be compensated for changes to public safety areas, or ANEFs as shown in the Master Plan (relates to sections 3.4.2, and 15).

Response

State Planning Policy SPP 1/02 *'Development in the vicinity of certain airports and aviation facilities'* is a significant policy. It identifies Archerfield and 12 other airports in Queensland as being essential for the State's transport infrastructure, and includes measures to protect the airports from adverse impacts on the safety and operational efficiency, large increases in the numbers of people adversely affected by significant aircraft noise, and increases to public safety risk near the ends of airport runways.

The policy ensures that airports are protected by requiring that councils incorporate airport protection aspects in their planning schemes and address the airport protection requirements in their assessment of development applications.

AAC notes that in some submissions there is concern expressed about the ability of the airport to comply with the guidance provided by SPP 1/02.

In particular there is confusion about how the policy informs planning decisions for land on and off the airport, and whether the policy creates an obligation on AAC to compensate landholders for any changes to Public Safety Areas or noise attenuation required in noise affected areas.

The SPP applies to land around the airport (and is designed to protect the ongoing operations of the airport). It does not create any restrictions over airport land. It does not seek to restrict aviation activity, or the noise or other effects of it. It also does not address compensation issues.

The Public Safety Area as defined in SPP 1/02 applies to land off the airport that is within 1000m of the end of the main runway (10L/28R).

AAC has reviewed the implications of the proposed main runway extension against the policy for managing a PSA on adjacent land.

The extension will allow for longer aircraft take-off runs whilst providing sufficient length for the incorporation of modern safety standards such as Runway End Safety Areas (RESA).

It is not expected to alter significantly the current aircraft take-off or landing locations, as indicated by the runway thresholds. Therefore, depending on interpretation of the SPP 1/02, a total of 12 properties on the eastern side of the airport may be included in the PSA with the runway extension. The PSA may also extend further into two properties that are already partly in the PSA.

Of the total of 14 properties, 10 are developed with existing houses on standard sized lots (consistent with other land closer to the runway), and three are larger properties which are also already developed but have potential for further development.

The residential properties are appropriately zoned for residential and related purposes, and their continued use is encouraged under the *Acacia Ridge/Archerfield Neighbourhood Plan*.

AAC understands that under SPP 1/02 these properties are considered to have a 'development commitment', so BCC has the discretion to assess public safety risk on individual merit (taking into account their existing and long established use and development).

Advice from the State Government is that SPP 1/02 does not prevent approval being given for the redevelopment of these properties, even if the PSA moves following the proposed extension of the main runway.

The PSA at the eastern end of the main runway is over part of an industrial property and open space. This will not change significantly with the runway extension project.

With respect to noise exposure, SPP 1/02 requires that BCC take into account the approved ANEF for Archerfield when amending the Brisbane City Plan (or Neighbourhood Plans), or making decisions about development applications.

This policy has been in force since 2002, and replaced similar provisions dating back to 1992.

AAC recognises that these are complex issues and that more work is required to appropriately communicate AACs perspective to BCC and stakeholders in the areas around the airport.

This will be achieved through the consultative processes in place, and through the *Community Aviation Consultation Group* and the ongoing *Planning Coordination Forum* (which includes the State representatives responsible for SPP 1/02). These mechanisms will provide AAC with valuable feedback on the effectiveness of the consultation and on emerging issues.

14.6.2 BCC concerned that height limits imposed by the airport's airspace could limit Council plans to encourage higher density development (in taller buildings) south of Brisbane.

The issue/changes sought

Include in the Master Plan a protocol that AAC will advise BCC of any changes to airspace (relates to sections 9.2 and 15).

Response

BCC has highlighted that the Brisbane City Plan encourages taller buildings in some areas on the south side of Brisbane CBD, and that there is the potential for the airport airspace requirements to conflict with this.

It is noted that the air airspace requirements in this part of Brisbane have not changed from the previous master plan and will not change with the realignment of the secondary grass runways.

From reviewing the implications of the limitation to 178.3m AHD with BCC, it has been confirmed that the airspace (as shown in the Master Plan) would not conflict with the Council plans.

Council has requested that it be informed should there be a future change to airspace that would set a lower maximum building height. This has been addressed by adding to section 9.2 the sentence "*BCC is required under State Planning Policy SPP 1/02 to ensure that current airspace protection requirements are reflected in the planning scheme. Should there be any change to the airspace AAC will advise BCC.*"

These strategic issues will be flagged and addressed in the Planning Coordination Forum which involves BCC, the State government and the Commonwealth.

14.6.3 Zoning, and consistency with Brisbane City Plan

The issue/changes sought

Show zoning surrounding the airport. Clarify the intent of Special Purpose Centre SP-6 Airport (relates to section 12.3).

Response

A new Figure 10 *Current airport land use context* has been added. It shows the land use zoning surrounding the airport, from the Brisbane City Plan.

The zone definitions for the zones on the airport are consistent with those in the Brisbane City Plan. The zoning of the airport follows the area designations and codes in the Brisbane City Plan.

Section 12.3 sets out the land uses that are allowable in the SP-6 (Airport) area. These include the runways and related aviation infrastructure, and aviation and related industries and services.

Assuming similar terms and conditions with any non-aviation related proposals, priority will be given to aviation related tenancies when leases expire within this precinct.

This may include tenancies that provide services required by airport businesses, users and visitors. Examples include convenience retailing and service businesses (eg food, etc) that are inadequately catered for on the airport or in the surrounding area.

Leases in the SP-6 area will be negotiated on commercial terms (as at present). Land within this zone will be available for interim uses when not required for aviation activities. Uses may include those similar to those in the General Industry and Light Industry zones. This is addressed in section 12.

14.6.4 Heritage conservation

The issue/changes sought

The features of heritage value need to be appropriately managed and conservation measures implemented (relates to section 13.5 and section 5 in Part 2 (AES)).

Response

The heritage values on the airport have been described in the 2001 heritage assessment prepared by Bonhomme Craib and Associates. Their findings are reflected in the Master Plan (incorporating the AES) and the approved 2010 version of the AES.

AAC has identified in the current AES action plan the need to review the Bonhomme Craib report and this work is progressing.

In the meantime, the AES (Part 2 of the Master Plan) sets out the process for considering heritage aspects for any proposals involving buildings that have been identified in the Bonhomme Craib report.

14.7 AVIATION FACILITIES

14.7.1 Further studies are required prior to realignment of the secondary grass runways

The issue/changes sought

Further studies are required (relates to sections 12 and 15).

Response

It is AAC's intention to progress the proposed realignment of these runways within the next five years to improve the usability of the runway system for flying training in particular. It will also enhance the airport's ability to provide for high-end aviation infrastructure with direct access to the main runway.

The proposed alignment and supporting taxiways are shown conceptually in Figure 2 *Master Plan vision*. Further information about the design is provided in the technical studies undertaken for AAC in the development of the Master Plan.

The proposed realignment of the secondary grass runways will be subject to the preparation and approval of a Major Development Plan, and this will include more detailed engineering investigations, design, and further consultation with stakeholders including Airservices Australia, CASA, nearby residents and businesses, aviation tenants and users of the airport.

Issues that will require particular attention include noise changes associated with a change in runway direction, approach and departure splay paths and any potential OLS issues with the Air Traffic Control Tower and fuel farms.

These matters will be analysed further in consultation with all stakeholders through the MDP process which is required to be completed before any works on the realignment of the grass runways proceeds.

As part of the MDP process, an updated Control Tower Siting Study will also be undertaken, and this will determine whether there is a need to relocate the Tower having regard to response times in relation to CASR 172 Manual of Standards, Chapter 3, Section 3.1.2.1 paragraph f.

The rezoning of land from *General Industry* to *Special Purpose Centre SP-6 (Airport)* and other proposals for the Wirraway and Beatty precincts are dependent on the successful implementation of the realigned secondary grass runways, which AAC expects will in turn be dependent on the relocation of the Control Tower.

The benefits of the proposed realignment are discussed further in section 14.7.6.

14.7.2 Length of proposed cross wind runways

The issue/changes sought

Include proposed lengths in the plan if not already (relates to section 12.5.1). Some submissions also voiced concern over the proposed shortening of the grass runways when realigned.

Response

The technical report '*GA Aircraft Performance Planning-November 2008'* by Randl Pty Ltd examined the various types of aircraft that could use these runways and recommended a length of 900m be considered for planning purposes.

Further technical studies were conducted to ensure that any proposed changes to the length of the grass runways would not have a deleterious effect on the airport's capacity to cater for different types of aircraft or air services that have used them in the past or are likely to require them in the future.

All aircraft that used the 04/22 grass runways during the three year period, August 2008-August 2011, were analysed within this study. During this period, over 231 different models of aircraft with 729 unique call-signs conducted over 24,000 flights on the secondary grass runway complex. Models ranged from the Boomerang ES-60 and Jabiru J230 through to the Cessna 340 and Beech 200 aircraft.

The studies were based on the aerodrome reference temperature of 30.3 degrees Celsius at 19 metres above mean sea level and took into account the usage of the grass runways with a 10-13 knot headwind. This is generally the point at which Air Traffic Control will direct light aircraft to begin using the secondary grass runways, primarily to cater for ab-initio students who can sometimes find it difficult learning in crosswinds on the main runway.

It was found that all aircraft in the study currently permitted to use the grass runways (ie aircraft under 5,700kg MTOW) would be capable of operating from the proposed shortest runway length of 920m. This length is approximately 8% longer than the runways at many other training airports For example, the main runway at nearby Redcliffe Airport has a length of 853m.

The realigned runways will maintain Archerfield's status as Queensland's premier flying training destination, whilst considerably improving the availability of training facilities.

Previous ANEF studies had included assumptions such as the use of the secondary runways by RPT aircraft. This is no longer consistent with the plans for the airport. Aircraft such as RPT aircraft with a MTOW greater than 5700kg

are generally rated for operations with 15 knots or more crosswind, in which case the primary 10/28 runway direction provides usability of at least 99% in all weather conditions and does not justify provision of a secondary runway direction.

The proposed lengths of 1020m and 920m were adopted and included in section 12.5.1. The final length will be resolved through the investigations and further consultation that will be undertaken as part of the MDP process.

14.7.3 Potential usage of grass runways by larger aircraft

The issue/changes sought

Concerns have been raised that the realigned runways might be used by larger aircraft, including those involved in RPT or freight.

There were also concerns that the grass runways would be used at all hours of the day and night, and that larger aircraft would be redirected to fly over residential areas that currently do not experience aircraft movements.

Response

These issues arose late in the public exhibition process, and were brought to AACs attention via media coverage, and a postcard and email campaign using pro forma objections.

AAC recognises that such concerns would be genuine, but were based on incorrect information.

The majority of pro forma submissions were received from people from Moorooka. The N70 analysis shows that Moorooka is not likely to be impacted upon by the changes to the runway realignment or RPT operations.

Section 7.2, which describes the proposed realignment of the grass runways, states categorically that the runways will continue to only be used by light aircraft, and only during daylight hours.

AAC has worked to address this issue by providing submitters with clarification about the proposed realignment, and other aspects of the Master Plan.

AAC has since followed up this issue with the majority of submitters, including BCC representatives and will also address it through the *Community Aviation Consultation Group*. This clarification will be carried through to the MDP when it is prepared for the secondary grass runway realignment proposal.

Likely flight paths for future RPT services have also been added to Figures 5 and 6.

14.7.4 Potential confusion caused by naming of proposed 01/19 runways

The issue/changes sought

Change naming of the proposed 01/19 runways to '18/36' to avoid confusion with the 01/19 runways at Brisbane Airport (relates to various figures and text references).

Response

The runway description has been changed to '18/36' in maps and in text.

14.7.5 RPT and freight are new additions to Archerfield

The issue/changes sought

Some submissions raised concerns that the RPT and freight proposals are a new initiative for the airport (relates to section 5.5)

Response

RPT and freight are included in the current master plan and in previous plans. They have always been included in the endorsed ANEF for Archerfield.

Although RPT flights have not been a feature of Archerfield in recent history, freight operations have been ongoing for many years through aircraft such as the DC-4 and smaller turboprops. With the airport's location within the South West Industrial Gateway, one of Australia's fastest growing regions, both RPT and freight movements from Archerfield are seen as likely requirements for the region in the future.

In the previous 2019 ANEF, some movements were assumed on the secondary grass runways in addition to the main movements on the 10/28 complex. This is no longer consistent with the plans for the airport, and all future RPT and freight movements have been modelled using the existing 10/28 runway complex.

This Master Plan and the Practical Capacity ANEF provide for a modest increase in the number of RPT movements. The proposal is to cater for small jets and Turboprops capable of carrying up to 80 passengers.

A MDP is required for runway upgrades, and this will include investigations into Jet Blast / RESA, in addition to a range of other factors.

The airport is currently registered, and would need to be certified for RPT or frequent charter with more than 30 passengers.

Consultation with affected stakeholders, through means such as the Community Aviation Consultation Group, would occur prior to the introduction of any RPT services operating from Archerfield. This consultation would address any potential implications including for aircraft noise, ground access and use of surrounding roads, adequate provision for on-airport parking, and

any effects on other airport operations. This has been clarified in section 5.5 of the Master Plan.

Likely flight paths for future RPT services have also been added to Figures 5 and 6.

14.7.6 Need to cater for aviation growth, including provide sufficient area for new hangars

The issue/changes sought

Expand on areas that are suitable for new hangars (relates to section 12).

Response

From a land use perspective the plan provides for the expansion of the core aviation areas, including airside developments in the Wirraway, Beatty and Barton precincts.

Overall it proposes an additional 5 hectares of land dedicated to long-term aviation use following the realignment of the grass runways.

The proposed realignment of the grass runway complex presents new opportunities to cater for this anticipated growth.

A strip of land one-third the length of, and adjacent to, the main runway will become available for high-end aviation uses providing direct access to the airport's most valuable asset. This will create efficiencies for operators in terms of reduced taxiing times, reduced fuel usage and subsequently reduced emissions.

The realignment will also create opportunities for the establishment of complementary industrial uses to offset the costs required to improve drainage in this area and relocate the secondary grass runways.

These uses will strengthen the economic activity on the airport.

An ongoing return from this area of land, which is currently underutilized, will provide additional capital required to improve existing facilities and to ensure the growth of the airport into the future.

In addition to the strip of land being made available parallel to the main runway, AAC has proposed that a large portion of land fronting Beatty and Mortimer Roads be rezoned for aviation use should the grass runway realignment proceed.

Much of this land is currently zoned 'General Industry'. The rezoning will give certainty of tenure to those tenants who currently have hangars in these areas. The BCC zoning 'Special Purpose Centre SP-6 Airport' will be applied, reserving it for future long-term aviation uses only. This will increase the total aviation dedicated land over the entire site by approximately 5 hectares compared with the existing 2005 Master Plan.

The area in the Beatty and Barton precincts, to the north of the proposed Boundary Road intersection will eventually be totally redeveloped. All existing hangars will be removed or relocated.

The realignment of the grass runways will provide additional area within this precinct for new aviation facilities and hangars with direct access to the grass runways and repositioned helipad. These facilities will also have direct land access via the new road network planned for the Barton precinct.

The Wirraway Precinct, which is already home to EMQ, Flying Fighters, the AAC corporate hangars and other aviation developments will be expanded with sites for RPT, freight and other aviation uses created adjacent to the main runway. These sites will have direct access to the widened Taxiway Bravo and a new code A, B taxiway.

Provision will also be made for a new central helipad and for access to the realigned grass runways.

An area to the north of Boundary Road, adjacent to the relocated northern helipad, will also become available for new aviation developments.

These initiatives will ensure sufficient land is reserved for any possible expansion required for future aviation facilities. It will provide the opportunity for existing and emerging aviation businesses to establish themselves in modern facilities with direct access to the new runways (and associated taxiways) and the new northern helipad. These tenants will enjoy operational efficiencies previously unavailable.

AAC has consulted with existing tenants and users on their future needs and is confident that the plan provides many opportunities for their growth.

AAC recognises that in some cases tenants might believe that the initiatives in the Master Plan will force the early resumption of their leaseholds.

This is not the intention, so AAC will make renewed efforts to communicate to tenants that existing leases are honoured, and if relocation is necessary, this will be negotiated in accordance with the conditions of their lease. This is consistent with normal AAC practice, and is also addressed in section 12.

14.7.7 Future airspace changes

The issue/changes sought

Brisbane Airport Corporation has submitted that the Master Plan should include reference to the changes to airspace that will occur in 2019/2020 due to the New Parallel Runway (NPR) at Brisbane Airport (relates to section 6.3.4).

Response

Brisbane Airport Corporation has highlighted that changes to the airspace around Archerfield will be required when the new parallel runway commences around 2019/2020.

Training areas at Archerfield Airport will be affected with the lowering of airspace base altitude from 3,500ft and 4,500ft to 2,500ft.

Arrivals and departures will not be affected. Arriving aircraft may benefit from having Class C protection for longer on descent.

Currently aircraft leave Class C at 3,500ft and will be in controlled airspace until 2,500ft with the airspace changes.

This information has been included in 6.3.4 of the Master Plan.

14.7.8 Updated information about GPS

The issue/changes sought

Airservices has requested that the information about GPS be updated (relates to summary and section 12.5.2).

Response

This section of the Master Plan has been reviewed with Airservices and the amended wording has been agreed to.

14.7.9 Ownership of Non Directional Beacon (NDB) on north-east corner of Beatty Road and Kerry Road.

The issue/changes sought

Indicate on maps and clarify that it is owned by Airservices (relates to sections 6.1.7 and Figures 3 and 4).

Response

The NDB has been added to the 'Airport context' and 'Existing airport layout' drawings. In section 6.1.7 (page 62) of the Master Plan it now states that the NDB is owned and managed by Airservices Australia.

14.7.10 Extension of Runway 10/28 onto BCC owned land

The issue/changes sought

Clarify that this will not occur on BCC land (without the consent of BCC) and any proposal will be discussed with BCC (relates to sections 3.4.5 and 7.3).

Response

The Master Plan foreshadows in sections 3.4 and 7.3 a possibility in the longer term for a new runway aligned parallel to the existing main runway, to cater for larger aircraft.

BCC has highlighted that it owns land to the west of the runways (adjacent to Oxley Creek) and has advised that at this time it would not agree to the land being used for runway purposes.

Before such a runway could proceed, there would need to be a demonstrated need (through a detailed feasibility assessment), and the project would be subject to consultation with BCC, and the preparation and approval of a Major Development Plan.

AAC has discussed this concern with BCC and as a result the Master Plan has been amended to delete reference to the runway potentially extending beyond the airport boundary, and to also state that any MDP will be prepared in consultation with BCC.

The sentence "*Notwithstanding this, future utility might commend the extension of a main runway to the west over Beaufighter Avenue and beyond the current airport boundary*" has been deleted from section 3.4.5 of the Master Plan. Section 7.3 has also been amended to delete reference to possible extensions onto other land, and include the statement "*Any new or extended runway will be confined to land under the control of AAC.*"

14.8 GROUND ACCESS

The adequacy of the road network around the airport has been an issue of concern to AAC, and this has been reflected in the initiatives presented in successive master plans. In recent years, the Barton Street link was created across the northern end of the airport, and this has enhanced significantly the east-west routes available to traffic travelling through the Archerfield area.

Master plans have also provided for the progressive development of the road network within the airport, including Beaufighter Avenue.

In this master plan, AAC has gone further. The Precinct Structure Plans (section 12):

- define potential road widenings along Beatty Road, Barton Street, Ashover Road and Boundary Road to cater for improvements required to these roads (primarily to deal with passing traffic, which is growing in volume);
- identify the proposed main access points for each precinct, and provide concept designs for the main intersections;
- propose a rationalised and improved access to the Airport terminal and administration (and related uses in the 'Archerfield Square' area of the Beatty precinct);

- show a new, direct road access to the proposed aviation area in the Wirraway precinct;
- show concepts for internal road alignments, for access to existing and new developments in each precinct; and
- adopt BCC standards for the design of new roads.

The State Department of Transport and Main Roads (DTMR) submission on the preliminary draft Master Plan highlighted a number of potential changes to the broader district and regional road network that are being considered by BCC and DTMR.

It is anticipated that some of the proposals described in the DTMR submission will not proceed in that form, once DTMR has taken into account the current and future access requirements of the airport, as shown in the Master Plan.

DTMR has also recently raised the prospect of the creation of a new link joining Boundary Road across the airport. AAC has included in the master plan actions to address the feasibility of this idea with DTMR and BCC. These issues are summarised below.

14.8.1 Proposed changes to State roads

The issue/changes sought

Include in the Master Plan proposed changes to the surrounding State Roads (Ipswich Motorway closures and overpass, Granard Road right lane changes to Beatty and Balham, Kerry Road intersection changes). This relates to sections 10.8 and 12.

Response

AAC has held discussions with DTMR about the proposals raised in its submission, as AAC had not been consulted on the majority of the proposed changes and the proposals would have significant implications for the airport, now and in the future.

DTMR has advised that the proposals in the initial submission were preliminary by nature, and were subject to further investigation and consultation.

AAC is now working with DTMR and is having input to the road network planning that is underway. It is anticipated that some of the proposals described in the DTMR submission will not proceed in that form, once DTMR has taken into account the current and future access requirements of the airport.

14.8.2 Traffic Impact Assessment for new developments

The issue/changes sought

A Traffic Impact Assessment should be undertaken to determine the impact of developments (relates to sections 10, 12 and 15).

Response

Traffic accessing surrounding roads has grown substantially in recent years due to developments external to the airport and changes in travel patterns. This has caused concern from airport users along with nearby residents who are finding it difficult and sometimes dangerous to travel along roads fronting the airport.

During the course of preparing the Master Plan, DTMR advised that it was in the process of developing a road network strategy for the broader Archerfield/Acacia Ridge and Rocklea area, to address existing shortcomings in the district road network.

The DTMR submission highlighted a number of potential changes to the road network that are being considered by BCC and DTMR. Some of these options would have implications for the airport.

Further discussions with DTMR revealed it is likely that the airport's future development potential, as indicated in previous master plans, had not been included in their models for the surrounding road network.

AAC is now being consulted on this, and is currently liaising with BCC and DTMR regarding the road infrastructure that surrounds the airport. AAC is seeking to ensure that the current and future use of the airport is not inadvertently constrained.

AAC has commissioned its traffic engineers to undertake a traffic impact assessment of the proposed developments in the Boundary Precinct. The assessment will become an input to the DTMR strategy, and the findings will be taken into account by AAC and BCC when assessing the road access requirements for the precinct. The findings will also provide useful data for the implementation of the other Precinct Structure Plans in the Master Plan.

The traffic impact assessment will clarify the access requirements for the airport and will assist AAC, BCC and DTMR to identify any improvements that will be required to the district and regional road network in the coming years. This will be used to also identify any land and/or infrastructure contributions for improvements to adjacent roads required from AAC to cater for traffic from airport developments.

If contributions are required, these will be formalised in an agreement with the relevant authorities (consistent with the agreement that is being developed with BCC for other external infrastructure).

14.8.3 Potential for future arterial road link east-west through the airport

The issue/changes sought

Highlight possibility of east-west link aligned with Boundary Road (relates to section 10.8).

Response

In recent discussions with DTMR, the possibility of creating an arterial road link east-west across the airport has been raised.

This was shown in past master plans, but was removed from this Plan as it was not reflected in the recently completed *Acacia Ridge/Archerfield Neighbourhood Plan* (BCC 2010), and had not been proposed by either BCC or State Government in any of the forums convened to discuss the emerging Master Plan.

AAC is cognisant of the social responsibilities entrusted to it by the Commonwealth. The Corporation will consider all reasonable proposals to improve surrounding roads for the benefit of the total community so long as they do not significantly disadvantage the airport itself or the community it serves.

As DTMR has suggested, if a link was to be created, it would need to be through means of a tunnel, to allow for the continued operation of the secondary grass runways and other aviation facilities.

There are significant issues to be addressed before this idea could be considered by AAC to be credible and feasible.

Of particular importance is ensuring that the link does not have deleterious effects on the operational aspects of the airport and in particular the grass runways. Factors including the intended scale and alignment of the link, location of portals, impacts on AAC land, impacts on existing tenants and proposed developments would require consideration amongst other factors.

AAC will continue with the preliminary discussions with DTMR and BCC, and should the preliminary issues be resolvable, the project can progress to consideration of potential routes (and the assessment of these), and clarification of the range of consequential issues that will determine the feasibility of this idea. This undertaking has been included in section 10.8 of the Master Plan.

14.8.4 Identify opportunities for providing pedestrian and cycle facilities servicing the airport

The issue/changes sought

A pedestrian/cycle network should be included in the Master Plan (relates to sections 10.4, 12 and the Precinct Structure Plans)

Response

Council has identified in the Acacia Ridge/Archerfield Neighbourhood Plan opportunities for improved pedestrian and cycle linkages in some of the roads surrounding the airport. This is discussed in section 3.5.4.

The Neighbourhood Plan identifies Boundary Road and Mortimer Road as 'local desirable cycle routes'. It indicates that Beatty Road provides for localised north-south access off the western ends of Boundary and Mortimer roads. It does not however show Beatty Road as a north-south pedestrian/cycle corridor.

As part of the review of submissions, AAC has considered options for extending this network to the airport.

The runway complex and airside areas provide a constraint to north-south or east-west connections through the middle of the airport site.

Security, topographic, flood management, environment conservation and runway protection issues make it impractical to provide a link along the Oxley Creek. Even if a section of path was provided along the creek, it would be isolated, as there are no paths (or practical options for creating these) on neighbouring land.

There is however the opportunity to incorporate pedestrian and cycle access along the upgraded road network planned around the airport perimeter and within each precinct.

These opportunities were identified in dicussions with BCC and have been highlighted in the updated Precinct Structure Plans which show suggested routes around and within the airport.

Subject to further investigations and discussions with BCC, pedestrian/cycle paths will be provided for along Balham Road/Barton Street and Ashover/Boundary roads when these are upgraded to cater for the development of adjacent airport precincts.

The new roads in the Barton, Ashover and Boundary precincts will include cycle lanes in accordance with BCC standards. Cyclists will also be able to travel along Beaufighter Avenue, to the tenancies in the Beaufighter precinct.

14.8.5 Provision needs to be made for taxi parking (including maxi taxis) to service planned RPT

The issue/changes proposed

Provision will need to be made for sufficient taxi parking, especially maxi taxis and for disabled persons in the vicinity of the RPT facility (relates to section 12; and Figures 2 (*Master plan vision*) and 21 (*Wirraway Precinct Structure Plan*).

Response

The *'Master plan vision'* drawing (Figure 2) has been amended to include a note that provision will be made in the Boundary and Wirraway Precinct for public transport access for RPT services (in addition to on site parking that is provided for in the Plan).

The *Boundary and Wirraway Precinct Structure Plan* (Figure 21) shows indicative access for passenger drop off and collection by taxis and buses (as required).

If RPT operates from the east side of the airport (eg from the historic Airport Terminal building), there is existing provision for taxi parking adjacent to the building, and a bus route along Beatty Road (and directly accessible to the Terminal via Grenier Drive).

If AAC receives a proposal for an RPT service operating from the existing Terminal, the adequacy of these facilities will be reviewed.

14.9 INFRASTRUCTURE SERVICES

14.9.1 Stormwater run-off/flood mitigation

The issue/changes sought

Clarification that stormwater management and flood mitigation will be assessed for developments and discussed with BCC (relates to sections 11, 12, 13 and the AES).

Response

AAC has in recent years implemented a range of major drainage works to cater for existing and planned developments. It has also included rainwater harvesting in new developments.

With new development, drainage requirements will be assessed (in consultation with BCC), and the necessary measures implemented.

The stormwater management requirements for the airport and for any future development are addressed in chapter 11 (services infrastructure); the description of development objectives, zones and precinct structure plans in section 12; and the environmental management aspects of stormwater management are addressed in section 13, and in the environment strategy which is part 2 to the Master Plan.

14.9.2 Electricity supply

The issue/changes sought

Highlight likely future electricity infrastructure requirements to cater for additional demand (relates to section 11.3).

Response

The Master Plan acknowledges that services infrastructure on the airport will need to be upgraded to support proposed developments.

This upgrading will be undertaken in accordance with normal development requirements, as has occurred over the past 12 years at Archerfield.

From an electricity supply perspective, Energex (the electricity supplier) has advised that a new substation will be required.

This advice has been reflected by including in section 11.3 the following sentence as per Energex's submission: "In order to cater for the proposed increase in industrial density in the area, a substation will be required".

14.9.3 Need for an infrastructure agreement with BCC

Changes sought

BCC has requested that AAC enter into an agreement with Council on infrastructure funding arrangements (relates to section 15.11).

Response

During the process of preparing the Master Plan BCC requested that AAC work with Council to determine the infrastructure requirements for the developments described in the Master Plan; the likely sequence, timing and triggers for the delivery of required infrastructure; and any contributions from AAC.

AAC is currently working with BCC on this issue and will enter into an appropriate agreement. This commitment has been addressed in section 15.11

14.10 CONSULTATION

14.10.1 Need to provide updated information on consultation undertaken

The issue/changes sought

Include information about the consultation undertaken in the process of preparing the Master Plan (relates to section 14.3).

Response

Section 14.3 has been updated to describe the consultation carried out as part of the master planning process. This has included engagement of key stakeholders in the formulation of the preliminary draft of the Plan; consultation prior to, and during the formal exhibition of the Plan; and consultation on issues arising from the submissions.

The section has also been updated to describe the methods used to engage with people and organisations, including consultative meetings with agencies, the publication of fact sheets about the preliminary draft Master Plan on the AAC web site, information sessions, news reports, radio broadcasts, letterbox drops, newspaper articles, follow up with submitters to clarify issues or respond to matters raised, and so on.

14.10.2 Ongoing consultation and coordination with state and local authorities with an interest in planning for the airport and surrounding area

The issue/changes sought

The master planning forum that has been established has provided a good basis for ongoing coordination between AAC and all levels of government, and it is beneficial for this to continue (relates to section 15).

Response

This aspect of the Master Plan has been strengthened by adding to section 15 a commitment to formalise the consultative forum that has been developed over the course of the master planning process.

The forum, which has met to discuss a range of issues including noise, traffic, land use, airport protection, infrastructure services and community consultation, involves representatives of AAC, BCC, State Government, and the Commonwealth (through the Department of Infrastructure and Transport).

AAC will propose to the Planning Coordination Forum members that a regular meeting schedule be established to discuss strategic issues relevant to the implementation of the Master Plan and plans for the areas around the airport, and disseminate information.

The frequency of the meetings is yet to be resolved, but is likely to be 2 to 3 times per year (supplemented by separate meetings held on specific issues as required).

For example, AAC, BCC and DTMR have since the publication of the PDMP held a series of meetings and discussions about road access in the district and wider region. These discussions are informing emerging plans for the road network, and for AACs plans for site access.

14.10.3 Engagement with community stakeholders and effective consultation and communication with the communities of interest around the airport

The issue/changes sought

Concerns have been raised by people who only became aware of the preliminary draft Master Plan late in the exhibition process, and felt that they had not been adequately informed or consulted on the plans (relates to section 15).

Response

AAC recognises the importance of effective consultation with the range of community stakeholders with an interest in the airport.

The issues are often complex, and attract divergent views. AAC has through this and past master plans identified and implemented various approaches to consulting with stakeholders, and providing information on the strategic issues shaping the airport.

AAC has undertaken a range of public information and consultation initiatives over the course of preparing the Master Plan as well as satisfying the public notifications in accordance with the Airports Act.

There is always scope to improve these processes, and AAC has sought specialist advice on this which it will incorporate into future consultation and information processes.

AAC has now decided to establish a structured approach to the ongoing consultation with community stakeholders.

AAC has formed the *Archerfield Airport Community Aviation Consultation Group*. This group held its first meeting in November 2011 and will meet on a regular basis to discuss airport related issues and provide feedback to AAC. The representation will include community groups from the areas around the airport, airport businesses, other local businesses and other stakeholders. This initiative is described in section 15.10 of the Master Plan and in the summary.

14.10.4 Communication of changes to airport zoning

The issue/changes sought

The Master Plan proposes changes to airport zoning, including rezoning of areas from General Industry to SP-6 Airport. Some tenants and airport users have highlighted their confusion about the implications of this change (relates to section 15).

Response

Sections 12.6.1, 14.6.3 and 14.7.6 have been updated or added to, to help clarify the proposed changes to land zoning.

The zoning changes will also be discussed at the regular meetings with AAC tenants, and AAC will address any queries raised by individual tenants as they arise.

14.10.5 Update contact details for Airservices Noise Enquiry line

The issue/changes sought

Update reference to noise enquiry line (relates to section 13.7).

Response

The reference to the Noise Enquiry Service has been updated to provide the current phone, mail and email contacts.

14.11 NOISE AND THE PRACTICAL CAPACITY ANEF

14.11.1 The issue/changes sought

Clarification of why the ANEF contours are more extensive than shown in previous Master Plans. This relates to sections 9.4, 9.5, 13.7 and Chapter 13 of the AES.

Response

AAC recognises that with the publication of the *Practical Capacity ANEF* (replacing the previous ANEF that modelled airport operations to the year 2019) there has been some confusion about the likely noise effects of the aviation activity being facilitated by the Master Plan.

Comparisons have been incorrectly drawn between the previous and current ANEF, and the implications of the ANEF have been misrepresented in various forums, and by some local media.

The *Practical Capacity ANEF* takes into account existing standards, the projected aircraft flight numbers at practical airport operating capacity, the projected movement patterns (including the planned re-alignment of the grass runways, anticipated around 2015 or 2016), and likely aircraft mix.

This capacity has been determined from an analysis of the theoretical maximum throughput of the airport, including the enhancements to the runways, taxiways and other infrastructure described in the Plan.

The modelling also considers the mix of operations for flying training, freight, maintenance, passenger transport, emergency services, and so on.

The previous ANEF showed the effects of forecast movements only to the year 2019. It also included assumptions such as the use by RPT of the secondary grass runways, which are no longer consistent with the plans for the airport.

The *Practical Capacity ANEF* shows more extensive noise contours than the previous 2019 ANEF, but it is incorrect to draw conclusions about noise impacts by comparing the two as they illustrate different levels of aircraft activity, and noise effects over different timeframes.

AAC took the decision to prepare the *Practical Capacity ANEF* (rather than an ANEF based on forecast air traffic for the next 20 years) as it illustrates the noise contours that could be generated by aircraft flights in the very long term, and is therefore a more reliable and robust basis for land use planning and development decisions for the land surrounding the airport.

State Planning Policy SPP 1/02 encourages the adoption of Practical Capacity ANEFs, and in the AACs consultation with BCC and State government representatives, both agreed that this was the most appropriate approach to take.

BCC also asked AAC to prepare N70 models to assist with interpreting forecast noise conditions, and this information was provided in the preliminary draft Master Plan and in fact sheets that were distributed during the exhibition period and made available for download.

The forecasting presented in Section 5 indicates that in 2031 the aircraft movements will be up to about 56.5% of the airport's practical capacity. The ANEF is therefore a very conservative illustration of the likely noise from aircraft by the year 2031.

During the exhibition of the preliminary draft Master Plan local media coverage about the master plan created considerable concern in the communities around the airport and as a consequence a large number of submissions were received, which were based on incorrect information about the proposals in the preliminary draft Plan.

AAC acknowledges that there is a need to continue to inform people about the basis and effect of the ANEF, both in response to individual enquiries, and in its ongoing consultation with stakeholders including residents and authorities.

It is also important to ensure that any issues with noise complaints from aircraft in flight are referred to Airservices, so they can be appropriately addressed.

To address this, the Master Plan has been amended to include:

- additional information about the ANEF in section 9.4;
- a commitment by AAC to formalising the strategic planning and consultative forum with BCC, the State, and Commonwealth;
- the likely arrival and departure flight paths for future RPT services in figures 5 and 6; and
- reference in Section 15 to the ANEF and N70 information that AAC will provide to interested parties.

These provisions are in addition to the description of the ANEF in section 9.4, the discussion about N70 modelling in section 9.5, and the noise management protocols described in section 13.7 of Part 1 of the Master Plan and chapter 13 of the Environment Strategy.

14.12 SUMMARY OF KEY CHANGES

As a result of this consultation a number of important changes have been made to the Master Plan, including:

- AAC has committed to formalising the *Planning Coordination Forum*, involving Commonwealth, State and Local government agencies with an interest in strategic planning for Archerfield and the surrounding area;
- AAC has committed to establishing a *Community Aviation Consultation Group* which will involve representatives from the communities on and off the airport, including airport tenants, airport users, residents, and businesses, and has facilitated the first meeting of the Group;
- the strategic land transport and access aspects have been strengthened with more detail about the road network planning initiatives by the State DTMR and BCC, and AACs participation in the emerging strategy to address existing and future needs in the areas around the airport;
- the plans for improvements to land access to the airport have been further strengthened by the commitment by AAC to the preparation of a traffic impact assessment for the Boundary precinct, which in turn will be used in the development and assessment of plans for each of the airport precincts, and will provide a valuable input to the regional and district road network strategy that is being developed by the State Government and BCC;
- more detail has been given on opportunities for providing public transport access to the airport (taxis and potentially buses) including to the new aviation areas planned in the Wirraway precinct;
- provision for a pedestrian/cycle access network has been included, linking with the plans by BCC for improved local routes along Mortimer Road and Boundary Road, east of the airport;
- clarification that a Major Development Plan will be required in accordance with Division 4 of the *Airports Act 1996* for many of the projects described in the Master Plan, including the proposed realignment of the grass runways, the improvements to and lengthening of the main runway, and that the MPD process will involve more detailed investigation into all relevant issues, consultation with people and organisations that might be affected, and ultimately a formal assessment by the Minister before the projects are approved and can proceed;
- the Public Safety Areas as defined by State Planning Policy 1/02 have been added to the *Master plan vision* drawing and to the *Practical capacity ANEF* drawing, to assist BCC with its assessment of development applications on land near the ends of the main runway;
- a commitment by AAC to formulate an appropriate infrastructure agreement with BCC addressing the timely and equitable provision of off-site infrastructure required as a direct consequence of development of the airport; and
- clarification of a number of technical details in the master plan, including numbering of the proposed realigned runways, location of aviation infrastructure, identification of potential future improvements to navigational aids, contact details for noise complaints, and so on.

15 Implementation

15.1 PLANNING PROCESS AND PRIORITIES

The *Airports Act* and regulations defines a planning regime for Archerfield Airport that comprises:

- a *Master Plan* that sets the long term framework for development of the airport, having due regard to its physical, economic and community context (and its relationship to surrounding areas), and the need to plan for the long term viability of aviation services;
- an *Environment Strategy* that identifies all relevant current and potential impacts of the Airport on the environment, and sets out strategies, actions, monitoring and review procedures required to address these impacts; and
- *Major Development Plans*, for significant projects. Major developments include projects with a value in excess of the benchmark set in the Regulations (currently $20M), proposals for new runways or taxiways, or proposals that could have a significant environmental impact.

The Master Plan sets the framework for the timely, equitable and efficient provision of general aviation services, facilities, and supporting infrastructure.

It also defines AAC's plans for non-aeronautical land. These plans show how the potential of the airport as a strategic part of the greater Brisbane area (and South East Queensland), can be realised.

The proposals build on the ideas originally identified by both the Commonwealth and the Federal Airports Corporation many years ago, and refined more recently by AAC and BCC.

It also sets the parameters for land use and development decisions for proposals that interface with the airport, particularly those on neighbouring land.

The Master Plan is dynamic and subject to ongoing improvement and review, including a formal review every five years.

It needs to be flexible to accommodate adjustments to market conditions, economic performance, operating requirements, standards and technologies.

15.2 KEY INITIATIVES

The development initiatives listed in the table below reflect the current and future needs of the airport as at the time of preparation of this Master Plan.

The timing and final form of specific projects is not guaranteed at this time. There are many interrelated factors that will influence the form, feasibility and timing of these proposals and much of this is outside the control of AAC.

Notwithstanding this, AAC will work diligently to realise the full potential of both the aviation and non-aviation aspects of the airport, with a view to securing its long term sustainability.

Table 6: Possible developments and planning initiatives

Project	Catalyst
TIMING	
0–5 years	
Continue to overlay and repair operational pavements.	Maintenance inspection results.
Investigate with Airservices Australia the siting requirements for the Airport Control Tower and its relocation if required.	Decision to prepare Major Development Plan for realignment of the grass runways
Implement realignment of the 04/22 runways.	Major Development Plan approved.
Rezoning of SP-6 and general and light industrial land to reflect the zoning shown in Figure 17.	Realignment of the grass runways.
Encourage new aviation developments, for RPT, freight, flying training, corporate aircraft and charter.	Market/industry interest in available serviced sites.
Further develop the Boundary precinct	Market/industry interest in available serviced sites.
Further develop the Beaufighter and Mortimer precincts.	Market interest in available serviced sites.
Improve the safety and efficiency of access to the airport from Beatty Road.	Initial planning investigations commenced. Property secured by AAC. Construction scheduled once agreement reached with BCC on configuration of intersection at Kerry Road (or alternative access arrangements).
Implement pro active building maintenance/replacement program.	Availability of funding and market interest will determine priorities
5 yearly review of Master Plan and Environment Strategy	Airports Act requirements for cyclical review.
5–10 years	
Encourage commuter operations to Archerfield Airport.	Potential operators identified.
Extend and strengthen Runway 28R/10L and associated taxiways	Commitment to RPT, freight or larger corporate aircraft
Change Archerfield from 'registered' to 'certified'	When required by RPT or charter operations
Reconstruct taxiways/develop new taxiways	Needs arising from increased movements/larger aircraft

Project	Catalyst
Develop the aviation area in the Wirraway Precinct	Commitment by operators of new or expanded aviation activities requiring access to main runway complex
Upgrade hangars along Qantas Ave and Ditchmen Ave	Commitments to upgrade facilities by existing or new tenants
Commence development in greenfields section of Barton Precinct	Commitments from tenants of proposed development
10–20 years	
Reconstruct runways, taxiways and aprons.	In accordance with AAC maintenance program.
Upgrade navigational facilities	Need demonstrated by airport users. AAC satisfied with viability of investing in system to attract additional movements, particularly flying training.
As required	
Prepare development plans for development precincts.	Critical mass of bona fide (and feasible) development proposals received by AAC.

The airport contains some significant landside development and redevelopment opportunities that will be realised by AAC.

The detail of these projects will evolve over the coming years, as bona fide proposals are secured and their feasibility proven to the satisfaction of AAC.

Within the framework of the Master Plan, AAC will at times draw on the advice of BCC and other agencies (as appropriate) to ensure that, before a decision is taken on a significant project, the full planning and development implications are known.

AAC has in recent years worked hard with BCC and other agencies to develop a constructive and cooperative approach on matters where there are shared interests.

This is reasonably new territory in the history of the airport.

From the feedback that AAC has received over the past 12 years it is clear that prior to privatisation the Commonwealth did not involve local authorities in many of the planning and operational decisions about the airport.

This appears to have created some resentment, as well as missed opportunities for mutually beneficial decisions to be made about the airport and the surrounding area.

AAC is committed to ameliorating the residual effect of these sentiments through respectful consultation and consideration.

To facilitate this, AAC will formalise the *Archerfield Airport Planning Coordination Forum*, and has established a new *Community Aviation Consultation Group* drawing on representatives from the airport businesses and users, the communities around the airport, local businesses, other local

stakeholders, and relevant agencies and authorities with a role in the planning and/or operation of the airport.

Further information about these initiatives is described in Section 15.10.

15.3 PLANNING APPROVALS PROCESS

15.3.1 AAC planning obligations and operation of the Master Plan

Under the provisions of the *Airports Act*, the airport is exempt from the local planning controls in the Brisbane City Plan.

Instead, AAC is responsible for devising a land use plan as part of the Airport Master Plan and administering the provisions of that plan. The plan must be consistent with relevant aspects of the Brisbane City Plan, and the State planning policies and strategies.

The land use zoning and requirements for development precincts are presented in Chapter 12. These should be read in conjunction with the City Plan.

The land use proposals in the Master Plan are consistent with the strategic direction for land use and development as described in the City Plan and State planning policies and guidelines.

AAC has adapted to the airport the Area descriptions used by BCC in its City Plan, and will also refer to relevant Codes and related provisions in the City Plan when assessing development applications.

Administration

Within this strategic framework, land use and development approvals are granted, either by the Airport Building Controller, or in the case of major developments, through the exhibition and approval of a Major Development Plan.

In the case of projects requiring the approval of a Major Development Plan (as defined in the *Airports Act*) AAC will undertake a range of consultation activities with relevant parties including BCC, in accordance with the Act.

15.3.2 Role of AAC in land use planning and development external to the airport site

Land use and development decisions relating to land in the vicinity of the airport have the potential to impact on the sustainable, safe and efficient operation of Archerfield Airport.

Key aspects are:

- maintaining obstacle clearances to allow for safe aircraft movement and aviation communications (in accordance with the obstacle limitation surfaces shown in Figures 11 and 12);

- controls over lighting to minimise the potential for adverse effects on pilots and ground staff (in accordance with the restricted light zones shown in Figure 13);
- identifying areas that are forecast to be subject to aircraft related noise, ensuring that noise sensitive uses are not located in these areas, and that appropriate noise amelioration measures are implemented (in accordance with AS2021: *Acoustics - Aircraft Noise Intrusion - Building Siting and Construction*);
- adherence to the public safety areas and other relevant provisions of the *State Planning Policy 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities*.

AAC will continue to work with BCC, State Government and other authorities responsible for land use and development decisions to ensure that these aspects are addressed. AAC will assist with providing advice on current obstacle clearance and lighting requirements and forecast noise distribution.

15.4 NEW FACILITIES/APPLICATIONS

AAC will require new tenants or proponents of new aviation or non-aviation facilities or activities to apply for approvals as provided for in the *Airports Act, 1996*.

In addition to the requirements of the Airport Building Controller, the application for approval will need to detail:

- the activities and operations proposed, in accordance with the Archerfield Airport EMPs;
- any chemicals to be used or stored on the site including type and maximum quantities;
- evidence that the proposal meets any applicable legislative requirements and guidelines for the construction and operation of the activity or site; and
- evidence that the proposal will meet any applicable occupational health and safety, storage and placarding requirements.

Procedures for this and relevant forms are set out in the Airport EMPs.

These include:

- Procedure AA1-*Environmental assessment of new tenancy or lease renewal*;
- Procedure AA8-*Assessment of environmental effects of new works*;
- EMP1 *Lease proposal/tenant questionnaire*; and
- EMP6 *Environmental management checklist for new works*.

The information provided with applications will assist AAC and the tenant/proponent to identify all potential issues or impacts, and to also clarify

applicable legislative requirements and best practice management guidelines that will be applied. If required, the AEO will be provided with this information.

15.5 ASSESSMENT

The assessment of new works will consider the implications of the proposal for:

- airside operations;
- existing land uses on and adjacent to the airport, including through the emission of noise, dust or odour;
- existing utility services, and any connections proposed during and following construction;
- efficient use of water;
- access to and within the airport;
- significant native flora;
- heritage values (pre and post contact);
- potential risk of soil or air pollution;
- noise impacts;
- groundwater, including potential changes to groundwater levels on or off airport, and/or water quality;
- surface water, including potential changes to peak volumes entering existing drainage lines, diversion of existing stormwater flows and/or impacts on water quality;
- containment of asbestos, where works relate to buildings or plant listed in the airport asbestos register;
- the potential for the works to result in the introduction or spreading of Fire Ants; and
- the appearance of the site and the airport.

If on reviewing the proposal potential impacts are identified, AAC will work with the proponent to identify how impacts can be mitigated. The preparation of a Site Environmental Management Plan for the construction and/or operational phases may also be required.

15.6 CONSULTATION ON DEVELOPMENT APPLICATIONS

All new proposals for the site will be reviewed by AAC against the Master Plan, the AES, and other relevant policies, guidelines or standards. Where the *Airports Act 1996* requires consultation with the wider community, AAC will facilitate this.

The AEO will be involved in assessing and advising on the environmental aspects of any major new developments on the airport site, including any Environmental Management Plan for the construction or operational phases.

If in the opinion of the AAC, the development could result in a significant off-site impact, AAC will identify and consult with relevant stakeholders including Brisbane City Council, and possibly State agencies and/or the community and their comments taken into consideration.

Information concerning new proposals will be provided to the AEO, in accordance with the Airport EMPs.

All comments received will be reviewed and considered by AAC before deciding on whether the proposal should proceed, and if relevant, under what conditions.

Where the *Airports Act 1996* requires consultation with the community (such as in the case of a Major Development Plan), AAC will initiate an appropriate consultative process. Comments received by external parties will be taken into account by AAC when deciding whether the proposal should proceed.

15.7 BUILDING APPROVAL REQUIREMENTS

DIT has appointed an Airport Building Controller (ABC) who is responsible for ensuring that activities at Archerfield Airport meet the appropriate building and engineering standards.

The ABC must be notified in writing of all proposed construction and building activities, including minor repairs, alterations and signs. Some minor works are exempt from formal approval.

In summary, the following standards and considerations will apply to all works on the airport:

- *Airports (Building Control) Regulations—Building Code of Australia* as applied in QLD (adopted by reference), and other relevant standards;
- structures must have a wind rating in accordance with *AS 1170 Part 2* - (2002);
- all structures and site features must comply with the Obstacle Limitation Surfaces applicable to Archerfield;
- regard must be had to noise attenuation requirements, or arrangement of activities to minimise adverse exposure of occupants;
- landscaping must be provided to provide screening, shade and an attractive setting, and be consistent with the overall landscaping theme for the precinct within which the building sits;
- individual developments must include adequate provision for car parking, service and emergency vehicle access, loading and storage facilities;

- the relevant provisions of the AES, environmental management plans, and the environment protection requirements of relevant regulatory bodies must be met; and
- in assessing proposals, AAC will have regard to best practice building development and environment protection practices, including those adopted by State Government and BCC.

Building and construction must comply with the Building Code of Australia (BCA) as operational in Queensland and any other relevant standards. Where the BCA does not apply (for example in relation to civil engineering works) the relevant Australian Standard or international standard will apply. The ABC identifies the appropriate standards.

The structural design will be required to be certified by an appropriately qualified Structural Engineer to meet the appropriate wind rating.

A Certificate of Compliance for Occupancy is required for all building or construction work that requires formal approval by the ABC. A Certificate of Compliance for Occupancy is issued before a building can be occupied, and a Certificate of Compliance for Use is required before engineering works, electrical works or other utility services can be used.

The consent of AAC is required before the ABC can approve a development application. The AAC is responsible for ensuring that all development proposals are consistent with the airport Master Plan and AAC's planning objectives. AAC will in each case assess the impact of the proposal on infrastructure and the operations of the Airport, and may impose conditions on building activities.

15.8 LEASING CONDITIONS

For all new leases, conditions will be included that ensure that facilities are constructed and operated in accordance with the Master Plan, the AES and relevant environmental requirements.

Following construction of the facility, AAC will inspect the premises and verify compliance with any requirements stipulated in the development approval.

15.9 BUILDING PRESENTATION STANDARDS

AAC seeks to encourage the progressive improvement of the airport environment, and is particularly concerned to see improvement in the quality and presentation of buildings on the site. This includes the standard and quality of building design and layout, the materials and finishes used, and the landscaping provided.

The principal objective is to ensure that the profile and presentation of the airport is continuously upgraded from the state to which it had deteriorated.

AAC will require that landscaping surrounding new developments will be of a standard complementary to the expectations of BCC.

AAC will apply appropriate siting and design guidelines to all applications for advertising signs proposed on airport. When assessing an application for a sign, AAC will refer to signage guidelines applied elsewhere by BCC. This will assist AAC to ensure that the character of the airport and surrounding neighbourhood is protected and where possible enhanced.

15.10 OTHER CONSULTATIVE PROCESSES

15.10.1 Consultation during implementation of the Master Plan and AES

Consultation is a prescribed element of the Master Plan and AES process.

AAC will continue to consult in a variety of ways to provide for appropriate and timely input to its decision making processes.

Similarly, AAC will seek to have input to planning and development decisions by others, where those decisions may have implications for the operation, amenity or safety of the airport.

AAC is particularly concerned that other parties are cognisant of AAC needs and requirements and seeks to work in partnership with its neighbours where there are common issues to be resolved.

Archerfield Airport Planning Coordination Forum

Consultation undertaken during the process of developing this Master Plan and the 2010 version of the *Airport Environment Strategy* has highlighted a number of ongoing issues that AAC shares with BCC and with State Government agencies responsible for the environment, roads, and planning. These include:

- planning for, and providing utility services infrastructure required to support the planned developments at Archerfield;
- land use and development controls to ensure that on airport activities are consistent with the Master Plan, complementary to the strategic direction of the City, and are compatible with neighbouring land use;
- opportunities to enhance the South West Industrial Gateway by the provision of complementary aviation services, and land uses;
- land use and development controls to ensure that land around the airport is used and developed in a way that will allow the continued safe and efficient operation of the airport, and minimise the opportunity for activities to establish that are intolerant to aircraft noise or other aspects of airport operation;
- identifying and conserving features and areas of heritage and natural significance;
- managing emissions to the environment; and

- facilitating the timely and equitable upgrading of the regional and local road network, to address existing capacity problems, particularly relating to Beatty Road.

AAC will continue to work to address these issues with the relevant authorities.

The strategic planning forum established as part of the master planning process has provided a valuable opportunity for these issues to be clarified and further considered by AAC, DIT, the State Government and BCC.

To facilitate the ongoing consultation, AAC will formalise the *Archerfield Airport Planning Coordination Forum* which will meet on a regular basis to discuss strategic issues relevant to the implementation of the Master Plan and plans for the areas around the airport, and disseminate information.

The meeting frequency will be resolved with the forum members. AAC anticipates that the meetings will be held 2 to 3 times per year, and will be supplemented by separate meetings held on specific issues as required.

Community Aviation Consultation Group

AAC recognises the importance of effective consultation with the range of community stakeholders with an interest in the airport. The issues are often complex, and attract divergent views.

AAC has through this and past master plans identified and implemented various approaches to consulting with stakeholders, and providing information on the strategic issues shaping the airport.

There is always scope to improve these processes, and with this in mind, AAC has now established the *Archerfield Airport Community Aviation Consultation Group*.

The group meetings will provide the opportunity for dissemination of information about airport related issues, and provide feedback to AAC.

The inaugural meeting of the group took place on 2 November 2011. It was attended by approximately 30 people, including individuals and representatives of community groups from the areas around the airport, airport businesses and business groups, other local businesses, BCC Councillors, BCC officers, CASA, Airservices Australia, DIT, and the State Department of Transport and Main Roads.

The group has an independent Chairperson, and is scheduled to meet 3-4 times per year.

Major developments

Major developments, including the proposed realignment of the 04/22 runway complex will require the preparation and approval of a Major Development Plan under the *Airports Act 1996*.

AAC will consult with potentially affected stakeholders in accordance with the requirements of the Act. The *Planning Coordination Forum* and the

Community Aviation Consultation Group will be engaged in these consultation processes.

Airport Environment Management Forum

The *Archerfield Airport Environment Management Forum* (AAEMF) provides a forum for AAC, the Airport Building Controller and the Airport Environment Officer to discuss current and emerging environmental issues, monitor aviation activities, and disseminate information relevant to the environmental management of the airport and its environs.

It is facilitated by AAC and meets monthly. It was established as part of AAC's commitment to implement an appropriate on-going consultation process.

The role and responsibilities of the AAEMF are detailed in the *Archerfield Airport Environment Strategy* (Part 2 of the Master Plan).

Consultation with airport tenants and airport users

AAC has in place regular meetings with airport tenants, at which information about current issues is presented and discussed.

AAC also publishes newsletters which are circulated to the individuals and organisations on the AAC contact list. The newsletters are circulated via email and are also posted on the airport notice board in the Terminal Building.

15.10.2 Other information

AAC maintains a range of literature and other publicly available documentation relating to the safe and efficient operation and management of the airport. This information currently includes:

- historic records about the airport;
- standard guidelines and other information about appropriate land use and development on the airport site (and in proximity to the airport);
- obstacle clearance requirements for Archerfield;
- brochures describing environment management at airports and the development approvals process;
- the current Airport Environment Strategy;
- the current approved ANEF;
- N70 modelling showing potential noise effects of the airport when operating at practical capacity; and
- fact sheets and other material that describes key aspects of the Master Plan.

AAC is proactive in working with any party that could either be impacted by airport operational requirements, or have the potential to compromise airport

functionality, to ensure that the safety, operational needs and amenity of the airport is maintained.

15.11 EXTERNAL INFRASTRUCTURE

During the process of preparing the 2011-2031 Master Plan, BCC has requested that ACC work with Council to determine:

- the infrastructure requirements for the developments described in the Master Plan;
- the likely sequence, timing and triggers for the delivery of required infrastructure; and
- any contributions from AAC toward the cost of providing infrastructure adjacent to the airport that is required as a consequence of airport developments.

AAC is currently working with BCC on this issue and will enter into an appropriate agreement.

Appendix A-Glossary of terms

AAA	Airline Academy of Australia
AAC	Archerfield Airport Corporation
AAEMF	Archerfield Airport Environment Management Forum
AEPAP	Airport Environment Protection Action Plan
ABC	Airport Building Control Officer
ACN	Aircraft Classification Number
AEO	Airport Environment Officer (Commonwealth)
ALC	Airport Leasing Company (AAC)
ANEF	Australian Noise Exposure Forecast
ARFL	aircraft reference field length
AsA	Airservices Australia
ATC	Air Traffic Control
ATS	air traffic services
BAC	Brisbane Airport Corporation Limited
BCC	Brisbane City Council
BOM	Bureau of Meteorology
CASA	Civil Aviation Safety Authority
CASR	*Civil Aviation Safety Regulations* 1998, and relevant provisions of *Civil Aviation and Civil Aviation Safety Amendment Regulations* 2009 (No. 1)
CCTV	closed circuit television
CTAF	common traffic advisory frequency
DERM	Department of Environment and Resource Management (State)
DIT	Department of Infrastructure and Transport (Commonwealth)
DTMR	Department of Transport and Main Roads (State)
EMPs	Archerfield Environmental Management Procedures
FAA	Federal Aviation Administration (US)
GA	general aviation
GAAP	General Aviation Aerodrome Procedures

GPS	Global Positioning System
ICAO	International Civil Aviation Organisation
IFR	instrument flight rules
ILS	instrument landing systems
MATS	Manual for Air Traffic Services
MOS 139	Manual of Standards Part 139-Aerodromes
MTOW	maximum take-off weight
NDB	Non Directional Beacon
OLS	obstacle limitation surfaces
PAPI	Procession Approach Path Indicator
PAL	Pilot Activated Lighting
PALC	Pilot Activated Lighting Control
PANS-OPS	Procedures for Air Navigation Services Operations
PCN	Pavement Classification Number
RPT	regular passenger transport
SEQ	South-East Queensland
Tenant	All occupiers of AAC land or facilities at Archerfield Airport (other than AAC), including lessees and sub lessees.
Tie Down	Aircraft parking position
US	United States of America
VMC	visual meteorological conditions
White Paper	National Aviation Policy White Paper: *Flight Path to the Future* (2009)

Appendix B-Legal register

The following is a list of Commonwealth and State planning, environment protection, health and safety or dangerous goods management acts and regulations that may apply to Archerfield Airport and/or its various tenants.

COMMONWEALTH LEGISLATION

Aboriginal and Torres Strait Islander Heritage Protection Act 1984
Airports Act 1996
Airports (Protection of Airspace) Regulations 1996
Airports (Environment Protection) Regulations 1997
Airports (Building Control) Regulations 1997
Australian Heritage Council Act 2003
Aviation Transport Security Act 2004
Civil Aviation Authority Act 1988
Civil Aviation Safety Regulations 1988
Environment Protection & Biodiversity Conservation Act 1999 and Regulations
Ozone Protection Act 1989
Ozone Protection Amendment Act 1995

STATE LEGISLATION

Aboriginal Land Act 1991
Aboriginal Cultural Heritage Act 2003
Coastal Protection and Management Act 1995
Environmental Protection Act 1994
Environmental Protection (Air) Policy 1997
Environmental Protection (Noise) Policy 1997
Environmental Protection (Water) Policy 1997
Environmental Protection Regulation 1998
Environmental Protection (Interim Waste) Regulation 1996
Environmental Protection (Waste Management) Policy 2000
Environmental Protection (Waste Management) Regulation 2000
Integrated Planning Act 1997
Native Title (Queensland) Act 1993
Nature Conservation Act 1992
Sustainable Planning Act 2009
Torres Strait Islander Cultural Heritage Act 2003
Wet Tropics World Heritage Protection and Management Act 1993.

Appendix C-References

Aerodrome Operation Support Pty Ltd (2000), *2019 Australian Noise Exposure Forecast for Archerfield Airport*, AOS Canberra 2000

Archerfield Airport Corporation (2009) *Archerfield Airport Planning Issues, Grass Runway Closure Investigation: 1989-2008*, AAC; Brisbane

Asbestos Audits Queensland (2003) *Asbestos Materials Report and Register for Archerfield Airport 2003*, Asbestos Audits Queensland

Brisbane City Council (1997), *The Brisbane Industrial Land Study*, Brisbane City Council; Brisbane

Brisbane City Council (2000), *Brisbane City Plan 2000,* Brisbane City Council; Brisbane

Brisbane City Council (2010), *Acacia Ridge/Archerfield Neighbourhood Plan (Amendment to City Plan July 2010),* Brisbane City Council; Brisbane

Bonhomme Craib and Associates (2001) *Cultural Heritage Assessment and Management Plan: Archerfield Airport, Brisbane* Bonhomme Craib and Associates; Brisbane

Commonwealth Government (1996) *Airports Act* 1996; Canberra

Commonwealth Government (1997) *Airport (Environment Protection) Regulations* 1997; Canberra

Commonwealth of Australia (1997) *Archerfield Airport Information Memorandum*, November 1997; Canberra

Demeyne Aviation (2010) *ANEF, N70 and OLS/PANS-OPS drawings*; Canberra

Department of Transport and Regional Services, (1998) *Environment Management at Airports*, Commonwealth of Australia; Canberra

Department of Transport and Regional Services, (1998) *Building and Construction at Airports*, Commonwealth of Australia, Canberra

Federal Airports Corporation (1996) *Archerfield Airport Environmental Management Plan*, FAC Brisbane

Marcom Communication Pty Ltd (2004) *Archerfield Airport Environment Strategy 2004-2009 Consultation Report*, Marcom Communication; Brisbane

Marcom Communication Pty Ltd (2005) *Archerfield Airport Preliminary Draft Master Plan 2005-2025 Consultation Report*, Marcom Communication; Brisbane

Marcom Communication Pty Ltd (2010) *Archerfield Airport Corporation Airport Tenants and Users Survey*, Marcom Communication; Brisbane

Oxley Creek Catchment Association (1998) *Summary of the Oxley Creek Catchment Management Plan,* Brisbane River Management Group; Brisbane

Otek Australia Pty Ltd (1999) *1998 Annual Groundwater Report Archerfield Airport, Archerfield Queensland*, Otek; Brisbane

Otek Australia Pty Ltd (1993) *Background Investigation Archerfield Airport, Archerfield Queensland*, Otek; Brisbane

Otek Australia Pty Ltd (1993) *Environmental Investigation Archerfield Airport, Archerfield Queensland*, Otek; Brisbane

Planned F.X. Pty Ltd (2003) *Archerfield Airport Environmental Management Procedures*, Planned F.X.; Melbourne

Planned F.X. Pty Ltd (2005) *Archerfield Airport Environment Strategy 2004-2009*, Planned F.X.; Melbourne

Planned F.X. Pty Ltd (2010) *Archerfield Airport Environment Strategy 2010-2015*, Planned F.X.; Melbourne

PPK Environment & Infrastructure Pty Ltd (1997) *Environment, Protected and Endangered Species and Heritage Review of the Archerfield Airport-Final Report*, BZW Australia Limited

Queensland Government, (2002) *State Planning Policy 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities,* Department of Local Government and Planning/Queensland Transport; Brisbane

Queensland Government, (2002) *State Planning Policy 1/02 guideline: Development in the Vicinity of Certain Airports and Aviation Facilities*, Queensland Government; Brisbane

Queensland Transport (2002) *Queensland Airports and Regulated Air Transport Plan* Queensland Government; Brisbane

Randl Pty Limited (2010) *Archerfield Airport ANEF Report*, Randl Pty Limited; Canberra

Randl Pty Limited (2010) *Archerfield Airport Master Plan Technical paper TP 01/10 Runway system design wind usability analysis*, *Estimating the Usability Factor and Determining the Number and Orientation of Runways* Randl Pty Limited; Canberra

Randl Pty Limited (2010) *Archerfield Airport Master Plan Technical paper TP 02/10 Runway system design wind usability analysis*, *Accounting for the Unserviceability of the Current 04/22 Parallel Secondary Runways*, Randl Pty Limited; Canberra

Randl Pty Limited (2010) *Archerfield Airport Master Plan Technical paper TP 03/10 Runway Capacity, An Investigation of Practical Capacity with Class D Airspace Procedures and the Proposed Runway Configuration*, Randl Pty Limited; Canberra

Standards Australia (1996) *Environmental Management Systems-specification with guidance for use AS/NZS ISO 14001:1996*, Standards Australia; Melbourne

Standards Australia (1996) *Environmental Management Systems-General guidelines on principles, systems and supporting techniques AS/NZS ISO 14004:1996*, Standards Australia; Melbourne

Stewart, D (1997) *The Vertebrate Fauna of the Oxley Creek, Archerfield Airport, Brisbane, south-eastern Queensland*, Department of Environment; Brisbane

Appendix D-Consultation on pDMP

ENGAGEMENT OF KEY STAKEHOLDERS PRIOR TO EXHIBITION

The following stakeholders were engaged prior to the public consultation beginning:

- Graham Perrett, Federal member
- Cr Steve Griffiths, Local Councillor
- Amanda Cooper, Brisbane City Council
- Judy Spence, State member
- Simon Finn, State member
- Campbell Newman, Lord Mayor of Brisbane
- Brisbane Airport Corporation
- Brisbane City Council
- Ipswich City Council
- Archerfield Airport aviation tenants
- Royal Queensland Aero Club
- Airline Academy of Australia
- Flight Training Australia
- Airservices Australia
- Local Air Traffic Control
- CASA
- Queensland State Government
- Graeme Newton, Department of Infrastructure and Planning
- Stirling Hinchliffe, Minister for Infrastructure and Planning
- Archerfield Airport Chamber of Commerce Incorporated
- Virgin Blue
- Aveo Forest Place Durack Retirement Village.

ENGAGEMENT OF KEY STAKEHOLDERS DURING EXHIBITION

The Master Plan consultation team contacted by email people and organisations on the AAC e-Newsletter database and the following on an individual basis during the exhibition period to ensure that they were aware of the consultation underway and fully informed about the plan:

- Cr Graham Quirk, Member for Sunnybank
- Judy Spence, MLA
- Karen Struthers, MLA
- Anastacia Palaszczuk, MLA
- Cr Steve Griffith, Local member
- Graham Perrett, Federal member
- Simon Finn, State member
- Cr Paul Pisasale, Ipswich City Mayor
- CASA
- Air Traffic Control
- Airservices Australia
- Brisbane Airport Corporation
- Department of Sustainability, Environment, Water, Population and Communities
- Brisbane City Council
- Queensland State Government
- Aveo Forest Place Durack Retirement Village
- ARTIC Community Library
- Ian Tait Aviation Insurance
- Flight One
- Solitair Helicopters
- V Squared Helicopters
- Gil Layts Flying School
- RQAC / AAA / ATAE
- Flight Training Australia
- Propcare
- Aircraft Radio

- Rapair
- Flying Colours
- Brisbane Aero Engineers
- Sunland / Cirrus
- Air BP
- Archerfield Refuelling Services
- Ian Aviation
- EMQ
- Executive Helicopters
- Availl Australia
- Quality Avionics
- The Aviator Store
- Angel Flight Australia
- Brisbane Flying Group
- Eagle Flying Group
- Five Star Aviation (Gambamora)
- Flight Maintenance
- Warbird Aviation.

CHANGES MADE TO MASTER PLAN AND ENVIRONMENT STRATEGY DRAWINGS

The following changes have been made to the drawings in the Master Plan and Environment Strategy, as a consequence of the review of the Preliminary Draft versions.

Figure	DMP Part 1: Context, vision and plans for the future	
1	Airport location	50km and 100km radii added.
2	Master Plan Vision	RPT area adjusted and aircraft parking moved 15m to the west to provide additional space for relocated Central Helipad.
		Central helipad relocated north, away from the widened/new taxiways.
		Note added to RPT area in Wirraway precinct 'Provision made for public transport access to RPT'.
		Additional link road between Boundary Road and

		Wirraway Avenue added, as agreed with BCC
		Stormwater basin in Boundary precinct reconfigured into two bioretention basins.
		Grass runways renumbered to avoid confusion with Brisbane Airport runway designations.
		Description of buffer to Oxley Creek revised to be consistent with other references in Master Plan.
		Note added to say that the optimal Control Tower location will be reviewed for the grass runways (via a Tower Siting Study).
		Public Safety Area (as defined in SPP 1/02) added.
		Note added to confirm that the runway threshold at 28R is unlikely to change location with the future runway extension.
		Potential future pedestrian and cycle routes added.
3	Airport context	Non Directional Beacon at 296 Beatty Road (off airport) added to drawing
4	Existing airport layout	Non Directional Beacon at 296 Beatty Road (off airport) added to drawing.
5	Fixed wing arrival flight paths	Likely RPT flight paths added.
6	Fixed wing departure flight paths	Likely RPT flight paths added.
7	Helicopter approach paths	
8	Helicopter departure paths	
9	Training circuits	
10	Current airport land use context	New plan added, categorising existing land use surrounding the airport in accordance with the zoning in the Brisbane City Plan.
11	Current OLS/PANS OPS surfaces (previously Drawing 10)	Drawing renumbered.
12	Future OLS/PANS OPS surfaces (previously 11)	Drawing renumbered.
13	Restricted light zones	Table of light restrictions updated to delete reference to '0 candella at horizontal'.
		Drawing renumbered.
14	Practical capacity ANEF	Future extension to main 10L/28R runway added.
		'Public Safety Area' as defined in State Planning Policy

		SPP 1/02 added to 10L/28R runway.
		Realigned grass runways renumbered.
		Drawing renumbered.
15	N70 contours	Key upgraded.
		Colour coding of N70 contours upgraded.
		Airport boundary, and existing and proposed runways added.
		Drawing renumbered.
16	Site drainage	Drawing renumbered.
		Realigned grass runways renumbered.
17	Airport Land Use Zoning	Note included, stating that the configuration of the SP-6 and Light/General Industrial zoning, and the rezoning of affected land will be dependent on resolving the new alignment of the grass runways.
		Realigned grass runways renumbered.
		Drawing renumbered.
18	Development precincts	Realigned grass runways renumbered.
		Drawing renumbered.
19	Beatty and Mortimer Precinct Structure Plan	Realigned grass runways renumbered.
		Potential pedestrian/cycle routes added.
		Drawing renumbered.
20	Beaufighter Precinct Structure Plan	Realigned grass runways renumbered.
		Potential pedestrian/cycle routes added.
		Drawing renumbered.
21	Boundary and Wirraway Precinct Structure Plan	Realigned grass runways renumbered.
		RPT and central helicopter pad layout refined.
		Note added that provision will be made for public transport access to RPT facilities. This would include taxis, and potentially bus parking if required (depending on the needs of the RPT services).
		The PSP shows a route for taxis and buses for passenger pick up and drop off, adjacent to the suggested location of a RPT facility. The detail of this will be resolved via a Major Development Plan, in consultation with the transport agencies and other stakeholders.
		New access road added, linking Boundary Road to

		Wirraway Avenue (as agreed with BCC).
		Lot layout revised to suit changes to roads and drainage.
		Bioretention basins added (replacing single basin on earlier plan), as supported by BCC.
		Potential pedestrian/cycle routes added.
		Drawing renumbered.
22	Ashover Precinct Structure Plan	Realigned grass runways renumbered.
		Potential stormwater basin amended consistent with current plans supported by BCC.
		Potential pedestrian/cycle routes added.
		Drawing renumbered.
23	Barton Precinct Structure Plan	Realigned grass runways renumbered.
		Potential pedestrian/cycle routes added.
		Drawing renumbered.

Figure	**DMP Part 2: Airport Environment Strategy**	
1	Airport location	50km and 100km radii added.
2	Airport context	
3	Aerial view	
4	Existing conditions	
5	Development precincts	Realigned grass runways renumbered.
6	Overview of environmental management	
7	Stormwater	Realigned grass runways renumbered.
8	Groundwater	Realigned grass runways added.