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VOLUME A: BACKGROUND AND NEED
Background

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1.1 Location and History of Brisbane Airport

1.1.1 Site Context

Brisbane Airport (Airport) occupies Commonwealth land held under long term lease by the Brisbane Airport Corporation Pty Limited ('BAC' or the 'Company') and is situated on the coast, north-east of Brisbane Central Business District. As well as managing the operations of Brisbane Airport, BAC controls the Airport's large 2,700 hectare site that includes a range of aviation related operational and commercial activities.

The Airport is noted as a Special Purpose Centre under the Brisbane City Council Planning Scheme which specifically recognises its past and expected ongoing use.

Figure 1.1a shows the Brisbane Airport site in relation to its surrounds and shows the names of local natural features such as rivers and creeks used throughout this Draft Environmental Impact Statement and Major Development Plan (EIS/MDP). The figure also shows existing built features on-airport land including the proposed New Parallel Runway (NPR) layout and other major infrastructure projects proposed in the local region such as the Gateway Upgrade Project (GUP).

Surrounding the Airport, the area immediately to the west comprises open space along Kedron Brook Floodway, the southern extent of the Boondall Wetlands and parts of the suburbs of Nudgee Beach, Banyo and Northgate used for residential purposes (low to medium density), local commercial uses, and community facilities, special purposes and some industrial activities (light to medium).

The northern boundary of the Airport site is the foreshore of Bramble Bay which forms part of the Moreton Bay Marine Park.

On the northern bank of the Brisbane River, immediately adjacent to and east of the Airport, land use is primarily industrial with some remnant pockets and individual parcels of land used for single unit (dwelling house) residential purposes, principally in the suburb of Pinkenba.

Industrial use throughout this part of the City (between the Airport and the River) includes light industries and warehousing, medium to high level manufacturing plants and noxious/hazardous industries such as the BP oil refinery at Bulwer Island. The Brisbane City Council's Luggage Point Wastewater Treatment Plant is located at the northern edge of the suburb of Pinkenba at Luggage Point, adjacent to a large inter-tidal mangrove and saltmarsh area known as Juno Point.

The southern boundary of the Airport is bounded by the Gateway Motorway, the Trade Coast Central site, and the suburbs of Eagle Farm, Doomben, Hendra, and Toombul, which all contain a mix of residential, commercial and industrial land uses.

The Airport is situated on a reclaimed portion of a river delta at the mouth of the Brisbane River. Areas of environmental value adjacent to the Airport include:

- Moreton Bay Marine Park (to the north), part of which is a declared Ramsar site;
- Boondall Wetlands (across Kedron Brook Floodway to the west) which is Ramsar declared and on the Register of the National Estate;
- Marine habitat of Jacksons Creek, (areas on and off Airport leased land on the eastern bank of Kedron Brook Floodway) which is documented in the Directory of Important Wetlands in Australia and designated as an Environmentally Significant Area in BAC's Master Plan and Airport Environment Strategy (AES);
- Mangrove and saltmarsh communities around Serpentine Creek Inlet, Jubilee Creek mouth and Juno Point (to the north-east) those parts of which are within BAC tenure are designated as Environmentally Sensitive Areas by the Master Plan and the Airport Environment Strategy; and
- Bulwer Island and Boggy Creek wetlands (to the east) of which the Brisbane Airport site comprises the major portion of the catchment draining into these wetlands.

1.1.2 A Brief History of the Airport

The Brisbane Airport site was first used as a landing field in 1922. Three years later Eagle Farm Aerodrome was officially opened. Scheduled flights between Brisbane and regional centres commenced in the late 1920s and early 1930s, with Qantas beginning operations at Eagle Farm Aerodrome in 1926. The first service to Sydney commenced in 1930 by Australian National Airways (later to become part of Ansett Australia). For a time operations moved to Archerfield but World War II saw operations reinstated at Eagle Farm as the preferred site for ongoing aviation operations in Brisbane.

Through the 1950s to the 1980s the site occupied an area of 16.2 km² roughly 6.4 km north-east of Brisbane urban centre, with one major runway bearing north-east to south-west 45.7 m wide and 2,365.2 m in length, with a secondary cross-runway bearing north-west to south-east 1,530.1 m long and 30.5 m wide. Two terminal buildings housed the domestic carriers Ansett and Trans Australia Airlines, while a third catered for all international services.

In the early 1970s, a search was instigated for an alternative site for a major Airport. Various sites were considered, and an area to the north east of Eagle Farm was selected as the new Airport site. The current Brisbane Airport site was established and operations commenced in 1988.

The new International Terminal Building and associated apron taxiways opened in September 1995. This was supplemented by the establishment of services and facilities for business and industry development including Export Park at Qantas Drive, establishment of a range of additional operators and tenants, extension of the Domestic Terminal Building and extension to Airservices Australia facilities.

A more detailed pre-BAC history of the Airport is provided in Volume B, Chapter 6, Cultural Heritage of this Draft EIS/MDP.

1.1.3 Ownership of the Airport

Following a decision by the Australian Government to privatise airports, BAC, a consortia formed primarily of local financial and investment organisations, bid and won the international competitive tender process to purchase the long term operating lease (50 + 49 year option) of Brisbane Airport. Prior to privatisation Brisbane Airport was owned by the Australian Government and managed on their behalf by a government owned corporation, the Federal Airports Corporation. BAC assumed management and operation of Brisbane Airport on 2 July 1997.

BAC operates Brisbane Airport under a 50 year lease granted to it by the Commonwealth of Australia in July 1997. BAC has an option to renew the lease for a further 49 years, which may be exercised during the 40th year of the initial term.

BAC is part of a holding company group corporate structure (the 'Group') where the ultimate shareholders are major Australian and international organisations and significant institutional investors. Principal shareholders are the Queensland Government owned enterprise, the Port of Brisbane Corporation (through its subsidiary Gateway Investments Corporation), and Schiphol Australia Pty Ltd, a wholly owned subsidiary of N.V Luchthaven Schiphol which operates the world leading Schiphol Airport in Amsterdam, The Netherlands.

The ultimate shareholders of the Company as at 30 June 2006 are listed in **Table 1.1**.

Figure 1.1a: Brisbane Airport and Surrounds.

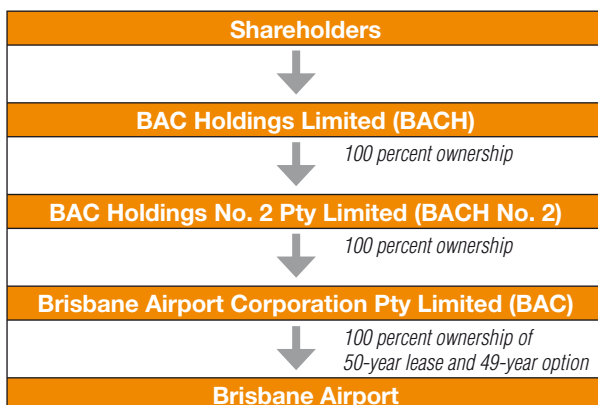


Table 1.1: The Ultimate Shareholders of the Company as at 30 June 2006.

Shareholders	Percentage Held (%)
AMP Investment Services Pty Ltd as Trustee for the Infrastructure Equity Fund	0.630
City of Brisbane Airport Corporation Pty Ltd	1.274
Colonial First State Private Capital Ltd	1.185
Citicorp Nominees Pty Limited (CFCL Structured Invest. Fund)	3.948
Citicorp Nominees Pty Limited (CFS Airport Fund)	10.410
J.P. Morgan Nominees Australia as Nominee of the Custodian of the Trustee of IFM Infrastructure Funds	8.058
National Nominees Ltd as Nominee of the Custodian of the Trustee of the Officers' Superannuation Fund	3.965
Motor Trades Association of Australia Super Fund Pty Ltd as Trustee of MTAA Superannuation Fund	4.865
Gateway Investments Corporation Pty Ltd	37.381
National Asset Management Limited as Trustee for the Brisbane Airport Trust	12.671
Schiphol Australia Pty Ltd	15.622
TOTAL	100.00

Figure 1.1b depicts BAC's corporate structure. BAC Holdings Limited (BACH) is the head entity in the consolidated group comprising all the Australian owned subsidiaries being BAC Holdings No. 2 Pty Limited (BACH No. 2), a non-operating entity, and BAC. BACH owns 100 percent of the shares in BACH No. 2 and BACH No. 2 owns 100 percent of the shares in BAC. The land remains the property of the Australian Government but with the \$1.3 Billion purchase of the lease, BAC became the operator of all infrastructure formerly owned by the Federal Airports Corporation (FAC). While the purchase entitles BAC to operate the Airport on behalf of its shareholders, the lease also confers a responsibility on BAC to manage, operate and develop the Airport for the benefit of the aviation industry and the community it services.

Figure 1.1b: BAC Group Corporate Structure.



1.1.4 Operation of the Airport

The operation of Brisbane Airport in the privatised environment is dependent on a number of government and commercial organisations working collectively and cooperatively to provide a safe, efficient facility for all Airport users. The major functions required to operate an Airport of the size and importance of Brisbane Airport are:

- The **Airport operator**, BAC, which provides, operates and maintains the necessary infrastructure and lessee services;
- The **airline operations** and their attendant maintenance and service providers;
- The **air traffic management services** currently provided by Airservices Australia;
- **Border protection and security agencies** including customs, immigration and federal policing services; and
- The **commercial sector** which provides retail and other commercial services for passengers and Airport workers.

Each of the major functions listed above is regulated under a number of different pieces of legislation which outline their individual responsibilities. The *Airports Act 1996* which established the new regulatory arrangements for privatised airports is the predominant piece of legislation which outlines the responsibility for the Airport operator.

The main responsibilities of BAC as the Airport operator are:

- Providing and maintaining aerodrome infrastructure for safe and secure aircraft operations;
- Terminal and other asset management and maintenance;
- Provision of utilities at the site (power, water, sewerage, communications);
- Master planning, development and administration of the site;
- Commercial retail and tenancy management; and
- Overall environmental management of the site.

1.1.4.1 Provision of Aerodrome Infrastructure

BAC provides the following infrastructure within the airfield for aircraft operations:

- The runways and taxiways;
- Airfield lighting, signage and some navigational aids;
- Marked aprons for aircraft manoeuvring and parking; and
- Docking facilities for dis/embarkation by passengers.

A current Aerodrome Certificate (AC) must be maintained at all times. It is the instrument by which government regulators ensure an Airport is being administered to recognised international operational and safety standards commensurate with the type of operations conducted at an Airport. In order to maintain Brisbane Airport's AC, BAC operates the Airport in accordance with important documentation including the Brisbane Airport Operations Manual and Safety Management System.

These documents detail the procedures in place for the safe operation of the Airport and cover the following types of activities:

- Maintaining airfield infrastructure to required standards;
- Managing protection of airspace from intrusions (permanent and temporary) into the safe height

limits for structures within and outside the Airport boundary;

- Regular inspections of runways and other airfield infrastructure;
- Ground management of emergency and low visibility situations;
- Management of handling of dangerous goods; and
- Bird and wildlife control.

Another important service component of Airport operations supplied by BAC is emergency planning and coordination. BAC has comprehensive documentation in place and regularly conducts training exercises to keep the Airport community and other emergency agencies abreast of their role in the event of a significant emergency event.

Procedures and activities are checked for compliance on a regular basis by regulatory agencies.

1.1.4.2 Terminals and Other Asset Services

Infrastructure provided by BAC includes terminals, other buildings, roads and utilities. Buildings on-airport are either BAC controlled or controlled by an individual tenant. BAC is responsible for maintenance of buildings over which it retains control. Some terminal space is controlled by individual airlines under long term lease agreements while other terminal space is retained as 'common user' areas where BAC maintains and operates the space for the use by many airlines. Each end of the Domestic Terminal is controlled by Qantas and Virgin Blue respectively with a small central area retained by BAC for common use. The International Terminal Building is a common user terminal over which BAC also retains control. BAC also maintains and operates a number of other buildings on the site.

BAC plans, owns, operates and maintains the vast majority of the Airport's utilities infrastructure for water, power, sewerage and communications within the site. BAC also provides and maintains a large network of surfaced roads and drainage within the site. This level of infrastructure provision is equivalent to that of a medium sized regional Queensland town.

1.1.4.3. Master Planning and Development Control

BAC is required, on a five yearly basis, to develop for public comment a Master Plan which sets out the framework for development of Brisbane Airport for a 20 year planning horizon. The Master Plan allows Government, potential investors, close neighbours and the community at large to comment on the way in which the Airport intends to grow and develop into the future. It addresses, in an integrated document, planning issues involving aviation activity, land and industry development, environmental management and surface transport access. The scope of the Master Plan is restricted to the general site area leased by BAC. Brisbane Airport's current Master Plan was approved by the Australian Transport Minister on 7 May 2004.

In the same way as the Brisbane City Council's City Plan for Brisbane sets out the land use planning intent for the Brisbane local government area, the Airport Master Plan also sets out the intent for land use planning on the Airport. However, in the same way that no single building development is approved by virtue of the City Plan being approved, so too does each individual Airport development require assessment and approval under the Commonwealth planning regime set out under the *Airports Act* before any building can commence.

Much building work occurs at the Airport on a yearly basis. Some of those works are undertaken by BAC while many others are undertaken by other operators which may include existing tenants/sub-tenants and their contractors or new tenants/sub-tenants and their contractors. Nonetheless, all building and development works, whether minor or major, are subject to a system of Airport development assessment which begins with BAC initially checking the proposed development for consistency and compliance with its development intent outlined in a range of documents prepared by BAC including:

- The approved Master Plan;
- The approved Airport Environment Strategy;
- BAC's Development Control Plan;
- BAC's Engineering Design Guidelines; and
- BAC's Landscape Master Plan.

Once the development has been evaluated against BAC's assessment criteria, the on-site Australian Government regulatory representatives, the Airport Building Controller (the ABC) and the Airport Environment Officer (the AEO) then undertake the regulatory assessment requirements which include planning, building and environment issues. For further information refer to section A1.5.2.3.

Some developments trigger the *Airports Act* requirement for a Major Development Plan (MDP) to be prepared for approval by the Australian Government Transport Minister. The types of development which require an MDP are set out in the *Airports Act*. The MDP process requires a detailed environmental assessment of the development, consultation with local and Queensland Governments, involves a 90 day public comment period and an automatic referral to the Australian Government Environment Minister for advice and final approval from the Transport Minister. See section 1.5.2.2 for more detail on the MDP requirements for this project.

1.1.4.4 Commercial Operations

In its capacity as the Airport Lessee Company (ALC), BAC sublets parts of the Airport site to a range of tenant businesses and government agencies. The Airport tenants together with BAC are collectively known as the Airport community.

Major Airport tenants consist of the following:

- Airlines which operate aircraft and perform passenger check-in, baggage handling, engineering, catering, maintenance, freight handling and administrative services;
- Air traffic management facilities which provide en-route navigational as well control tower services for aircraft departing or arriving at Brisbane Airport;
- Other aircraft maintenance and service providers including refuelling operations;
- Car rental companies which operate large handling and processing bases;
- Freight forwarding and express delivery companies;
- Exporters;

- Relevant government agency offices and/or headquarters;
- Terminal retail and food and beverage outlets; and
- Other Airport retail and convenience outlets.

These organisations lease areas or develop areas relevant for the type of activity they conduct in accordance with the approved Master Plan. Already more than 130 businesses operate from Brisbane Airport and nearly 10,000 people work on Brisbane Airport every day. This is forecast to exceed 40,000 people by 2025.

1.1.4.5 Environmental Management

Another of BAC's roles as the Airport operator is the overall environmental management of the Airport site. BAC is required to prepare on a five yearly basis, in conjunction with the Master Plan, the Airport Environment Strategy (AES). The AES is a statement to government, industry and the public of how the Airport community plans to manage the environment at Brisbane Airport. BAC's current AES was approved by the Minister for Transport and Regional Services on 7 June 2004 for a five year period.

The AES is a statement of the combined intent of BAC and other Airport users including tenants/subtenants, contractors/subcontractors and licencees to implement responsible management strategies in accordance with Airport legislation and other relevant laws. While BAC has a primary role for environmental management, other Airport users are responsible for the environmental management of their individual operations.

Essentially, BAC has committed in the AES to develop and maintain an Environmental Management System (EMS) consistent with international standards and to carry out a range of strategic action plans aimed at the issues of air quality, water quality, soil quality, waste, natural resources, energy, noise, ecology and cultural heritage. It also addresses tenant obligations for environmental management of their operations and how development projects are controlled environmentally.

BAC prepares and submits an Annual Environment Report to the Department of Transport and Regional Services (DOTARS) which reports on BAC's implementation of the AES and its conformance with the Airports (Environment Protection) Regulations. BAC has maintained an excellent environmental record since being formed as a company. As the annual reporting reveals BAC has never been found to be in breach of any of its statutory obligations nor any of the environmental regulations which pertain to it.

1.1.5 History of the BAC Master Plan

Over the last thirty years a NPR has been identified in forward planning documents for Brisbane Airport.

The initial planning for the current Brisbane Airport site was undertaken in the early 1970s by the Brisbane Airport Advisory Committee comprising representatives of the Queensland Government, Brisbane City Council and various Australian Government departments.

Further Government reviews and studies into the requirements and impacts of possible Airport developments resulted in the 1981 report by the Parliamentary Standing Committee on Public Works.

This report and the preparation and publication of a Preliminary Master Plan in 1981 resulted in the Department of Aviation's 1983 Master Plan for Brisbane Airport which provided the framework for development up to the year 2000 and for the ultimate development of the Airport. Broadly this plan provided for aeronautical and associated facilities to cater for an ultimate capacity of 40 million annual passengers and was based on 01/19 parallel runways plus a 14/32 cross runway configuration.

The initial development of Brisbane Airport was undertaken in accordance with the 1983 Master Plan. Works included principally the construction of the 01R/19L (existing main) and 14/32 (existing cross) runways and taxiways as they currently exist, the Domestic Terminal Building, Control Tower and Airservices Australia facilities, airline support facilities and roads and services infrastructure. These facilities were put into operation when the new Airport opened in 1988, with its significant Buffer Zones (refer **Figure 1.1c**).

In 1991 the FAC prepared an updated Master Plan. This plan was closely aligned to the 1983 Master Plan, adopting the same airfield planning layout, providing particularly for the future development of an 01L/19R (western) parallel runway and further terminal precinct development. One notable feature of the 1991 Master Plan was to identify opportunities for the development of commercial precincts within the Airport lease area.

BAC, being the successful tenderer to the privatisation of Brisbane Airport became the Airport Lessee Company (ALC) on 2 July 1997. The *Airports Act 1996* required the development of a Master Plan within the first 12 months of operation.

The 1998 BAC Master Plan concept recognised the very significant investment in infrastructure to date and the Airport's physical site extents, form and limitations. It therefore maintained the aeronautical layout strategies of previous plans, making improvements wherever possible and addressing industry trends and influences at the time. The plan also suggested improvements to surface transportation strategies and improved opportunities for business and industry development. The new runway remained located parallel to and 2,000 m west of the existing 01/19 runway in this Master Plan.

The 01/19 parallel runway layout concept was further refined in BAC's 2003 Master Plan and is the basis for the current planning and approval exercise for the NPR EIS/MDP. (Refer **Figure 1.1d**).

Figure 1.1c: Brisbane Airport has the Largest Buffer Zone of any Capital City Airport in Australia.

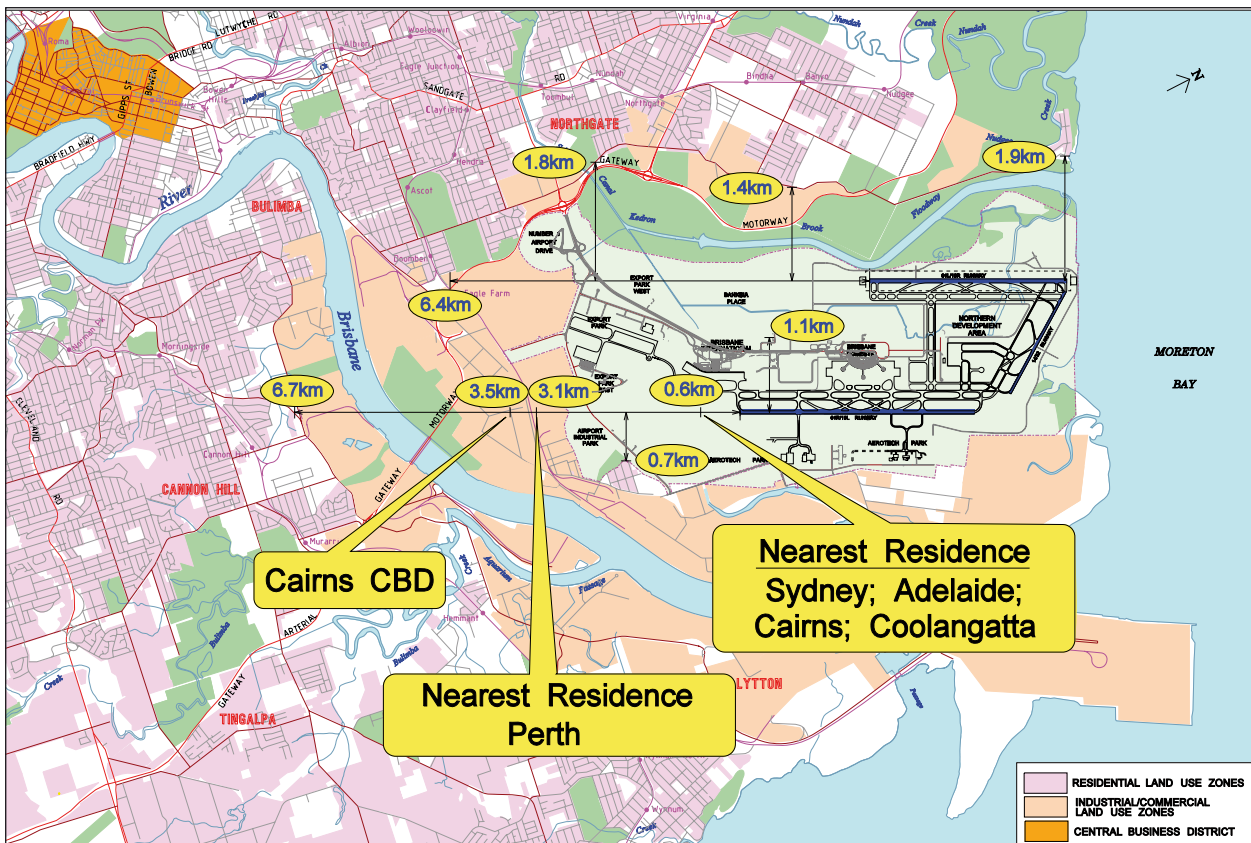
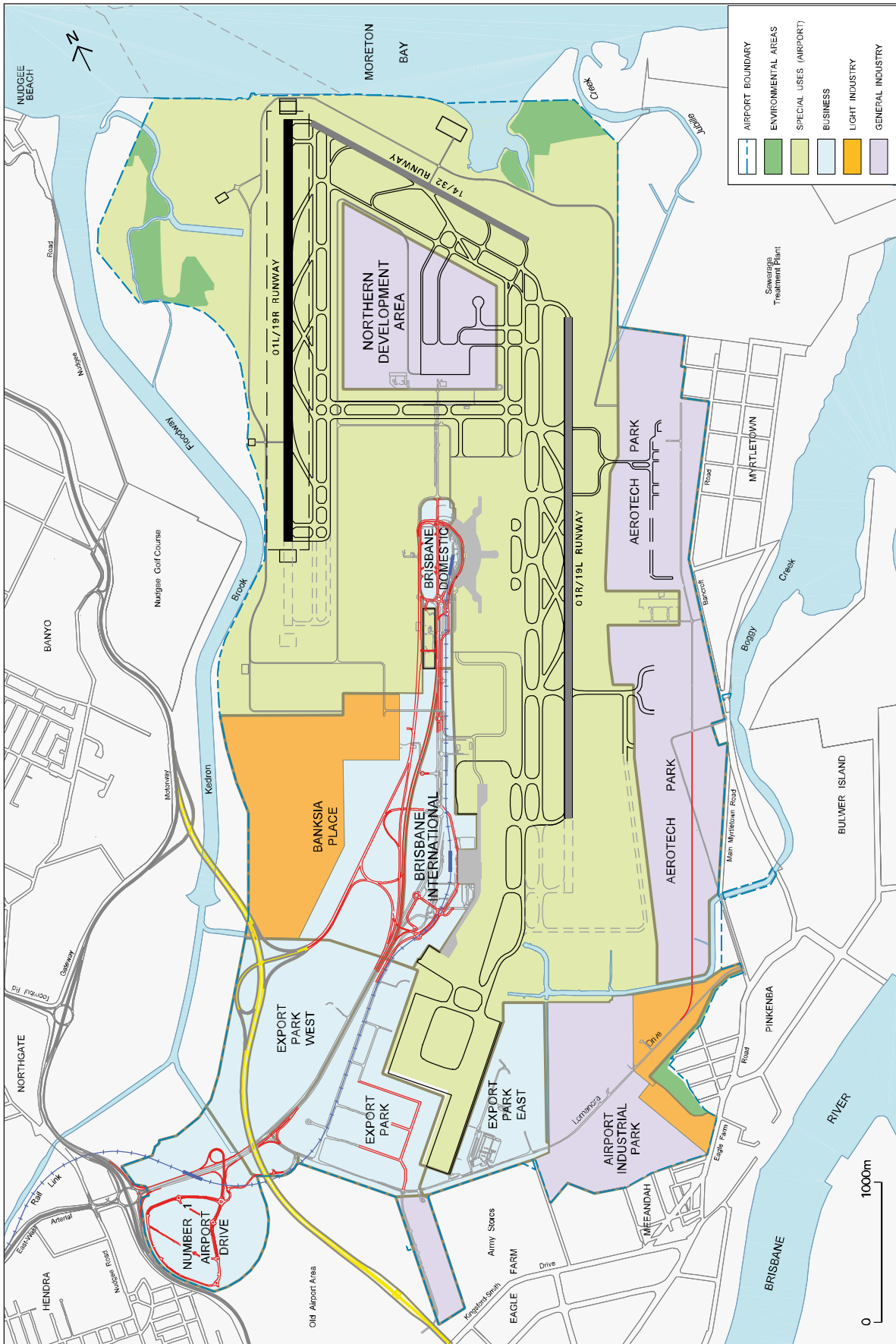


Figure 1.1d: BAC's 2003 Master Plan Showing Location of NPR.



1.2 Project Overview

BAC is proposing to construct and operate a NPR at Brisbane Airport west and parallel to the existing 01/19 runway and staggered in a northerly direction towards Moreton Bay. Provision of the new runway will also include associated taxiways, navigational aids and land based access infrastructure. The location of the NPR is consistent with that identified in the 2003 Master Plan (see **Figure 1.2a**).

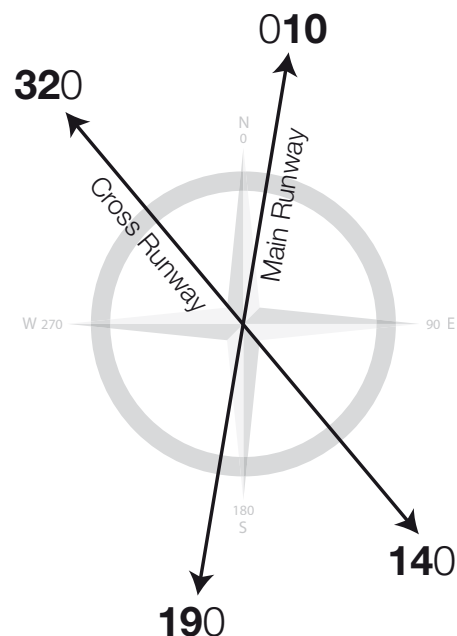
This section presents an overview of the project based on the preliminary design. The proposed scheme is discussed in more detail in Chapters A4 and A5.

Key features of the proposed NPR project are:

- Construction and operation of a new 3,600 m runway 2 km west and parallel to the existing 01/19 runway, including associated taxiways, navigational aids and land based access infrastructure. This construction will occur within the boundaries of Brisbane Airport which is Commonwealth land held under long term lease by Brisbane Airport Corporation. The area proposed for sand filling and runway construction is approximately 475 ha. This proposed scheme is likely to be staged with initial construction to be a 3,000 m runway and partial taxiway development;
- Development of a Future Aviation Facilities Area (FAFA) between the proposed and existing airfields;
- Maintenance of a 2 km separation between the existing runway and the new parallel runway to optimise safety and provide for the development of new terminal facilities;
- Initial upgrade (widening and strengthening of pavement) of the shorter 14/32 east-west runway to enable larger planes to land (pre NPR) before conversion to an aircraft taxiway for the NPR;

- Navigational aids (approach lighting) will be required to be constructed at the northern end of the new runway and will extend into Moreton Bay. The navigational aids extend to a distance of 900 m from the runway end;
- Dredging of 15 Mm³ sand from Middle Banks in Moreton Bay to provide fill and surcharge material for the runway;
- Transport of the dredged sand material from Middle Banks by dredger involving delivery to the runway site via a mooring facility at Luggage Point and a pipeline. An area of land would be required temporarily for the placement of a pipeline to deliver sand from the unloading point to the runway construction site;
- Development of changes to current airspace to accommodate new arrival and departure procedures Standard Instrument Departure (SID) and Standard Terminal Arrival Routes (STAR).

The project as outlined above is consistent with the current approved 2003 Master Plan.



The compass diagram above outlines the direction of the current runways at Brisbane Airport.

1.3 Need for a New Runway

Forecasting growth in passenger and aircraft movements provides the basis for the long term planning of Airport facilities to meet future demand for air travel. The forecasts inform the type of facilities required and the appropriate staging and timing of these facilities.

The ability of an Airport's runway and taxiway system to service demand is dependent on the number of aircraft arriving and departing at the Airport. In turn the number of aircraft movements is dependent on the number of passengers wishing to travel by air and the size of aircraft in operation. The travel patterns of people also govern the busier periods for aircraft movements. Therefore the number of passengers wishing to travel, and the time that they wish to travel at, are the main factors in determining the requirements for air related infrastructure.

Brisbane Airport has experienced strong passenger growth of around 7 percent per annum over the 15 years between 1989/90 and 2004/05. Existing and forecast passenger and aircraft movements are summarised in **Table 1.3**.

Table 1.3: Summary of Existing and Forecast Passenger and Aircraft Movements.

Years ended 30 June	All Passenger Movements	All Aircraft Movements
2005	15,600,000	160,000
2015	25,300,000	227,000
2035	50,000,000	393,000
Compound Annual Growth Rates		
2005 to 2015	4.9%	3.5%
2015 to 2035	3.5%	2.8%

The existing runway system has a modelled capacity of 59 movements (departures and arrivals) per hour. The existing busier peak hours have around 45 movements (departures and arrivals). Based on the forecasts of air travel growth in **Table 1.3**, demand will exceed existing runway capacity around 2014.

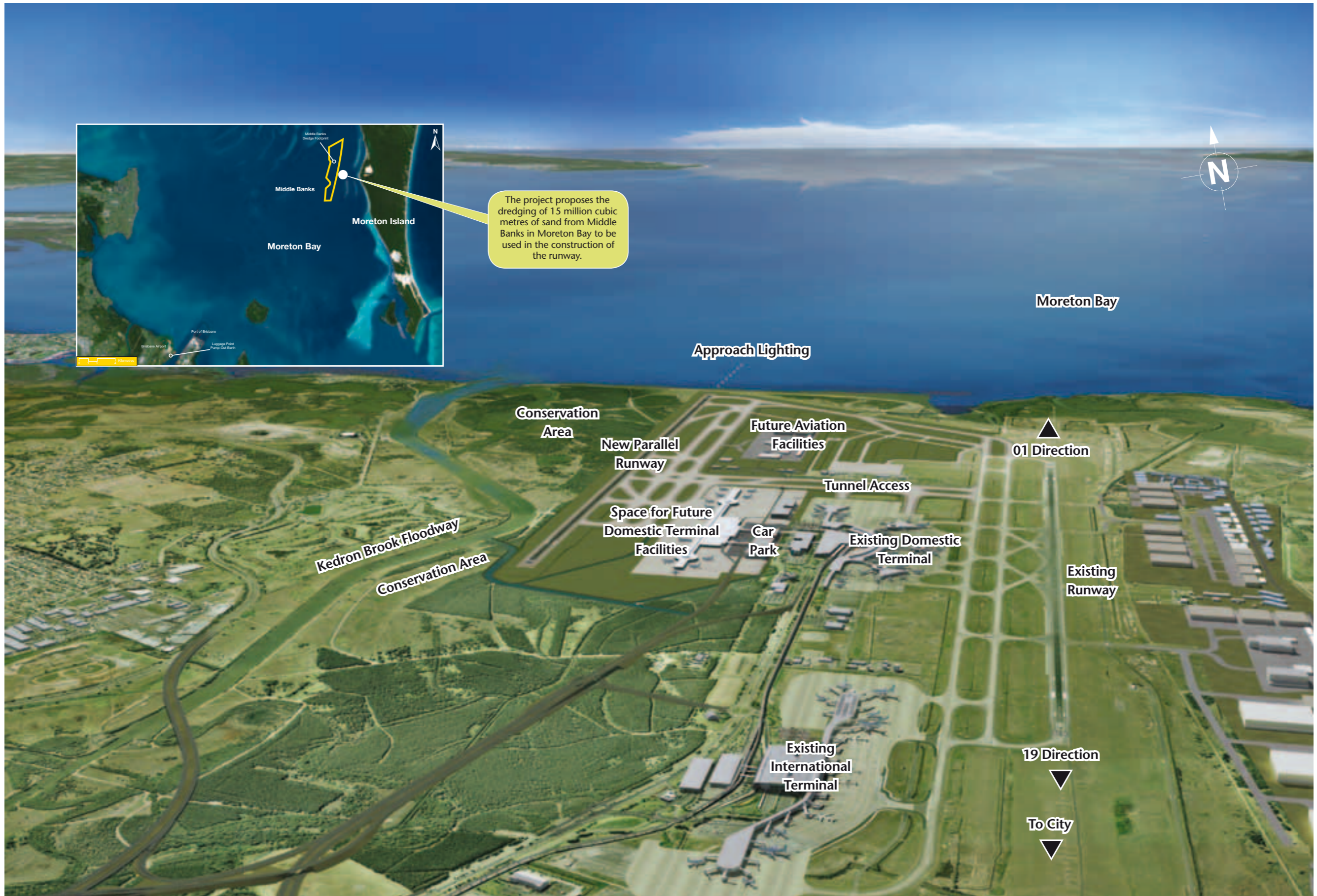
1.4 Project Objectives

The key objectives for the construction of the NPR project are:

- To facilitate passenger and aircraft movement through the delivery of a safe runway system and airspace architecture;
- To meet future capacity needs through the staged delivery of the NPR in an appropriate and economically justifiable time frame;
- To maintain Brisbane Airport as a major contributor to the regional economy and through the project assist in the generation of regional economic growth;
- To balance economic benefit, social and environmental impact;
- To implement appropriate environmental management plans for all facets of the NPR that meets the requirements of the AES and statutory requirements;
- To ensure review and update of airspace approvals prior to opening (as appropriate);
- To implement and maintain appropriate risk management processes;
- To seek key stakeholder support including the Airlines;
- To enhance shareholder value through the delivery of the project.

Chapter A6 of this Volume provides details of the public engagement objectives associated with the NPR project.

Figure 1.2a: Proposed New Parallel Runway Development.



This artist's impression has been prepared on behalf of Brisbane Airport Corporation (BAC) and relates to its proposal for a New Parallel Runway at Brisbane Airport. This graphic is representative of the proposal at the time of producing the Draft EIS/MDP for public comment. It also illustrates conceptual future aviation facilities.

1.5 Legislative Context – Australian Government

1.5.1 Introduction

This section summarises the Commonwealth approvals that are required for the NPR project. The components of the project are located in areas under the jurisdiction of the Australian Government, the Queensland Government and the Brisbane City Council and there are approvals required under the laws relevant to each jurisdiction.

While the Airport is located within Queensland not all Queensland Laws apply to the Project. The Airport is a ‘Commonwealth Place’ under the *Commonwealth Places (Application of Laws) Act 1970 (Cwlth)* that applies State laws “in accordance with their tenor” to Commonwealth places. However, a State law does not apply if, for example, it is inconsistent with a Commonwealth law in which case the latter prevails and the State law will not apply to the relevant Commonwealth place. This is as a consequence of s109 of the Australian Constitution.

Land use, building and environmental matters are principally administered by the Commonwealth Airport legislation. The relevance of State legislation on the Airport site depends on the application of the *Airports Act*, Part 5, Division 5 which excludes State laws relating to land use planning and the regulation of building activities and Part 6 which provides that State environmental laws do not apply if certain prescribed matters are covered by a Regulation made pursuant to the *Airports Act* (the relevant statute being the *Airports (Environment Protection) Regulations 1997*). A description of State Laws that apply to the project can be found in section A1.6 of this chapter.

1.5.2 Australian Government Approvals Identified

The approvals from the Australian Government which will be required for the Project and which are discussed separately in this section have been identified as:

- Approval of the relevant ‘Controlled Actions’ under the *Environment Protection and Biodiversity Conservation Act 1999*;

- Approval of a Major Development Plan under the *Airports Act 1996*;
- Approval for building activities under the *Airports (Building Control) Regulations* pursuant to the *Airports Act 1996*; and
- Approval for controlled activities under the *Airports (Protection of Airspace) Regulations* pursuant to the *Airports Act 1996*.

Some decisions will be made under Commonwealth legislation relevant to Aviation Airspace Management prior to opening the NPR.

These include:

- Determining the classification and extent of controlled airspace in accordance with Annex 11 to the Chicago Convention on Civil Aviation;
- Designation and containment, within controlled airspace of air routes and conditions of use for air routes; and
- Design of terminal instrument flight procedures.

The first two are determinations by Airservices Australia under regulations 2.02 and 2.04 of the *Air Services Regulation 1995* while the third is a determination by the Civil Aviation Safety Authority under the *Civil Aviation Safety Regulation 1998*.

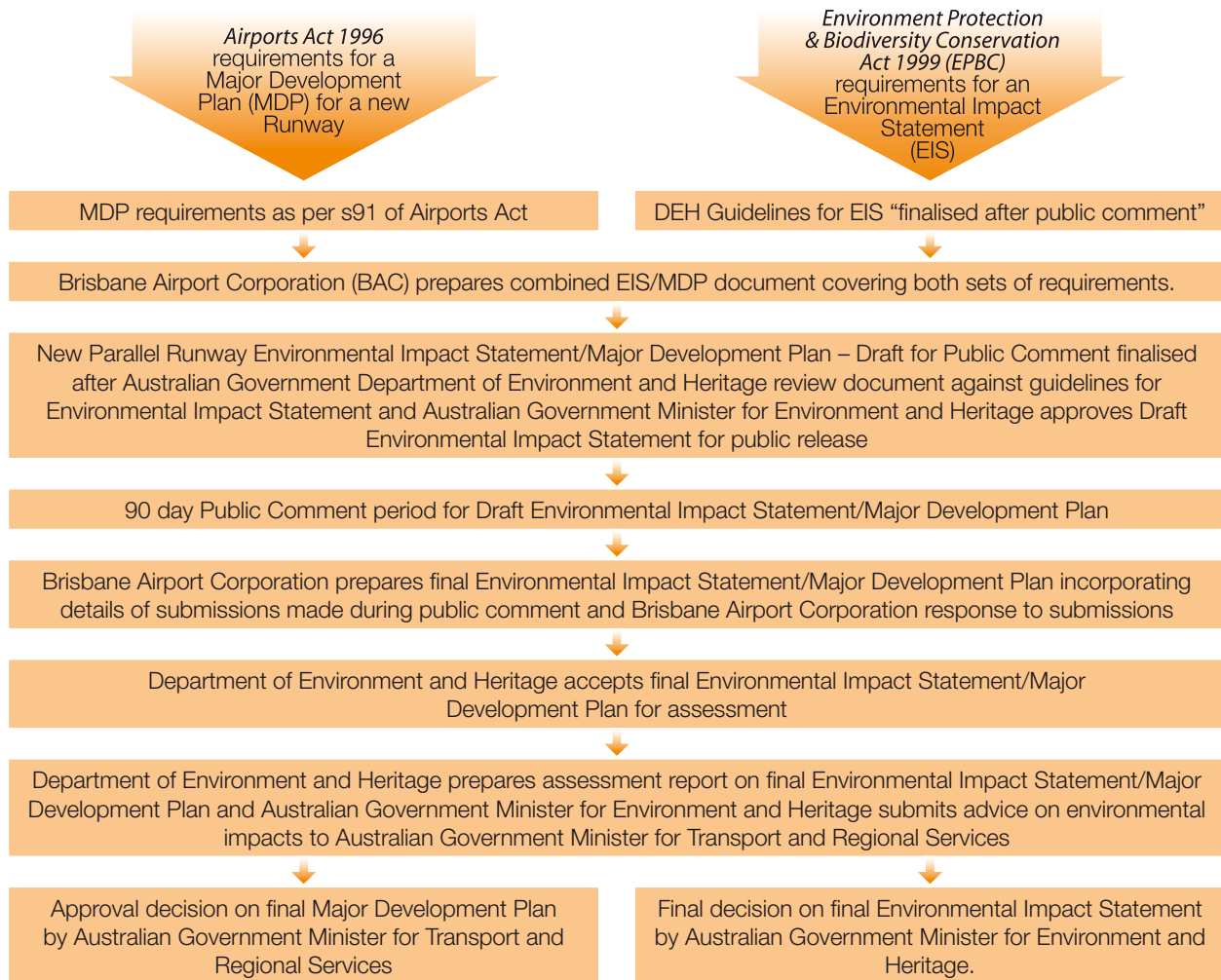
1.5.2.1 ‘Controlled Actions’ under the *Environment Protection and Biodiversity Conservation Act 1999*

This legislation requires an approval from the Australian Government Minister for Environment and Heritage for actions that are likely to have a significant impact on a matter of national environmental significance.

By notice dated 6 May 2005 the Project was declared to require an approval because of the potential for impact on the following matters of national environmental significance:

- Wetlands of international importance;
- Listed threatened species and communities;
- Listed migratory species; and
- Commonwealth land.

Figure 1.5: Flow diagram of EIS/MDP Process.



By notice dated 16 June 2005 the Australian Government Minister for Environment and Heritage decided that the assessment approach for these approvals should be the environmental impact process provided for under the *Environment Protection and Biodiversity Conservation Act 1999*.

Draft guidelines for the environmental impact statement were issued by the Australian Government Department of Environment and Heritage in July 2005, and following public input, the final guidelines were approved on and issued to BAC on 2 September 2005. This environmental impact statement is being prepared in accordance with those guidelines.

As subsequently explained in relation to the *Airports Act 1996*, the project was referred to the Australian Government Minister for Environment

and Heritage under s160 of the *Environment Protection and Biodiversity Conservation Act 1999*. As a consequence of that, the guidelines for the environmental impact statement address the potential impacts of the project on all aspects of the environment including the matters of national environmental significance previously referred to. As a consequence of this, s130(1B) of the *Environment Protection and Biodiversity Conservation Act 1999*, which would otherwise require a notice from Queensland about the assessment of other impacts on the environment (for on-Airport matters), is not required because of the exemption under s130(1E) of the *EPBC Act*.

The Minister’s approval may include conditions which are ‘necessary or convenient’ but must relate to the relevant matter of national environmental significance to which the approval is directed.

An assessment of criteria listed by the *EPBC Act 1999* for a ‘significant impact’ against the matters listed above has been prepared in Chapters B5 and C5. It should be noted that in BAC’s view these assessments conclude that the NPR project would not have a significant impact on the matters of national environmental significance listed above.

1.5.2.2 Major Development Plan under the Airports Act 1996

Under the *Airports Act 1996*, a MDP is required to be approved by the Australian Government Minister for Transport in relation to each major Airport development. This Project is a major Airport development as defined in the *Airports Act 1996* by virtue of Section 89(1) a:

“constructing a new runway”

Section 90 of the *Airports Act 1996* provides that major Airport developments must not be carried out except in accordance with an approved MDP. Among the matters that must be addressed in an MDP (Section 91 (1) (h)) are:

“...the Airport-lessee company’s assessment of the environmental impacts that might reasonably be expected to be associated with the development.”

This Draft MDP has thus been prepared in accordance with and in order to meet the requirements of the *Airports Act 1996* as outlined above.

The key steps in the approval process for the MDP under the *Airports Act 1996* are presented in **Figure 1.5**. An important implication of this process is the requirement that the Draft MDP be made available for public comment for 90 days.

An MDP checklist is provided in the following table to demonstrate the compliance of this proposed development with Section 91 of the *Airports Act 1996*.

When BAC became the Airport-lessee company for Brisbane Airport on 2 July 1997, it assumed certain pre-existing lessor obligations under various leases. BAC also accepted the Airport lease subject to a number of other interests in the Airport land (such as easements).

Some of those contractual and other rights remain in existence at Brisbane Airport while others have expired. However, there are no such contractual or other rights affecting the site of the proposed NPR the subject of this Draft EIS/MDP.

The process for approval of the MDP is contained in the *Airports Act 1996*. In addition, s160 of the *Environment Protection and Biodiversity Conservation Act 1999* requires the Australian Government Transport Minister to obtain and consider advice from the Australian Government Minister for Environment and Heritage before giving approval to the MDP (s160(1)).

Table 1.5a: Contents of a Major Development Plan.

Contents of a Major Development Plan	Volume, Chapter(s) of Draft EIS/MDP
Section 91	
(1) A Major Development Plan, or a draft of such a plan, must set out:	
a) The Airport lessee company’s objectives for the development; and	Volume A, Chapter 1
b) The Airport lessee company’s assessment of the extent to which the future needs of civil aviation users of the Airport, and other users of the Airport, will be met by the development; and	Volume A, Chapter 2
c) A detailed outline of the development; and	Volume A, Chapter 4 and 5
d) If a final master plan for the Airport is in force — whether or not the development is consistent with the final master plan; and	Volume A, Chapter 1
e) If the development could affect noise exposure levels at the Airport—the effect that the development will be likely to have on those levels; and	Volume D, Chapter 5
f) The Airport lessee company’s plans, developed following consultations with the airlines that use the Airport, local government bodies in the vicinity of the Airport and — if the Airport is a joint user Airport — the Department of Defence, for managing aircraft noise intrusion in areas forecast to be subject to exposure above the significant ANEF levels; and	Volume D, Chapters 6

Contents of a Major Development Plan	Volume, Chapter(s) of Draft EIS/MDP
Section 91	
g) outline of the approvals that the Airport-lessee company, or any other person, has sought, is seeking or proposes to seek under Division 5 or Part 12 in respect of elements of the development of the development; and	Volume A, Chapter 1
h) The Airport lessee company's assessment of the environmental impacts that might reasonably be expected to be associated with the development; and	Volume B, Chapters 1–14; Volume C, Chapters 1–8, Volume D, Chapters 1–5
j) The Airport lessee company's plans for dealing with the environmental impacts mentioned in paragraph (h) (including plans for ameliorating or preventing environmental impacts); and	Volume B, Chapter 15; Volume C, Chapter 9, Volume D, Chapter 6
k) If a draft environmental strategy has been approved — the date of the approval; and	Volume A, Chapter 1
l) Such other matters (if any) as are specified in the Regulations.	Not applicable
(4) In specifying a particular objective or proposal covered by paragraph (1) (a) or (c), a Major Development Plan, or a draft of such a plan, must address the extent (if any) of consistency with planning schemes in force under a law of the State or Territory in which the Airport is located.	Volume A, Chapter 1 Volume B, Chapter 2

The project was therefore referred to the Australian Government Minister for Environment and Heritage by the Department of Transport and Regional Services, and by notice on 16 June 2005, the Minister for Environment and Heritage decided that the assessment approach for the project should be by way of Environmental Impact Statement (EIS). Thus, the assessment approach in relation to the matters of national environmental significance and to the MDP was decided to be the same environmental impact process.

After completion of the assessment report regarding the EIS, the Australian Government Minister for Environment and Heritage will provide advice to the Australian Government Minister for Transport which will state:

- If the MDP should be approved;
- Any conditions which should be attached to protect the environment; and
- Any other matter relating to protection of the environment concerning the MDP.

In making a decision about the MDP the Australian Government Minister for Transport must consider the advice provided by the Australian Government Minister for Environment and Heritage and must

subsequently report to that Minister the decision made and if that Minister's advice was not followed an explanation.

The following table outlines the matters considered by the Australian Government Minister for Transport in the determination for approval of a Draft MDP, pursuant to Section 94 of the *Airports Act 1996*.

Table 1.5b: Ministerial Considerations in Determining Approval of an MDP

Ministerial Considerations in the Determination of Approval of a Draft MDP
a) The extent to which the carrying out of the MDP would meet the future needs of civil aviation users of the Airport, and other users of the Airport for services and facilities relating to the Airport;
b) The effect that carrying out of the MDP would be likely to have on the future operating capacity of the Airport;
c) The impact that carrying out of the MDP would be likely to have on the environment
d) The consultations undertaken in preparing the MDP (including the outcome of the consultations);
e) The views that the Civil Aviation Safety Authority (CASA) and Airservices Australia (ASA), in so far as they relate to safety aspects and operational aspects of the MDP.

1.5.2.3 Building Approvals Under the Airports (Building Control) Regulations

This section deals with the approval of building activities on-airport land.

The project will involve a number of building activities described in Section 98 of the *Airports Act 1996*. The proponent is required to obtain an approval under these regulations in relation to each building activity. It is anticipated that the following building activities will be involved:

- Constructing buildings or other structures (s.98(1)(a));
- Undertaking, constructing or altering earth works (s.98(1)(c)); and
- Undertaking, constructing or altering engineering works, electrical works or hydraulic works (s.98(1)(d)).

These approvals are issued by the Airport Building Controller (ABC) under these regulations and are classified as either, a building permit, a works permit or a demolition authorisation depending upon the building activities involved.

1.5.2.4 Controlled Activities Approvals Under the Airports (Protection of Airspace) Regulations

Part 12 of the *Airports Act* deals with Airspace which is declared in the interests of safety, efficiency or regularity of air transport operations, to be prescribed airspace. It identifies activities known as 'controlled activities' which result in intrusions into that prescribed airspace which require approvals.

The approval procedures for controlled activities are determined by the Airports (Protection of Airspace) Regulations 1996.

1.5.2.5 Airspace Approvals – Airservices Regulations

There are two relevant determinations that may be made by Airservices Australia relevant to aviation airspace management and which are a consequence of the project. These are:

- The designation of air routes and their determination of conditions of use for those air routes (regulation 2.02); and

- The determination about volumes of airspace being within particular classes from the Chicago Convention on International Civil Aviation, a determination of flight information areas or regions or control areas or zones (regulation 2.04).

It is likely that Airservices Australia or its successor, as the Airspace Regulator, will make relevant determinations about these matters having regard to operational requirements for the new runway.

These determinations may not be strictly categorised as 'authorisations' for the purposes of s.160 (1) of the *Environment Protection and Biodiversity Conservation Act 1999* although these were referred to the Australian Government Minister for Environment and Heritage by Airservices Australia on 27 May 2005 for the Minister's advice under s.160.

Their determinations would only be considered closer to when the NPR becomes operational in 2015.

Airspace Approvals Process

The process for adoption and implementation of significant changes to the operation of Australia's airspace – such as changes required by the NPR – is a complex and rigorous process.

Based on current legislative requirements, it is expected that the approval of changes to airspace required for the NPR to be operated will be a two step process, as described below.

Step 1 – Approval of EIS/MDP

The first step is approval of the MDP under the *Airports Act* and the approval of controlled actions under the *EPBC Act*. In this document, a comprehensive environmental assessment of the operational impacts of the project (predominantly concerned with noise and air issues) has been undertaken. Volume D of this Draft EIS/MDP contains that environmental assessment.

This assessment is based on a range of possible flight path options, approach and departure procedures and operating modes which have been prepared for BAC. The airspace design work is not preliminary but of an advanced technical level and will form the basis of the next step for adoption and implementation of airspace changes (beyond the EIS/MDP approval) outlined in Step 2 following.

The environmental assessment undertaken and presented in this Draft EIS/MDP will provide:

- The Minister for the Environment and Heritage with sufficient information to decide whether to approve the EIS for the purposes of the *EPBC Act*;
- The Minister for the Environment and Heritage with sufficient information to provide advice to the Minister for Transport and Regional Services before that Minister can approve the MDP (this is a requirement of the *EPBC Act*);
- The Minister for Transport and Regional Services with sufficient information to decide whether to approve the MDP for the purposes of the *Airports Act*; and
- To enable the NPR to proceed to construction.

In addition, the EIS/MDP assessment will provide the Minister for the Environment and Heritage with information to provide advice to Airservices Australia before it can adopt and implement any changes to airspace which are likely to have a significant impact on the environment (again, a requirement of the *EPBC Act*).

Step 2 – Approval by the Airspace and Environment Regulatory Unit (AERU) or its Airspace Regulator Successor

The second step in the process is approval for the adoption and implementation of the airspace changes by the Airspace and Environment Regulatory Unit (AERU), currently a division of Airservices Australia. The role of AERU is to exercise Airservices Australia's authority for airspace and environment responsibilities as defined with prescribed legislation including:

- *Air Services Act 1995*;
- *Air Services Regulations 1995*;
- *EPBC Act 1999*; and
- *Air Navigation (Aircraft Noise) Regulation 1984*.

However, official adoption of the changes required to allow a new runway to become operational cannot occur until the construction of the runway is approved and final detailed specifications (e.g. exact elevation, length, width, alignment, coordinates of thresholds and extent of navigation aids) are

fully known. That will not happen until the new runway is close to completion. At this time, detailed procedures for the flight tracks are designed by experts who must be certified by the Civil Aviation Safety Authority (CASA) to undertake such design.

Those final detailed procedures, together with the new flight tracks to be operated after the NPR becomes operational, will be submitted to AERU for assessment. A detailed Safety Case and Environmental Assessment will be undertaken closer to the completion of the construction of the NPR. It is expected that AERU will take into account the detailed environmental assessment contained in this Draft EIS/MDP in making its assessment. Additionally, the detailed design of the new airspace just prior to the NPR becoming operational would be based on the flight tracks and procedures outlined in the EIS/MDP.

The AERU assessment is based on a number of criteria, including:

- Safety implications;
- ICAO obligations;
- Environment considerations;
- Consultation and cooperation;
- Government policy; and
- Promoting and fostering civil aviation.

If AERU decides to approve the airspace changes, the following occurs:

- Advice is issued through the Aeronautical Information Service process;
- Industry training will occur as required; and
- The changes are made available on AERU's website.

1.5.2.6 Civil Aviation Safety Regulations

It is likely that flight procedures for Brisbane Airport will be amended to allow for the operation of the new runway. These procedures include terminal instrument flight procedures which are referred to in subpart 173.A of the Civil Aviation Safety Regulations, 1998. That subpart provides for the standards that apply to the design of instrument flight procedures and applies to persons who design instrument flight procedures and those who are or

wish to become certified or authorised designers of terminal instrument flight procedures.

Under this part the Civil Aviation Safety Authority may issue procedure design certificates or procedure design authorisations which will generally allow the holder to carry out design work on a terminal instrument flight procedure such as may be involved as a consequence of the operation of the new runway at Brisbane Airport.

It may be the case that a person needs to obtain either a procedure design certificate or a procedure design authorisation in relation to amendments to the terminal instrument flight procedures for Brisbane Airport. While such a certificate or authorisation may not be strictly categorised as ‘authorisations’ for the purposes of s.160(1) of the *Environment Protection and Biodiversity Conservation Act 1999* these were referred to the Australian Government Minister for Environment and Heritage by Airservices Australia (as the CASA delegate) on 27 May 2005 for the Minister’s advice under s160.

Given that this matter has been referred to the Minister for Environment and Heritage who has determined that the assessment approach shall be by way of environmental impact statement, the Minister for

Environment and Heritage, after completion of the assessment report regarding this environmental impact statement, will provide advice to Airservices.

1.6 State Approvals and Local Planning

1.6.1 Approvals Required

The NPR project will consist of works on the Airport site, works that occur on land and water outside the Airport boundary (such as drainage channels and the approach lighting structure) and works associated with the sand extraction activity in Moreton Bay and at the mouth of the Brisbane River.

Table 1.6a shows the relevant State and local approvals likely to be required for the project in areas outside of the Airport boundary. **Table 1.6b** shows the relevant State approvals for the proposed sand extraction at Middle Banks and the associated dredge pump-out mooring at Luggage Point.

Further information about State and local approval requirements are contained in Chapter B14, Environmental Management Framework and Chapter C9, Dredge Management Plan respectively.

Table 1.6a: Airport and Surrounds Approval Requirements.

1. Kedron Brook Tidal Drainage Channel (in relation to the part of the development that is not contained on-airport land)		
Required Approval	Administering Agency	Legislation
(a) Development Permit for Operational Works (that is tidal works)	Brisbane City Council (involves prescribed tidal works) Environmental Protection Agency Maritime Safety Queensland	<i>Coastal Protection and Management Act 1995</i> and Regulations <i>Integrated Planning Act 1997</i> and Regulation <i>Transport Operations (Marine Safety) Act 1994</i>
(b) Development Permit for Material Change of Use for an Environmentally Relevant Activity	Environmental Protection Agency	<i>Environmental Protection Act 1994</i> <i>Integrated Planning Act 1997</i> and Regulation
(c) Registration Certificate for an Environmentally Relevant Activity	Environmental Protection Agency	<i>Environmental Protection Act 1994</i>
(d) Development Permit for Operational Works that is the removal, destruction or damage of a marine plant	Department of Primary Industries and Fisheries	<i>Fisheries Act 1994</i> <i>Integrated Planning Act 1997</i> and Regulation
(e) Development Permit for Material Change of Use (assessed against planning scheme)	Brisbane City Council	<i>Integrated Planning Act 1997</i> Brisbane City Council City Plan 2000
(f) Development Permit for Operational Works (assessed against planning scheme)	Brisbane City Council	<i>Integrated Planning Act 1997</i> Brisbane City Council City Plan 2000

2. Approach Lighting Structure (in relation to the part of the development that is not contained on-airport land)		
Required Approval	Administering Agency	Legislation
(a) Development Permit for Operational Works (that is tidal works)	Brisbane City Council (involves prescribed tidal works) Environmental Protection Agency Maritime Safety Queensland Port of Brisbane Corporation	<i>Coastal Protection and Management Act 1995</i> and Regulations <i>Integrated Planning Act 1997</i> and Regulation <i>Transport Operations (Marine Safety) Act 1994</i> <i>Transport Infrastructure Act 1994</i>
(b) Marine Park Permit to construct minor works	Environmental Protection Agency	<i>Marine Parks Act 2004</i> Marine Park Regulations 1990 Moreton Bay Zoning Plan 1997

3. Seawall: (in relation to the part of the development that is not contained on-airport land)		
Required Approval	Administering Agency	Legislation
(a) Development Permit for Operational Works (that is tidal works)	Brisbane City Council (involves prescribed tidal works) Environmental Protection Agency Maritime Safety Queensland Port of Brisbane Corporation	<i>Coastal Protection and Management Act 1995</i> and Regulations <i>Integrated Planning Act 1997</i> and Regulation <i>Transport Operations (Marine Safety) Act 1994</i> <i>Transport Infrastructure Act 1994</i>
(b) Marine Park Permit to construct minor works	Environmental Protection Agency	<i>Marine Parks Act 2004</i> Marine Park Regulations 1990 Moreton Bay Zoning Plan 1997

Table 1.6b: Middle Banks Approval Requirements.

1. Sand Extraction at Middle Banks		
Required Approval	Administering Agency	Legislation
(a) Marine Park Permission to Enter and Use for sand extraction activity	Environmental Protection Agency	<i>Marine Parks Act 2004</i> Marine Parks Regulation 1990 Marine Parks (Moreton Bay) Zoning Plan 1997
(b) Approved Dredge Management Plan (DMP)	Environmental Protection Agency	<i>Coastal Protection and Management Act 1995</i>
(c) Development Permit for Material Change of Use for an Environmentally Relevant Activity	Environmental Protection Agency Port of Brisbane Corporation	<i>Environmental Protection Act 1994</i> <i>Integrated Planning Act 1997</i> and Regulation <i>Transport Infrastructure Act 1994</i>
(d) Registration Certificate for an Environmentally Relevant Activity	Environmental Protection Agency	<i>Environmental Protection Act 1994</i>

2. Dredge Pump-out Facility at Luggage Point and Dredge Pipeline			
Required Approval		Administering Agency	Legislation
(a)	Permit to Occupy (for placement of pipeline across State Land)	Department of Natural Resources and Water	<i>Land Act 1994</i>
(b)	Development Permit for material change of use (assessed against planning scheme)	Brisbane City Council	<i>Integrated Planning Act 1997</i> Brisbane City Council City Plan 2000
(c)	Development Permit for Operational Works (assessed against planning scheme)	Brisbane City Council	<i>Integrated Planning Act 1997</i> Brisbane City Council City Plan 2000
(d)	Development Permit for Operational Works (that is tidal works)	Brisbane City Council (involves prescribed tidal works) Environmental Protection Agency Maritime Safety Queensland Port of Brisbane Corporation	<i>Coastal Protection and Management Act 1995</i> and Regulations <i>Integrated Planning Act 1997</i> and Regulation <i>Transport Operations (Marine Safety) Act 1994</i> <i>Transport Infrastructure Act 1994</i>
(e)	Development Permit for Operational Works involving interference with quarry material on State Coastal Land in a coastal management district	Environmental Protection Agency	<i>Coastal Protection and Management Act 1995</i> and Regulations <i>Integrated Planning Act 1997</i> and Regulation
(f)	Development Permit for Operational Works that is the removal, destruction or damage of a marine plant	Department of Primary Industries and Fisheries	<i>Fisheries Act 1994</i> <i>Integrated Planning Act 1997</i> and Regulation

1.6.2 Brisbane City Council's City Plan 2000

According to the Brisbane City Plan 2000, Brisbane Airport land is designated a 'Special Purpose Centre'. Council's Strategic Plan within City Plan acknowledges the Airport as being a major industrial location (as part of the broader Australia TradeCoast) that offers "enormous potential for industrial, business and transport related employment growth".

Within City Plan, as a 'Special Purpose Centre', Brisbane Airport is defined as:

"A use of premises for:

- The landing and/or departure of aircraft;
- The housing, servicing, maintenance and repair of aircraft;
- The assembly and dispersal of passengers/goods on or from aircraft; and

- Any ancillary activities serving the needs of passengers and visitors to the Airport, such as shopping, food outlets and tourism services."

To the extent that the proposed NPR project will result in serving core Airport operations and the needs of passengers, this Draft EIS/MDP is consistent with Brisbane City Plan 2000. However, it should be noted that there is a clear intention in City Plan that it is not intended to apply to the Airport land.

"The land on which a number of those centres operate is regulated by State or Commonwealth legislation not the City Plan e.g. the *Southbank Corporation Act 1989* regulates Southbank and land use and planning controls for Brisbane Airport are regulated under the *Airports Act 1996*".

1.7 Australian Government and State Agency Consultation

Due to the complexity of the project and that all three levels of Government have a role in its assessment and approval, BAC proposed a model for coordination and engagement between the relevant government stakeholders. The Working Group Model proposed comprised of a Steering Group to oversee a series of five discipline-focussed Working Groups. The Steering Group consisted of high level officers from the key coordinating agencies while representation on the Working Groups was at project officer level from the range of agencies which may have an interest in the project.

The five Working Groups focused on the following areas of study:

1. Airspace and Emissions;
2. Dredging and Coastal Processes;
3. Ecology and Water Quality;
4. Social and Economic; and
5. Cultural Heritage.

After the initial meeting Working Groups 2 and 3 were combined to form Working Group 2/3, the Land and Marine Impacts Working Group. For details of the structure and government agency representation within the Working Group Model structure refer to **Figure 1.7**.

The principal role of the Working Groups was to provide a forum for discussion and direction between relevant Government agencies and BAC during the course of the EIS. In particular, the Working Groups were able to:

- Provide clarification on issues that BAC's consultants raised within the course of their investigations;
- Comment on whether the scope of the studies met the intent of the Guidelines;

- Advise on relevance of independent peer review requirements;
- Identify if additional work was likely based on the baseline and impact assessment findings of the EIS studies; and
- Provide comment on study reports.

The role of the Steering Group was to ensure the key Federal and State agencies were kept abreast of the range of issues, discussions, and outcomes of the Working Groups.

The Working Group Model approach was seen to be of benefit for both BAC and Government for mutual understanding and communication of the range of issues which may arise in the project.

Most of the Working Groups met about 4–5 times during the course of the EIS development at critical milestones during the process. These meetings occurred approximately as follows:

- Following commissioning of sub-consultants to undertake specialist studies;
- Following completion of gap analyses by specialist consultants;
- Following completion of the baseline conditions reporting; and
- Upon completion of initial assessment of impacts and mitigation options.

Most of the meetings were held in Brisbane except the Airspace and Emissions Group (Working Group 1) which comprised mostly Canberra-based representatives were held in Canberra. The consultation between BAC and government agencies was extremely useful in discussing and clarifying project issues.

Figure 1.7: Structure and Representation of the Working Group Model.



1.8 Report Structure

1.8.1 The Combined NPR EIS/MDP Report

Following agreement with DEH and DOTARS, the proposal for the NPR project has been prepared as a combined Draft EIS/MDP. This is because requirements for each document completely overlap. It was agreed that the development of a single document that responded fully to the requirements of all relevant legislation would be preferable from a community perspective. This Draft EIS/MDP has been signposted to allow the reader to understand how it fulfils the requirements of the *EPBC Act* and Guidelines and the MDP requirements contained in the *Airports Act*.

The project has been split into four separate work areas and the EIS/MDP report structure follows this format as outlined in **Table 1.8a**.

Table 1.8a: Structure of the EIS/MDP.

Draft EIS/MDP Volumes	Scope	Individual Chapter Headings
Executive Summary	The Executive Summary will cover all aspects of the EIS/MDP report in summary and will also be able to be printed as a stand-alone document to assist in public engagement.	
Volume A: Background and Need for the Project	This Volume sets the context for the Project and covers: <ul style="list-style-type: none"> • Background to the Project; • Need for the Project; • An assessment of options and alternatives; • A project description and details of the preliminary design of the runway and associated works; • A detailed description of the activities involved in the construction and operation of the runway project; • The assessment methodology used to prepare the EIS/MDP; and • An overview of the public engagement program. 	<p>Chapter A1: Background Chapter A2: Need for the Project Chapter A3: Options and Alternatives Chapter A4: Project Description: Runway Layout Chapter A5: Project Description: Runway Construction Chapter A6: Public Engagement Chapter A7: SPeAR® Sustainability Assessment</p>
Volume B: Airport And Surrounds	This Volume covers: <ul style="list-style-type: none"> • Detailed information resulting from baseline review and survey for aspects such as ecology, cultural heritage, geology, soils, water quality etc on-airport; • For all aspects of the project occurring on-airport and surrounds, the impact of activities associated with the Project; • For areas immediately surrounding the Airport this includes aspects such as the location of the dredge pump-out, alignment and impacts of the pipeline; • Impacts arising from on-airport activities on surrounding receiving waters (Moreton Bay, Kedron Brook, Brisbane River, Serpentine Creek etc); • Traffic impacts (including noise and air emissions) off-Airport generated as a result of the runway project; • Details of the environmental management and mitigation measures proposed to ameliorate impacts. 	<p>Chapter B1: Context and Project Description Chapter B2: Land Use and Planning Chapter B3: Geology, Soils and Groundwater Chapter B4: Coastal Processes and Natural Features Chapter B5: Terrestrial and Marine Ecology Chapter B6: Cultural Heritage Chapter B7: Surface Hydrology Chapter B8: Water Quality Chapter B9: Social Impact Assessment Chapter B10: Surface Transport Chapter B11: Construction and Traffic Noise Chapter B12: Construction and Traffic Air Emissions Chapter B13: Landscape and Visual Chapter B14: Environmental Management Framework</p>

Draft EIS/MDP Volumes	Scope	Individual Chapter Headings
Volume C: Middle Banks, Moreton Bay	This Volume presents the findings of: <ul style="list-style-type: none"> • The results of the analysis to identify the preferred dredge footprint; • All aspects of the project involving the details of sand extraction and its potential impacts on the environmental values of Middle Banks and surrounds (including Moreton Island); • Details of the environmental management and mitigation measures proposed to ameliorate impacts. 	Chapter C1: Context and Project Description Chapter C2: Geology and Soils Chapter C3: Coastal Processes and Natural Features Chapter C4: Water Quality Chapter C5: Marine Ecology Chapter C6: Cultural Heritage Chapter C7: Social Impact Assessment Chapter C8: Landscape and Visual Chapter C9: Dredge Management Plan
Volume D: Airspace	This Volume investigates and reports on: <ul style="list-style-type: none"> • The existing situation with respect to current Brisbane Airport flight paths; • The proposed flight paths associated with the closure of the 14/32 runway and opening of the New Parallel Runway and their implications on local communities. Impacts assessed will include noise, air emissions, hazards of Airport operation and health impacts; • The proposals for a noise management plan. 	Chapter D1: Volume Overview Chapter D2: Background to Airspace Architecture Chapter D3: Airspace Architecture Chapter D4: Noise Modelling Methodology Chapter D5: Noise Assessment Chapter D6: Air Emissions Chapter D7: Health Impact Assessment Chapter D8: Hazards and Risks of Airport Operations Chapter D9: Social Impact Assessment Chapter D10: Operational Noise Management Plan

1.8.2 Responsibilities for EIS Preparation

BAC has implemented a structure for the development of the Draft EIS/MDP which has involved the creation of a Core Project Team (CPT) for the delivery of the draft document. The CPT is a team comprised of BAC, Arup, Bayly Willey Holt and Maunsell personnel experienced in project delivery, preparation of EISs and MDPs, with considerable

knowledge of Brisbane Airport and expertise in public engagement for large infrastructure projects.

The CPT has been responsible for the management, coordination and integration of a range of technical specialists in all areas of expertise covered by the EIS Guidelines and requirements of the *Airports Act 1996* for an MDP. Details of the consultants engaged in the preparation of the EIS/MDP and their general scope of work are listed below in **Table 1.8b**.

Table 1.8b: The BAC NPR Consultant Team and Scope of Work.

Consultant	Scope of work
Access Economics	<ul style="list-style-type: none"> Economic Analysis
Airservices Australia	<ul style="list-style-type: none"> Airspace Architecture (SIDS and STARS)
	<ul style="list-style-type: none"> Airspace Procedures (Operations)
Airbiz	<ul style="list-style-type: none"> Runway Timing Review
Allens Arthur Robinson	<ul style="list-style-type: none"> Legal Advice (including Native Title and input to CHMP)
Archaeo Cultural Heritage Services	<ul style="list-style-type: none"> Archaeology and Heritage (including Cultural Heritage Management Plan)
Archimage	<ul style="list-style-type: none"> Specialist Graphics and Visualisations
Arup	<ul style="list-style-type: none"> EIS/MDP Lead Consultant
Arup (Planning)	<ul style="list-style-type: none"> Land Use and Planning
Arup (Transport)	<ul style="list-style-type: none"> Land Transport including Modelling Infrastructure Upgrade Requirements
Baggerman Associates	<ul style="list-style-type: none"> Dredge Strategy (Extraction and Delivery) for EIS/MDP
Bayly Willey Holt	<ul style="list-style-type: none"> Public Engagement Consultant
Briggs Brindle and Chambers	<ul style="list-style-type: none"> Social Impacts
Lex Brown (Griffith University)	<ul style="list-style-type: none"> Health Impact Assessment (Noise)
Core Project Team (BAC/Arup/BWH/Maunsell)	<ul style="list-style-type: none"> Includes input to chapters on Background, Project Justification and Need, Options and Alternatives, Community Consultation, coordination and preparation of the EMP and DMP
EDAW Gillespies Australia	<ul style="list-style-type: none"> Landscape and Visual Assessment
Engine Creative	<ul style="list-style-type: none"> NPR Website Design and Maintenance
Holmes Air Sciences	<ul style="list-style-type: none"> Air Quality Assessment for aircraft emissions Traffic emissions assessment Construction emissions
Mapping and Hydrographic Surveys	<ul style="list-style-type: none"> Hydrographic and Seismic Survey in Moreton Bay and the Brisbane River. Transects of shorelines along Moreton Island and the Moreton Bay foreshore at Brisbane Airport.
Maunsell Australia (including AOS/ASA/DHI/Golders/Project Support/North Surveys)	<p>Preliminary Design (Maunsell Australia) including input to EIS. Also incorporating sub-consultancies:</p> <ul style="list-style-type: none"> North Surveys – Survey Project Support – Project Costings AOS Airport Consulting/Air Services Australia – Airfield Layout and TAAM Modelling DHI – Hydraulics including Drainage and Flooding Impacts Golder Associates – Geotechnical Assessment including: <ul style="list-style-type: none"> Groundwater/Porewater Assessments Geology and Soils including Acid Sulfate Soils/issues

Consultant	Scope of work
Matusik Property Insights	<ul style="list-style-type: none"> Real Estate Research
Tim O'Meara (CSIRO)	<ul style="list-style-type: none"> Health Impact Assessment (Air Emissions)
Spinifex	<ul style="list-style-type: none"> Indigenous Issues Negotiator
Tourism Futures International	<ul style="list-style-type: none"> Passenger/Aircraft Forecasts Development of Scenario Schedule for nominated busy days Runway Capacities/Timing Input into Project Justification and Need
WBM	<ul style="list-style-type: none"> Coastal Processes and Natural Features Terrestrial and Marine Ecology Water Quality modelling and assessment
Wilkinson Murray	<ul style="list-style-type: none"> Aircraft Noise Modelling and Assessment Construction noise Traffic noise

1.9 Option Testing

The Guidelines require that an analysis must be included in the EIS/MDP of any feasible alternatives to the following:

- Runway construction i.e. not proceeding with the proposed development;
- Source of fill material;
- Mechanisms for delivering fill material to the construction site; and
- Alternative designs for construction of the runway i.e. levee system options.

In addition, the analysis of options and alternatives must include a comparative description of the impacts of each alternative drawing, where relevant, on 'triple bottom line reporting outcomes' and provide sufficient detail to make clear why one alternative is preferred to another.

In relation to testing alternatives, two documents were referenced in the DEH Guidelines:

- Triple Bottom Line Reporting in Australia – A Guide to Reporting Against Environmental Indicators. Environment Australia, June 2003*
This guide is targeted at organisations aiming to improve and report on their environmental performance in line with the triple bottom line themes of environment, social and economic. It presents information around the following environmental performance indicators: Energy; Greenhouse; Water; Materials; Waste; Emissions and discharges to air, land and water; Biodiversity; ozone-depleting substances; suppliers; products and services; compliance. Other issues discussed include measurement and reporting boundaries, stakeholders and environmental management systems. The guide is aligned to the Global Reporting Initiative; and
- Sustainability: A Guide to Triple Bottom Line Reporting, Group 100, June 2000*
This guide once again focuses on organisational reporting on financial, environmental and social performance and the various forms of communicating this information including triple bottom line reporting. The benefits of reporting are discussed as is the importance of engaging relevant stakeholders. The guide makes substantial reference to the Global Reporting Initiative.

In reviewing these documents, it is clear that they are fundamentally aimed at the communication and reporting of social, environmental and economic information at a corporate level. This is obviously

relevant to how BAC operates and is covered to some degree within the Master Plan, AES and Annual Environment Report. However, whilst the themes in these documents are appropriate at a project level, these documents are not relevant guidelines to assist in the assessment of project level sustainability matters when considering options and alternatives.

In response to this an alternative approach has been developed and implemented on the NPR project which is outlined in **Table 1.9**.

The principle behind all of the option assessments in this Draft EIS/MDP has been to consider (where appropriate) social, environmental and economic aspects. Where particular defined options have been identified (such as the pipeline route options to deliver fill to site) the analysis has been set up within a sustainability framework. The following table describes the aspects of the project where a project focused options and alternatives assessments have been made and where in the EIS/MDP it is reported.

Table 1.9: The Approach to Option Testing in the EIS/MDP.

No.	Options Tested	Location in EIS/MDP Report	Details of the Assessment
1	Feasible alternatives to runway construction	Volume A, Chapter A3	In assessing the feasible options to runway construction information has been provided in the EIS/MDP on three potential scenarios, they are: <ul style="list-style-type: none"> • The no change scenario; • The demand management scenario; and • The expanded use of other airports.
2	Options to runway location at Brisbane Airport	Volume A, Chapter A3	This assessment has drawn on and expanded the detail of the assessment of runway location options provided in the BAC 2003 Master Plan. The assessment has been tabulated and each option is assessed against environment and social, implementation, operation and economic (cost) factors.
3	Feasible alternatives to sourcing runway fill	Volume A, Chapter A3	This assessment summarises the work undertaken in the Moreton Bay Sand Extraction Study which described in detail the social, economic and environmental implications of extraction of sand fill from marine versus land based sources. This work led to the conclusion that the extraction of sand from Moreton Bay was sustainable and preferable to the alternative of land based extraction of sand (for major projects such as the NPR). The study concluded that subject to the approval of an EIS BAC would be permitted to extract 15 Mm ³ of sand for filling and surcharging of the site. The assessment also investigates the availability of other construction materials required for the project (i.e. for pavement and structures) from locally based sources.
4	Options for the delivery of fill material to the runway site	Volume B, Chapter B1	An assessment of potential dredge mooring locations and pipeline alignments to the runway site has been tabulated and each option has been assessed against environment and social, operational and economic (cost) factors.
5	Option testing between 01 vs.19 runway preference and between 3 options for flight path arrivals from the north to runway 01L	Volume D, Chapter D5	The aircraft noise Chapter provides an assessment of runway option preference (01 vs. 19) and options for arrival from the north for flight path arrivals from the north to 01L against social and environmental criteria relevant to the assessment of aircraft noise.

1.10 Sustainability Assessment

The Guidelines require presentation of the details of how the development of the new runway is consistent with the principles of ecologically sustainable development as defined in Section 3A of the *EPBC Act* and other relevant policy instruments such as the standard criteria as defined by the *Environmental Protection Act (Qld)*. In addition, the National Strategy for Ecologically Sustainable Development, published by the Commonwealth Government in December 1992 should also be considered and each principle should be discussed and conclusions drawn as to how the proposal conforms. A life-of-project perspective must be shown.

In order to address the above requirements, a sustainability assessment for the NPR project has been undertaken. This assessment utilises a tool known as SPeAR[®] (Sustainable Project Appraisal Routine) which has been developed by Arup and used globally on projects both in Australia and internationally in the last five years. The findings of this assessment are provided in Chapter A7.

It should also be noted that the very nature of the environmental impact assessment process with its consultation, assessment and reporting elements, consideration of environmental, social and economic considerations align it to a great extent with the principles of sustainability.

1.11 Assessment Method

1.11.1 Introduction

This Draft Environmental Impact Statement has been prepared in accordance with the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* and the *Airports Act 1996*. Details of all the legislation can be found in section 1.5.

1.11.2 Scoping the EIS/MDP

Guidelines were prepared by the Australian Government Minister for the Environment and Heritage under Section 102 of the *Environment Protection and Biodiversity Conservation Act 1999* in August 2005 entitled 'Guidelines for an Environmental Impact Statement on the proposed parallel runway at Brisbane Airport'. These Guidelines and the Section 91 requirements for an MDP from the *Airports Act 1996* provided the necessary information to allow the EIS/MDP to be scoped in detail. The Guidelines can be found in Appendix 1A.

1.11.3 Establishing Baseline

A wide range of baseline data on the environment has been utilised for the purposes of the assessment including:

- Documentary information from a wide variety of sources, including historical and contemporary records;
- Data collected from recent surveys and sampling on the Airport site, in the surrounding area and at Middle Banks including background noise levels, ecological features, fisheries, landscape character; acid sulfate soils, etc.;
- Maps and aerial photographs of both historical and contemporary features; and
- Data obtained from statutory and non-statutory consultees such as Brisbane City Council, Environmental Protection Agency, Department of Primary Industries and Fisheries, Department of Natural Resources and Water, Department of Environment and Heritage, Department of Transport and Regional Services.

Details of this is included in each of the respective specialist chapters in Volumes B, C and D of this Draft EIS/MDP, as required to describe the aspects of the environment likely to be significantly affected by the development.

The methodology for the assessment in this Draft EIS/MDP has been developed to specifically address the requirements of the Guidelines. The individual methodologies for each assessment undertaken as part of this Draft EIS/MDP vary from topic to topic and are set out in detail in the specialist chapters (see Volumes B, C and D). Each chapter follows a similar general format:

- Introduction;
- Proposed Development;
- Methodology;
- Limitations and Assumptions;
- Baseline;
- Consultation;
- Policies and Guidelines;
- Effects of the Proposal;
- Mitigation Measures;
- Assessment of Residual Effects;
- Cumulative and Interactive Effects; and
- Assessment Summary Matrix.

All of the assessments have involved a process of interaction between the specialist consultants/ assessors and the preliminary design team.

Throughout the design and assessment process, attention has been paid to the minimisation of adverse effects on the environment during the construction and operation of the NPR project.

An environmental management framework covering proposed mitigation, monitoring and management measures is provided at the end of Volumes B, C and D of the EIS/MDP.

The assessment is based on the development as described in Chapters A4 and A5 and the proposed operational airspace in Chapter D3. As evidenced by the scope of the project, the geographical extent of the assessments will vary depending on the aspect being assessed. Certain environmental impacts will be largely confined within the boundaries of the Airport site; for example cultural heritage. Other impacts will extend beyond the application site, such

as air quality, socio-economic issues and noise. The geographical scope of the assessments is set out in Volumes B, C and D of this Draft EIS/MDP.

Any topic-specific assumptions and limitations are set out in the specialist chapters.

1.11.4 Approach to Assessing Impacts

The Guidelines state the requirements for the EIS to provide an analysis of the significance of impacts requiring that *“quantitative descriptions of the likely impacts on environmental values of the area from all phases of the proposal need to be assessed at local, regional and national levels as appropriate. This must include an assessment of the degree of uncertainty in relation to each impact including statements of whether any impacts are likely to be unknown, unpredictable or irreversible. The cumulative impacts of the proposal must be considered over time or in combination with the impacts of other relevant existing or approved developments in the dimensions of scale, intensity, duration or frequency of the impacts. Any requirements and recommendations of the relevant State planning policies, environmental protection policies, national environmental protection measures and integrated catchment management plans must be addressed.”.*

The following criteria and descriptors have been used to describe impacts in this Draft EIS/MDP:

- Adverse and beneficial – major*, high, moderate, minor, negligible;
- Temporary, short, medium, long term, permanent;
- Direct and indirect; and
- Cumulative and interactive.

* Major is only applied to adverse effects.

In relation to timescales in the EIS/MDP, the following assumptions have been made:

Relative duration of environmental effects applied for the NPR Project	
Temporary	Up to 1 year
Short term	From 1 to 7 years
Medium term	From 7 to 20 years
Long term	From 20–50 years
Permanent/Irreversible	Period in excess of 50 years

In order to gauge the magnitude of any impacts, the following descriptors have been used:

Significance	Criteria
Major Adverse	Only adverse effects are assigned this level of importance as they represent key factors in the decision-making process. These effects are generally, but not exclusively associated with sites and features of national importance. A change in a national or state scale site or feature may also enter this category. Typically mitigation measures are unlikely to remove such effects.
High Adverse	These effects are likely to be important considerations at a state scale but, if adverse, are potential concerns to the project, depending upon the relative importance attached to the issue during the decision making process. Mitigation measures and detailed design work are unlikely to remove all of the effects upon the affected communities or interests. Effects can be beneficial as well as adverse.
Moderate Adverse	These effects, if adverse, while important at a regional scale, are not likely to be key decision making issues. Nevertheless, the cumulative effects of such issues may lead to an increase in the overall effects upon a particular area or particular resource. They represent issues where effects will be experienced but mitigation measures and detailed design work may ameliorate/enhance some of the consequences upon affected communities or interests. Some residual effects will still arise. Effects can be beneficial as well as adverse.
Negligible	No effects or those which are beneath levels of perception, within normal bounds of variation within the margin of forecasting error.
Beneficial	The effects of a project can also be beneficial – using the same scale minor, moderate and major.

The application of these descriptors and criteria for the assessments are specific to each individual topic and are explained accordingly in the specialist chapters. The criteria are based on established standards appropriate to each of the topics assessed.

Criteria have been developed for the following discipline areas in the EIS:

- Geology and soils;
- Terrestrial and marine ecology;
- Cultural heritage;
- Hydrology and flooding;
- Water quality;
- Social impact;
- Traffic impacts;
- Noise;
- Air emissions;
- Landscape and visual; and
- Coastal processes.

Where potentially significant effects have been identified during the assessment, measures have been proposed to prevent, reduce and where possible offset these, either by design changes or mitigation measures. These are described, as appropriate, in the specialist chapters.

In order of preference, identified impacts have been:

- 1) Avoided if possible through appropriate location of infrastructure associated with the runway;
- 2) 'Designed-out' where practicable, thereby minimising significant impacts to environmental values; or
- 3) Mitigated through the implementation of environmental management plans that will measure and minimise any impacts to the greatest practicable extent; and
- 4) Compensated for where impacts cannot be adequately mitigated and residual effects predominate.

Volumes B, C and D present the impact assessment of the proposed development on relevant receptors, identifying appropriate mitigation measures to address any significant adverse environmental effects.

1.11.5 Cumulative and Interactive Effects

Consideration is also made within each of these chapters of the cumulative and interactive effects of the proposed development.

1.11.5.1 Cumulative Effects – Those Occurring Between Projects

If projects are considered individually, the environmental effects may appear non-offensive, however the combination of effects from the proposed development and from other permitted developments (existing, not yet constructed or currently under construction), acting together may generate elevated levels of impact. This combination of effects is regarded as the cumulative effects. These may occur over a certain time period and geographical distance (Kingsley, 1997). Some examples of these kinds of effects include:

- Regional based discharges to the water environment;
- Regional air quality effects from developments; and
- Traffic generated from developments, affecting the surrounding developments and the road network.

Adjacent projects being developed within a similar timeframe to the NPR which the Guidelines request are considered as part of the NPR impact assessment include:

- North-South Bypass Tunnel (NSBT);
- Airport Link (the extension of NSBT);
- Gateway Upgrade Project (GUP);
- TradeCoast Central; and
- Northern Access Road Project (NARP).

The following projects are to be included into the assessment of cumulative impacts associated with the NPR project as per the requirements of the Guidelines. The proposed programme for the construction of these projects is provided on **Figure 1.11**.

1.11.5.2 North-South Bypass Tunnel (NSBT)

www.nsbt-eis.com

The NSBT project is a system of road tunnels with the main running tunnels approximately 5.2 km in length. The project will be constructed in rock below the city and under the Brisbane River. It will link the Inner City Bypass and Lutwyche Road in the north

with Ipswich Road and the South East Freeway in the south. There will also be links to and from Shaftston Avenue to allow traffic from the eastern suburbs to gain access to the tunnel system.

1.11.5.3 Airport Link (the extension of NSBT)

www.airportlinkeis.com

The Airport Link is a mainly underground toll road proposed to connect Brisbane's northern suburbs to the Inner City Bypass and proposed North-South Bypass Tunnel at Bowen Hills. The proposed Airport Link is expected to include connections to the Inner City Bypass and the proposed North-South Bypass Tunnel at Bowen Hills, to Sandgate Road and the East-West Arterial at Toombul, and Gympie Road at Kedron.

1.11.5.4 Gateway Upgrade Project (GUP)

www.mainroads.qld.gov.au

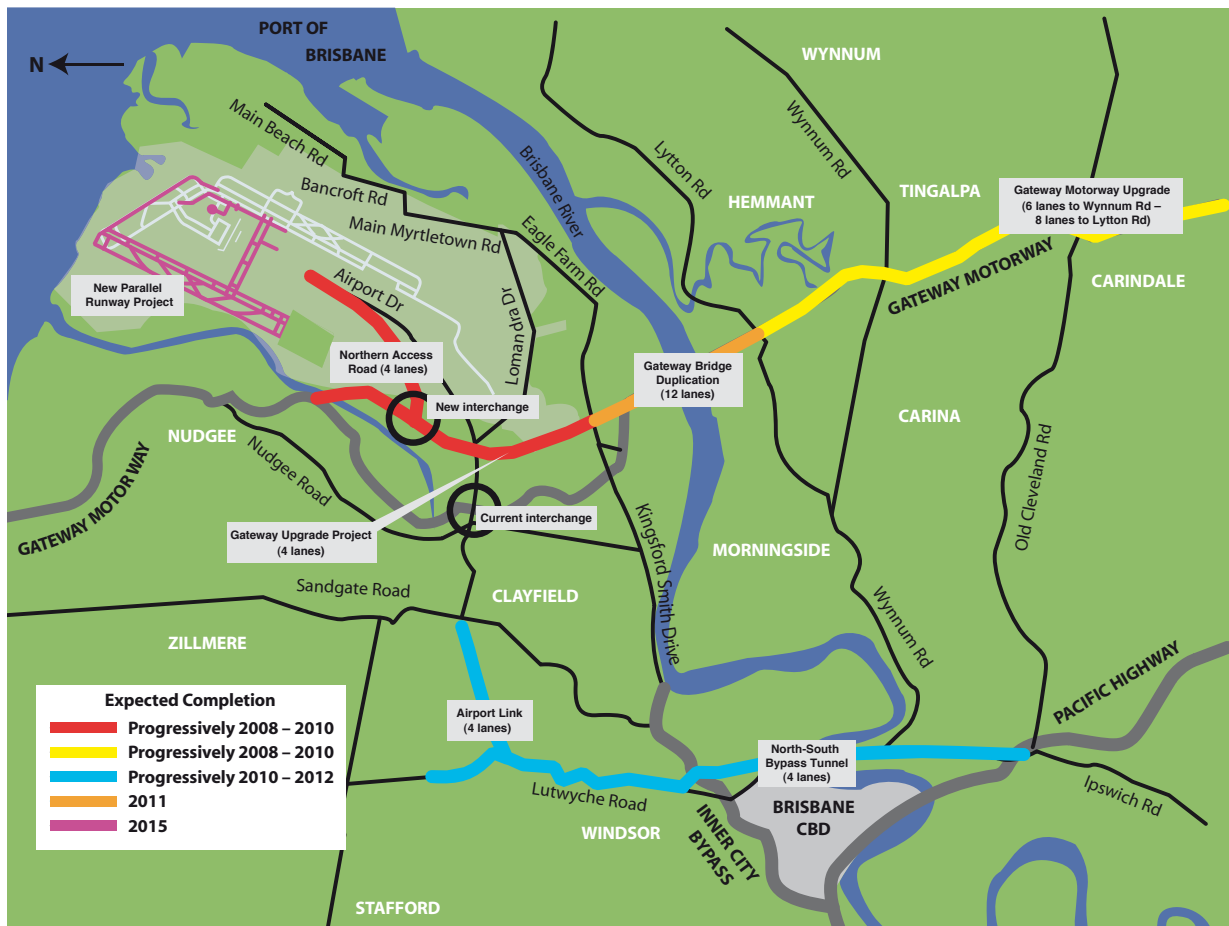
The Gateway Upgrade Project includes the building of a second Gateway Bridge on the eastern side of the existing bridge, approximately 50 m downstream. It involves the upgrade of 20 km of the Gateway Motorway from four to six lanes between Mt Gravatt-Capalaba Road and Wynnum Road and from four to eight lanes between Wynnum Road and Lytton Road. A new four lane northern deviation of the motorway is also proposed from the Gateway Bridge to Nudgee Road, through old and new Airport land which includes a second access interchange to the Airport (for the Northern Access Road).

1.11.5.5 TradeCoast Central

www.tradecoastcentral.com.au

TradeCoast Central is located on the former Brisbane Airport site adjacent to the Gateway Arterial Motorway. It is a joint venture between the Brisbane City Council and Prime Development Corporation which will provide, on completion, an area in excess of 110 ha of a planned industrial community. The plan for the site has been developed to provide for an industrial community which will include a community services precinct, extensive public open spaces, walkways and bikeways, a large logistics and distribution precinct, manufacturing precinct and a 'campus style' biotechnology precinct.

Figure 1.11: Proposed Infrastructure Developments on the Surrounding Road Network.



1.11.5.6 Northern Access Road Project (NAR)

The Northern Access Road (NAR) is proposed by BAC and will be located to the west of the existing Airport Drive and facilities, on a currently undeveloped area within the Airport boundary. Running south-west/north-east between the proposed GUP interchange and the domestic terminal, the road will also have a connection to the international terminal, and in the longer term access to the Banksia and Export Park West precincts. There will also be a connection to the existing Airport Drive, to the southwest of the proposed GUP interchange. The role of the Northern Access Road (NAR) is primarily to provide high speed access to the terminals, whilst augmenting Airport Drive in providing access to other on-Airport facilities. It is also intended to provide access to the Airport's western precincts for future development in this area. NAR is going through its own MDP process.

1.11.5.7 Other Planned Airport Development

International Terminal Building Expansion

The proposal involves construction of a major extension to the south of the existing International Terminal Building (ITB). The footprint of the new works will extend up to 80 m from the end of the existing ITB, and be of a similar width to the current building. The development will accommodate the minimum facilities and spatial requirements necessary to meet the 2012 busy hour passenger and aircraft demand at the International Terminal. This expansion will increase the floor area of the current terminal by approximately 80 percent. Construction is scheduled to start in 2007.

Multi-Level Carpark

BAC currently operates an at-grade 950 bay car park in the International Terminal Precinct which caters for both short and long term parking.

The significant growth in passenger numbers has placed pressure on the existing car park capacity. As a result it is proposed to construct a Multi Level Car Park (MLCP) on the existing ITB car park site. The building footprint is approximately 10,800 m² with a gross floor area of approximately 54,000 m² and a building height of approximately 15 m. The proposed works will provide approximately 1,740 car spaces under a multi level arrangement, with an additional 620 (approximately) at-grade spaces outside of the MLCP arrangement. This proposed parking layout would meet the anticipated peak demand for car parking at the International Terminal in the medium term. The MDP for the MLCP has been approved and construction commenced in September 2006.

Northern Concourse

The proposal involves the extension of the existing Northern Concourse at the International Terminal Building by 400 m, more specifically, the provision for 11 new gates (Gates 66 to 76), and the increase of seating capacity at Gate 77 to support Code E aircraft size operations. At the new gates there will be a physical separation of concourses to handle both departing and arriving international passengers. The gates will be constructed in three stages, namely, Stage 1 (Gates 74 to 76 and upgrade of Gate 77 seating), Stage 2 (Gates 66 to 69) and Stage 3 (Gates 70 to 73). Construction will be in a secure environment, air-side of the International Terminal. Once completed the Northern Concourse extension will closely resemble the existing concourse in architecture and function. Construction is scheduled to start in 2007.

MDPs have been prepared for all of the planned projects noted above. Other developments which are planned but that either do not or may require MDPs include:

- A high level walkway between the MLCP and the ITB Expansion;

- Expansion/upgrade of the Domestic Terminal Building;
- Future long term road upgrades and road realignments; and
- Construction of new staff car park to the north of the ITB.

1.11.5.8 Interactive Effects – Those Occurring Within Projects

Interactive effects arise where effects from one environmental element bring about changes in another environmental element. Associated impacts do not occur as a direct result of the project but are often produced away from or as a result of a complex pathway. These are sometimes referred to as second or third level impacts (Hyder, 1999). Examples would include:

- Impacts on the marine environment as a result of habitat loss on land;
- Impacts on water quality as a result of filling and surcharging the site and potentially mobilising contaminants or acid sulfate soils; and
- The effects of providing for increasing traffic capacity on air quality or noise.

Where appropriate an assessment of cumulative and interactive effects has been incorporated into specific EIS/MDP topic chapters.

1.11.6 Assessment Summary Matrix

At the end of each chapter there is a table which provides a summary of the residual impacts remaining after mitigation (including that which is inherent in design or which is considered best practice) has been assessed. The summary also considers the need for additional compensation for those residual effects that are deemed to be significant. See **Table 1.11**.

Table 1.11: Example Assessment Summary Matrix.

EIS Area: Feature/ description	Current Value + Substitutable Y:N	Description of Impact			Additional Compensation (Beyond Standard Practice)	Description of Residual Impact	
		Description in words	Mitigation Inherent in Design/Standard Practice Amelioration Who?/Why?/ Scale?	Significance Criteria		Description in words	Significance
This field shows the topic title and a note of the feature being impacted on.	This field notes the value of the feature and a comment on whether it is substitutable or not.	This field presents a description of the impact in words.	This field notes the measures already incorporated into the design to minimise the impact on the feature.	The field presents the significance rating of the impact including the impact descriptors outlined above.	Where applicable, this field describes any additional compensation measures that are being adopted to negate the impact.	This field presents a description of the residual impact in words. (post mitigation and additional compensation)	The field presents the significance rating of the residual impact including the impact descriptors outlined above.

KEY:

Significance Criteria: Major, High, Moderate, Minor, Negligible
+ve – positive; -ve – negative impacts;
D – direct; I – indirect;
C – cumulative; P – permanent; T – temporary;
ST – short term; MT – medium-term; LT – long term

References

Arup, 2004, Application for the Detailed Planning Permission: Environmental Statement for Silvertown Aquarium, Silvertown Quays, London.

Hyder 1999, Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions, Study commissioned by the European Commission: Directorate-General XI (Environment, Nuclear Safety and Civil Protection), NE80328/D1/3.

Kingsley, L. 1997, A Guide to Environmental Assessments: Assessing Cumulative Effects, National Parks Canada, Natural Resources Branch, Quebec.