

Confidential

The economic significance of Darwin International Airport

Prepared for NT Airports Pty Ltd

1 June 2004



ACIL Tasman

Economics Policy Strategy

© ACIL Tasman Pty Ltd

This work is copyright. The *Copyright Act 1968* permits fair dealing for study, research, news reporting, criticism or review. Selected passages, tables or diagrams may be reproduced for such purposes provided acknowledgment of the source is included. Permission for any more extensive reproduction must be obtained from Kelly Milne at ACIL Tasman on (03) 9600 3144.

Reliance and Disclaimer

The professional analysis and advice in this report has been prepared by ACIL Tasman for the exclusive use of the party or parties to whom it is addressed (the addressee) and for the purposes specified in it. This report is supplied in good faith and reflects the knowledge, expertise and experience of the consultants involved. The report must not be published, quoted or disseminated to any other party without ACIL Tasman's prior written consent. ACIL Tasman accepts no responsibility whatsoever for any loss occasioned by any person acting or refraining from action as a result of reliance on the report, other than the addressee.

In conducting the analysis in this report ACIL Tasman has endeavoured to use what it considers is the best information available at the date of publication, including information supplied by the addressee. Unless stated otherwise, ACIL Tasman does not warrant the accuracy of any forecast or prediction in the report. Although ACIL Tasman exercises reasonable care when making forecasts or predictions, factors in the process, such as future market behaviour, are inherently uncertain and cannot be forecast or predicted reliably.

ACIL Tasman shall not be liable in respect of any claim arising out of the failure of a client investment to perform to the advantage of the client or to the advantage of the client to the degree suggested or assumed in any advice or forecast given by ACIL Tasman.

ACIL Tasman Pty Ltd

ABN 68 102 652 148

Internet www.aciltasman.com.au

Melbourne office

Level 6, 224-236 Queen Street
Melbourne VIC 3000
Telephone (+61 3) 9600 3144
Facsimile (+61 3) 9600 3155
Email melbourne@aciltasman.com.au

Brisbane office

Level 15, 127 Creek Street
Brisbane QLD 4000
GPO Box 32
Brisbane QLD 4001
Telephone (+61 7) 3236 3966
Facsimile (+61 7) 3236 3499
Email brisbane@aciltasman.com.au

Perth office

Level 12, 191 St Georges Terrace
Perth WA 6000
PO Box 7035
Cloisters Square
Perth WA 6850
Telephone (+61 8) 9485 0300
Facsimile (+61 8) 9485 0500
Email perth@aciltasman.com.au

Canberra office

103-105 Northbourne Avenue
Turner ACT 2612
GPO Box 1322
Canberra ACT 2601
Telephone (+61 2) 6249 8055
Facsimile (+61 2) 6257 4170
(+61 2) 6249 7455
Email canberra@aciltasman.com.au

Darwin office

Suite 1/63 Marina Boulevard
Cullen Bay NT 0820
GPO Box 1000
Darwin NT 0801
Telephone (+61 8) 8981 2101
Facsimile (+61 8) 8981 2702
Email darwin@aciltasman.com.au

Sydney office

PO Box 170
Northbridge NSW 1560
Telephone (+61 2) 9958 6644
Facsimile (+61 2) 8080 8142
Email sydney@aciltasman.com.au

For information on this report

Please contact:

Peter Anderson

Telephone (08) 8981 2101

Mobile 0408 894 604

Email darwin@aciltasman.com.au

Contents

Executive summary	v
Introduction	v
Economic impact	v
Airport businesses	vi
Airport output, income, employment and value-added	vi
The Airport and tourism	vii
The effect of additional tourists and flights	vii
Other economic and social impacts	viii
Darwin Airport in the future	ix
Conclusion	ix
1 Introduction	1
1.1 The context and conduct of the study	1
2 Airport overview	3
2.1 The Greater Darwin region	4
3 Measuring economic and social impacts	5
3.1 Direct economic impacts	5
3.2 Indirect economic effects: input-output analysis	6
3.3 Economic facilitation effects	6
3.4 Other economic impacts	7
3.5 Social impacts	7
4 Darwin International Airport today	9
4.1 Air activity	9
4.2 Business activity	9
4.2.1 Defining the airport sector	9
4.2.2 Airport businesses and organisations	10
4.2.3 The size of business activity	11
4.3 Tourism and the Airport	13
4.3.1 Visitor numbers and expenditure	13
4.3.2 The visitation multiplier	14
4.4 The effect of additional flights	14
4.5 Related activities	16
4.5.1 General air services	16
4.5.2 Freight	16
4.5.3 Medical services	17
4.5.4 Construction sector	17

4.5.5	The RAAF Base	18
4.5.6	Connecting communities in the Territory	19
5	The Airport in the future	20
5.1	The Airport in 2023	20
5.1.1	Future passenger and aircraft movements	20
5.2	Business activity	21
5.2.1	Approach	21
5.2.2	The size of business activity	22
5.2.3	Tourism expenditure	23
5.3	Future plans and expectations	23
5.3.1	Tourism	23
5.3.2	General air services	24
5.3.3	Freight	24
5.3.4	Medical services	24
5.3.5	Construction sector	24
5.3.6	The RAAF Base	25
5.3.7	Connecting communities in the Territory	25
6	Conclusion	26
Boxes, figures, tables and charts		
Figure 1	Photograph of Darwin International Airport	4
Table 1	Annual airport-related business impacts	v
Table 2	Economic effects of additional flights to Darwin	viii
Table 3	Annual airport-related business impacts	12
Table 4	Annual airport-related tourist impacts	13
Table 5	Visitor multipliers and the marginal effects of tourism	14
Table 6	Economic effects of a weekly Boeing B 737-800	15
Table 7	Economic effects of a weekly Boeing 767	15
Table 8	Economic effects of additional flights to Darwin	16
Table 9	Forecasts for Darwin International Airport	21
Table 10	“Most likely” Annual airport-related business impacts – 2023/24	22
Table 11	“Low” & “high” annual airport-related business impacts – 2023/24	22
Table 12	Annual business impacts of tourists by air – 2023/24	23

Executive summary

Introduction

Darwin International Airport ('DIA'), located 13 kilometres from the centre of Darwin, is the main international and domestic gateway to the Northern Territory, and is Australia's closest airport to Asia. DIA provides facilities for international, domestic and regional passenger airlines, and for general aviation and helicopter traffic. It also provides facilities for handling air freight, and operates curfew-free 24 hours per day. DIA is a joint user airport, where the civilian airport shares runway and associated infrastructure with the Royal Australian Air Force.

This study was commissioned by NT Airports P/L to describe and measure the economic impact of DIA on the local region and in the wider Northern Territory economy, now and in the future. NT Airports is the leaseholder of the Airport, and this study was commissioned as part of a review of the Airport master plan.

The study was undertaken by ACIL Tasman, assisted by the findings of a survey of businesses conducted by NT Airports, and additional information provided by the Northern Territory Tourist Commission. ACIL Tasman constructed a new input-output model of the NT economy, based on 2001-02 data, for the purposes of this study.

Economic impact

The following table sets out summary quantitative findings in relation to estimated current and projected Darwin International Airport impacts on the local economy:

Table 1 **Annual airport-related business impacts**

	Total 2002/03	Total 2023/24
Output (\$m)	157.1	349.9
Income (\$m)	40.9	90.9
Employment (jobs)	948	2,115
Value-added (\$m)	87.5	194.2

Source: Survey of businesses by NT Airports; analysis by ACIL Tasman. Note all financial estimates throughout this report include GST, excepting output and value added calculations

Airport businesses

Many businesses owe at least some of their activity to the Airport. These include the providers of airport infrastructure (the largest being NT Airports itself); aviation support services, which include operators who provide airlines with catering, as well as businesses engaged in aircraft maintenance and fuel providers; retailing, of which the biggest component is land transport and which also includes cafes, gifts and foreign exchange franchises within the terminal; and there are also off-Airport activities, such as bus and coach services and city booking offices.

The airlines and aircraft operators drive demand for these services. The major scheduled airlines, Qantas and Virgin Blue, account for most of the 877,000 domestic passengers who made use of the Airport in the most recent year for which data are available. The corresponding 209,000 international travellers were largely accounted for by Qantas, Garuda Indonesia, and Royal Brunei passengers.

AirNorth, which operates services to many locations in northern Australia and to Dili, also has a major presence, and charter services as well as regular passenger transport are also provided by Northern Air Charter, Air Frontier, Anindilyakwa Air, Pearl Aviation and Pel-Air, among others.

Finally, airfreight and courier companies (such as Patrick Cargo, Pel-Air and TNT) have major operations from Darwin.

Airport output, income, employment and value-added

Input-output multipliers for the Northern Territory were applied to business activity data collected in the above –mentioned survey and from information provided by NT Airports. Four types of input-output multiplier were used, being output, income, employment and value-added. Direct and flow-on effects were thus estimated. Estimates throughout may be regarded as conservative, as individual company expenditures or revenues which could not reliably be estimated were omitted, resulting in underestimates of total Airport impacts.

The total impact of the Airport's operation was found to be substantial. The Airport currently supports, directly and indirectly, nearly 1,000 jobs. Associated annual output (or revenue) impact on the Territory's economy was estimated at \$157 million, with corresponding value added (or contribution to GDP) by the Airport totalling \$88 million. Almost half of the value added (\$41 million) is estimated to relate to employee wages and other income.

To put these figures in some context, both the amount of the value added and the employment generated were equivalent to around one per cent of the

figures for the Northern Territory as a whole. It is clear that in its present configuration, Darwin International Airport is a highly significant economic entity within the Northern Territory.

Furthermore, assessed impacts exclude the economic impact of military operations utilising DIA, and would have been significantly greater but for this exclusion.

The Airport and tourism

In addition to business activity associated directly with the Airport, there is also activity generated by the visitors to the region who arrive by air. The Northern Territory Tourist Commission estimated in 2002/03 that 215,000 travellers arrived into the Darwin region by air, spending an estimated \$244 million.

This expenditure translates into a \$303 million increase in output, leading to \$187 million in value-added and 2,321 jobs. Allowing for the fact that some of these benefits have already been captured in the Airport's economic impacts described above, tourism is estimated in net terms to add an additional \$167 million value-added and 2,066 jobs in the Territory.

The effect of additional tourists and flights

The outcomes of attracting more tourists via air travel – on the basis of tourist spending alone – were estimated. It was found each additional visitor adds \$869 of value to the local economy. Furthermore, the direct and indirect effects of an additional 90 visitors create another job in the Territory.

The combined economic effects can be used to estimate the likely impact of additional flights into Darwin International Airport. Two examples were used: an additional weekly domestic flight of a Boeing B737-800, and an additional weekly international flight of a Boeing 767.

Table 2 summarises the incremental economic effects, in terms of the value-added and employment, of between one and ten additional flights per week of each of these types of aircraft.

Table 2 **Economic effects of additional flights to Darwin**

No. of extra weekly flights	Effects of a Boeing B737-800		Effects of a Boeing B767	
	Value-added (\$m)	Employment	Value-added (\$m)	Employment
1	6.19	76	7.24	89
2	12.39	152	14.47	178
3	18.58	228	27.71	266
5	30.97	380	36.18	444
10	61.95	760	72.35	888

Other economic and social impacts

Airport activity affects social and other elements not apparent in accounts and the flow of payments. Such impacts were identified during consultations with a diverse range of stakeholders, including the Department of Defence, providers of aerial medical services, representatives of the tourism, freight and construction sectors, and community representatives.

Important effects identified included:

- Amongst Australian airports, Darwin has the 11th highest number of small and medium aircraft movements, with general aviation and club facilities providing apron parking for over 100 aircraft;
- The NT's main medical services are located in Darwin, and most residents on remote communities requiring such services travel by air. A total of 875 aerial medical flights (originating from Darwin) were recorded for Darwin Airport in 2002;
- Darwin Airport is an important source of work for the construction sector. Substantial projects have become more common in recent years as NT Airports has developed previously unused airport property;
- Darwin Airport is a strategic defence asset of the highest priority. Over 6,400 military flight movements last year constituted the second highest number recorded by AirServices Australia for defence-utilised airports;
- Darwin Airport has an essential role during emergency evacuations, such as those in the immediate aftermath of the Bali bombings, and also during cyclones, floods and other disaster response operations; and
- Darwin Airport plays a vital role in sustaining remote communities in Australia's northern regions.

Darwin Airport in the future

BAA, the world's largest airport operator and a shareholder of NT Airports, prepared 20-year passenger and aircraft movement forecasts for the Airport. These estimates of the number of international passengers, international aircraft movements, domestic passengers, domestic aircraft movements, general aviation movements and freight tonnage were used to scale up current levels of business activity to identify possible activity levels in 2023/24.

Individual judgements were made regarding factors most strongly influencing the revenue of each business. The scaled-up revenues were then combined with the Input-Output Table to estimate the economic activity likely to be generated by the Airport in the year 2023/24.

On this basis, it is expected that the Airport could support over 2,000 jobs in 2023. Associated annual output (or revenue) is estimated to be \$350 million, with corresponding value added (or contribution to GDP) of the order of \$194 million per year. Approximately half of the value added (\$91 million) is estimated to relate to employee wages and other income.

For each impact indicator, “most likely”, “low” and “high” estimates were derived, revealing significant variation between “low” and “high” outcomes. Taking the example of jobs, there could be a difference of as much as 650 jobs depending on how airport activity develops over the next 20 years. To the extent that activity is encouraged towards the “high” scenario, there are clearly significant potential gains to the NT economy.

The effects of visitor expenditure in 2023/24 were also estimated. It was estimated that a total of 5,000 jobs and \$400 million of value-added could result from visitors arriving by air (under the “most likely” scenario).

Conclusion

This report provides an indication of the extent to which Darwin International Airport contributes to the NT economy. Through a comprehensive survey and consultation process, and by developing an updated input-output table for the Territory, ACIL Tasman has been able to describe the impacts of the Airport directly and indirectly upon on the NT economy's value added and employment.

Through the activities of directly related businesses, and their interactions with the wider economy, the Airport is estimated to account for approximately 1% of the NT economy. The heavy tourism industry reliance on the Airport is reflected in an additional 2% of economic activity associated with air-related travel.

The economic significance of Darwin International Airport

The significance of the Airport to the Territory is more than just economic. It forms a critical means of connecting communities in remote areas, and provides a conduit for medical assistance. It provides a base upon which to build Darwin's position as a regional transport and freight hub, and makes Darwin an attractive place to do business.

As Darwin seeks to build upon its national and international position, the Airport will take on increased significance as a key part of the Territory's infrastructure, and initiatives to increase air activity and tourism visitation will further increase the vibrancy and improve the development of the NT economy.

1 Introduction

This study was commissioned by NT Airports Pty Ltd, leaseholders of the Darwin International Airport, to describe and measure the economic impact of the Airport now and its likely impact in twenty years time.

In 1999, NT Airports prepared a Draft Master Plan and Draft Environment Strategy for Darwin International Airport in accordance with the *Airports Act 1996*. These were approved by the Commonwealth Minister for Transport and Regional Services in September 1999. The Master Plan remains in force for five years, and a revised Draft Master Plan must be submitted to the Minister by September 2004.

The current Master Plan includes general comment about the economic significance of the Darwin International Airport, but no specific analysis was conducted. NT Airports has determined that revising the Master Plan provides an opportunity to conduct such analysis.

The analysis follows a methodology and scope similar to economic studies of other airports. It involved describing and assessing the economic impact of:

- The operations of business and other organisations providing airport activities;
- The expenditure of air travellers utilising Darwin International Airport;
- The defence operations operated by the RAAF adjacent to the civilian airport facilities;
- Other organisations and groups that make heavy use of the Airport, showing their linkages with the Airport and how this affects Darwin and its surrounds; and
- The airport as a whole.

Many of these impacts are assessed in terms of their effect on output, income, value added, and employment.

Many insights can flow from such analysis. An airport is a much larger economic entity than is usually realised. The direct activities conducted on or in relation to an airport are substantial, and the indirect efforts pervasive. This study will hopefully improve the wider community's understanding of what happens at the Airport and its importance to their future well-being.

1.1 The context and conduct of the study

In conducting the study, ACIL Tasman reviewed publicly available information from NT Airports, the Northern Territory Government (including the NT

Tourist Commission) and the Commonwealth Government (including AirServices Australia). Available data relevant to the measurement of the Airport's impact were assessed, utilising a new input-output table for the Northern Territory developed by ACIL Tasman for the purposes of this study.

In addition to the available information, considerable amounts of data needed to be collected. Accordingly, in consultation with ACIL Tasman, NT Airports surveyed most of the airport-related businesses to ascertain their activities, turnover and employment. Also, ACIL Tasman interviewed representatives of airport-related sectors.

Additionally, ACIL Tasman drew extensively on the stated plans of NT Airports and of other key businesses, as well as twenty-year passenger and flight projections. Where gaps existed, estimates were made based on relationships with available data, judgement, and experience elsewhere; we have described our methods so that refinements may be made later if new information comes to hand. This material formed the basis of the assumptions made for the projections.

2 Airport overview

Darwin International Airport, located 13 kilometres from the centre of Darwin, is a key commercial, military and recreational facility for northern Australia. As the capital of the Northern Territory, Darwin is the centre of government and its major administrative and commercial centre. Furthermore, it is a major gateway to Asia, close to developing areas including eastern Indonesia, eastern Malaysia and the southern Philippines.

The current site was established in 1940, when it was commissioned by the Royal Australian Air Force (RAAF). It was made available for civil aviation purposes in 1945 and upgraded and developed for military and civil aviation uses during the 1950s and 1960s.

In 1989, the Federal Airports Corporation (FAC) acquired the land required for civil operations from the RAAF. It assumed responsibility for the planning, development, operation and maintenance of the civil facilities on the Airport. It constructed a new domestic/international terminal, as well as aprons, taxiways, roads and car parks. Operations commenced from the new terminal in 1991 and effectively separated civil and military activities at the Airport.

Subsequent developments in the late 1990s included a new fire station (commissioned in 1999), new control tower (commissioned in 2000), taxiway enhancements, the development of access roads and extensions to the long-term public, hire car and staff car parks.

Darwin International Airport is managed and operated by NT Airports Pty Ltd, which in turn is managed by Airport Development Group Pty Ltd. In 1998, NT Airports obtained a 50-year lease plus a 49 year option from the Commonwealth Government to manage and develop the civil area of DIA.

The airport-leased area is to the north and consists of 311 hectares of land while the Department of Defence owns the RAAF base to the southeast. The 311 hectares includes, in addition to land for aviation-related and ancillary uses, 87 hectares of land on which a business park and other commercial uses are being developed. Car parking facilities include short and long-term parking for 570 vehicles and staff car parking for 180 vehicles.

The general layout and main features of Darwin International Airport are shown in Figure 1.

Figure 1 **Photograph of Darwin International Airport**



Data source: NT Airports

The Airport can accommodate aircraft of all sizes, including Boeing 747s. Airlines with Darwin services include AirNorth, Australian Airlines, Garuda Indonesia, National Jet Systems, Qantas, Qantaslink, Royal Brunei, SkyWest and Virgin Blue. They have direct flights from Darwin to:

- Singapore, Bali, Brunei, Dili and Timika in West Irian (internationally); and
- Adelaide, Brisbane, Perth, Melbourne, Sydney, Broome, Cairns, and many Territory destinations including Alice Springs and Tennant Creek.

2.1 The Greater Darwin region

The Northern Territory has a population of around 200,000 people, with approximately 100,000 located in the Greater Darwin area. This area includes the fast-growing Palmerston, which was established in the early 1980s and is located about 20km south-east from Darwin.

Industries that are large contributors to the economy are mining, tourism and defence. In Darwin, in addition to these industries, proportions of the workforce employed in government administration and in the construction sector are at higher levels than elsewhere in Australia.¹

¹ Darwin City Council, 2002, *Darwin – A Complete Perspective*, July 2002.

3 Measuring economic and social impacts

The input-output analysis carried out on Darwin International Airport captures the direct and indirect (or flow-on) effects of the Airport on the Northern Territory economy. A third category of economic impact is also considered in this report: the economic facilitation effects. It is important to understand the links between the three concepts and how they can be measured.

3.1 Direct economic impacts

Some activities are directly related to the operation of an airport. Tasks carried out by airport management, airlines and air freight companies are obvious examples, while airport-based retailers and taxi services are other important examples of direct activity. Most of the direct effects are generated on site.

ACIL Tasman has measured the direct effects of Airport activities in terms of their employment levels, gross turnover and value added. These data were derived “from the ground up” by surveying the relevant businesses. The value added is the contribution to the total value of output made by a particular business – it is the revenue it makes less cost of goods sold. Essentially value added comprises wages and salaries, depreciation, interest and profit and, when aggregated for Australia as a whole, equals Gross Domestic Product (GDP).

The most challenging task in this study has been to apply a comprehensive and consistent framework for measuring the business sector of the Airport.

As an economic sector, “an airport” can be more than the activities physically located there. For instance, the city booking offices of the airlines can legitimately be considered part of an airport sector, as can off-site firms supplying in-flight catering. Equally, some activities on an airport are quite incidental to its functions (weather recording equipment or non-Airport business car parking, for example); they should not be included in an economic definition of the airport sector.

In addition to on-Airport activities, NT Airports and ACIL Tasman considered a wide range of off-Airport operations prior to deciding what should be included. A formal survey was then conducted by NT Airports, with some follow-up by ACIL Tasman. This was undertaken during February and March 2004. There were approximately 100 businesses surveyed, of whom 38 responded.²

² Although only 38 responses were received, it was possible to estimate the impact of 59 airport-related businesses on the Northern Territory economy.

3.2 Indirect economic effects: input-output analysis

To understand indirect (or flow-on) effects, consider the example of a catering business based at the airport. That business purchases goods and services from other at- and off-airport businesses, which in turn make further purchases. This process continues – in ever-decreasing amounts – and means that the initial impact “multiplies” through the economy.

Input-output tables set out the purchases and sales of the various sectors of a State, Territory or regional economy. They show flows between industries and imports and exports across the region’s borders. Sales to and purchases from government sectors are also shown. By capturing all the linkages in the economy, the input-output tables (through the multipliers derived from them) provide a means of estimating the direct and indirect effects of a given economic stimulus. In this report, that stimulus is provided by Darwin International Airport.

There are several limitations to input-output analysis that should be noted. The input-output process can lead to some double counting of economic activity, and to understatement of some costs (because resources are assumed to have no alternative use in the NT). This means that I-O results should be regarded an upper bound estimate of the flow-on effects. Despite these limitations, input-output analysis provides a good estimation of the flow-on effects. This is particularly the case in the Northern Territory, where its relatively isolated nature means many resources will have a low opportunity cost within the Territory.

At the commencement of this study, the most recent input-output table for the Northern Territory pertained to the base year 1997-98.³ To improve the quality of the analysis, a new, more recent table was developed by ACIL Tasman. This new table, with a base year of 2001-02, has the added advantage of incorporating the Goods and Services Tax, whereas the previous table assumed the previous wholesale sales tax system still applied.

The new input-output table contains 101 sectors. Output, income, employment and value-added multipliers have been derived for each of these sectors and selected multipliers used in the analysis in this report.

3.3 Economic facilitation effects

There are other activities which, even though they are not solely reliant on the airport, would be affected if the airport was not there. For example, important

³ Murti, S. *Input-Output Multipliers for the Northern Territory 1997-98*. Office of Resource Development, October 2001.

economic effects are generated by the spending of visitors who come into the Northern Territory through Darwin International Airport. Air-freighted goods and services used in local production generate additional impacts.

Many of these effects are difficult to measure. In this exercise, we have concentrated on quantifying visitor expenditure and the economic activity which results. Other effects are assessed qualitatively.

The Northern Territory Tourist Commission collects data on visitors and a range of their characteristics, including method of travel, length of stay and amount spent. This information can be used to understand the economic impact of visitors who arrive and leave via Darwin International Airport.

3.4 Other economic impacts

Unsurprisingly, there are economic impacts that fall outside of the above categories. There could well be costs or benefits which remain “external” to the economic system, which will not be accurately measured just by looking at what appears in company accounts (for example, the external cost of noise pollution and the external benefit of enhanced defence capability).

Unquestionably, the development of a large facility such as an airport creates external effects, though these occur in both directions and their practical significance is often overstated.

Another aspect is the value to travellers beyond costs. ACIL Tasman recognises that residents of Darwin and its surrounds, when they travel elsewhere (whether for business or pleasure), derive benefits over and above the costs they incur – as otherwise they would not travel. A portion of these extra benefits (the consumer surplus) should accrue to the Airport as the transport facilitator, though they are not quantified in this study.

3.5 Social impacts

In addition to the quantitative assessment of the impacts of the airports, it is important to comment upon the social aspects of the Airport. These are elements not apparent in accounts and the flow of payments. It is often difficult to distinguish between economic and social impacts; however, it is useful to consider certain social aspects separately as they are not easily measured in the current situation.

Consultation processes

The primary way of understanding the effects that the Airport has on social outcomes is by talking to people who have a stake in these outcomes. After

discussion with NT Airports P/L, it was decided that the social impacts could be understood through high-level interviews with:

- Tourism sector representatives;
- Freight companies;
- Aircraft operator and pilot representatives;
- Construction sector representatives;
- The Department of Defence;
- Providers of aerial medical services; and
- Community representatives

4 Darwin International Airport today

4.1 Air activity

The volume of air traffic – including the number of flights and passengers, and the amount of freight – is an important way of assessing the activity level of an airport.

Flights

The RAAF, which operates the air traffic control tower, records aircraft movements and reports such information to AirServices Australia. In 2003 there were 74,434 civil movements at Darwin International Airport, making it the 14th busiest airport in Australia. These movements comprise a significant number of larger aircraft, and rank 8th in terms of the movements of aircraft heavier than 7,000kg.

Passengers

An idea of the activity at Darwin International Airport can also be gained by looking at the number of passengers passing through the airport on an annual basis. In 2002/03 there were 209,000 international passengers and 877,000 domestic passengers who flew into or out of Darwin – a total of over 1,000,000 civil passenger movements annually.

Freight

Both international and domestic freight is delivered to and departs from the Airport. In 2001/02 Darwin dealt with 1,340 tonnes of international freight and 5,610 tonnes of domestic freight.

4.2 Business activity

It is important to understand how this air activity translates into economic activity. This section outlines the approach taken here.

4.2.1 Defining the airport sector

A number of possible criteria were considered when deciding the definition of “the Airport sector”. It was decided that Airport sector activities would be defined as meeting the following conditions:

- Having a physical presence on-Airport in the form of employees; and/or

- Owning, or paying fees for, locations at the Airport; and/or
- Representing inputs, the costs of which form part of charges to Airport users.

This implies an “accrual” or functional view of the airport, rather than a strict locational view. Any activity not attributable to Darwin International Airport has not been included in the on-Airport figure.

The difficulty in identifying relevant businesses, measuring the necessary costs and filling in the gaps for non-respondents means several decisions about the treatment of certain businesses had to be made. The most important of these were:

- Only businesses whose relationship to the Airport was clear and whose activity could be measured or estimated were included;
- For air transport services, revenue relates not only to the Airport but also to the other airport serving as the departure point or destination as well as the aircraft movement itself. Therefore the costs associated with using the Airport were used instead of the total revenue; and
- Most government services do not have a revenue stream – instead, their airport-related costs were estimated.

These approaches are likely to lead to understatements of economic activity, thus the overall figures are conservative estimates of the business activity at the Airport. Such underestimation is compounded by the omissions of RAAF activities, which are known to be significant.

4.2.2 Airport businesses and organisations

Before moving to the aggregate estimates of economic activity, it is worth understanding the composition of the airport sector. It can be divided into five components: airport infrastructure, air transport, aviation support services, retailing and directly related off-airport services. These categories and their general make-up are briefly outlined below.

Airport infrastructure

The largest organisation in the infrastructure category is NT Airports P/L itself, which operates the airport. Also significant is AirServices Australia, the supplier of fire fighting services. RAAF provides air traffic control services.

Air transport

The major scheduled airlines, Qantas and Virgin Blue, dominate domestic passenger traffic at Darwin International Airport. The international operators include Australian Airlines, Garuda Indonesia, Qantas and Royal Brunei.

AirNorth, which operates services to many locations in northern Australia and to Dili, also has a major presence. Charter services as well as regular passenger transport are also provided by Northern Air Charter, Air Frontier, Anindilyakwa Air, Pearl Aviation and Pel-Air, among others. Finally, airfreight and courier companies (such as Patrick Cargo, Pel-Air and TNT) have major operations from Darwin.

Aviation support services

These include the operators who provide the airlines with catering, both in-flight and at the airline lounges. Aviation support services also include aircraft maintenance, operators of aircraft hangars, and fuel providers.

Retailing

Land transport is the biggest part of the retailing category. The other retail operations are the various franchises within the terminal – cafes, the newsagency, the foreign exchange agency, and souvenir shops.

Directly airport-related activities off-airport.

Bus and coach services, some of which do not have access to rented space at the Airport, plus taxis, are the most important off-Airport activities included in the Airport definition.

4.2.3 The size of business activity

The survey of airport-related businesses enabled their activity to be estimated. In order to avoid double counting once tourism expenditure was considered in the next section, the businesses were divided into two categories – those that were involved in the operations of the airport, and those that provided services for visitors using the airport.

Input-output multipliers for the Northern Territory were applied to the data collected in the survey (and from information provided by NT Airports Pty Ltd). Four types of input-output multiplier were used: output, income, employment and value-added.

Table 3 provides the results of the analysis and quantifies the total (direct plus indirect) impact of the Airport's operation. The estimates in Table 3 are conservative; where doubts existed, they were resolved on the low side.

Table 3 Annual airport-related business impacts

	Airport operations	Visitor-related airport businesses	Total
Output (\$m)	116.8	40.3	157.1
Income (\$m)	31.0	9.9	40.9
Employment (jobs)	693	255	948
Value-added (\$m)	67.3	20.2	87.5

Source: Survey of businesses by NT Airports; analysis by ACIL Tasman

Darwin International currently supports nearly 1,000 (full-time-equivalent) jobs. The annual output (or revenue) is \$157 million, and its value added (or contribution to GDP) is \$88 million per year. Nearly half of the value added (\$41 million) goes to employees as wages and other income.

Box 1 **What do the different numbers mean?**

Several different economic concepts appear in the assessment of economic activity.

Output is equivalent to revenue. It provides an overall measurement of the effect of economic activity. However, it does not necessarily provide clear insight into how a community benefits from such activity, as growth in gross turnover may not be reflected in additional net local economic value adding—although it is reasonable to assume positive correlation between the two measures.

Value-added in a given economy is output less the costs of tangible inputs, and quantifies 'local content' generated by the process which leads to output. It includes income, profits and tax revenue generated.

Income is the component of value-added that goes to wage earners.

Employment measures jobs generated by economic activity.

Relative to the Northern Territory economy, this is equivalent to around 1% of employment, and approximately 1% in value added terms.

Table 5 suggests that

- The Airport's value added is over \$800 per resident in the Greater Darwin region (ie \$87.5 million for an urban population of 100,000); and
- The value added per passenger is \$82 (ie \$87.5 million for a total passenger count of over 1,000,000)

From these data, it is clear that in its present configuration, Darwin International Airport is a highly significant economic entity within the Northern Territory.

4.3 Tourism and the Airport

In addition to business activity associated directly with the Airport, it has numerous other effects. The most important of these is the activity generated by the visitors to the region who arrive by air. Using information supplied by the Northern Territory Tourist Commission, the NT Airports survey, information from a previous study on the composition of tourism spending⁴ and ACIL Tasman's NT Input-Output Table, the magnitude of this effect is able to be assessed.

4.3.1 Visitor numbers and expenditure

The Northern Territory Tourist Commission estimated that in 2002/03 215,000 visitors arrived into the Darwin region by air. On average, they stayed more than four nights each, resulting in a total of 967,000 nights. They spent a total of \$244 million.

In assessing the effect of Darwin International Airport on tourism, the key statistic is the extra tourists it brings to the Northern Territory – tourists who would not travel to the NT but for the Airport. For many airports, few extra tourists result from their existence, as passengers would otherwise arrive by road or by other means. In the case of Darwin Airport, the remoteness of the location means it is reasonable to assume that few of the tourists arriving by air would otherwise come to the NT. The proportion that would arrive by other means has been assumed to be negligible.

Clearly, tourism expenditure has a significant effect on the economy. The \$244 million expenditure translates into a \$303 million increase in output, leading to \$187 million in value-added and 2,321 jobs. In net terms, this is an additional \$167 million value-added and 2,066 jobs for the Territory to the impact identified in the previous section.

Table 4 **Annual airport-related tourist impacts**

	Tourism effects	Already counted	Net tourism effects
Number of visitors by air	215,000		
Total nights stayed	967,000		
Amount spent (\$m)	244		
Economic effects			
Output (\$m)	303.2	40.3	262.9
Income (\$m)	82.2	9.9	72.3
Employment (jobs)	2,321	255	2,066
Value-added (\$m)	186.8	20.2	166.6

Source: Survey of businesses by NT Airports

⁴ O'Dea, D. 1997, *Tourism's Direct Economic Contribution, 1995-96, Research Paper no. 3*, Bureau of Tourism Research, Canberra

Tourist expenditure adds significantly to the direct impacts of Darwin International Airport: the value added of air-traveller's tourist expenditure is almost double the direct value-added, and the additional 2,000 jobs more than double the employment effects of direct airport activity.

4.3.2 The visitation multiplier

The importance of encouraging more tourists via air travel can be seen by understanding the marginal effects. In Table 5, tourism multipliers used to derive the overall numbers in Table 4 are identified. Dividing total tourism expenditure in the Darwin region by the number of visitors shows that each visitor spends an average of \$1,135.

Table 5 Visitor multipliers and the marginal effects of tourism

	Tourism multipliers (per extra \$)	Effect of an additional visitor (an extra \$1,135)
Output (\$)	1.2425	1,410
Income (\$)	0.3371	383
Employment (jobs)	9.5×10^{-6}	0.011
Value-added (\$)	0.7655	869

Source: ACIL Tasman analysis

Each additional visitor adds \$869 of value to the local economy. The direct and indirect effects of an additional 90 visitors create another job in the Territory. Clearly, additional visitors provide important boosts to the economy.

4.4 The effect of additional flights

The combined economic effects can be used to estimate the likely impact of additional flights into Darwin International Airport.

Take an additional weekly domestic flight of a Boeing B737-800. This aircraft can carry 170 passengers. If the weekly flight was, on average, 75 per cent full, then an additional 6,656 passengers would come to Darwin annually. The likely economic effects of that additional activity can be estimated.⁵

⁵ There are two important assumptions. First, it is assumed that the economic activity at the airport is proportional to passenger numbers at the Airport. Second, it is assumed that 100 per cent of the passengers are tourists entering the Darwin region.

Table 6 **Economic effects of a weekly Boeing B 737-800**

	Airport operations	Visitor-related airport businesses	Additional tourism	Total
Aircraft capacity	170			
Load factor	75%			
Additional people per annum	6,656			
Economic effects				
Output (\$m)	0.72	0.25	9.14	10.10
Income (\$m)	0.19	0.06	2.49	2.74
Employment (jobs)	4	2	70	76
Value-added (\$m)	0.41	0.12	5.66	6.19

Source: Survey of businesses by NT Airports

Like the previous analysis, the most important figures are employment and value-added. An additional flight of this size would lead to an additional 76 jobs in the NT economy. There would be a further \$6.2 million of value added to the NT.

Another example is that of an additional weekly Boeing 767 to Darwin, departing from an international location. This aircraft averages a capacity of 230 passengers, which on a 65 per cent load factor, would lead to an additional 7,774 visitors per year to Darwin. Under the same assumptions used for the Boeing B737-800, the economic benefits of an additional flight shown in Table 7 would result.

Table 7 **Economic effects of a weekly Boeing 767**

	Airport operations	Visitor-related airport businesses	Additional tourism	Total
Average aircraft capacity	230			
Load factor	65%			
Additional people per annum	7,774			
Economic effects				
Output (\$m)	0.84	0.29	10.67	11.80
Income (\$m)	0.22	0.07	2.90	3.20
Employment (jobs)	5	2	82	89
Value-added (\$m)	0.48	0.14	6.61	7.24

Source: Survey of businesses by NT Airports

The estimated 89 jobs and \$7.24 million value added is probably an under-estimation, given that the same level of tourism spending is assumed for both flights; however, international tourists could be expected to spend more than domestic tourists.

This exercise allows some understanding to be gained about what the development of additional routes may deliver. Table 8 summarises the incremental effects of between one and ten flights of each of these types of aircraft.

Table 8 **Economic effects of additional flights to Darwin**

No. of extra weekly flights	Effects of a Boeing B737-800		Effects of a Boeing B767	
	Value-added (\$m)	Employment	Value-added (\$m)	Employment
1	6.19	76	7.24	89
2	12.39	152	14.47	178
3	18.58	228	27.71	266
5	30.97	380	36.18	444
10	61.95	760	72.35	888

This shows that the measurement of economic activity should not be viewed only as a static assessment of the present. It allows estimations to be made about what the outcomes of initiatives and developments may be.

4.5 Related activities

The above figures do not take account of the more complex economic relationships involving Darwin International Airport. It is worth discussing some of the key areas in order to gain a deeper understanding of the role of the Airport.

4.5.1 General air services

Darwin International Airport houses and supports a number of aircraft used for recreational and private business purposes. There is a General Aviation area with parking for approximately 100 aircraft, adjoined by light aircraft hangars. A helicopter landing area and associated apron, hangars and refuelling facilities are located at the eastern end of the Airport.

There were 41,944 movements by aircraft under 7,000kg and 3,490 movements by helicopters at the Airport in 2003 (source: AirServices Australia, 2004). Amongst Australian airports, Darwin has the 11th highest number of small aircraft movements.

4.5.2 Freight

Darwin International Airport provides the means for the city to act as regional freight hub. In 2001/02, freight tonnage was approximately 7,000 tonnes. Of this, 1,340 tonnes comprised international freight.

Although this freight volume is not substantial in a relative sense, just-in-time freight figures prominently in the operational support logistics of key industries, particularly the mining industry. Air freight also provides the means by which low volume high value produce (such as horticultural produce and seafood) can be distributed fresh to domestic and international markets. This also includes basic mail and freight services to almost a hundred pastoral and community destinations and other northern Australia locations.

4.5.3 Medical services

Royal Darwin Hospital houses the NT's main concentration of medical services. All but a small percentage of residents on remote communities requiring RDH services travel by air. Air travel is usually necessary when interstate specialist assistance is required.

In 2002, 875 aerial medical flights were recorded for Darwin Airport; this excludes inbound flights originating from other locations such as Katherine and Gove.

4.5.4 Construction sector

There is growing recognition within the construction sector of the importance of Darwin Airport as a source of work, especially on substantial projects that have become more common in recent years. This has occurred in part as NT Airports has developed previously unused airport property.

Recent examples of major business developments at the Airport which have generated construction sector activity include:

- Progressive upgrading of security, safety, immigration, customs and quarantine facilities;
- Construction of an extension to the western end of the terminal to provide the Australian Protective Service with administration and training facilities over a floor area of some 230sqm;
- Fitout of several new or upgraded retail premises within the terminal including:
 - A new cafe, chicken and beverage outlets in the domestic departure lounge;
 - An upgraded and relocated news and retail outlet in the domestic departure lounge, costing \$400,000;
 - An upgraded and relocated cafe in the international departure lounge;
 - An upgraded cafe in the arrivals hall;
- Several airline office expansions and relocations, including:
 - Relocation of Qantas offices into a combined area of 750sqm;
 - Doubling of Air North administration space through relocation; and

- Expansion and relocation of Virgin Blue administration office area;
- Doubling of Qantas Club Lounge area to 651sqm, accommodated by extending the eastern end of the first floor of the terminal building;
- Construction of the Environment Australia building at the Airport, a \$5.6 million administration and laboratory building which houses the Office of the Supervising Scientist; and
- Construction of a new ABC Childcare facility on the Airport, capable of accommodating 75 people, which is opening in May 2004.

There are also several projects in their development stages:

- Conversion of the former Golden Wing Lounge into a dual purpose facility capable of servicing either domestic or international passengers;
- An upgrade of the flight information display system; and
- General modernisation of the terminal, including carpet replacement and new seating.

Longer term, and potentially much more substantial, opportunities for the construction sector will be generated as a consequence of the Darwin International Airport property development strategy.

4.5.5 The RAAF Base

From a defence perspective, Darwin Airport is considered to be a strategic asset of the highest priority. This has particularly been the case since the independence of Timor Leste.

Quite apart from aircraft-related activities that utilise infrastructure owned and operated by the Australian Defence Force, military usage of the Airport facilities is strategically significant and includes:

- Charter use by the Northern Defence Reserve Unit (known as “Norforce”). Approximately 90 per cent of Norforce air travel requirements currently involve charters operating from Darwin International Airport. This currently involves 100 flights and 1,400 passenger movements annually;
- Australian Defence Force (ADF) personnel utilising commercial airlines; and
- United Nations personnel utilising commercial airlines

Direct military usage is also significant. In 2003, 29,000 passengers were processed, and consumables uplifted included 30,000,000 litres of fuel. There were 6,456 military flight movements at Darwin, which was the second highest number recorded by AirServices Australia at the airports where they maintain terminal services.

It should be noted that this report takes no account of the considerable impact RAAF Base activities have on the local economy: although outside the scope of the present study, civic operations and supply activities supporting the Base are substantial, and would materially add to multiplier estimates of the impact of the Airport on the local economy if included.

4.5.6 Connecting communities in the Territory

Darwin Airport plays a vital role in sustaining remote communities in Australia's northern regions. This important social element was recognised last year by the Commonwealth House of Representatives' Standing Committee on Transport and Regional Services, in their report titled *Regional Aviation and Island Transport Services: Making Ends Meet*.

The Northern Territory, due to its vast expanse and scattered population, arguably depends on air transport to a greater degree than other jurisdictions. Many remote communities are cut off for extended periods due to harsh weather conditions, with their air services providing the only link to the outside world... In many cases regional air services are actually an essential service.

In this regard, the maintenance and development of Darwin Airport plays a critical social role for many people.

5 The Airport in the future

It is important to estimate future economic activity. Already-developed twenty year passenger and flight movement forecasts have been used to make these forecasts.

In developing future projections, a range of assumptions was adopted. As much transparency as possible has been provided, so the effect of changed circumstances can be assessed as the future unfolds.

5.1 The Airport in 2023

5.1.1 Future passenger and aircraft movements

Predicting future passenger movements is a difficult exercise. In the past couple of years we have seen a number of terrorist incidents and health crises which demonstrate the large effects that external events can have on air travel. Also, the airlines using Darwin often have relatively few services to many destinations, and therefore schedule changes can have pronounced influences on passenger and flight movements.

Despite these difficulties, BAA, the world's largest airport operator and a shareholder of NT Airports, has prepared 20-year passenger and aircraft movement forecasts for Darwin International Airport. There are three estimates for future activity – “most likely”, “low” and “high” estimates.

The main estimates are included in Table 9, together with the current levels of activity and the ratio of the future and current levels.

Table 9 **Forecasts for Darwin International Airport**

		2002/03	2023/24	Ratio (scaling)
International passengers	"Low"	209,000	555,000	2.66
	"Most likely"	209,000	730,000	3.49
	"High"	209,000	825,000	3.95
International movements	"Low"	4,780	6,600	1.38
	"Most likely"	4,780	7,800	1.63
	"High"	4,780	8,500	1.78
Domestic passengers (excl. transit passengers)	"Low"	858,000	1,550,000	1.81
	"Most likely"	858,000	1,820,000	2.12
	"High"	858,000	2,075,000	2.42
Domestic movements	"Low"	13,200	16,700	1.27
	"Most likely"	13,200	18,200	1.38
	"High"	13,200	19,500	1.48
General aviation movements	"Low"	40,600	40,000	0.99
	"Most likely"	40,600	50,000	1.23
	"High"	40,600	66,000	1.63
Freight tonnage	"Low"	6,950*	9,700	1.40
	"Most likely"	6,950*	13,350	1.92
	"High"	6,950*	17,200	2.47

Note: * denotes 2001/02 figures.

Source: NT Airports

5.2 Business activity

The NT Input-Output Table and the current levels of business activity were used to estimate the economic impact of future levels of business activity. There are two important assumptions attached to this approach. The first is that the nature of economic relationships at the airport remains constant over time – that is, that the types of businesses remain constant over time. Second, by using the same input-output table it is assumed that the structure of the NT economy also remains constant over time.

5.2.1 Approach

Current levels of business activity were scaled up on the basis of the information in Table 9. Individual decisions were made about what factor would most strongly influence the revenue of each business. The scaled-up

revenues were then combined with the Input-Output Table to estimate the economic activity likely to be generated by the Airport in the year 2023/24.

5.2.2 The size of business activity

The same categories of economic activity were considered as before to avoid double counting – those that were involved in the operations of the airport and those that provided services for the visitors using the airport. The “most likely” estimates for direct employment, output, income and value added at Darwin International Airport in 2023 are provided in Table 10.

Table 10 “Most likely” Annual airport-related business impacts – 2023/24

	Airport operations	Visitor-related airport businesses	Total
Output (\$m)	251.6	98.3	349.9
Income (\$m)	66.7	24.2	90.9
Employment (jobs)	1,492	623	2,115
Value-added (\$m)	144.9	49.3	194.2

Source: Survey of businesses by NT Airports; analysis by ACIL Tasman

On this basis, it is expected that the Airport will support over 2,000 jobs in 2023. In 2023, the annual output (or revenue) impact on the NT economy will be \$350 million, and the value added impact (or contribution to GDP) will be \$194 million per year. As before, approximately half of the value added (\$91 million) goes to employees as wages and other income.

Given the uncertainties involved, it is important to include the “low” and “high” estimates of economic activity in 2023. These are provided in Table 11.

Table 11 “Low” & “high” annual airport-related business impacts – 2023/24

	Airport operations	Visitor-related airport businesses	Total
Low			
Output (\$m)	209.6	80.6	290.2
Income (\$m)	55.6	19.9	75.4
Employment (jobs)	1,241	511	1,752
Value-added (\$m)	120.7	40.4	161.2
High			
Output (\$m)	285.4	111.8	397.3
Income (\$m)	75.7	27.6	103.3
Employment (jobs)	1,696	709	2,406
Value-added (\$m)	164.3	56.1	220.4

Source: Survey of businesses by NT Airports

The results in Table 11 show that the range of outcomes that can be expected is large. Taking the example of jobs, there could be a difference of as much as 650 jobs depending on the how airport activity develops over the next 20 years. As mentioned earlier, this will be influenced to some degree by events beyond the control of those associated with the Airport. However, to the extent that activity heads towards the “high” scenario, there are significant gains to the NT economy.

5.2.3 Tourism expenditure

The effects of tourism expenditure can also be estimated based upon predictions about total passenger numbers in 2023/24. The results in Table 12, show that nearly 5,000 jobs will be due to tourists arriving by air while they will add nearly \$400 million of value to the NT economy (under the “most likely” scenario).

Table 12 **Annual business impacts of tourists by air – 2023/24**

	Tourism effects	Already counted	Net tourism effects
Number of visitors by air	513,824		
Total nights stayed	2,311,012		
Amount spent (\$m)	583		
Economic effects			
Output (\$m)	724.4	98.3	626.1
Income (\$m)	196.5	24.2	172.3
Employment (jobs)	5,546	623	4,923
Value-added (\$m)	446.3	49.3	397.0

Source: ACIL Tasman calculations

5.3 Future plans and expectations

Again, given the limitations of quantitative analysis in describing relationships, it is useful to examine how the Airport fits with the plans of sectors affected by Darwin International Airport. Much of this discussion relates to aspects or occurrences that are in the five to ten year timeframe, rather than twenty years.

5.3.1 Tourism

There are general expectations of a resurgence in tourism growth, assuming regional stability continues to consolidate. As has been well documented, a series of setbacks have dented tourism performance in the national market in recent years, and the Top End region has not been spared from the adverse impacts of such events.

However, some broad-based optimism for improvements in loadings and capacities is evident, largely centred on prospects for an increasing role for Darwin as a regional hub. It is perceived that lower fares are permanent, which will strengthen air travel across the board.

There are generally positive expectations about the effects of large projects in the NT, including the north-south railway and the \$600m Darwin convention centre complex.

5.3.2 General air services

It is expected that air services demand will benefit from travellers wanting increasingly shorter travel times and from the increased use of Darwin as a regional hub. There are also niche opportunities for special interest group travel (such as gambling tourism) which have the potential to increase demand for air services.

5.3.3 Freight

There is broad anticipation that the longer-term future of the economy will be significantly affected by current and prospective developments in the oil/gas area, with accompanying implications for airfreight to satisfy urgent demands. More generally, freight throughput is expected to grow as available capacity and supporting infrastructure expand.

5.3.4 Medical services

There is no anticipated future reduction in the importance and level of usage of Darwin Airport in the context of meeting the emergency and specialist medical needs of the broader regional community.

5.3.5 Construction sector

As a result of privatisation of the airport and the apparent associated increased spread of spin-off work, there is a growing awareness of airport owners' intentions to expand and diversify into other commercial activities.

Undeveloped airport property totals around 87 hectares, almost 90 per cent of which is high value land adjacent to that required for aviation-related and ancillary support purposes.

A detailed precinct development plan has been prepared, delineating respective areas for:

- Bulky goods, retail and commercial businesses;
- Uses such as retirement village, childcare centre, medical suites and other commercial and retail activities;
- Resort/hotel development, high technology park, terminal and business parking;
- Additional commercial activities contemplated include:
 - Mega retail warehouses; and
 - A 24-hr petrol/supermarket facility.

As a consequence, it appears that airport-generated construction work will increase.

5.3.6 The RAAF Base

It is intended that activity relating to the airport—both by the Australian Defence Force and its counterparts from other countries participating in major joint exercises with the ADF—will continue at present levels, and that the RAAF Base itself will be maintained on a fully operational level of readiness for some decades hence.

Expanded usage of the airport for defence purposes is not anticipated based on current outlooks; however, existing infrastructure will be progressively improved and modernised to maintain full readiness.

5.3.7 Connecting communities in the Territory

The role of Darwin Airport in providing for the various needs of the outlying region is anticipated to grow with the populations of remote communities.

Such growth in demand is also likely to be underpinned by an increasing preference for use of air travel and air freight, as they are the most timely means of service delivery.

6 Conclusion

This report provides an indication of the extent to which the Darwin International Airport contributes to the NT economy. Through a comprehensive survey and consultation process, and by developing an updated input-output table for the Territory, ACIL Tasman has been able to describe the impacts of the Airport upon on the NT economy's value added and employment.

The Airport saw 74,434 aircraft movements with 209,000 international and 877,000 domestic passengers passing through in the last year. In addition, there was 6,950 tonnes of freight. With this high level of activity has come increasing investment in the Airport, with additions to café, retail and office facilities in recent times.

Through the activities of directly related businesses, and their interactions with the wider economy, the Airport is responsible for the creation of 950 jobs and nearly \$90m in value added to inputs and raw materials. This is a significant contribution – it amounts to the Airport adding over \$800 per Greater Darwin resident in terms of value added.

The tourism industry relies heavily on the Airport. In 2002/3 around 215,000 visitors entered the NT via the Airport, staying a total 967,000 nights and spending \$244m in the Territory. The isolated nature of the Territory makes it likely that, without the Airport, many tourists would holiday elsewhere rather than travel to the Territory by road.

Forecasts over a 20-year horizon result in a wide range of possible outcomes, but under the most likely assumptions, the Airport will, directly and indirectly, support 2,100 jobs and businesses with an output of \$350m in 2023. This will contribute \$194m annually to GDP.

The significance of the Airport to the Territory is more than just economic. It forms a critical way to connect communities in remote areas and provides a conduit for medical assistance. It provides a base upon which to build Darwin's position as a regional transport and freight hub, and makes Darwin an attractive place to do business.

As Darwin seeks to build upon its national and international position, the Airport will take on increased significance as a key part of the Territory's infrastructure. Initiatives that increase air activity and tourism numbers will increase the vibrancy and improve the development of the NT economy.