



B9

**VOLUME B:** AIRPORT AND SURROUNDS  
Social Impact Assessment

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## 9.1 Introduction

The purpose of this Chapter is to consider community impact issues arising from the New Parallel Runway (NPR) project On-airport and Surrounds. Social impacts related to operations at Middle Banks are provided in Chapter C7 and aircraft operations at and from the NPR are separately considered in various Chapters in Volume D.

**Table 9.1** on the following page, provides more detail as to the requirements of the guidelines for the consideration of social issues and impacts and where these matters can be found in the Draft Environmental Impact Statement and Major Development Plan (EIS/MDP).

The scope of this Chapter includes a description of the key demographic characteristics of the South East Queensland region (including demographic trends) with a focus on those areas immediately surrounding the airport site. The second part of the Chapter includes an assessment of the impacts of runway construction and operation related to those issues that are considered in Volume B on regional (as appropriate) and local communities.

## 9.2 Methodology

### 9.2.1 Approach

There are many definitions of social impacts. Two definitions suitable to the present assessment are:

“Significant events experienced by people as changes in one or all of the following:

- People’s way of life – how they live, work, play and interact with one another on a day to day basis;
- Their culture – shared beliefs, customs and values;
- Their community – its cohesion, stability, character, services and facilities.”<sup>1</sup>

And “By social impacts we mean the consequences to human populations of any public or private actions that alter the ways in which people live, work, play,

relate to one another, organise to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalise their cognition of themselves and their society.”<sup>2</sup>

Social Impact Assessment (SIA) is the analysis of social changes and impacts on community that are likely to occur as a result of a particular development, planning scheme, or government policy decision.

The SIA has involved the following methodology:

- 1. Scoping.** Identify potentially affected groups and individuals and their issues of concern and the nature of the likely impact - what might happen where and to whom?
- 2. Profiling.** Describe the nature of the groups and individuals likely to be affected.
- 3. Prediction.** What are the social impacts associated with the development, who is affected and to what extent?
- 4. Assessment.** Are these impacts significant given the priorities, policies and programs of Government?
- 5. Management, mitigation, monitoring and review.** How can we best manage the potential impacts of this development which we have identified?
- 6. Recommendations.** What recommended strategies and actions will produce the best outcomes for the groups or individuals potentially impacted by the development?

### 9.2.2 Significance Criteria

Socio-economic impacts do not have recognised ‘standards’, and as such it is not common practice to describe social impacts in terms of significance criteria. However, there is a need to assign a significance to this assessment so that any impacts can be considered in relation to the other environmental, engineering, social and economic impacts identified in association with the proposed development.

<sup>1</sup> “Social Impact Assessment for Local Government: A Handbook for Councillors, Town Planners and Social Planners” (1995) NSW Office of Social Policy.

<sup>2</sup> “Principles and guidelines for social impact assessment in the USA” by The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment, Impact Assessment and Project Appraisal, volume 21, number 3, September 2003.

**Table 9.1:** Guideline Requirements for Social Impact Assessment (SIA).

Guideline Requirements for SIA	Airport and Surrounds	Relevant Volume and Chapter in EIS/MDP	Airspace
<p>1. A description of the key demographic characteristics of the South East Queensland region, including demographic trends.</p>	<p>This Chapter (B9) provides details of key demographic characteristics of the South East Queensland region with specific emphasis on those communities that immediately surround the airport site.</p>	<p>The demographic characteristics of adjacent settlements to the dredge site on Moreton Island are described in Chapter C7.</p>	<p>The description of key demographic characteristics and demographic trends of the South East Queensland region is described in Volume B, Chapter B9 and not repeated in Volume D.</p>
<p>2. Impacts of runway construction and airport operation on regional and local communities including noise, traffic, air quality, amenity, demands on local services, changes to lifestyle and everyday activities.</p>	<p>The impact on communities surrounding the airport site as a result of:</p> <ul style="list-style-type: none"> <li>Noise during construction and impacts arising from noise emissions due to increased traffic as a result of the NPR can be found in Chapter B11;</li> <li>Air quality during construction and impacts arising from air emissions due to increased surface traffic as a result of the NPR can be found in Chapter B12;</li> <li>Traffic during construction and impacts arising from increased traffic as a result of the NPR during operation can be found in Chapter B10;</li> <li>Visual amenity impacts of the NPR are to be found in Chapter B13;</li> <li>Other amenity issues (including changes to lifestyle and everyday activities) and the impact on demands for local services is the focus of the impact assessment component of this chapter.</li> </ul>	<p>The impact on communities surrounding Middle Banks as a result of dredging operations are provided in summary in Chapter C7, as are the impacts on recreational and commercial fishing operations, recreational use of that part of Moreton Bay, tourism and access. In addition, amenity issues such as noise and air emissions from the dredging operations are considered in Chapter C9 the Dredge Management Plan. Visual amenity of the dredge operations is described in Chapter C8.</p>	<p>The impact of changes to airspace and flight paths for the NPR will be addressed in Volume D. Chapter D5 assesses the impact of over flight noise on communities surrounding the airport and in the South East Queensland region. Chapter D6 addresses the impacts of aircraft air emissions and Chapter D8 addresses the health impacts of the changes to airspace. Chapter D9 summarises and further assesses the social impacts arising from airspace and flight path arrangements associated with the NPR.</p>
<p>3. Impacts of airport operations on regional and local communities including impacts on demographic characteristics due to redevelopment or changes in land values.</p>	<p>Potential impacts on land values as a result of the NPR project are addressed in Volume A, Chapter A2.</p>		
<p>4. Property acquisition requirements and processes.</p>	<p>No residential or commercial property is required to be resumed or acquired to construct the NPR project.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>
<p>5. Impacts on potential Native Title claimants.</p>	<p>This can be found in Volume B, Chapter B2.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>
<p>6. Impacts on radio and television reception.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>	<p>This issue is only relevant to airspace and can be found in Chapter D9.</p>

**Table 9.2** defines significance criteria for assessing the environmental consequences of the proposed scheme upon:

- The character, amenity and liveability of affected areas as well as their cohesion, lifestyles and activities (community liveability and wellbeing);
- The demographic structure of regional and local communities;
- The amenity and utility of community and recreational facilities, as well as demand for their services;
- Access patterns and community mobility;
- Property and land uses (including businesses and tourism facilities); and
- Radio and television reception.

‘Community liveability and wellbeing’ is subjective and therefore difficult to define. Impacts on this concept differ according to the situation and socio-environmental factors. ‘Amenity’ plays a large part in the determination of community liveability and wellbeing. In this SIA, amenity is considered to be a term given to the attributes and appeal of a place. It is the ‘liveability’ or quality of a place which makes it pleasant and agreeable to be in, whether by the community as a whole or by an individual. Amenity is important in both the public and private domain, be it dwellings or publicly accessible land, workplaces, community facilities or open space. It can be affected by loss of privacy or views or by nuisance arising from the emission of noise, vibration, smell, fumes, smoke, dust, or waste products.

**Table 9.2:** Significance Criteria: SIA.

Significance	Criteria: Social Impact
Major Adverse	Irreversible and significant negative change to current amenity, lifestyle and community activities and functioning. Severance of many communities in the area from facilities, services or of a community itself. Permanent and total loss of formal and informal recreational facilities of regional importance, without opportunity for replacement/reprovisioning within the region. Loss or relocation out of the area of a community facility of regional value. An ‘unhealthy’ demographic structure is created in a community. Permanent closure of one or more businesses. Significant impact to many tourist attractions/facilities. Significant constraints on the ability for the airport to satisfy the needs of the Queensland economy.
High Adverse	Considerable adverse change to current amenity, lifestyle and everyday community activities with limited scope for mitigation. Displacement or relocation of houses or businesses. Separation of a number of communities or residential properties from facilities and services. Relocation of a community facility of regional value to a less socially appropriate location. Permanent and total loss of locally significant formal and informal recreational facilities without opportunity for replacement/ reprovisioning. Impact to a large number of tourist attractions/facilities. Mitigation measures and detailed design work are unlikely to remove all of the significant effects upon the affected communities or interests.
Moderate Adverse	Noticeable adverse change to current amenity, lifestyle and everyday community activities, but with scope for some mitigation. Relocation of a community and or recreational facility to a less socially appropriate location. Separation of a small number of residences from facilities and services. Impact to a number of tourist attractions/facilities. Adverse impact upon a large number of businesses, however their operations remain viable. The disruption of radio and television reception for a community.
Minor Adverse	Localised or limited noticeable change to current amenity, lifestyle and everyday community activities, which can be largely mitigated. Some residual effects will still arise. The functional useability of community and recreational (formal or informal) facilities affected. Localised or limited change to the operation of businesses or tourism facilities. The disruption of radio and television reception for a substantial group of households.
Negligible	Very little change in the current situation. No appreciable impact on local amenity, resident lifestyle and everyday community activities. Imperceptible changes to the amenity of nearby residences. Temporary access alterations to residential properties, businesses, community facilities and recreational areas during construction. Temporary alteration to operation of businesses, community facilities and recreational areas during construction. The disruption of radio and television reception for a small number of households.
Moderate Beneficial	Noticeable improvements to current amenity, lifestyle and everyday community activities. Improved access to residential areas, businesses, community facilities and recreational areas. Improved access to public transport. Promotion of investment locally. Improved access to tourist attractions. Improvements to the operation of businesses or tourism facilities. The development of new social infrastructure which satisfies the needs of the local community.
High Beneficial	The creation of strong communities which are socially inclusive, with high levels of social capital, access to employment, secure housing and appropriate services and facilities. The development of new social infrastructure which satisfies the needs of the regional community. Significant promotion of the ability for the airport to satisfy the needs of the Queensland economy.

### 9.3 Assumptions and Limitations

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The following assumptions have been made in the study:

- The profile of the existing social environment is based primarily on 2001 data sourced from the Australian Bureau of Statistics (ABS) 2001 Census of Population and Housing. Projections have been made of this data where possible based on an assumption of the continuation of social trends. Brisbane's spatial and social structure will have substantially altered by 2015. Resident lifestyles will be influenced by these trends as well as technological developments and structural changes to the economy.
- Suburb level population projections utilised are those prepared by the Planning Information and Forecasting Unit (PIFU), Department of Local Government, Planning, Sport and Recreation for the Brisbane City Council. Assumptions made by PIFU are detailed in the 2005 document 'Brisbane Long Term Infrastructure Plan - Projection of Demographic Indicators: Final Report' and relate to:
  - The availability of greenfield land;
  - The location, size and timing of major development projects; and
  - The capacity for infill and re-development at Collector District (CD) level.

### 9.4 Baseline - Summary Description of the Social Environment

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This section summarises the social environment of the communities which may be directly or indirectly impacted by the NPR, during its construction or operation. These investigations included the compilation of profiles of socio-economic information, social structure and conditions for these communities, as well as a description of their social infrastructure. The profiles examine their current composition, as well as (where possible) considering the likely composition of those communities at 2015

when the NPR commences operations. The profile is based upon data provided by the ABS Censuses of Population and Housing for 2001 and 1996. It has been supplemented with other data where available.

Social impacts can be assessed on several geographic as well as societal levels. That is, potential impacts can accrue and thus need to be identified at:

- i. The direct and local level impact on the key local communities surrounding the airport;
- ii. The direct and local level impact on communities that may be affected by dredging works at Middle Banks (refer to Volume C, Chapter C7 for details of social impacts associated with dredging at Middle Banks);
- iii. The indirect impact on the regional communities due to a change in airspace architecture. For the purposes of the SIA this has been defined as an area within a radius of 15 km of the Project. This is detailed in Volume D, Chapter D5;
- iv. The 'broader community' namely the South East Queensland region in terms of broader social indicators, economic benefits and the flow on effects the proposal may have on the general population and capacities of related human services; and
- v. Further 'communities of interest' which do not have a spatial basis per se (e.g. the Aboriginal or Torres Strait Islander (ATSI) community).

Each of these groups needs to be identified and described so that the potential impacts upon each can be assessed. This information has been provided in the appendices to this Chapter, Chapter C7 and Chapter D9. This Appendix is structured as follows:

#### **Section A Demographic Profile of South East Queensland Region**

Describes the key demographic characteristics of the South East Queensland region, including demographic trends (including Population and age structure, Labour force statistics, Ethnicity, Education, Household composition and status, Household income, and Journey to work data). Refer **Appendix A**.

## **Section B Description of the Community Within 15 km of the Airport**

Describes the regional communities that may be affected by the impacts of a change in overflights and air emissions as a result of a change to airspace architecture. Refer Chapter D9.

## **Section C Description of the Communities Surrounding the Airport**

Describes the key local communities surrounding the airport that may be affected by increases in traffic, emissions, general amenity and demands on local services as a result of the proposal. Refer **Appendix A**.

## **Section D Description of the Communities Affected by Dredging**

Describes the communities that may be affected by dredging works at Middle Banks. Refer Chapter C7.

## **Section E Description of the Airport Businesses**

Describes the nature of the current airport business community. Refer **Appendix A**.

As can be seen, the profiling undertaken moves from the general to the specific, recognising that whilst many of the beneficial impacts of the project will accrue at a regional level, many of the negative impacts will be experienced at the local level. A radius of 15 km from the NPR was chosen as it includes all suburbs surrounding the airport which are most likely those affected by activities associated with airport and surrounds and those which could potentially be affected by overflight noise generated by the airport's operations. It also includes the core of the area benefiting most from the current economic effects of the airport. The Brisbane Local Government Area (LGA) and the South East Queensland Region have also been profiled, both as comparative measures, but also as the key communities whose economies and populations benefit from the airport and simultaneously drive the demand for increased airport capacity.

As stated previously, the content of this Chapter deals with the communities surrounding the Airport. Demographic profiles of each suburb immediately surrounding the Airport are presented in **Appendix A**.

## **9.5 Public Engagement**

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A number of public engagement mechanisms were implemented during the preparation of the EIS, and are described in Chapter A6. Fewer overall comments were received from the community regarding its potential impact upon surrounding suburbs, with the bulk of comment related to aircraft operations. In terms of the potential impact upon surrounding suburbs, only 0.3 percent of telephone respondents and 1.5 percent of written survey respondents were concerned about increased road traffic. Of this small percentage of people, concern about this issue was highest amongst those residents living in the suburbs adjacent and to the west of the airport, where 2.1 percent of written survey respondents raised the issue of traffic.

Engagement specific to surrounding suburbs is summarised below. Forums were convened with the communities of Nudgee Beach and Pinkenba/Myrtle town.

The findings of the Nudgee Beach meeting (excluding those related to aircraft operations) included:

- Concern over noise generated by bird management activities;
- Initial concern that the NPR may require resumptions at Nudgee Beach;
- Concern for the continued ability to fish in Jacksons Creek;
- Concern over the potential impact of high intensity landing lights;
- Discussions of runway separation and the use of runway 14/32; and
- Concerns regarding construction, in terms of noise, dust and vibration, and the potential effects of 24 hour operations.

The findings of the Pinkenba/Myrtle town meeting included:

- Concern about ground running noise.
- Concern about the buffer zone between the community and the Airport.
- Discussion about the point at which planes turn after take-off.
- Discussions about the dredge pump-out site and impact on areas of environmental interest.
- Interest in cultural heritage and engagement with indigenous communities.
- Overall interest in environmental issues linked to the Brisbane River and Moreton Bay.

## 9.6 Relevant Statutory and Policy Guideline

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The South East Queensland Regional Plan (SEQRP) released in July 2005 presents a sustainable growth management strategy for South East Queensland to the year 2026. This document presents a regional vision for South East Queensland, namely:

A future for South East Queensland which is sustainable, affordable, prosperous and liveable, where:

- Communities are safe, healthy, accessible and inclusive;
- There are diverse employment opportunities, and quality infrastructure and services, including education and health;
- Urban and rural areas are mutually supportive and collaborative in creating wealth for the community;
- Development is sustainable, well-designed and the subtropical character of the region is recognised and reinforced;
- Ecological and culturally significant landscapes are valued, celebrated and protected; and
- The community has access to a range of quality open space and recreational opportunities.

A number of key terms are utilised in the document to describe the desired future outcomes for the social environment of South East Queensland. These have been described in detail in Chapter A1.

A comprehensive statement of Brisbane City Council's vision for the future development of Brisbane is provided in the Brisbane City Plan 2000 (the City Plan). Prepared under the *Integrated Planning Act 1997*, the plan seeks to advance the objects of this Act in seeking ecological sustainability. The City Plan provides strategic guidance for Brisbane city, in the form of Citywide Desired Environmental Outcomes and supporting strategies. These Desired Environmental Outcomes are founded on a vision for Brisbane as 'the Liveable City'. The Plan seeks continued development (economic, cultural and social) underpinned by ecological sustainability and maintenance of Brisbane's position as the administrative heart of the South East Queensland region and the state. Brisbane is to have a strong and sustainable economy offering a diversity of employment opportunities, and infrastructure which is integrated, efficient and equitably distributed.

## 9.7 Assessment and Cumulative Effects

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### 9.7.1 Background

The SIA of the NPR considers the analysis of the social environment (both existing and, where possible, as projected to 2015) as well as the information gathered in the public engagement program and predicts and projects the project's likely impact, both beneficial and adverse, on regional and local communities and social infrastructure (services and facilities).

Potential impacts of the NPR have been considered in terms of runway construction and airport operation. Construction activities will vary by stage and consequently the potential and likely form of any social impacts upon communities surrounding the airport will also vary between stages. A description of likely construction processes, activities and equipment to be used is presented in Chapter A5 of the Draft EIS/MDP.

Operation of the NPR will commence in 2015 and has been considered at a number of points in time:

- Re-opening and operation of runway 14/32, between 2009 - 2015, after strengthening works;
- Commencement of operation of the NPR in 2015; and
- The situation 20 years after opening of the NPR in 2035.

Informing the assessment a base case has been utilised, that is Airport operations at 2015 and 2035 without the availability of the NPR for operations.

The cumulative and interactive effects of other technical investigations have been considered as appropriate. There are a number of relevant projects which could act in a cumulative manner on the communities surrounding the airport. These are:

- Gateway Upgrade Project (GUP), including bridge duplication;
- Northern Access Road Project (NARP), from the GUP to the Airport;
- North-South Bypass Tunnel;
- Airport Link;
- Various precinct developments as per the Airport Master Plan;
- Australia TradeCoast (various developments); and
- A likely increase in residential density and development in line with the South East Queensland Regional Plan (2005), such as the Northshore Hamilton development.

Of interest to this SIA is the potential manner in which these projects could cumulatively affect the amenity of the suburbs surrounding the airport. This could involve changes in air quality, noise pollution, visual pollution, community safety or traffic disruption or delay.

The following sections detail the assessment of effects of the NPR on social factors (such as the community surrounding the airport site). This assessment draws on and summarises relevant parts of the EIS/MDP that report on social issues (particularly those contained in Volume B). It refers the reader to relevant chapters of the EIS where more detail about these issues can be found.

Where a social impact issue is considered it is assessed in the following sections and summarised in section 9.10.

## 9.7.2 Potential Effects on Amenity and Lifestyle – Construction Phase

### Introduction

During the construction phase, project elements which could affect amenity and lifestyle include air quality (i.e. dust, plant and vehicle pollutants), noise (on-site from plant and vehicles, and off-site from vehicles), visual pollution or increases in traffic levels.

### Noise

Noise levels as a result of construction activities associated with the NPR have been predicted and assessed in Chapter B11. The EMF in Chapter B14 establishes the framework for noise management during construction and criteria which will be satisfied to minimise impacts on residential amenity.

Chapter B11 predicts that, in a worst case scenario, the nearest residential locations will experience occasional construction noise above accepted criteria during the night, over approximately an 18 month period. However on those occasions where these controls are unsuccessful, the potential for social impact arises (including annoyance/stress and the disturbance of sleep). The number of exceedences will identify the degree of significance. These are unavoidable impacts if the NPR is to be undertaken. The physiological effects of noise are discussed in Chapter D7. Any potential impact is moderated by the knowledge that the Airport is a nearby land use and that plans for an additional runway have been published for a number of years, although it is unlikely the community would have understood the extent of works involved.

During construction, some on-site operations during the 6pm–7pm evening period will exceed the relevant evening noise criteria at the nearest residential locations. This occurs in the context of changing lifestyles, longer working hours and commuting times, strongly mitigating any potential for social impact.

## **Dust**

Dust generated from construction related activities is described and assessed in Chapter B12. It is concluded that dust is unlikely to affect surrounding suburbs given the distance of residences from operations. Potential sources, such as dust from stockpiles or surcharge, will be well controlled. It is noted that dust would affect airport operations before it affected residences. Contribution to other forms of air pollutants is not expected to be significant, as discussed in Chapter B12.

## **Visual Impact**

The visual amenity of areas close to the NPR, including parts of Nudgee and passive recreation areas within the Kedron Brook corridor, will be affected by some views of sand surcharge stockpiles and vegetation clearance. Some elevated locations in the residential areas of Ascot, Clayfield and Hamilton will be subject to distant views of construction activities. In most situations, the magnitude of visual modification would not be great enough to have a perceivable effect on visual amenity. However, some residences in Clayfield will experience a Minor Adverse visual impact, as identified in Chapter B13.

## **Traffic**

An increase in heavy vehicle traffic will occur during the construction phases of the project. This traffic will utilise main arterial routes to access the NPR site, primarily the Gateway Motorway. Access to the Airport will be via NARP. Construction related traffic will not utilise local streets within adjoining communities. Accordingly, there are no implications for community safety. The traffic will not interact with any vulnerable populations or facilities in the surrounding area (such as schools). Contractors will journey to the site in a manner similar to other commuters in Brisbane. Due to the working hours and shift patterns of construction workers, construction traffic movements will predominantly occur outside of peak commuter hours. These issues are addressed and assessed in Chapter B10.

## **9.7.3 Potential Effects on Amenity and Lifestyle – Operational Phase**

During the operational phase, project elements which could affect amenity and lifestyle include noise (related to increases in traffic levels as a result of the NPR), visual pollution or increases in traffic levels leading to disruption or delays. It is considered that given the nature of the site (i.e. an expansion of an existing use, which is contained within a large area with buffer areas between it and adjacent uses), the potential for social impact from those activities associated with the operation of the NPR (excluding aircraft flights, the potential effect of which is considered in Chapter D5) is small.

Operation of the NPR as a facility is not expected to result in any changes to the lifestyles or cohesion of communities in the surrounding suburbs.

As identified in Chapter B11 noise from sources other than aircraft operations is not expected to be heard beyond the airport during the operational phase. Additionally, the potential for social impact is somewhat moderated by the knowledge that the airport is a nearby land use and that plans for an additional runway have been published for over 20 years.

An indirect social impact generated due to the operation of the NPR is a reduction in visual amenity, either to residential properties or to recreational resources. As identified in Chapter B13, these impacts would be localised to specific views. It is noted that the degree of visual impact would be greater during the construction phase than upon completion. It is considered that the liveability of residential areas and enjoyment of recreational facilities would not be adversely affected by views of the NPR facility.

Some elevated locations in the residential areas of Ascot, Clayfield and Hamilton will have distant views of the NPR operating. As identified in Chapter B13, by 2015 planned urban growth, such as at the Australia TradeCoast and construction of the GUP (an elevated road structure), would alter the view shed within which the NPR is contained and limit the extent to which this would have a social effect.

The cumulative effect of projects mentioned in section 9.7.1 on traffic levels has been considered in Chapter B10 and visually assessed in Chapter B13, which identify that the interaction of these projects with the NPR will be negligible. Upon completion, these projects will beneficially increase the capacity of the road network and access to and from the airport, reducing disruptions and delays.

In relation to light spill from the high intensity approach lights into the surrounding community, these lights are highly directionally focused and luminescence would not occur. However, several hundred metres of the northern end of the landing light structure would be visible from Nudgee Beach.

#### **9.7.4 Potential Effects on Access and Movement Patterns**

There are no project elements which affect access or movement patterns in the surrounding community, during construction or operational phases. No communities would be severed by the construction or operation of the NPR. Construction of the NPR will not affect the road network external to the airport or cause any disruption to local movement. No roads will be closed for the NPR. No traffic delays are expected to be generated by NPR construction activities or construction related traffic.

Chapter B10 identifies that the road network surrounding the airport will be heavily congested by 2015, with a significant number of key links operating above capacity. By 2035 the road network is forecast to be extremely congested, with intersections in particular, forecast to operate well above capacity. There may be some 'rat running' as motorists seek alternate routes through congested areas. These impacts will occur regardless of the NPR project.

The forecast increase in traffic volumes will result in a reduction in peak operating speeds in the order of 3 km/hour on a limited number of roads. The residual effects of the NPR in 2035 are likely to be barely perceptible in terms of vehicle speeds to users of the road network.

Indirect social benefit may result in terms of increased public transport (Airtrain) patronage to the airport. However, this would also occur during the no new runway scenario.

#### **9.7.5 Potential Effects on Demographic Structure of Communities**

It is considered highly unlikely that construction or operation of the NPR would directly affect the demographic structure of local or regional communities. The potential effect of aircraft operations in this regard is considered in Chapter D5.

Indirectly, the NPR responds to and facilitates the continued economic development of South East Queensland, and thus population growth and associated land use change. However, such growth will involve the continuation of pre-existing trends. Development of the airport, industry and the economy will proceed at their present pace. Population growth and demographic change in the suburbs surrounding the airport, and South East Queensland will not alter as a result of the NPR.

However, it is stressed that impacts to the socio-economic structure could be experienced if the NPR did not proceed, given the capacity constraints which would become apparent at the airport and the flow on effects that would have on the Queensland economy (as detailed in Chapter A2).

There will be no disruption to planned development or land use change due to the NPR. Australian Noise Exposure Forecast (ANEF) contours will continue to influence the land use development process and control urban encroachment on the airport through the planning system. Land use related impacts due to the NPR are considered in detail in Chapter D5.

No resident, business, or industry properties will be acquired for the NPR. Consequently, no population would be displaced. No resident, business or industry properties would be affected by changes to local hydrology (flooding). The potential effect on property values is considered in Chapter A2.

### **9.7.6 Potential Effects of Sand Transfer Operations**

The project proposes to undertake the transfer of sand between the dredge mooring location at Luggage Point and the NPR site via a pipeline. The operation of the dredge vessel at this location will not adversely affect the operation of the Port. Vessel movement at the mooring site will be carefully managed to ensure maritime safety and to this end relevant maritime safety protocols will be developed in consultation with the Port of Brisbane and Regional Harbour Master. The impacts of the proposed sand pumping activities from the dredge mooring location on commercial beam trawling activities has been discussed in Chapter B5.

Chapter B11 identifies the likely noise generated by sand transfer operations. The surrounding land uses at the sand transfer site are predominately heavy industry, including the BP Oil Refinery and the Port of Brisbane. In this context noise and visual effects of the operation are highly unlikely to be felt by residents of the Pinkenba/Myrtle town area. These suburbs are home to few people, and those that do are buffered from the operations by distance and intervening land uses.

### **9.7.7 Potential Effects on Social Infrastructure in Adjacent Communities**

The demand for social services will not be affected by the NPR facility nor will patterns of access to them or the viability of individual services be affected. The NPR facility will not alter the number of people resident around the Airport, or their demographic structure. There will be an increase in construction employment at the Airport. Most employees (apart from those associated with the dredge vessel which will be sourced from overseas) will be residents of the Brisbane region and will not increase demands on local services. There is some probability that the workforce will patronise local retail services, such as food outlets during lunch time, which would be beneficial to the economy at the local scale.

Social infrastructure in the suburbs surrounding the area which would be affected by the NPR or its construction is limited to a number of recreational sites. A decreased level of recreational amenity could result at these facilities, as discussed below.

### **9.7.8 Potential Effects on Recreational Activities**

The recreational experience of parts of Kedron Brook (used for boating, fishing and walking/cycling) and the Nudgee Golf Course will be somewhat affected during construction, primarily by prominent views of stockpiles detracting from what is currently a vegetated area with a 'green' experience. During operation, partly obscured views will be available to aircraft at these locations. Generally it is noted that the degree of amenity impact will generally be greater during the construction phase than upon completion.

The social impact of this on Kedron Brook users will however be relatively small given the nature of the area's use. Localised pedestrian and cyclist usage patterns may alter due to this decline in recreational amenity, however this is not likely to be significant as the majority of the Kedron Brook cycleway and the destinations to which it links remains unaffected. Localised usage may temporarily increase slightly due to some curiosity in the community about construction activities. Localised patterns of recreational fishing may alter, being displaced to other more amenable locations within the area, however the ability to fish in these locations would not be affected. As such social impact would be negligible.

Commercial fishing is prohibited by state regulation in Jacksons Creek, although some use of these areas is made for recreational fishing. For the parts of the Jacksons Creek and Channel system that are to be retained as part of the Airport Biodiversity Zone (refer Chapter B5 for more detail), access to these areas will of necessity become more stringently controlled with the NPR in operation as a result of Airport security protocols, possibly displacing fishing activities to other locations.

Hydraulic modelling presented in Chapter B7 predicts that construction of the NPR, either separately, or in conjunction with the GUP and NARP (NARP is expected to be materially complete prior to commencement of NPR), would have a negligible impact on the maximum water surface level during flood events. There is likely to be no measurable increase in flood risk for the surrounding community, residential development, or socially important infrastructure due to the NPR.

Floodplain areas that would be affected are undeveloped or have been developed for recreational amenity. This involves the Nudgee Golf Course and the Kedron Brook Bikeway. A corner of Nudgee Golf Course adjacent to Kedron Brook is currently inundated during 1 in 100 year regional flood events. Inundation after completion of the GUP and NARP will spatially increase to also encompass the low lying 'centre' of the course.

Course playability is already greatly affected during flood events and the NPR has minimal additional impact. Consequently the NPR itself will have negligible impact on course use.

The bike and walkway adjacent to Kedron Brook is currently severed during regional flood events. This will not change with construction of the NPR.

### **9.7.9 Potential Effect on Ecological or Community Values**

Environmental concerns have been expressed by local and peak body environmental groups regarding the long term effects from the loss of habitat for NPR construction. Approximately 361 ha of vegetation will be required for removal, comprising casuarina plantation (209 ha), mangrove (94 ha), managed grassland (31 ha) and saltmarsh (18 ha). Chapter B5 examines the ecological significance of vegetation clearing. It concludes that high adverse impacts are expected to habitats at site-specific scale, whereas at local scales impacts are considered to be minor (<5 percent of regional total removed). A range of mitigation mechanisms (see Environmental Management Framework in Chapter B14) have been developed to guide vegetation clearing operations to minimise the effects on terrestrial fauna during vegetation clearance. In addition, compensatory habitat measures both on and off-airport site have also been proposed.

### **9.7.10 Potential effects on Indigenous Groups or Cultural Heritage**

Consultation with members of the relevant Aboriginal communities was undertaken as part of the Cultural Heritage Assessment and Cultural Heritage Management Plan (Chapter B6 and B14). Overall, the effect of the project upon known cultural heritage sites and values is extremely low. Aboriginal people who reside in the surrounding communities will be impacted similarly to the overall community. These impacts have been detailed above and in relation to airspace in Chapter D5.

### **9.7.11 Potential Effects on Community Safety or Access to the Airport by Emergency Services**

The Brisbane Airport Emergency Plan outlines the actions required to provide an effective response to an emergency at the Airport. It provides a detailed plan of the requirements of each agency to ensure the efficient access to the Airport after the emergency. **Figure 9.7** displays the primary and secondary emergency services access routes to and from the Brisbane Airport.

Existing management and safety practices will continue to be implemented with the operation of the NPR. Adequate buffer areas are provided by Airport lands under proposed flight paths where no residential or employment uses are located. Community or passenger safety would not be affected by the construction or operation of the NPR.



### 9.7.12 Potential Effects on South East Queensland/Brisbane/Queensland Business Community

The positive benefits to the regional economy of Brisbane and South East Queensland of the NPR are detailed in Chapter A2. The negative impacts of the NPR not proceeding are also detailed. Brisbane Airport facilitates economic activity and the performance of other industries in the region. The Airport plays a role in domestic and international trade and tourism, influences business investment and location decisions and positively affects productivity. The NPR will assist the airport perform these functions.

Local businesses and their workforce includes:

- Airside and Airport related businesses;
- Airport workers and Airport related workers;
- Airlines;
- Peak business bodies;
- Exporters and importers (primary producers, manufacturers, major retailers); and
- Businesses in the surrounding communities.

The positive economic benefits identified above will also accrue to these groups.

There will be no change in local business activity unrelated to airport activities with the NPR. The ability of local business to supply products (and thus generate income) will not be compromised by the construction or operation of the NPR.

Around 10,000 people are employed at Brisbane Airport, and a larger number of indirect jobs are reliant upon it. The NPR will result in the temporary creation of construction related employment of 2,700 positions at 2009 (the peak of the increase).

### 9.7.13 Potential Effects On-airport Users

The potential impact on-airport users is considered in Chapter A2. One of the beneficiaries of the NPR, Airport users, will benefit from improved travel options, less delays and competitive fares.

## 9.8 Mitigation Measures

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Mitigation measures, including the continuation of ongoing community liaison and communication mechanisms, are detailed in the EMF in Chapter B14.

## 9.9 Residual Effects

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The social impacts of the construction and operation of the NPR as a facility, excluding the aircraft operations element, will be relatively small due in part to the size of Airport site.

Residual impacts relevant to amenity issues such as construction noise are dealt with in specific Chapters. The recreational experience of parts of Kedron Brook (used for boating, fishing and walking/cycling) and the Nudgee Golf Course will be somewhat affected during construction, primarily by prominent views of stockpiles detracting from what is currently a vegetated area with a 'green' experience. However, these are unavoidable impacts if the work is to be undertaken.

The benefits of the NPR to the economy of Brisbane and South East Queensland will be substantial. The potential impacts of the NPR not proceeding are also substantial.

## 9.10 Assessment Summary Matrix

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The impacts summarised in the following matrix are those that have been assessed in this Chapter. Refer to individual assessments in other Chapters mentioned in this section to see relevant assessment summary matrices.

**Table 9.2:** Significance Criteria: SIA.

Impact Name	Description of Impact		Description of Mitigation Measures	Description of Residual Impact	
	Description in Words	Significance Criteria		Description in Words	Significance Criteria
Potential effects on amenity, lifestyle and everyday activities.	Adverse amenity impact will be occasionally experienced at the closest residential locations due to general night construction noise.	Minor Adverse to Negligible.	Limited plant operating and best practice noise management.	These are unavoidable impacts if work is to be undertaken.	Negligible -ve, T, ST, D
Potential effects on recreational activities.	The recreational experience of parts of Kedron Brook (used for boating, fishing and walking/cycling) and the Nudgee Golf Course will be somewhat affected during construction, primarily by prominent views of stockpiles detracting from what is currently a vegetated area with a 'green' experience.	Negligible.	These are unavoidable impacts if the work is to be undertaken.	Refer Description of Impact column.	Negligible
Potential effects on South East Queensland, Brisbane and Queensland community.	Brisbane Airport facilitates economic activity and the performance of other industries in the region. The airport plays a role in domestic and international trade and tourism, influences business investment and location decisions and positively affects productivity. The NPR will assist the airport perform these functions.	High Beneficial.	Not Applicable.	Refer Description of Impact column.	High +ve, I, P, LT.

**Key to Abbreviations**

- severe, major, moderate, minor, negligible
- +ve or -ve (positive or negative)
- D, I, C, In (direct, indirect, cumulative, interactive)
- P, R (permanent, reversible)
- ST, MT, LT (short term, medium term, long term)