

Initial Advice Statement



Dedicated to a better Brisbane



**Queensland
Government**

Airport Link

Detailed Feasibility Study

INITIAL ADVICE STATEMENT

- October 2005

Major Infrastructure Projects Office
Brisbane City Council
Level 2, 171 George Street
Brisbane QLD 4000
Phone: 07 3403 7330
Fax: 07 3403 7333

Contents

Executive Summary	1
1. Introduction	4
1.1 Background	4
1.2 Need for the Project	4
1.3 Proponents	5
1.4 Purpose of Initial Advice Statement	5
2. Project Information	8
2.1 Location	8
2.2 Studies to date	8
2.3 Project Details	9
2.3.1 Corridor	9
2.3.2 Network Connections	9
2.3.3 Ventilation	9
2.3.4 Other Works	10
2.3.5 Northern Busway	10
3. Level of Investment	11
3.1 Project Cost and Timing	11
3.2 Financial Issues	11
4. Planning and Policy Framework	12
4.1 The Need for a Transport Strategy	12
4.2 Strategic Planning Framework	13
4.3 Strategic Significance of the Project	16
5. Complexity of Government Requirements	18
5.1 Planning Approvals Framework	18
5.1.1 Introduction	18
5.1.2 State Development and Public Works Organisation Act	18
5.1.3 The Integrated Planning Act	19
5.1.4 Development and Other Approvals	19
5.1.5 Commonwealth Requirements	20
5.2 Agency consultation	20
6. Effects on Relevant Infrastructure	22
6.1 Transport Infrastructure	22
6.1.1 Road Network	22
6.1.2 Rail Network	22
6.2 Public Utility Services	22
6.2.1 Water Supply and Drainage	22

6.2.2	Energy Usage	23
6.2.3	Telecommunications	23
7.	Potential Environmental Effects	24
7.1	Land Use, Land Acquisition and Urban Renewal	24
7.1.1	Direct changes in use and acquisition	24
7.1.2	Local Planning	25
7.1.3	Urban Renewal	26
7.2	Urban Design, Landscape and Visual Effects	26
7.3	Geology and Soils	27
7.4	Hydrology and Water Quality	27
7.5	Natural Environment	28
7.6	Air Quality	28
7.6.1	Construction	28
7.6.2	Operation	28
7.7	Noise and Vibration	29
7.8	Cultural Heritage	29
7.8.1	Non Indigenous	29
7.8.2	Indigenous	30
7.9	Socio-economic Effects	30
7.10	Waste Management	31
8.	Employment Opportunities	32
9.	Consultation	33
10.	References	34

Executive Summary

The Queensland Government and Brisbane City Council recognise that, along with managing travel demand, further investment in the transport system is required to ensure the continued prosperity of Brisbane and South East Queensland. A key part of the investment strategy is to continue to work towards a safer and more efficient road network.

Proposed new infrastructure (outlined in the *Transport Plan for Brisbane 2002-2016* and in *TransApex 2005*) included the Airport Link which has been subject to a pre-feasibility assessment within the TransApex study process.

The TransApex study recommended that Airport link was a viable project and should proceed to feasibility stage. This involves the development of a concept design for the project and the undertaking of a comprehensive environmental impact assessment.

Proponents

The State of Queensland and Brisbane City Council are the proponents for the Airport Link project. They are seeking to have the environmental and assessment required for the project carried out under the *State Development and Public Works Organisation Act, 1971* (SDA). This Initial Advice Statement has been prepared to provide sufficient information to:

- Enable determination of the significance of the project to the State; and
- Provide information to enable advisory agencies and the public to have input into the Terms of Reference for the Environmental Impact Statement (EIS).

Project Information

The study corridor of the proposed Airport Link is shown in Figure 1.

This corridor covers the western route alignment option identified in the pre-feasibility studies. It is about 8km long and runs from the northern end of the proposed NSBT at Bowen Hills, passing beneath Lutwyche Road and the commercial precinct of Lutwyche and the residential areas of Woolloowin, Clayfield and Nundah to join the East-West Arterial and Sandgate Road at Toombul. A western connection would be provided from north of the Lutwyche commercial precinct to Gympie Road north of Kedron Brook. Opportunities for connection to Lutwyche Road are also being considered in the vicinity of Newmarket Road, as well as an east-west connection between Gympie Road / Stafford Road and the east-West Arterial / Sandgate Road.

The proposed infrastructure will be predominantly in tunnel from its southern end to just west of Sandgate Road.

Level of Investment

A very preliminary evaluation of costs has been undertaken and costing will be refined as the project is further developed. The current capital cost estimate of the project is \$1,200 million, but it will vary depending on the construction methodology and time as well as further development of the concept design.

Policy and Planning Framework and Strategic Significance of the Project

The Airport Link is part of an overall strategy to improve the efficiency of Brisbane's road network, consistent with established and accepted regional and citywide transport planning objectives. The project is recognised in the *South East Queensland Regional Plan* and *South East Queensland Infrastructure Plan*, as well as the *Transport Plan for Brisbane 2002 – 2016* and *TransApex 2005*, which are an outcome of the integrated local and regional transport planning processes which have been undertaken in recent years.

Complexity of Government Requirements

The detailed processes are outlined, demonstrating the range of local, State and Commonwealth requirements and approvals for the project. To ensure all requirements are met and addressed adequately, extensive agency consultation will be undertaken throughout the EIS preparation.

Effects on Relevant Infrastructure

Potential effects on road infrastructure include connections to the State road network, as well as changes in traffic volumes on other roads which would result from the construction of the proposal. Other infrastructure – services such as water supply, drainage, energy and telecommunications – may be affected by the proposal.

Potential Environmental Effects

The Airport Link will have substantial environmental, social and economic benefits at the regional, city and local scales, and a number of potentially adverse environmental and social impacts, especially at the local level, which will need to be carefully considered and mitigated against through considered design and management approaches. Benefits are expected to include:

- Improved network travel time and reduced traffic accidents and congestion, with associated social benefits;
- Increased road capacity which will be available for use to the advantage of buses (including the proposed Northern Busway) and high-occupancy vehicles, pedestrians and cyclists;
- Reduced noise levels and air quality impacts over significant areas, where the diversion of traffic from the existing road network will occur into the tunnel. This will result in a reduction in severance effects, amenity and access improvements, with associated economic (property values and urban renewal) benefits.

Employment Opportunities

The construction of the Airport Link will potentially be a major generator of employment both directly to those employed on the assessment, design, construction and on-going management of the infrastructure, and through the opportunities for the supply of materials and equipment to the project.

1. Introduction

1.1 Background

A key aspect of achieving sustainable growth in the South East Queensland region is the development of a safe, attractive and efficient transport system. Brisbane City Council and the Queensland Government have recognised the importance to the region of continuing the development of the transport system within the City. The *Transport Plan for Brisbane 2002-2016*¹, *TransApex*² and the *South East Queensland Regional Plan* (SEQRP) identify an inner orbital system to provide for a system of motorway-standard orbital (ring) roads that seeks to address the high-levels of congestion in Brisbane while at the same time enhancing accessibility. These plans also include initiatives for public transport as well as alternatives such as walking and cycling to support the desired urban form to accommodate the predicated additional people moving to South East Queensland (SEQ) over the next decade and beyond.

The Airport Link Project is identified as one of a number of strategic elements of major transport infrastructure that could be delivered and financed by the private sector to address deficiencies in the orbital road network of Brisbane.

Since the release of the *Transport Plan for Brisbane*, the Airport Link has featured within the *TransApex* policy of Council along with a wider set of transport infrastructure links (primarily tunnels) around the city in order to take traffic away from Brisbane's CBD and inner and middle suburbs.

1.2 Need for the Project

The *TransApex Prefeasibility Report* (March 2005) identified that the Airport Link's primary function would be to provide an alternative high-speed route to the CBD bypass network or beyond, for airport and northern suburbs traffic using the East West Arterial, Sandgate, Gympie and Lutwyche Roads.

Preliminary assessment also identified that Airport Link would:

- support the development of a significant bus facility along Lutwyche Road, such as the proposed Northern Busway; and
- facilitate potential Transport Oriented Developments (TODs).

¹ *Transport Plan for Brisbane 2002-2016*, Brisbane City Council, 2003

² *TransApex - Pre-feasibility Report*, Brisbane City Council, March 2005

The *South East Queensland Regional Plan 2005-2026*³ (SEQRP) and its supporting *Infrastructure Plan and Program* (SEQIPP) includes support for the full feasibility study for Airport Link in the first phase of the Infrastructure Plan. The plan identifies significant regional transport infrastructure projects⁴ that will be needed to support the desired urban form within a connected and accessible region. Within greater Brisbane, the plan recognises that managing traffic in Brisbane requires quality orbital road systems such as TransApex to cater for cross-city movements. It also suggests transit infrastructure actions including bus way networks and road network improvements to support the projected growth in freight transport.

Brisbane City Council and the Queensland Government recognise that, along with managing travel demand, further investment in the transport system is required to ensure the continued prosperity of Brisbane. A key part of the investment strategy is to continue to work towards a safer and more efficient road network. The North South Bypass Tunnel (NSBT) is currently proposed to be constructed by 2010 and will provide a bypass of the Central Business District between Woolloongabba and Bowen Hills and relieve Brisbane CBD peak hour congestion for north-south road travel. The Airport Link from the northern end of the NSBT would continue to contribute to the plan to cater for cross-city travel and promote free-flowing traffic throughout Brisbane, by directly connecting existing motorways and major arterial roads.

Following the NSBT project, Airport Link is considered to be the highest priority in the TransApex developments and the Queensland Government and Brisbane Council are proceeding to undertake a feasibility study for the project.

1.3 Proponents

The State of Queensland and Brisbane City Council are the proponents for the Airport Link project. The Queensland Government sees the proposal as having the potential to make a significant contribution to the transport needs of Brisbane and is providing financial and logistic support to the feasibility study. Brisbane Council and the Queensland Government are jointly preparing the feasibility study for Airport Link. The feasibility study will include the development of the business case in accordance with the Value for Money Framework, as well as the concept design and Environmental Impact Statement.

1.4 Purpose of Initial Advice Statement

The Queensland Government and Brisbane City Council are seeking to have the environmental assessment required for the project carried out under the *State Development and Public Works*

³ *South East Queensland Regional Plan 2005-2026*, Queensland Government, June 2005

⁴ *South East Queensland Infrastructure Plan and Program 2005-2026*, Queensland Government 2005

Organisation Act, 1971 (SDA). This Initial Advice Statement has been prepared to provide sufficient information to:

- Enable determination of the significance of the project to the State; and
- Enable advisory agencies and the public to have input into the Terms of Reference for the Environmental Impact Statement (EIS).

The SDA enables the Coordinator-General to declare certain developments to be “significant projects”, for which an EIS is required.

In making a declaration about a significant project, the Co-ordinator General must have regard to one of more of the following⁵:

- (a) *detailed information about the project given by the proponent in an initial advice statement;*
- (b) *relevant planning schemes or policy frameworks, including those of a relevant local government or of the State or the Commonwealth;*
- (c) *the project’s potential effect on relevant infrastructure;*
- (d) *the employment opportunities that will be provided by the project;*
- (e) *the potential environmental effects of the project;*
- (f) *the complexity of local, State and Commonwealth requirements for the project;*
- (g) *the level of investment necessary for the proponent to carry out the project;*
- (h) *the strategic significance of the project to the locality, region or the State.*

This report is the Initial Advice Statement (IAS) required of the proponent and addresses items listed as (a) to (h) above. If the project is declared to be “significant” under the Act, Section 29 of the SDA notes:

The Coordinator-General must—

- (a) *advise the proponent that an EIS is required for the project; and*
- (b) *publicly notify—*
 - (i) *that an EIS is required for the project; and*

⁵ *State Development & Public Works Organisation Act 1971, section 27*

- (ii) *where copies of the draft terms of reference may be obtained; and*
- (iii) *that comments on the draft terms of reference are invited.*

This IAS is intended to provide an overview of the existing environment of the area of influence of the proposal, and to identify the level of potential impacts that will be investigated in the EIS. An EIS is to be prepared as part of the approval process. The Terms of Reference (ToR) for the EIS will be developed, based on the outcomes of this report and the requirements of relevant agencies.

2. Project Information

2.1 Location

The preferred corridor of the proposed Airport Link is shown in Figure 1. The Airport Link Project is a predominantly underground toll road proposed between Brisbane's northern suburbs and the CBD bypass network. It is intended to link the ICB and NSBT at Bowen Hills to Gympie Road, Sandgate Road and the East-West Arterial.

2.2 Studies to date

Since 2000, Brisbane City Council has been active in developing and defining the North South Bypass Tunnel, as outlined in Council's Transport Plan. The NSBT which will provide twin road tunnels between the South-East Freeway / Ipswich Road at Wooloongabba and the ICB / Lutwyche Road in Bowen Hills. This link was recommended to proceed by the Coordinator-General in August 2005⁶ and is expected to be constructed by 2010.

In May 2004, the TransApex Prefeasibility Study was commissioned by Council. It represents Council's long-term plan to improve cross-city travel in Brisbane through the creation of a "motorway standard" ring road around the Brisbane CBD. The prefeasibility study for TransApex was completed in March 2005. It found that the Airport Link project was technically and financially viable and would:

- Help deliver a transport system that achieves integrated land use and sustainable transport outcomes;
- Improve access to Brisbane's middle and inner ring suburbs;
- Reduce traffic congestion on certain arterial roads;
- Assist in the efficient movement of cross-city traffic, leading to environmental and economic benefits for the community;
- Improve journey times;
- Benefit the freight industry by facilitating improved access to the airport, sea port and Australia Trade Coast;
- Complement Council's desired land use and economic outcomes by assisting inner-city urban renewal; and
- Supports Council's vision as outlined in *Living in Brisbane 2010*.

⁶ *Coordinator-General's Report on the Environmental Impact Statement for the proposed North-South Bypass Tunnel Project*, August 2005

Airport Link is one of the proposed TransApex projects. The prefeasibility report investigated two primary route corridor options for the Airport Link and found that both route corridors were technically feasible. The prefeasibility report, although describing the most recent work defining the project, did not provide the level of investigation and study of the proposal or its options and alternatives required for a comprehensive environmental impact assessment. This detailed feasibility phase of the project will revisit all earlier work, assess the corridor options and develop route alignment options, undertake route concept development of the alignment to the required level, consider feasible and relevant options, and undertake the environmental assessment of the preferred option.

2.3 Project Details

The project described below represents the output of the pre-feasibility report and the environmental analysis / engineering design work to develop a preferred route corridor. The project design within that corridor will be subject to change through more detailed design work and consideration of options as well as environmental assessment and community input.

2.3.1 Corridor

The preferred corridor is similar to the western option identified in the prefeasibility studies. It is about 8km long and runs from the northern end of the NSBT, passing beneath Lutwyche Road and the commercial precinct of Lutwyche and the residential areas of Woolloowin, Clayfield and Nundah. The corridor will be predominantly in tunnel from its southern end to just west of Sandgate Road.

2.3.2 Network Connections

The links to the surface connection with the NSBT and ICB at the southern end will cross Enoggera Creek near Horace Street and pass underground south of Federation Street. At the north-east connection surface works will be required to allow connections to the East-West Arterial and to Sandgate Road. A western connection would be provided from north of the Lutwyche commercial precinct to Gympie Road north of Kedron Brook. A possible Lutwyche Road connection will be investigated in the vicinity of Newmarket Road. Allowance will also be made in the concept design for a possible east west link to allow connection between Gympie Road / Stafford Road and the East-West Arterial / Sandgate Road.

2.3.3 Ventilation

Options for ventilation management of the tunnels and location of ventilation outlets and emergency smoke ducts will be considered during the EIS study. The choice of the ventilation outlet sites would be governed by engineering requirements, such as the choice of system, and the potential environmental and social impacts associated with their location.

2.3.4 Other Works

Works which are not part of the tunnel, but which form an important element in the project, need to be considered and assessed in the environmental impact statement. Of note would be surface works associated with construction, ramp connections to the existing road network, intersection and other improvements to the existing surface network, and reconfiguration of surface areas to provide for improved public transport, cycleways and community use areas.

Careful consideration is required of the means and location of construction spoil, as well as selection of and the impacts associated with spoil haulage from the construction sites to the spoil placement sites.

2.3.5 Northern Busway

TransLink is progressing the Northern Busway Project to improve the regional public transport network by upgrading the level of public transport service to the northern suburbs of Brisbane. The Northern Busway Project is intended to connect the Inner Northern Busway at the Royal Brisbane Hospital with high-occupancy vehicle lanes or dedicated bus lanes on Gympie Road at Kedron. The study corridor for the Northern Busway Project covers much of the study corridor for the Airport Link Project.

Consideration will be made in the concept design for integration with the concept design and construction schedule for proposed Northern Busway in order to achieve the following objectives:

- To inform TransLink about the potential impacts of the Airport Link project;
- To identify possible opportunities for integration with the Northern Busway Project;
- To address and minimise where possible the cumulative impacts of the Northern Busway and the Airport Link Projects in the inner northern suburbs; and
- To achieve a high level of co-ordination between the two projects regarding their planning and assessment.

The Northern Busway assessment is to be prepared at the same time as the Airport Link EIS and the process of consultation for the Northern Busway is proposed to be conducted at the same time as for the Airport Link EIS.

3. Level of Investment

3.1 Project Cost and Timing

A very preliminary evaluation of costs has been undertaken and costing will be refined as the project is further developed. The current capital cost estimate of the project is about \$1,200 million, but it will vary depending on the construction methodology and time as well as further development of the concept design.

The construction time will take up to 4 years, subject to construction methodology and engineering and environmental constraints. It is anticipated the project would be operational by 2012.

3.2 Financial Issues

The TransApex Prefeasibility Report was asked to consider issues associated with technical feasibility and affordability of the project. To this end, it considered the financial viability of TransApex and its components including the Airport Link on a whole of project life basis, the ability to service debt obligations, funding options and project risks.

A financial analysis model was developed, with assumptions amongst other things made on borrowing sources, project life, tolled traffic volumes and growth, toll rate per vehicle, operation and maintenance costs and debt financing. Scenarios modelled delivered positive, whole-of-life, net present values, and the report concluded that the project was financially viable. Separately, Airport link had a positive, net present value.

A “user pays” system was considered appropriate for Airport Link as it will contribute to construction costs, assist in the control of traffic demand and allow investors to recover financial outlays.

Concurrent with the development of the concept design and the environmental impact assessment, the Queensland Government and Council are preparing a business case which is developing a full financial analysis of the project and assisting the evaluation of the means by which the project can be delivered, including mechanisms to involve private investment in the project.

4. Planning and Policy Framework

4.1 The Need for a Transport Strategy

Brisbane is the centre of the fastest growing urban region in Australia, and increasing pressure is being placed on developing an integrated transport network catering for accessibility and mobility demands, whilst meeting economic, environmental and social goals.

Increasing transport congestion will have a major detrimental impact on both the economic growth and urban amenity of Brisbane and South-East Queensland and urgent action is required at a State, regional and local level. Failure to provide the necessary infrastructure to manage these adverse impacts, including public transport and roads, will result in additional cost to the community and a decline in environmental and economic values.

The future economic and social development of the South East Queensland region, and in particular the City of Brisbane, will rely on the provision of an efficient and effective transport network supported by travel demand management strategies addressing public transport, traffic management, parking and travel behaviour.

Analysis undertaken for Brisbane City Council demonstrated that if no new road, public transport or travel demand management initiatives were implemented, extreme and untenable congestion would exist throughout the Brisbane metropolitan area by 2016. The number of private vehicle kilometres travelled is projected to double, reducing traffic flow on almost all road corridors to Level of Service (LOS) E or worse⁷. The number of new traffic lanes required to accommodate this traffic growth will exceed the physical ability to accommodate them, and the government's capacity to fund them. A significant residual road program will be required to deal with congestion, even with major shifts in public transport use.

A balanced transport strategy including public transport projects and services, orbital road improvements/river crossings and road pricing measures is needed over the next 15 years to ensure that congestion does not exceed acceptable levels. A system of radial and ring or orbital capabilities is a solution to those deficiencies and to the problems caused by growing demands. Brisbane City's road and public transport network has distinct gaps that complicate the establishment of a logical ring road network. These gaps have a significant impact on public transport performance due to a reliance on buses that necessarily use road space.

⁷ LOS E occurs when traffic volumes are at or close to capacity, flow is unstable, and minor disturbances will cause a breakdown of traffic flow.

4.2 Strategic Planning Framework

Council plays the major role in the management of the Greater Brisbane road network including the delivery of the majority of the public transport system throughout the urban area. Council's role is complemented by the services and infrastructure provided by Queensland Transport and the Department of Main Roads, ensuring connectivity and service with the regional and wider state transport network.

Both State and Council policy for integrated land use and transport planning is contained within various planning studies and policy statements where desired outcomes at the highest level variously include:

- **Liveable communities** – a land use and transport system that improves and supports our urban environment with appropriate connectivity on suitable transport networks that are fit for purpose;
- **Safer communities** – a land use and transport form that supports the safety and security of users;
- **Sustainable communities** – a land use and transport form that values, conserves and supports the continuity and health of human and ecological processes; and
- **Economic communities** – a land use and transport system that supports economic prosperity and growth through the efficient and effective exchange of goods and services.

The policy basis for Council's transport planning is largely contained with *The Transport Plan for Brisbane 2002-2016*. This plan developed a set of coordinated actions and strategies aimed to achieve a range of transport outcomes for Brisbane to 2016, including:

- Providing quality public transport that everyone can use and which encourages people to leave their cars at home;
- Managing travel demand so that traffic growth is kept below population growth;
- Coordinating transport and land use to make it easy to travel across Brisbane using sustainable forms of travel;
- Providing a safe and efficient road network that minimises traffic impact on neighbourhoods and the environment;
- The delivery of goods on time to the right place so that freight moves efficiently and safely throughout Brisbane while protecting residential areas;
- Providing more clean and green transport providing a safe and attractive alternative to driving.

Airport Link is identified as one element of major infrastructure that could be delivered and financed by the private sector to address deficiencies in the orbital road network of Brisbane. As such Airport Link falls under the intended outcome identified in the Transport Plan for Brisbane as one element considered necessary to deliver a safe and efficient road network for Brisbane.

Equally, Airport Link is also considered relevant to assisting achieve the stated outcome to deliver goods on time with regard to the safe and efficient movement of freight while protecting residential areas.

Since the release of the Transport Plan for Brisbane, Airport Link has featured within the TransApex policy of Council as part of a wider set of transport infrastructure links (primarily tunnels) around the city in order to take traffic away from Brisbane's CBD and inner and middle suburbs. The TransApex Strategic Context Report⁸ identified key deficiencies in Brisbane's current road network structure to include a lack of strong and legible road connections catering for "cross-town" movements –connections which are commonly known as orbital or ring roads. Fundamentally, this type of road system would allow for cross-town traffic (traffic that does not have an origin or destination in the CBD) on higher-standard road connections. This would help remove through traffic from the current radial network of generally low-quality and informal routes in travelling through the CBD.

The TransApex Strategic Context Report also noted that if we were to only improve the current radial road network capacity, rather than improving specific cross-town links, we would risk making travel to the CBD via private vehicle more attractive.

The TransApex Prefeasibility Report identified that the Airport Link's primary function would be to provide an alternative high-speed route to the CBD bypass network or beyond, for airport and northern suburbs traffic using the East West Arterial, Sandgate, Gympie and Lutwyche roads.

Preliminary assessment also identified that Airport Link would:

- Support the development of a significant bus facility along Lutwyche Road, such as the proposed Northern Busway; and
- Facilitate potential Transport Oriented Developments (TODs).

In this regard Airport Link has important relationships to a number of the other strategic transport planning outcomes identified in the Transport Plan for Brisbane, notably:

- Assisting with the provision of a quality public transport system through opportunities for integration with the Northern Busway as well as supporting greater public transport opportunities through providing for surface road traffic relief;
- Coordinating transport and land use through facilitating TODs and providing key land use development opportunities.

The South East Queensland Regional Plan (SEQRP) and its supporting Infrastructure Plan and Program (SEQIPP) includes support for the full feasibility study for Airport Link in the first

⁸ *TransApex Strategic Context Report*, Brisbane City Council, February 2005

phase of the Infrastructure Plan. The SEQRP establishes a range of desired regional outcomes, principles and policies to guide the development of SEQ through to 2026. The SEQRP recognises the significant role Council has in transport in the region and provides in-principle support from the State as a partner in the detailed feasibility study of the Airport Link.

Relevant desired regional outcomes to be delivered through SEQRP and SEQIPP include:

- **Sustainability** – The region grows and changes in the most sustainable way; generating prosperity, maintaining and enhancing quality of life, and providing high levels of environmental protection;
- **Strong Communities** – Cohesive, inclusive and healthy communities with a strong sense of identity and place, and access to a full range of services and facilities that meet diverse community needs;
- **Urban Development** – A compact and sustainable urban pattern of well-planned communities, supported by a network of accessible and convenient centres close to residential areas, employment locations and transport. This outcome includes the theme of integrated land use and transport planning with the policy to facilitate appropriate forms of “transit oriented development”;
- **Economic Development** – A strong resilient and diversified economy – growing prosperity in the region by utilising its competitive advantages to deliver exports, investment and sustainable and accessible jobs;
- **Infrastructure** – Regional infrastructure and services are planned, coordinated and delivered in a timely manner to support existing and future settlement patterns and desired community outcomes. This outcome is supported by the Infrastructure Plan (SEQIPP) that includes within the Greater Brisbane area:
 - A transport infrastructure investment program for \$1,200M cost estimate for Airport Link within the Orbital Road Network theme (2.6), and
 - \$21million for Investigations to support the full feasibility and commencing the AL pending private sector interest (Orbital Road Network 2.6a).

The identified strategic transport needs for transport infrastructure investment in Greater Brisbane within the SEQIP are:

- Quality public transport connections between Principal Activity Centres;
- Better transport links to industrial and logistics centres, particularly to the Australia Trade coast; and
- Orbital road networks that link centres outside the inner city, reduce traffic congestion and provide a sound basis for future traffic management.
- **Integrated Transport** – A connected and accessible region based on an integrated transport system that supports more compact urban growth and efficient travel; connects people,

places, goods and services; and promotes public transport use, walking and cycling. This includes consideration of quality orbital road networks such as the Airport Link to support connectivity of urban centres and to bypass major road congestion points. This will be accompanied by enhanced public transport services and better walking and cycling facilities on existing routes.

4.3 Strategic Significance of the Project

The Airport Link Project is an important component of a future transport system for Brisbane and will provide a bypass system for cross-city traffic. The Airport Link will also:

- Allow for greater use of public transport to the CBD;
- Support centres and provide the opportunity to enhance cross-city public transport;
- Support alternative transport modes (cycling, walking) by providing reduced traffic demands on the local street system and provide opportunities on key links to provide for bus or HOV lanes or urban streetscape improvements;
- Improve freight efficiency; and
- Support desired land use and economic outcomes that can assist in urban regeneration.

The Airport Link is a significant part of an overall strategy to improve the efficiency of Brisbane's road network, consistent with established and accepted regional and city-wide transport planning objectives.

The project is one part of the implementation of the Transport Plan for Brisbane, the TransApex policy of Council and the detailed feasibility of the project is supported by the SEQRP and its associated Infrastructure Plan and Program. These are public policies and statutory instruments of both the Brisbane City Council and the Queensland Government with the aim of providing sustainable transport outcomes for South East Queensland and, in particular, the Greater Brisbane area.

Project objectives for the Airport Link have been developed from the identified State and Council outcomes for regional planning, infrastructure provision, and integrated land use and transport planning for South East Queensland and in the Greater Brisbane area. The objectives are:

1) Improve Transport Sustainability in Brisbane's inner northern suburbs

a) Road transport

- Ease traffic congestion on key routes
- Improve accessibility across and within Brisbane's northern suburbs
- Improve journey time reliability for road users including freight
- Contribute to an appropriate road hierarchy
- Enhance the connection between communities
- Improve road safety
- Improve road network legibility/navigability.

b) Public transport pedestrians and cycles

- Improve opportunities and travel times for public transport eg. Northern Busway
- Enhance the pedestrian and cycle network
- Accommodate transit oriented development
- Facilitate a better balance between public transport and private vehicles use.

2) Enhance liveability of our communities

- Minimise community impact of project footprint
- Reduce through traffic and heavy vehicles through suburban streets
- Facilitate planning and urban regeneration
- Seek to improve urban amenity and community safety.

3) Enhance the Environment

- Seek to improve local air quality along the corridor
- Seek to improve water quality
- Reduce road traffic noise along the corridor
- Protect significant flora and fauna
- Protect cultural heritage
- Mitigate and manage environmental construction impacts.

4) Support Economic Development

- Meet the access needs of tourism, trade and industry
- Enhance access to and competitiveness of major activity centres
- Create new employment and improved land use opportunities.

5) Provide an Affordable Solution

- Deliver an affordable and cost effective solution (with appropriate toll levels)
- Establish project priority.

5. Complexity of Government Requirements

5.1 Planning Approvals Framework

5.1.1 Introduction

The Airport Link is a major project for the City in terms of its capital cost, its beneficial impacts on the City's road and transport networks and its benefits to inner city communities, as well as the City's air quality, levels of accessibility and livability.

Queensland Government and Brisbane City Council wish to proceed with the project under the *State Development and Public Works Organisation Act 1971* (SDA), and as such are seeking declaration as a 'significant project' under the SDA. Certain development approvals may also be required under the *Integrated Planning Act, 1997* (IPA).

The EIS process under the SDA will involve an extensive process of consultation, integrated with the technical environmental studies and concept development. The consultation process will include the statutory notifications for the draft Terms of Reference for the EIS and the exhibition of the EIS.

5.1.2 State Development and Public Works Organisation Act

The Queensland Government and Brisbane City Council are seeking declaration of the Airport Link Project as a 'significant project' under the *State Development and Public Works Organisation Act 1971* (SDA). This Act sets out the requirements for environmental assessment and public review of an Environmental Impact Statement (EIS) and associated process specified in the Act. It also outlines the relationship of the environmental impact assessment process with the *Integrated Planning Act, 1997* (IPA).

Matters to be addressed in an EIS prepared under the SDA are prescribed in Schedule 1 of the *State Development and Public Works Organisation Regulation 1999*.

The EIS process includes provision for:

- The public notification and development of the Terms of Reference (ToR) for the EIS;
- Public notification of the EIS which must address the finalised ToR;
- The receipt and review of public submissions on the EIS; and
- The evaluation of the EIS and public submissions and preparation of an Evaluation Report by the Coordinator-General, (the Coordinator-General's Report).

5.1.3 The Integrated Planning Act

The *Integrated Planning Act 1997* (IPA) seeks to achieve ecological sustainability through:

- the coordination and integration of planning at the local, regional and State levels;
- managing the process by which development occurs; and
- managing the effects of development on the environment.

While the impact assessment process under the integrated development assessment system (IDAS) closely resembles an “EIS styled” process, there is currently no trigger for a formal EIS process under the IPA for major projects such as the proposed Airport Link. The SDA explicitly provides for an environmental impact assessment process and is considered to be more appropriate to this significant project.

5.1.4 Development and Other Approvals

Those aspects of the Airport Link Project which require an application for development approval will be reviewed during the EIS process. Assessable development aspects of the project will be defined by both by the relevant planning scheme (Brisbane City Plan, 2000) and the IPA (Schedule 8).

The Airport Link project may be delivered as:

- A road which is not assessable under City Plan, although other development approvals necessary under IPA must still be obtained; or
- If required, community infrastructure through a designation under IPA such that development within the scope of “community infrastructure” would be exempt from assessment under City Plan.

With either of these approaches, conditions recommended by the Coordinator General are imposed to the extent that they are relevant, as concurrence agency conditions on approvals sought under the IPA.

With either of these approaches conditions recommended by the Coordinator-General would be imposed to the extent they are relevant, as concurrence agency conditions on approvals sought under the IPA. The project may require the following approvals under the IPA:

- Development approval for tidal works – assessed by the EPA under the *Coastal Protection and Management Act, 1995*;
- Development approval for material change of use involving land included on the Environmental management Register or the Contaminated land register – assessed by the EPA under the *Environmental Protection Act, 1994*;

- Development approval for material change of use involving an environmentally relevant activity – assessed by the EPA and the *Environmental Protection Act, 1994*;
- Development approval for aspects of the development on a registered place – assessed by the Queensland Heritage Council under the *Queensland Heritage Act, 1992*;
- Development approval for operational works being the removal, destruction or damage of a marine plant – assessed by DPI (Fisheries) under the *Fisheries Act, 1994*;
- Development approval for building works for the construction of buildings associated with the project, including work sheds and maintenance buildings.

In addition, development approvals will be required to be made and approved prior to the commencement of works where such development is assessable. These may include operational works for filling and excavation for spoil placement that materially affects premises of their use.

5.1.5 Commonwealth Requirements

The project will be referred to the Commonwealth Department of Environment and Heritage for consideration as a controlled action under the *Environment Protection and Biodiversity Conservation Act, 1999*. Approval is required from the Commonwealth Minister for Environment if the activity is likely to have a significant impact on a matter of national environmental significance.

The potential EPBC triggers include Ramsar listed wetlands, nationally listed threatened species and listed migratory species primarily in relation to proposed spoil placement areas associated with the Australia TradeCoast and Port of Brisbane Areas adjacent to Moreton Bay.

5.2 Agency consultation

Given the range of potential approvals, there may be a complex range of local, State and Commonwealth requirements for the project. To ensure all requirements are met and addressed adequately, extensive agency consultation will be undertaken throughout the EIS preparation. In relation to the EIS, the following referral agencies and advisory groups will be contacted during the preparation of the EIS (in addition to local groups, residents and community associations):

Local Government

- Brisbane City Council (internal branches including City Planning, Brisbane Transport).

Commonwealth Government

- Department of Transport and Regional Services;
- Department of Environment and Heritage.

State Government

- Department of the Premier and Cabinet (including the Office of the Coordinator General);
- Environmental Protection Agency;
- Department of Communities;
- Department of Education and the Arts;
- Queensland Health;
- Queensland Treasury;
- Department of Natural Resources and Mines;
- Department of Local Government, Planning, Sport and Recreation;
- Department of Main Roads;
- Department of State Development, Trade and Innovation;
- Queensland Police;
- Queensland Transport (including Translink);
- Department of Public Works;
- Department of Primary Industries and Fisheries;
- Department of Housing;
- Department of Emergency Services (including Queensland Ambulance Service, Fire and Rescue Service).

Other Stakeholders

These include but are not limited to:

- Queensland Rail;
- Electricity authorities (including Energex), gas supply agencies, communication service agencies;
- Public transport user groups;
- Indigenous / Native Title representatives;
- Environmental groups, including Queensland Conservation Council;
- Bicycle Queensland;
- Road user groups, including Taxi Council of Queensland, RACQ, Queensland Trucking Association;
- Local business groups and Chambers of Commerce; and
- Other community groups such as School P&Cs, Windsor and District Historical Society.

6. Effects on Relevant Infrastructure

6.1 Transport Infrastructure

6.1.1 Road Network

Traffic modelling undertaken to date suggest that there will continue to be traffic growth on the road network, regardless of whether the Airport Link is built or not and there will be diversions of vehicles on the network to provide for changes in users travel requirements once the link is operational. It is likely that the project will result in major reductions in traffic on key roads, although other streets may have some increase in traffic volume.

The construction phase of the project has potential to provide additional traffic, including heavy vehicles, on the regional and local road network. Of particular note would be the use of heavy vehicles to remove spoil from the site to an appropriate emplacement or storage location. Other traffic movements during construction would be related to the delivery of construction equipment and materials to the site.

6.1.2 Rail Network

The proximity of the rail network to parts of the proposed development allows consideration to the transport of equipment and spoil by rail. Options for this will be considered during the EIS.

At this stage of concept development it is unlikely the rail network would be affected directly by the construction of the Airport Link, although the capacity of the rail network to carry spoil and other materials will need to be assessed if that transport option is considered.

6.2 Public Utility Services

6.2.1 Water Supply and Drainage

Water will be required to assist compaction of road base and embankments, for dust suppression during construction activities and for amenity use at construction compounds. It is likely that water will be drawn from Brisbane Water supplies and disposed off to the storm water system (following appropriate treatment).

Water supply, sewer and stormwater pipes may need to be relocated during construction.

The provision of the fire emergency system in the operating tunnel may require augmentation of the water supply system in the area.

6.2.2 Energy Usage

Energy usage during construction would be of some significance if equipment such as tunnel boring machines (TBMs) are used. Similarly, the operation of ventilation systems in tunnels of this size can require significant energy usage. The EIS will need to assess the extent to which the energy requirements can be met by energy suppliers.

Transmission lines and underground cables and gas mains may be considered for relocation throughout the project.

6.2.3 Telecommunications

It is possible that Telstra and other agencies may be required to relocate lines. Further work will be undertaken during concept development to assess the extent of this.

7. Potential Environmental Effects

For the purposes of this chapter, environmental effects (listed in SDA Section 27) include environmental, social and economic effects, both positive and negative. The Airport Link would have substantial environmental, social and economic benefits at the regional, city and local scales, and a number of potentially adverse environmental and social impacts, especially at the local level, which will need to be carefully considered and mitigated against through considered design and management approaches. Benefits are expected to include:

- Improved network travel time and reduced traffic accidents and congestion, with associated social benefits;
- Increased road capacity which will be converted to the advantage of buses, eg the proposed Northern Busway and high-occupancy vehicles, pedestrians and cyclists;
- Reduced noise levels and air quality impacts over significant areas, where the diversion of traffic from the existing road network will occur into the tunnel. This will result in a reduction in severance effects, amenity and access improvements, with associated economic (property values and urban renewal) benefits.

The facility will also be constructed to appropriate standards, with particular attention to road spillage and road pollution run-off. These improved measures are not generally features of existing road infrastructure.

The TransApex prefeasibility study and subsequent preliminary environmental work has provided information on potential environmental issues that may arise. Based on this material and a general understanding of potential environmental issues, major areas of environmental interest were examined. These preliminary views are provided below to indicate the possible areas of environmental benefit, environmental concern, and the risks that may need to be managed.

The general area of the proposed works is shown in Figure 1.

7.1 Land Use, Land Acquisition and Urban Renewal

7.1.1 Direct changes in use and acquisition

As the project is primarily in tunnel, land use impacts are likely to be centred on portal areas and changes in land use that will occur at these key locations along the route. This will involve the conversion of usage along the existing road network adjacent to the proposed portals and ventilation outlets, whereby current usage (residential, commercial, industry) will be replaced by road facilities.

As well as the need to acquire some surface land, land acquisition in strata will be needed where the tunnel will pass under a variety of buildings and lands in private ownership. The process of

acquisition and change of title on the surface and in strata (tunnel) may be undertaken through the provisions of the *Land Acquisition Act, 1967*.

The issue of residual land and its use, consolidation or disposal will also be considered throughout the project.

7.1.2 Local Planning

Parts of the project may be subject to the provisions of *Brisbane City Plan 2000* and associated Local Plans. The zoning and land uses for the proposed alignment and nearby areas are:

- Low Medium Density Residential along both sides of Lutwyche Road and the east side of the rail line at Clayfield (in transition from detached dwellings to more intense residential development);
- Character Housing in Windsor and west of Albion;
- Low density residential in Woolloowin, west of Lutwyche Road and a narrow spine from Windsor East to west of Albion;
- Light and General industry from Albion to Bowen Hills;
- Commercial centres at Lutwyche, Albion, Bowen Hills, Gympie Road, intersection of Albion and Lutwyche Roads, intersection of Lutwyche Road and the Ferny Grove Rail Line and Eagle Junction; and
- Commercial uses and parkland dispersed throughout.

Local area plans overlay the zones to provide direction for future development. There are five local plans that overlap the proposed development area, namely:

- Grange District Local Plan;
- Clayfield-Woolloowin District local Plan;
- Bowen Hills Local Plan;
- Nundah District Local Plan;
- Toombul- Nundah Major Centre Local Plan.

These have been prepared in consultation with the local community and government stakeholders and provide an integrated plan for each locality. These plans do not have any reference to the proposed Airport Link. Consistent with the requirements of the SEQRP, Council is reviewing its planning scheme to ensure compliance with the regional plan. Council is also preparing master plans to guide development in Albion and Bowen Hills.

The Queensland Government, through the Office of Urban Management, has commissioned the Inner Northern regeneration Precinct (INRP) study to support the integration of land use and transport in relation to the Airport Link and Northern Busway projects, consistent with the intentions of the SEQRP. The SEQRP promotes the development of transit-oriented development

(TOD) as part of achieving a sustainable urban form and integrating land use and transport planning. Albion and Bowen Hills are identified as locations being considered as a centre point for a TOD.

Accordingly, the EIS will need to assess the consequences of the proposed works on the on-going planning process, either directly where land use changes may result from project construction or indirectly where land use changes may be induced through improved amenity and economic development.

7.1.3 Urban Renewal

Locations where traffic volumes will reduce, resulting in reduced congestion and improved amenity for residents and/or businesses, will be considered in the context of the community and economic impacts on neighbourhoods and businesses, and the general opportunities for urban renewal.

Other areas where traffic flows are likely to increase (near the portals at Bowen Hills, East West Arterial, Gympie Road) will also require careful consideration to ensure the urban environment does not deteriorate and that enduring and acceptable outcomes are achieved for the local communities.

The EIS process will need to engage with local communities (residents, businesses, other interest groups) to identify matters of local value or significance, and matters of concern now and upon commencement of tunnel operations. Of note there are a number of major landowners and interest groups in the corridor of interest whose needs and aspirations ought to be considered in the concept design and impact assessment stages of the process.

7.2 Urban Design, Landscape and Visual Effects

The proposed corridor has been assessed against the criteria of urban precincts (supporting opportunities for urban regeneration), connections (preserve and enhance movement patterns), landscape values (preserve and enhance the integrity of existing open space), urban character (preserves and enhances existing urban character).

The preliminary results suggest the opportunity for high level support for urban regeneration and centres, low confluence with existing multi-modal transport and sensitivity to design responses on impacting areas, potentially high impact on visual values and sensitivity to design responses on ridgelines, potentially high impact on open space and landscape features, relatively low impacts on low density residential but moderate impacts on character in transition areas.

Landscape mitigation measures (including appropriate urban design) will be required where the proposed works will have an impact on the existing surface features. The direct impact areas such as connections to the existing road network will require landscape works to minimise the visual

impacts of the project on the surrounding areas. A detailed assessment will be undertaken to determine the nature and extent of such impacts on residents and surrounding areas, and how those potential impacts can be made into a benefit. Similarly, ventilation outlets will be considered in their urban context to ensure their integration into the built urban form.

7.3 Geology and Soils

Quaternary Alluvium is likely to be encountered in transition structures and in cut and cover sections near Breakfast Creek, Kedron Brook and Schulz Canal. Sandstones, shales and mudstones of the Aspley and Tingalpa Formations are likely to be encountered in transition structures, cut and cover sections and short lengths of driven tunnel between Gympie Road and Sandgate Road. These formations are deeply weathered with low strength rocks and include seams of the Upper Ipswich Coal Measures. Excavation support and groundwater ingress would need to be addressed. The older and much harder Neranleigh Fernvale Beds and the Brisbane Tuff are likely to be encountered in the driven tunnel section in the vicinity of Lutwyche Road and areas around some of the potential ramp structures.

Some surface soils are likely to be classed as erodable. Acid sulfate soils (ASS) and potential acid sulfate soils (PASS) are expected in the project area associated with the low lying alluviums and particularly the areas along Schulz Canal at Toombul. The connection with the NSBT at Breakfast Creek runs through areas with low to moderate ASS potential. Assessment will be undertaken along the length of the route and, in particular, in areas where disturbance may occur and management measures for handling ASS identified.

7.4 Hydrology and Water Quality

Enoggera Creek and Breakfast Creek, tributaries of the Brisbane River, are located near the southern area of the project. Kedron Brook and Schulz Canal are the main drainage areas at the northern end.

Water quality in these waterways may be affected by the works. There is potential for water quality to be affected through erosion of surface disturbed areas and sedimentation entering the stormwater system and the nearby waterways. The management of potential exposure of acid sulphate soils will be considered for any surface works near Enoggera Creek and Schulz Canal.

There is also the likelihood of encountering groundwater when excavating the tunnel, with any groundwater disposal during construction and operation of the tunnel requiring careful management. Alteration of the groundwater flow could occur, and further investigation will be undertaken to determine groundwater flows, volumes and quality. A detailed assessment will be required for options for disposal of groundwater from the tunnel. The potential for flooding will need to be considered, and the design of the tunnel will need to address the potential for flood inundation and avoid detrimental effects on the existing flood regime for the nearby waterways.

7.5 Natural Environment

The natural environment in the vicinity of the project is limited in its extent. Land along the banks of Kedron Brook contains vegetation that is protected under the Natural Assets Local Law, 2003 and there is some estuarine marine vegetation along the banks of Enoggera Creek and Schulz canal. Detailed assessment of flora and fauna along the waterways, including possible mitigation measures, will be undertaken.

There is a small area of bushland, south of Kalinga Park between Lewis Street and Jackson Street, which is a designated waterway corridor and an Environmental Protection Area under the Brisbane City Plan.

Several Vegetation Protection Orders (VPOs) are in effect in the vicinity of the project. These trees are valued for amenity and for cultural reasons and the potential impacts of the proposal, including groundwater draw-down, will be assessed.

7.6 Air Quality

7.6.1 Construction

Air quality issues associated with construction could include dust generation due to excavation and wind erosion activities and exhaust emissions from increased traffic and machinery use on site.

Some soil types in the area have been identified as erodable and this increases the potential for dust generation, especially during dry weather. Potential impacts on residential properties near the project sites will be assessed using dust gauging and dispersion prediction techniques, and negative impacts identified would need to be mitigated against by appropriate site management practices and dust monitoring programs.

Emissions from construction machinery can be managed by appropriate maintenance and control of vehicle exhausts.

7.6.2 Operation

Vehicle emissions from the tunnel will have air quality implications in terms of air quality in the tunnel and emissions from ventilation outlets and the tunnel portals. Ventilation of the tunnel, using designed ventilation outlets and/or the tunnel portals is necessary to ensure that air quality levels in the tunnel do not affect vehicle occupants and maintenance personnel.

Areas around entry and exit portals may experience increases in surface traffic, with consequent impacts on local air quality. It is not expected there would be emissions from the tunnels at the portals due to the use of separate ventilation outlets. Nevertheless, careful assessment of impacts on sensitive land uses around the portals (including Windsor Primary School, Woolloowin Primary School and Kedron High School) will be considered.

Potential effects of ventilation outlets on the surrounding community will be assessed using dispersion modelling and assessment of concentrations of potential pollutants and background levels against established criteria for those pollutants. Changes in air quality on the surface road network resulting from increased or reduced traffic volumes will be assessed. In areas where surface traffic volumes are significantly reduced, it is expected that air quality would be improved.

7.7 Noise and Vibration

There are several noise-sensitive areas along the site, including the residential areas near portal locations and feeder roads, schools such as Windsor Primary School, Woolloowin Primary School and Kedron High School, along with a range of community facilities. Due to the type of construction equipment generally used on such a project, high noise levels are possible during construction. A detailed assessment of construction noise impacts will be undertaken and consultation with these and other potentially affected institutions and with the residents involved will be undertaken during the study, to inform them of likely construction noise issues.

There is limited risk of long-term noise impact from use of the proposed route since most of it is underground. Use of the tunnel by vehicles may also reduce the use of surrounding roads, and thus lead to reduced noise levels in local areas and along secondary roads through Woolloowin and Eagle Junction and main roads such as Sandgate Road and Lutwyche Road, with a consequential social benefit. A detailed noise assessment will be undertaken to determine impacts and to provide measures to mitigate noise, if required.

There is potential for vibrational impacts from the construction activities, in particular the tunnelling activities. Impacts on sensitive equipment and the stability of heritage sites must also be considered. A detailed assessment will be undertaken to determine the impacts and how to manage any potentially negative effects.

7.8 Cultural Heritage

7.8.1 Non Indigenous

There are two types of sites on Council's Heritage list: those listed on the Queensland Heritage Register of the *Queensland Heritage Act 1992* and those listed for significance to Brisbane City. A major constraint in the corridor is the Windsor precinct and especially the Windsor War Memorial Park. The proposal may pass by or beneath a number of listed heritage sites and the potential exists for direct or indirect (vibration) effects to occur during construction. A detailed assessment of the potential impacts of the proposed works on heritage listed structures or other buildings of merit will be undertaken during the EIS.

7.8.2 Indigenous

Notwithstanding the changes to traditional cultural systems since the arrival of Europeans in the Brisbane area, the existing evidence shows that the area around the project corridor represented a rich resource area for local Aboriginal groups that included a large variety of resource environments. Evidence also suggests that a number of important places of ceremonial significance existed in proximity to the project corridor.

An assessment of the Aboriginal cultural heritage values of the project corridor will be undertaken to determine if there are any sites of indigenous significance within the project area and an indigenous cultural heritage survey be undertaken along the length of the route.

A detailed consultation process will be undertaken with the Aboriginal parties for the project corridor, the Turrbal and Jagera Registered Native Title Claimants, as part of the EIS.

7.9 Socio-economic Effects

The existing social conditions of the study area will be assessed during the EIS, although it is clear that the community is densely populated, culturally diverse and from a wide range of socioeconomic backgrounds.

As outlined at the beginning of this chapter there are many potentially positive social outcomes which may result from this project. These may include:

- Improved access to services and public transport;
- Improved amenity, especially in terms of air quality, noise, visual effects and urban renewal;
- Reduced severance;
- Employment opportunities and economic development.

There are also a number of potentially negative effects which may occur in the project area, during both construction and operation, and these may relate to:

- Land acquisition and potential displacement;
- Disruption of local access during construction;
- Effects on community structure and functioning, including severance;
- Effects on residential amenity;
- Effects on workplace amenity;
- Psychological effects; and
- Socioeconomic impacts.

A social impact assessment will be undertaken which will involve assessing social changes – effects of the proposal on the local community -which may result from the proposed works,

assessing the significance of those changes and identifying means of mitigating those potential impacts. The social costs in economic terms will also be evaluated, and the impacts of and opportunities for the project on local businesses and urban renewal will be considered.

7.10 Waste Management

There is the potential for a significant amount of waste to be generated and managed during both the construction and operational phases of the project. This would include construction and demolition waste. Strategies will be developed for maximising the recycling of as much waste as practicable, and appropriately disposing of the rest.

8. Employment Opportunities

The construction of the Airport Link will potentially be a major generator of employment both directly to those employed on the assessment, design, management and construction of the infrastructure, and through the opportunities for the supply of materials and equipment to the project.

The operational project will generate additional employment opportunities through the City of Brisbane, the South East Queensland region and in Queensland generally, through improved transport opportunities, improved connectivity, urban renewal, and multiplier effects from the economic activity generated by the project.

A detailed assessment of job creation, skills development and training opportunities will be included within the EIS.

9. Consultation

Initial community awareness of the Airport Link project was in the context of the TransApex Prefsability Report, which was released in March 2005. There was also some level of awareness of the project within the community through the extensive consultation program associated with the NSBT project. A comprehensive consultation program has begun and will continue throughout the study. It will inform both impact assessment and design/construction phases. Consultation is an essential element in the EIS program as it will assist in identifying issues and potential impacts, in disseminating information on the project to the community and stakeholders and in building relationships between Council, the community and Government agencies. It will assist community members to explore the benefits, impacts and issues affecting the project's ability to meet its objectives. This will be achieved by providing information about issues, impacts and benefits, facilitating community participation in scoping and reviewing study outputs and enabling community review of project documentation. This, in turn, will assist to ensure the project's design provides the best "fit" for the local needs.

The Airport Link Feasibility consultation program includes:

- The establishment of two community liaison groups and one local business liaison group. These will meet about 6 to 8 times to provide input to the project design and EIS. Two rounds of meetings have already occurred;
- Community information sessions in four locations, dealing separately with project design, impact assessment and the EIS. Three information sessions will be held in or near to the study corridor, while a fourth will be held at King George Square. The first round of community information sessions was held in early September 2005 to gather community values and issues for the corridor investigations. Staffed library displays were held at Chermide, Grange, Hamilton and Nundah libraries during the study, dealing with project design, impact assessment and the EIS. The first round of staffed library displays were held in late August and early September in relation to the corridor investigations;
- Briefings with community stakeholder groups near to proposed portals, to discuss local impacts of proposed construction works and project infrastructure;
- Provision of project newsletters, information sheets and access to a web site specific to this project. The first project newsletter was distributed in August 2005 to approximately 140,000 households and businesses in Brisbane's northern and inner southern suburbs;
- A 1800 project information line (1800 990 038) for ease of contact between the community and the study team;
- Public exhibition by the Coordinator General of the draft Terms of Reference for the EIS;
- Public exhibition by the Coordinator general of the EIS; and
- Continued contact with the community through later phases of the project.

10. References

Brisbane City Council (2001). *Strategic Transport Opportunities, Brisbane North South Bypass Tunnel, Prefeasibility Report*. Brisbane.

Brisbane City Council (2002). *Living in Brisbane 2010*, Brisbane

Brisbane City Council (2003). *Transport Plan for Brisbane 2002 – 2016*, Brisbane

Brisbane City Council (2005). *TransApex Pre-feasibility Report*, Brisbane

Dept of Local Government & Planning (2003). *SEQ 2021, A Sustainable Future, Issues & Options for Transport*, Discussion Paper, Brisbane.

Queensland Government (2005). *South East Queensland Regional Plan 2005-2026*. Brisbane

Queensland Government (2005). *South East Queensland Infrastructure Plan and Program 2005-2026*, Brisbane.

Queensland Transport (2001) *Transport 2007, An Action Plan for South East Queensland*, Brisbane