NORTHERN LINK

TECHNICAL REPORT NO.13

SOCIAL ENVIRONMENT

- August 2008

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Glossary of Terms

Term	Description
ABS	Australian Bureau of Statistics
ATC	Australia TradeCoast
BUZ	Bus Upgrade Zone
CBD	Central Business District
CCD	Census Collector District
CLEM7	Clem Jones Tunnel
CPTED	Crime Prevention Through Environmental Design
DEO	Desired Environmental Outcome
EIS	Environmental Impact Assessment
ERP	Estimated Residential Population
FOTC	Friends of Toowong Cemetery
GP	General Practice
ICB	Inner City Bypass
INB	Inner Northern Busway
KGUV	Kelvin Grove Urban Village
LGA	Local Government Area
LGMS	Local Growth Management Strategy
NESB	Non-English Speaking Background
NSBT	North-South Bypass Tunnel
P&C	Parents and Citizens
PCYC	Police Community Youth Clubs
PIFU	Planning Information and Forecasting Unit
QLD	Queensland
QUT	Queensland University of Technology
RBH	Royal Brisbane Hospital
RB&WH	Royal Brisbane and Women's Hospital
RCH	Royal Children's Hospital
REIQ	Real Estate Institute of Queensland
SAE	School of Audio Engineering
SIA	Social Impact Assessment
SEIFA	Socio-Economic Indices for Areas
SEQ	South East Queensland
SEQRP	South East Queensland Regional Plan
SLA	Statistical Local Area
SOWN	Save Our Waterways Now
ToR	Terms of Reference
WBTNI	Western Brisbane Transport Network Investigation

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1. Introduction

This report addresses Section 5.9 of the Terms of Reference (ToR), which require an assessment of Northern Link's potential benefits and impacts on the social environment of the study corridor and other areas that may be affected by the Project.

1.1 Background

Northern Link is proposed to connect the Western Freeway at Toowong to the Inner City Bypass (ICB) at Kelvin Grove, with connections to surface roads at Toowong and Kelvin Grove.

The Project has been proposed as part of an overall strategy to improve the efficiency of Brisbane's road network. The TransApex Prefeasibility Report (March 2005) identified that Northern Link's primary function would be to provide a bypass of the Brisbane Central Business District (CBD) for cross-city trips by linking the Western Freeway at Toowong with the ICB and Kelvin Grove Road. The Project would remove surface traffic from the CBD and the radial arterials, creating opportunities for enhanced public transport for the inner western suburbs and opportunities for urban regeneration within the study corridor.

The Project has potential for both city-wide and local benefits in the medium to longer term. However, the Project would be placed in a highly urbanised, inner city environment, which would bring immediate and longer term changes to the physical and social fabric of local neighbourhoods and communities in the inner western suburbs.

1.2 Study Corridor

This social impact assessment (SIA) applies to the study corridor in which daily living conditions or community well-being may be affected by construction or operation of the Project.

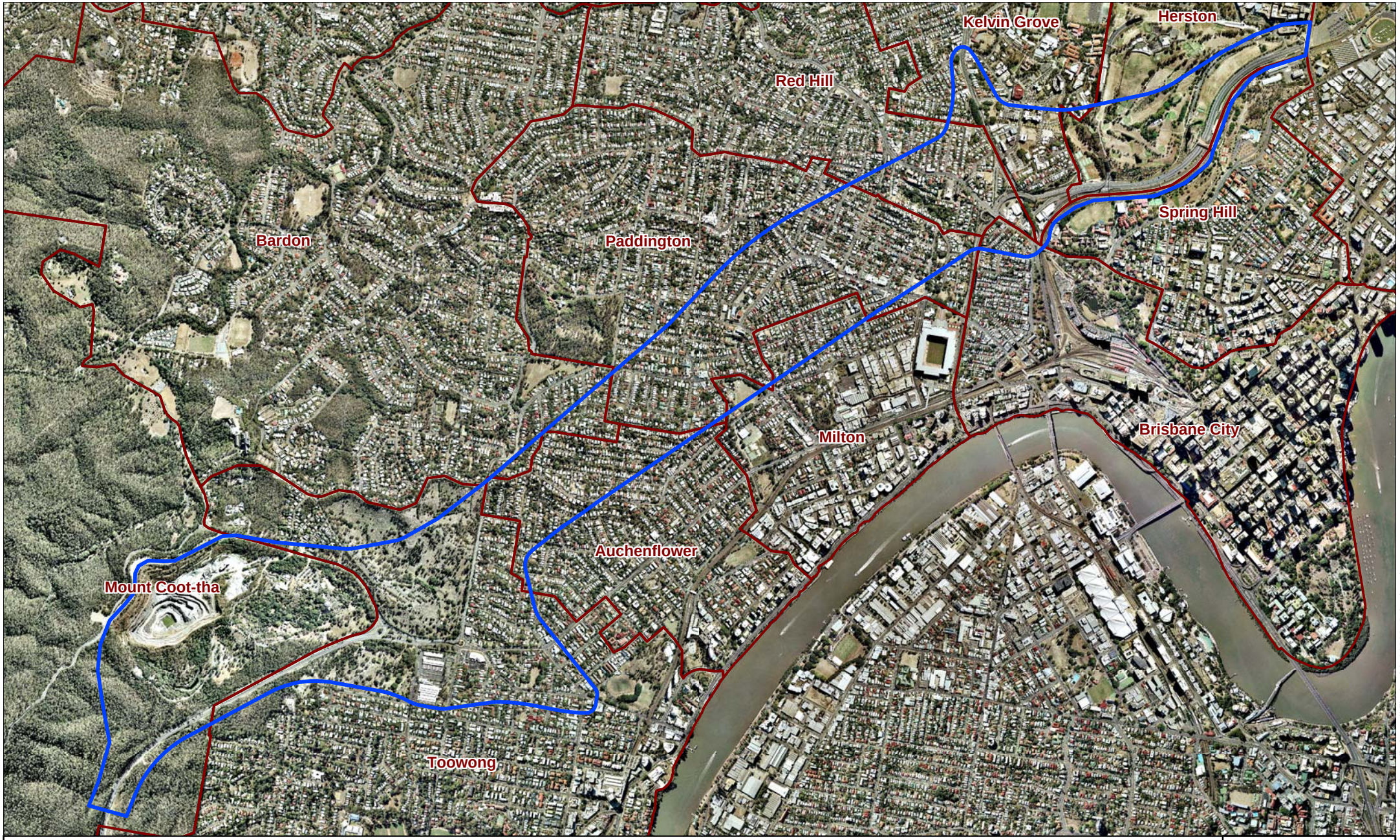
Figure 1-1 shows the study corridor for the SIA. The study corridor for this SIA incorporates a broader area than the study corridor identified in the ToR. It incorporates each of the suburbs through which the Northern Link study corridor would pass including:

- Toowong and Bardon, in the vicinity of the proposed western connection;
- Brisbane City, Herston, Spring Hill and Kelvin Grove in the vicinity of the proposed northern connection; and
- Paddington, Red Hill, Milton, and Auchenflower, in the vicinity of the proposed tunnel alignment.

This broader study corridor acknowledges the movement patterns of people who live in the vicinity of, and interact with, the study corridor outlined in the ToR. It also allows ease of use of Australian Bureau of Statistics (ABS) population and demographic data that are aggregated by ABS-defined State Suburbs.

The suburb of Mt Coot-tha (located at the western end of the study corridor) has a very low population count and ABS demographic data is therefore not available. However, the Mt Coot-tha Forest Park and Mt Coot-tha Botanic Gardens, which fall within the Mt Coot-tha suburb boundary and the Northern Link study corridor, have important values for both local and regional communities and have been considered in this SIA.

Changes may also be experienced in other areas of Brisbane, such as reduced congestion or potential changes to conditions along spoil haulage routes. These changes have been considered in this SIA.



LEGEND

- Study Area Corridor
- Social Environment Study Corridor Suburbs

0 500 1000

metres

Scale 1: 25,000 (A4)

N

NORTHERN LINK
ENVIRONMENTAL IMPACT STATEMENT

Figure 1- 1

Suburb Boundaries

Northern Link

SKM Connell Wagner JOINT VENTURE

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1.3 Methodology

Social impact assessment "*includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions* [i.e. the Project] *and any social change processes invoked by those interventions. The primary purpose of SIA is to bring about a more sustainable and equitable biophysical and human environment*"[1].

Key stages of SIA include scoping of issues, documentation of the existing social environment, identification of potential benefits and impacts for particular communities and assessment of their magnitude, duration and likelihood, and identification of mitigation strategies to enhance benefits of the project and avoid or minimise impacts[2].

Scoping of Issues

The initial phase of the social impact assessment process was to scope the range of potential social impacts in relation to communities within the study corridor, including those neighbourhoods closest to the construction worksites and construction works, surface infrastructure and the tunnel alignment. This ensures that information collected for the existing environment would support consultation and the analysis of the Project's potential social impacts.

The range of potential social impacts was informed by the ToR for the Northern Link EIS, a review of SIA guidelines, SIAs undertaken previously for other tunnel and road transport projects (i.e. Airport Link Project and the North-South Bypass Tunnel), literature relating to the assessment of social impacts of transport projects, and initial consultation undertaken for the Project.

Information on community values and community concerns and issues gathered from consultation with community members was considered in the preparation of the SIA. This included information gathered from community information sessions, community reference group meetings, 1800 project information line, meetings with government agencies, and consultation with directly affected property owners.

The effects of the Project may be experienced by individuals and communities as positive, neutral or negative, depending on individual circumstances, vulnerabilities and attitudes in relation to particular changes. Information from community consultation identified a range of views in response to the Project, including potential benefits and impacts of the design, construction and operation.

Existing Social Environment

The existing social environment section provides an overview of key social characteristics and conditions in the study corridor, including population and demography, social infrastructure and community values.

The demographic profile provides an analysis of key indicators of population size, diversity and socio-economic conditions. The analysis draws on information from the ABS Census of Population and Housing 2006, supplemented by data from:

- related ABS publications;

[1] International Association for Impact Assessment (2003), Social Impact Assessment International Principles, Special Publication Series No. 2, May 2003.
[2] Families, Youth and Community Care Queensland (2000), Social Impact Assessment in Queensland.

- population projections prepared by the Queensland Government's Planning Information and Forecasting Unit (PIFU);
- the Queensland Department of Housing on housing affordability and public housing stock;
- the Commonwealth Department of Employment and Workplace Relations on unemployment rates;
- the Real Estate Institute of Queensland (REIQ) on property prices;
- Brisbane City Council's 'Our Brisbane' and 'Brisbites' suburb series; and
- community consultation undertaken for the Project.

The long-term nature of the Project's effects requires consideration of both existing and future populations and population projects were considered as representative of future population growth.

The SIA provides an overview of existing social infrastructure in the study corridor. This includes services, facilities and networks that support quality of life and well-being. The SIA focuses on facilities, which provide the base for most services and networks, and includes health facilities, schools, cultural facilities and community centres. The SIA also describes the provision of public housing, which is an indicator of potential disadvantage and a determinant of security for low income people.

Community values in the study corridor relate to factors such as access and connectivity, sense of place and community safety. The identification of community values has been informed by:

- Brisbane City Council and Queensland Government social policies, as part of the strategic context for the proposal;
- outcomes of community consultation, including input from community information sessions and community reference group meetings;
- literature reviews and data analysis; and
- observation of conditions in the study corridor.

Social indicators are measures of the factors that affect quality of life and community well being. The social indicators used in this report include both quantitative and qualitative measures. In order to map social indicators, the report refers to Socio-Economic Indices for Areas (SEIFA) values, which are based on data derived from the ABS Census 2006 to measure socio-economic conditions. These indices were considered to give the best indication of the sum of personal resources which enable people to cope with change. Low values indicate areas of relative disadvantage.

Impact Assessment and Mitigation

Potential benefits and impacts on the social environment of the study corridor and other areas were identified and evaluated. This included:

- an analysis of community consultation outcomes, including from community information sessions, community reference group meetings, the 1800 Project Information line, and consultation with directly affected property owners;
- consultation with Council and State Government agencies;
- an analysis of the potential benefits and impacts of the Project on the social environment, including quality of life, community values, population size and characteristics, access and connectivity, and social infrastructure; and

- an assessment of the magnitude, duration and likelihood of identified benefits and impacts.

The ToR requires the assessment of potential direct, indirect and cumulative impacts of the project, during construction and operation.

Measures to enhance the Project's benefits and avoid or reduce its impacts were identified. Mitigation includes measures relating to design development, urban regeneration, environmental management and monitoring. Consideration was also given to mitigation measures used in comparable projects, including the Clem Jones Tunnel (CLEM7)[3] and Airport Link projects, and the suitability of such measures for this Project. As required by the ToR, this section describes how nominated quantitative standards and indicators may be achieved for social impacts management, and how the achievement of the objectives should be monitored, audited and managed.

The construction period has been assumed to commence in 2010, with operation of the project commencing in about 2014.

[3] Formerly known as the North South Bypass Tunnel (NSBT).

2. Existing Social Environment

This section describes the existing social conditions in the study corridor, including:

- the social policy framework;
- population characteristics;
- housing supply and affordability;
- social infrastructure provision; and
- community values.

The Project would traverse Brisbane's inner western suburbs, which are home to nearly 60,000 people. The study corridor population is expected to grow to approximately 68,000 people by 2026.

The study corridor suburbs (excluding Mt Coot-tha) are predominantly residential in nature with a combination of low density "tin and timber" character housing and areas of medium-high density units and apartments, particularly near major transport corridors and nodes, and key centres. These suburbs also include a range of community and social infrastructure of international, national, state, regional and local significance, including health care, education, open space and sport and recreation facilities, as well as retail, commercial and entertainment precincts with local and broader regional catchments. A number of major transport corridors traverse the study corridor, including road, rail and bus, and walking and cycling networks.

The Brisbane City Council's draft Local Growth Management Strategy (CityShape) identifies the inner western suburbs as a future growth corridor, which would accommodate high density residential and mixed use developments concentrated along the Brisbane-Ipswich rail line and around Toowong Village. Milton has also been identified as a major renewal area, to accommodate high density residential development focused on the Milton railway station.

2.1 Social Policy Framework

2.1.1 Brisbane City Council Policy

Living in Brisbane 2026

Brisbane City Council released *Our Shared Vision: Living in Brisbane 2026 (Living in Brisbane 2026)* in December 2006, outlining Council's vision for Brisbane. *Living in Brisbane 2026* identifies eight themes, of which the following themes are relevant to Brisbane's social character, amenity and equity:

- Friendly, safe city:
- Clean, green city;
- Accessible, connected city;
- Active, healthy city; and
- Vibrant, creative city.

Council's key task and strategic directions for each of the relevant themes are outlined in **Table 2-1**.

- **Table 2-1 Living in Brisbane 2026 Themes**

Themes	Key Task	Strategic directions
Friendly, safe city	Retain Brisbane's personality of freshness, friendship, optimism and community compassion while managing the rapid population growth and increasing cultural and age diversity in SEQ.	▪ Inclusive and caring communities ▪ Active and healthy communities ▪ Safe communities ▪ Well-designed and responsive built environment ▪ Healthy economy
Clean, green city	Conserve the natural assets of Brisbane and its surrounding regions while meeting the demand for more housing, more roads, and more services to accommodate the one million people who will be arriving in SEQ over the next 20 years.	▪ Green and biodiverse city ▪ Healthy river and bay ▪ Clean air ▪ Towards zero waste ▪ Sustainable water use
Accessible, connected city	Reorient Brisbane – attitudinally and structurally – so that it is planned, built and 'greened' around efficient, friendly and safe public and active transport networks for everyone, and a high-speed information and communication technology system.	▪ Green and active transport ▪ Effective road networks ▪ Effective growth management
Active, healthy city	Increase the physical fitness and mental health and emotional well-being of all Brisbane residents. We will significantly reduce the rate of suicides, obesity and associated health disorders, and significantly increase resident participation in local community events.	▪ Active and healthy communities ▪ Food in the city ▪ Green and active transport ▪ Healthy river and bay ▪ Well-designed and responsive built environment ▪ Better public health
Vibrant, creative city	Stimulate and sustain Brisbane as a vibrant, 24-hour cultural city – a city which attracts and generates a robust cultural life and applies its creativity to generating innovative solutions for sustainable urban living.	▪ Outstanding city profile ▪ Inclusive and caring communities ▪ Well-designed and responsive built environment ▪ Healthy economy

Source: Brisbane City Council (2007), Our Shared Vision: Living in Brisbane 2026

Brisbane City Plan 2000

Council's Strategic Plan sets the broad planning policy for the *Brisbane City Plan 2000*, and describes the overall land use structure for the city to 2011. The Strategic Plan identifies a range of citywide desired environmental outcomes (DEOs), which set broad policy at a citywide level and form the basis from which other provisions of the City Plan flow.

The Strategic Plan includes a DEO relating to "community life, health and safety", which identifies Brisbane as a "safe, healthy and vibrant place to live, offering a wide range of local and regional services, facilities and activities and diverse housing, community, cultural and recreational choices".

The citywide strategies for "community life, health and safety", relevant to the social environment include:

- 3.2.2.1 Enhance social diversity, choice and accessibility;
- 3.2.2.2 Cater for a balanced range of recreational and sporting opportunities, natural environments and attractive landscapes to meet community needs;
- 3.2.2.3 Promote cultural diversity; and
- 3.2.2.8 Achieve a safe, secure, equitable and comfortable City.

Further detail on the citywide strategies is provided in Appendix A.

CityShape Implementation Strategy

Brisbane City Council has prepared a draft Local Growth Management Strategy (*CityShape Implementation Strategy*) that responds to the strategic directions and population and housing targets identified in the *South East Queensland Regional Plan* (SEQRP) for the Brisbane City Council area. The draft *CityShape Implementation Strategy* outlines the proposed future growth pattern for Brisbane LGA, and includes proposals to enable infill development in selected renewal areas and growth corridors.

Of importance to the Project are the identification of a proposed growth corridor following the Brisbane-Ipswich rail corridor, and planning for a major renewal area at Milton and higher density residential development around Toowong Village. This is expected to result in increased residential densities in these locations, increased diversity in population and housing, and progress towards desired social outcomes.

Further information on the draft *CityShape Implementation Strategy* is in the Land Use and Planning Report.

2.1.2 Queensland Government Policy

The SEQRP provides the framework for sustainable population growth in South East Queensland (SEQ) over the next twenty years. The key aspects of the SEQRP for the social environment are outlined in *Regional Policy 6: Strong communities*. The desired regional outcome for strong communities is: *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.* Principles which support achievement of this outcome include:

- Maximise access to appropriate social infrastructure for all residents in the region;
- Ensure the social effects of growth and change on the local community are planned for, monitored, and evaluated;
- Address issues of disadvantage in communities;
- Create well-designed, safe, and healthy local environments, encourage active community participation, promote healthy lifestyles, and prevent crime;
- Support community engagement and community capacity building in the planning and development of future communities;
- Manage urban growth and development to create, maintain, and enhance a sense of community, place, and local identity throughout the region;
- Protect the region's unique cultural heritage, including historic places; and
- Support the arts and cultural development through the planning and provision of cultural infrastructure and spaces[4].

Social policy is co-ordinated within the Policy Division in the Queensland Government's Department of the Premier and Cabinet, which '*strive*[s] *to ensure that all Queenslanders have equitable access to positive social, economic and environmental outcomes from government policies and programs*'[5].

[4] Queensland Government (2005), *South East Queensland Regional Plan 2005 -2026*

Social policy is primarily enacted by the Departments of Communities, Child Safety, Education Training and the Arts, Health, and Housing, each of which have policies and a program structure aimed at enhancing quality of life and community well being.

2.2 Demographic Profile

This section provides an overview of the study corridor's key population, housing and demographic characteristics. The study corridor for the SIA is described in Section 1.2 and includes each of the suburbs through which the Northern Link study corridor identified in the ToR passes.

ABS defined 'State Suburbs' have been used where this information is available. State Suburbs are a geographic classification not previously been released by the ABS. The State Suburb boundaries for the study corridor generally match the Statistical Local Areas (SLAs), which have traditionally been adopted as the geographic entity for small area analysis in social impact assessment. However, the key differences include:

- the State Suburb of City (Brisbane City), which equals the SLAs of City Inner and City Remainder; and
- the State Suburb of Auchenflower, which is incorporated in the Toowong SLA.

SLAs have been used to present data relating to population characteristics such as Estimated Resident Population (ERP), population growth rates and population projections, as data for these indicators is published at SLA level.

A detailed analysis is included in Appendix B. Demographic characteristics for each suburb are also contained in the suburb profiles in Section 2.5.

2.2.1 Population Size and Growth

The study corridor had an estimated residential population of 59,897 people in 2006. This represented 6.0% of the Brisbane City LGA population, which was 992,176 people.

At the 2006 Census, Toowong SLA had the largest residential population in the study corridor, with 15,858 people. This included the suburb of Auchenflower, which accounted for approximately 34% of the Toowong SLA population or approximately 5,400 people. Bardon had the second largest population, with 9,492 people, followed by Paddington with 8,061 people. The Milton SLA had the smallest population, with 1,782 people, reflecting Milton's relatively small geographic area and mixed land use pattern.

Population sizes for each of the study corridor SLAs are presented **Table 2-2**.

Table 2-2 Population Size, 2006

SLA	Total
City Inner	2,840
City Remainder	4,473
Herston	1,890
Spring Hill	5,466
Kelvin Grove	4,561

[5] Department of Premier and Cabinet, www.premiers.qld.gov.au/policy/strategicadvice, viewed on 3 December 2007

SLA	Total
Paddington	8,061
Red Hill	5,474
Milton	1,782
Toowong (includes approximately 5,400 people in Auchenflower)	15,858
Bardon	9,492
Study Corridor	59,897
Brisbane LGA	992,176

Source: ABS Census 2006

Between 2001 and 2006, the study corridor's ERP increased from 49,073 people to 59,897 people, representing an annual average growth rate of 4.4%. This was more than double the rate of growth in the previous five years, and more than twice the Brisbane LGA average (2.1%).

Each of the study corridor SLAs, with the exception of Herston and City Inner, experienced higher population growth between 2001 and 2006, than for the preceding five years. However, overall high growth was largely driven by very high rates in the City Inner (35.9%), City Remainder (28.5%) and Spring Hill (9.8%). This is explained by the trend towards inner city living and the increasing development of high rise apartments, including in Spring Hill and parts of Toowong. Herston recorded the lowest rate of population growth between 2001 and 2006 (0.7%), followed by Bardon (1.5%).

Table 2-3 shows population growth in the study corridor between 1996 and 2006.

Table 2-3 Population Growth, 1996-2006

	ERP (as at 30 June)			Average Annual Population Change			
	1996	2001	2006	1996-2001		2001-2006	
SLA	Number	Number	Number	Number	%	Number	%
City Inner	345	1,017	2,840	134	38.9	365	35.9
City Remainder	1,401	1,842	4,473	88	6.3	526	28.5
Herston	1,692	1,831	1,890	30	1.6	12	0.7
Spring Hill	2,789	3,671	5,466	176	6.3	359	9.8
Kelvin Grove	4,023	4,198	4,561	35	0.9	73	1.7
Paddington	7,205	7,411	8,061	41	0.6	130	1.7
Red Hill	4,932	5,048	5,474	23	0.5	85	1.7
Milton	1,637	1,639	1,782	2	0.0	29	1.8
Toowong	12,839	13,604	15,858	153	1.2	451	3.3
Bardon	8,303	8,812	9,492	102	1.2	136	1.5
Study Corridor	45,166	49,073	59,897	781	1.7	2,165	4.4
Brisbane	824,489	896,649	992,176	14,432	1.7	19,105	2.1

Source: ABS Census 2006, 2001 and 1996

The most recent available population projections were published by PIFU in March 2007. These were derived from the ABS Census 2001. Higher than anticipated growth has been experienced in many of the SLAs, resulting in the 2006 ERP being higher than the PIFU medium series projected 2011 population for each SLA, with the exception of Milton and the two City SLAs.

The population in the study corridor is currently forecast at 68,087 people in 2026, an increase of 11,308 persons, or 19.9%, from 2006. This is similar to the growth rate expected in the Brisbane LGA (18.3%) for the same period. The highest population growth is forecast in the SLAs of City Remainder (73.7%), City Inner (64.2%) and Spring Hill (32.2%), while the lowest rate of growth is forecast in Bardon (2.3%). Further information on population projections for each SLA is in Appendix B.

2.2.2 Age Profile

The study corridor had a relatively homogeneous age profile, which differed from the Brisbane LGA's age profile. At the 2006 Census, relative to Brisbane, the study corridor had a lower proportion of children (i.e. aged 0-14 years), higher proportions of people aged 15-24 years and 25-44 years, and a lower proportion of people aged over 45 years. The exception to this was Bardon, which generally aligned more closely with the age profile for the Brisbane LGA. The data also indicated that:

- the City recorded the lowest proportion of children, with 4.6% of the suburb's population aged 0-14 years, compared to 11.6% for the study corridor and 18.1% for the Brisbane LGA;
- Bardon recorded the highest proportion of children (21.3%), the lowest proportion of people aged 24-44 years (31.5%) and the highest proportion of people aged 45-64 years (23.5%);
- the highest proportions of people aged 15-24 years were in Toowong (30.9%), the City (30.5%) and Kelvin Grove (28.2%), likely due to the proximity of these suburbs to major universities;
- the study corridor had lower proportions of people aged 45-64 years and more than 65 years (19.6% and 7.7% respectively) compared to the Brisbane LGA (23.1% and 11.8% respectively); and
- the median age of the study corridor was 30 years, compared to 34 years for the Brisbane LGA, with Bardon's median age outlying at 35 years.

Further information on the study corridor's age profile is in Appendix B.

2.2.3 Household and Family Type

The study corridor generally had a lower proportion of family households and higher proportions of lone person and group households compared to the Brisbane LGA. At the 2006 Census, 53.3% of households in the study corridor comprised family households, compared to 68.2% in the Brisbane LGA and 25.1% in Queensland. The suburbs of the City (44.8%), Spring Hill (45.3%) and Milton (45.4%) displayed low rates of family households, while Bardon, with 71.6% of households, was the only suburb with a higher proportion of family households than the Brisbane LGA. This reflects the age profile of the study corridor, which generally had low proportions of children aged 14 years or less, with the exception of Bardon.

Lone person households comprised 30.2% of the households in the study corridor, which was higher than in the Brisbane LGA (25.1%) and Queensland (22.8%). The City had the highest proportion of lone person households, at 38.6%, while Bardon had the lowest at 21.9%.

At the 2006 Census, the study corridor had higher proportions of couple only families and "other families" and lower proportions of couple families with children and one parent families, compared to Brisbane and Queensland. Couple only families comprised 47.8% of families in the study corridor, compared to Brisbane LGA at 37.8%. The City had the highest proportion of couple only families at 66.4%, followed by Spring Hill (58.0%) and Auchenflower (51.2%). Bardon had a significantly lower proportion of couple only families than other suburbs, at 35.8%. Conversely, Bardon had the highest proportion of couple families with children, while

the City had the lowest proportion of this family type. Couple families with children comprised 34.7% of families in the study corridor, with highest proportions in Bardon (49.7%), Red Hill (39.9%) and Herston (35.6%).

At the 2006 Census, 11.0% of the study corridor's families comprised one parent families, compared to the 15.3% in the Brisbane LGA. Those suburbs with proportions of one parent families lower than the study corridor included the City (7.3%), Auchenflower (9.2%) and Toowong (10.8%). "Other families" comprised 6.4% of the study corridor's families. Herston had the highest proportion of "other families", with this family type nearly double the proportion for the study corridor (12.4%). Toowong and the City also had high proportions of "other families" at 9.8% and 8.4% respectively.

Further information on households and families is in Appendix B.

2.2.4 Population Mobility

The study corridor had a high degree of population mobility, with lower proportions of people who lived at the same address either 12 months or five years previously than for Brisbane LGA and Queensland. At the 2006 Census, 63.1% of the study corridor's population lived at the same address 12 months previously (compared to 77.1% in the Brisbane LGA), while 29.4% lived at the same address five years previously, compared to 46.9% in the Brisbane LGA. The suburbs of Brisbane City and Spring Hill had the most 'mobile' populations. In 2006, 45.7% of the City's population lived at the same address as 12 months previously, and 10.1% lived at the same address as five years previously. In Spring Hill, the proportion of people who lived at the same address 12 months previously was 53.4% and for five years previously was 15.8%. The high population turnover in these suburbs partly reflects the proportions of young professionals and number of couple only households, which tend to move house more often.

Bardon was the only suburb in the study corridor that experienced a lower rate of population mobility than the Brisbane LGA and Queensland.

Further information on population mobility is in Appendix B.

2.2.5 Cultural Diversity

At the 2006 Census, 398 people in the study corridor identified as being Aboriginal or Torres Strait Islander, representing 0.7% of the total population. This was lower than for the Brisbane LGA (1.4%) and Queensland (3.3%). Herston and Milton had the highest proportion of Aboriginal and Torres Strait Islander people, with 1.3% and 1.2% of those suburb's populations respectively.

Compared to the Brisbane LGA, the study corridor had lower proportions of people who spoke a language other than English at home and who spoke English not well or not at all. The City had the highest proportion of people who spoke a language other than English at home (28.3%) and who spoke English not well or not at all (12.7%). Spring Hill and Toowong also demonstrated high proportions of people who spoke a language other than English or who spoke English not well or not at all. These people represent a stakeholder group with particular communication needs and which may be more vulnerable to changes in the social environment than some other members of the community.

The study corridor had similar proportions of overseas born people compared to the Brisbane LGA, but higher than Queensland. At the 2006 Census, 24.4% of the study corridor's population were born overseas. The City

had the highest proportion of overseas born people, at 41.4%, followed by Spring Hill and Toowong, both with approximately 27%.

2.2.6 Education

At the 2006 Census, 68.6% of people in the study corridor aged over 15 years had completed Year 12 or equivalent, higher than the Brisbane LGA, at 55.7% and Queensland at 41.3%. The proportion of people completing Year 12 or equivalent was high across each of the study corridor suburbs, with the exception of Spring Hill which was the only suburb where the percentage was lower than the Brisbane LGA. The study corridor had low proportions of people who had completed Year 8 or below or who did not go to school compared to Brisbane and Queensland averages. Herston had the highest proportion of people who completed Year 8 or below, while Red Hill had the highest proportion of people who did not go to school. The City had a high proportion of people who did not state the level of school completed, which may reflect the high number of overseas born people living in the suburb.

There were 22,212 people in the study corridor at the 2006 Census who were studying. Overall, the study corridor had lower proportions of school students and higher proportion of university students compared to the Brisbane LGA, due to the proximity of these suburbs to major universities. Approximately 37% of students in the study corridor attended University or other tertiary institutions at the 2006 Census. Toowong had the highest proportion of university students, with half of the suburb's students attending university or other tertiary institution. Auchenflower, Kelvin Grove and Herston also had high proportions of tertiary students.

Overall, the study corridor had higher proportions of people with either a post-graduate degree or degree and lower proportions of people with either a diploma or certificate, compared to Brisbane LGA and Queensland. At the 2006 Census, 14.8% of people with a qualification in the study corridor had post-graduate degrees. Spring Hill was the only suburb in the study corridor to have lower proportions of people with a Bachelor Degree or post-graduate degree than the Brisbane LGA.

2.2.7 Income and Employment

At the 2006 Census, the median weekly household income for all study corridor suburbs was $1,297, which was higher than both the Brisbane LGA, at $1,157 and Queensland, at $1,033. Bardon recorded the highest median weekly household income, at $1,671, followed by Paddington at $1,496, and Auchenflower at $1,382. Each of the study corridor suburbs, with the exception of Kelvin Grove ($1,136) and Toowong ($1,155), had a median weekly household income higher than the Brisbane LGA. This is likely due to the number of student households in these suburbs, which typically have lower incomes.

At the 2006 Census, the labour force in the study corridor comprised 33,726 people, representing 66.6% of the total population aged over 15 years. This was higher than the labour force participation for the Brisbane LGA (65.0%) and Queensland (61.8%). Paddington had the highest labour force participation rate, comprising 75.3% of the suburb's working age population. This was followed by Red Hill (72.1%) and Auchenflower (71.8%). Spring Hill and the City had the lowest rate of participation in the labour force at 51.6% and 55.6% respectively.

Part-time workers comprised 29.0% of employed people in the study corridor, which was higher than the proportion of part-time workers in the Brisbane LGA and the same as Queensland. Herston, Toowong, Kelvin Grove and Bardon had the highest proportions of part-time workers, with each suburb above 30%, while the City had the lowest proportion of part-time workers, at 25.3%.

At the 2006 Census, the rate of unemployment in the study corridor was 4.2%, slightly above the Brisbane LGA at 4.0%. The unemployment rate varies across the study corridor, with the highest rate of unemployment (in Spring Hill) more than double the rate of the suburb with the lowest unemployment rate (in Bardon.) Spring Hill had the highest rate of unemployment, at 6.0%, followed by Kelvin Grove (5.4%), and Toowong (5.3%). Bardon and Paddington had the lowest unemployment rates, at 2.8% and 3.0% respectively. Other suburbs with unemployment rates below the Brisbane LGA include Milton (3.6%) and Red Hill (3.5%).

Overall, the study corridor had high proportions of people employed in professional and management positions, and lower proportions of people employed in machinery, labourers, technical/ trades, and clerical positions than the Brisbane LGA and Queensland. Professionals comprised the largest occupation group in the study corridor, comprising 37.3% of workers in the study corridor. Bardon, Toowong and Auchenflower had the highest proportions of professionals, with this group comprising 40% of these suburbs' workforce. However, there were generally high rates of professionals across each of the study corridor suburbs. People employed in clerical positions were the second largest occupation group in the study corridor, at 14.2%, with Auchenflower and Milton having the largest proportions of people in this occupation.

The study corridor suburbs generally had high proportions of people employed in industries such as legal and accounting, and engineering, architecture and technical industries. Tertiary education and hospitals were also well represented, reflecting the proximity of the study corridor to major universities and hospitals. Each suburb, with the exception of Bardon also included food services in the five largest industries of employment, which is likely to include part-time employment for university students.

2.2.8 Advantage and Disadvantage

The Australian Bureau of Statistics produces four Socio Economic Indices for Areas (SEIFA) based on Census data for local areas[6]. These indices identify areas of relative advantage and disadvantage. This section presents data for two indices, including the index of relative socio-economic advantage/ disadvantage and the index of economic resources. SEIFA values are calculated at Census Collector District (CCD) level.

The Index of Relative Socio-Economic Advantage/Disadvantage is a continuum of advantage to disadvantage. It considers indicators relating to income, education, occupation, wealth and living conditions. A higher value on the index represents an area of relative advantage, and occurs when areas have higher proportions of people on high incomes, qualified people, and professionals.

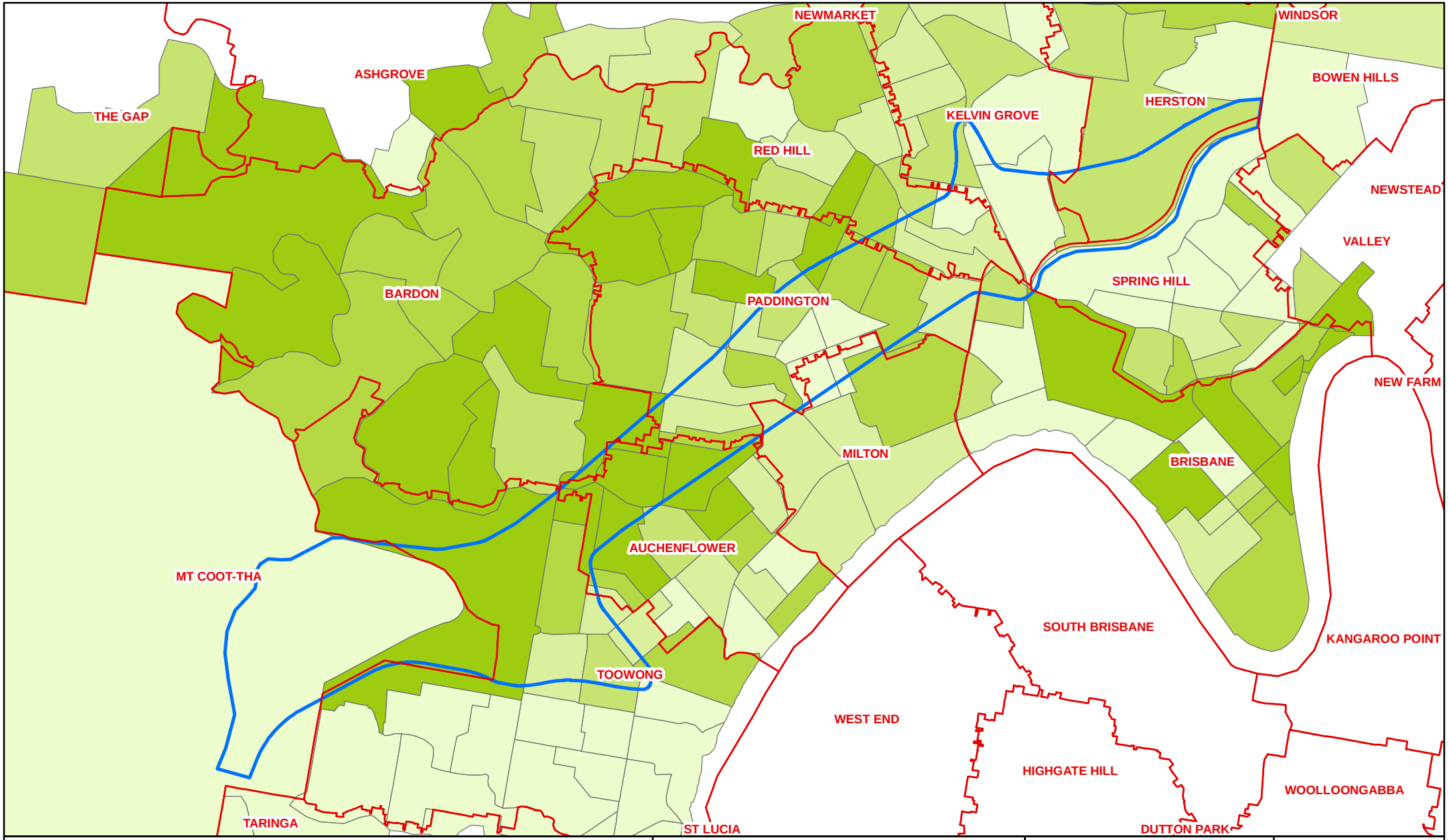
The SEIFA values for the Index of Relative Socio-Economic Advantage/ Disadvantage is shown on **Figure 2-1**. Each of the study corridor SLAs ranks highly on this Index, with value ranges all above those for Brisbane LGA, and amongst the highest in Queensland. The lowest value occurs in a CCD in City Inner (990), which is still relatively high compared to the lowest value of 718 for a CCD in Brisbane LGA. The average Advantage/ Disadvantage value for the study corridor is 1,125, which is higher than the Brisbane LGA average of 1,063. CCDs with lower scores on the Index were concentrated in Milton and the eastern area of Paddington and near the Project's connection at Kelvin Grove, Red Hill and Spring Hill. CCDs with higher Index scores were distributed across the study corridor, including in Bardon, Toowong, Auchenflower and the western portion of Paddington.

The Index of Economic Resources reflects indicators such as income and expenditure including wages and rental costs for families, and variables that reflect wealth (e.g. dwelling size). Income variables are also

specified by family structure, as this affects disposable income. A higher value on the Index indicates an area has a higher proportion of high-income families, a lower proportion of low-income families and more households living in large houses.

The SEIFA values for this Index are shown in **Figure 2-2**. The study corridor SLAs also ranked highly on this index with many SLAs having CCDs with values above the mean of 1,000. The City Inner SLA recorded the highest value (1,070) with the lowest value recorded in the Spring Hill SLA (974). This compares to a range of 663-1,257 for CCDs in the Brisbane LGA, which indicates that collectively, the study corridor ranked highly in terms of income and expenditure and other indicators relating to availability of economic resources. While scores were generally high across the study corridor, CCDs with lower values were located in Milton near the northern connection at Kelvin Grove and Red Hill. Those areas with higher values were located in Bardon, Toowong and Auchenflower.

[6] An additional SEIFA Index is produced for Aboriginal communities.



Legend

- Study Area Corridor
- Suburb Boundary

RSEAD Index

- < 1098
- 1098 - 1116
- 1116 - 1128
- 1128 - 1152
- > 1152

Figure 2 - 1

Northern Link

Relative Socio-Economic Advantage / Disadvantage Index

0 600 1,200

metres

Scale 1:30,000 (A4)

N

Northern Link

SKM Connell Wagner JOINT VENTURE

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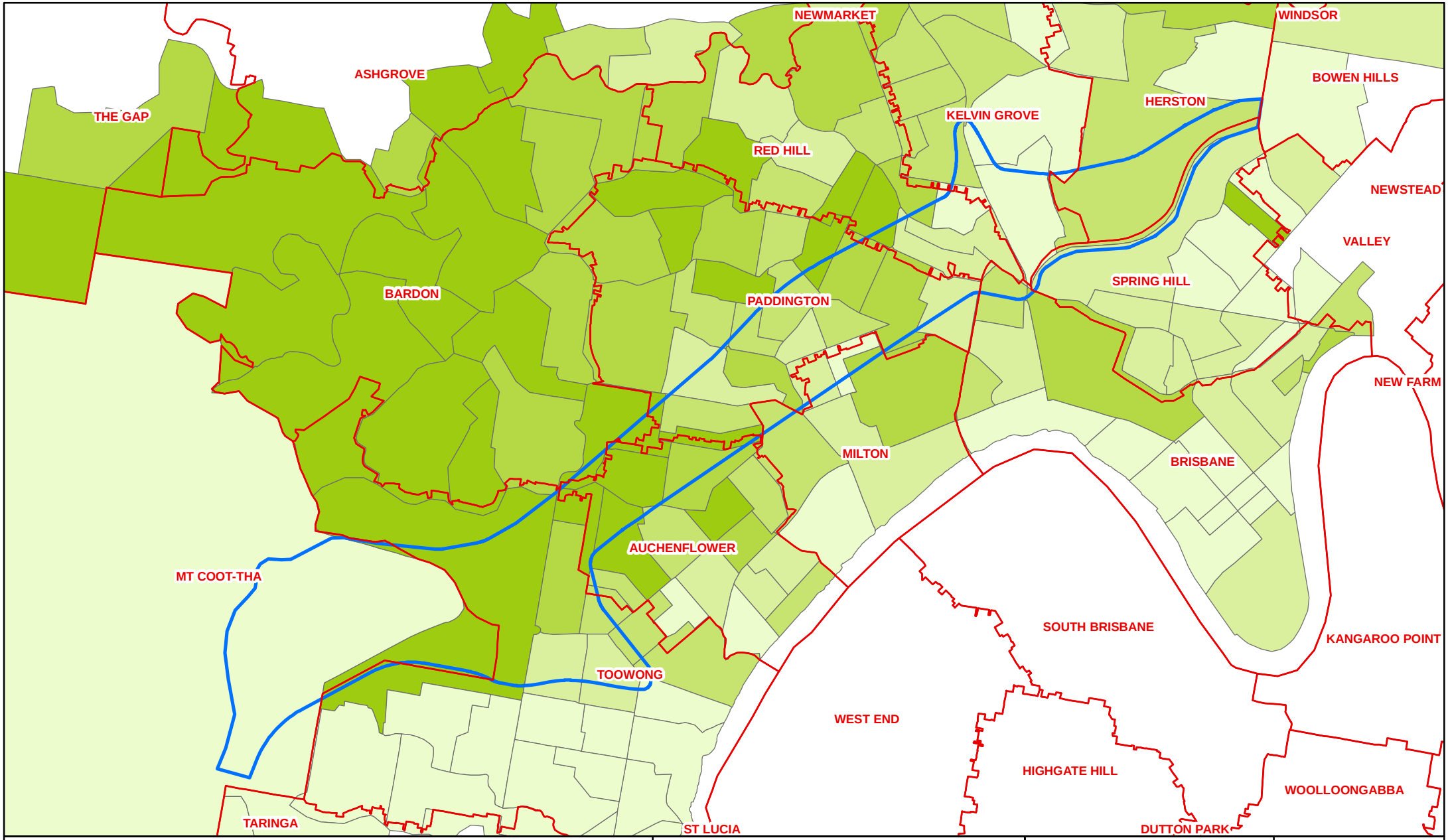

Legend

- Study Area Corridor
- Suburb Boundary

Economic Resources Index

- < 961
- 961 - 1017
- 1017 - 1061
- 1061 - 1093
- > 1170

Figure 2 - 2

Northern Link

Economic Resources Index

0 600 1,200

metres

Scale 1:30,000 (A4)

N

Northern Link

SKM Connell Wagner JOINT VENTURE

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2.2.9 Transport Use

The study corridor had a high proportion of households without a motor vehicle, and low proportions of households with three or more motor vehicles, with significant variance across the study corridor suburbs. The suburbs of the City, Spring Hill and Milton had high proportions of households without a vehicle, with two to three times more households in these suburbs without a car, compared to the Brisbane LGA. Households with one vehicle comprised the largest group in each suburb, with the exception of Bardon, where households with two vehicles comprised the largest group. This is likely to be a reflection of the higher proportion of households in this suburb comprising families with children.

Access to a motor vehicle is typically an indicator of potential social isolation. However, in relation to the study corridor, the higher proportions of households without a vehicle is likely to reflect a reduced need and personal choice, given the study corridor's access to public transport and proximity to the CBD, employment opportunities and major universities.

Private vehicle was the most prevalent form of transport in the study corridor, with 46.2% of people driving to work as either a driver or passenger[7]. However, this compared to 60.0% in the Brisbane LGA and 66.5% in Queensland. Those suburbs that had the highest proportions of people who drove to work included Bardon (60.6%), Paddington (53.3%) and Red Hill (52.7%), while those suburbs with the lowest proportion of drivers included the City (27.5%) and Spring Hill (28.1%), due to their proximity to CBD employment centres.

The study corridor also had high proportions of people who either caught a bus, walked or cycled to work. At the 2006 Census, 9.8% of people in the study corridor caught a bus only, 14.5% of people walked only and 2.3% cycled. This compared to 8.6% of bus travellers in the Brisbane LGA, 5.0% of people who walked and 1.6% of cyclists.

There was significant variance again with respect to journey to work, with more than 40% of people in the CBD and Spring Hill walking to work, while Herston (15.3%), Auchenflower (9.5%) and Kelvin Grove (9.5%) also had relatively high proportions of people who walked. Kelvin Grove had the highest proportion of bus travellers at 14.9%, followed by Herston (13.0%), which may reflect the proximity of these suburbs to the Inner Northern Busway (INB). Red Hill and Paddington also had high proportions of bus travellers, comprising approximately 13% of these suburbs' populations. Toowong and Milton had the highest proportion of cyclists, at 3.3% and 3.0% respectively.

While the proportion of people in the study corridor who travelled to work by train was slightly lower than the Brisbane LGA, there were a number of suburbs that had proportions of train travellers more than double the Brisbane LGA. These included those suburbs with good access to a rail station such as Auchenflower (11.8%), Toowong (11.5%) and Milton (10.9%).

Public transport use as a whole was relatively high in the study corridor with 14.7% of the people aged over 15 years either catching a train, bus or ferry to work. This is compared to 12.1% in the Brisbane LGA and 5.0% in Queensland. Toowong had the highest proportion of public transport use (22.2%), followed by Auchenflower (19.6%) and Milton (17.7%). Kelvin Grove also had a higher proportion of public transport users than the study corridor average.

[7] This refers to one method of travel only. Some people may have also driven in conjunction with one or more other methods of travel (i.e. driven and then caught a train).

At the 2006 Census, 4.3% of workers in the study corridor worked from home, marginally higher than the proportion for Brisbane LGA. The study corridor had a lower proportion of people who travelled to work by two or more methods (i.e. walk and train) compared to the Brisbane LGA.

The travel patterns of residents in the study corridor generally reflect the proximity of the study corridor to the CBD and other employment centres such as the RBH and Wesley Hospital and major universities. The travel patterns also reflect the high level of public transport access in the study corridor, particularly bus and rail, and good access to pedestrian and cycle paths such as the Bicentennial Bikeway.

2.2.10 Need for Assistance and Voluntary Work

'Need for assistance' refers to people who need help or assistance in one or more of the three core activity areas of self-help, mobility or communication due to disability, a long term health condition or old age (ABS Basic Community Profile – Concepts and Definitions 2007).

At the 2006 Census, the study corridor had a lower rate of people needing assistance, at 2.1%, compared to the Brisbane LGA and Queensland, which were both at 3.5%. Red Hill had the highest proportion of people needing assistance, at 3.4%, while the City had the lowest proportion of people needing assistance, at 0.8%. Consultation for the Project indicated that the neighbourhoods affected by surface works at Toowong and Kelvin Grove include a number of elderly residents and long-term residents, with some houses owned by the one family for a number of generations. The area also includes a number of people who need help or assistance in self-care, mobility or communication because of disability, long-term health condition or old age.

The level of participation in volunteering is commonly used as a measure of an area's social capital. The study corridor generally demonstrated a high rate of participation in volunteering, with 19.6% of people indicating that they had volunteered for a community group or organisation in the previous 12 months. This is compared to 15.3% in the Brisbane LGA and 14.6% in Queensland. Those suburbs that had a high rate of volunteer participation included Bardon (25.8%), Auchenflower (21.6%) and Toowong (21.1%). The City and Spring Hill had low levels of participation in volunteering, at 12.1%.

2.2.11 Housing

There were 22,101 occupied private dwellings in the study corridor at the 2006 Census. The table in this section provides an overview of dwelling type at the 2006 Census. Overall, the study corridor had higher than average percentages of higher density dwellings such as flats, units and apartments, and lower percentages of separate houses. However, housing type varies across the study corridor, with higher density dwellings generally located in those suburbs close to the CBD (i.e. City, Spring Hill and Milton).

The study corridor generally had relatively lower rate of owner occupants and higher rates of renters compared to the Brisbane LGA and Queensland, correlating with higher percentages of attached dwellings. At the 2006 Census, 47.5% of dwellings in the study corridor were either fully owned or being purchased by the occupant, compared to 62.8% in the Brisbane LGA and 65.4% in Queensland. Bardon had the highest level of owner occupants at 72.8%, followed by Paddington and Red Hill, both at approximately 50%. The City had the lowest proportion of owner occupants, comprising less than one in three of the suburb's dwellings. Spring Hill and Milton also had low proportions of dwellings that were either fully owned or being purchased by the occupant.

Almost half of the dwellings in the study corridor were being rented at the 2006 Census, which reflects the study corridor's relatively young and mobile population and high proportion of students. Spring Hill and the City had high proportions of rental dwellings, at 62.3% and 61.2% respectively. Milton also had a high proportion of

rental dwellings, at 59.4%. Bardon had the lowest proportion of rental dwellings, with approximately one in four properties being rented at the 2006 Census, which is lower than the proportion of rental dwellings in the Brisbane LGA and Queensland. The table below provides a summary of dwelling tenure at the 2006 Census.

2.2.12 Property Prices

At June 2006, median house prices across the study corridor were higher than the Brisbane LGA, ranging from $450,000 in Kelvin Grove to $695,000 in Spring Hill. The average median house price for the study corridor is approximately $509,000. This is compared to the median house price for the Brisbane LGA of approximately $400,000. The study corridor had an average median unit price of $331,425 in June 2006, which was higher than the median price for the Brisbane LGA ($292,500). Bardon had the highest median unit price, at $435,000 followed by the City at $414,000. Herston, Spring Hill and Kelvin Grove had the lowest median unit prices, with these suburbs having unit prices below the Brisbane LGA median[8].

2.2.13 Housing Costs and Affordability

Housing costs across the study corridor are generally high, with the study corridor experiencing higher rental costs and housing loan repayments compared to the Brisbane LGA and Queensland. At the 2006 Census, the study corridor had an average median rent of $274 per week. The City had the highest median rent at $385 per week. Paddington and Spring Hill were also above the average for the study corridor. Red Hill had the lowest median rent, at $240 per week, which was the same as the Brisbane LGA.

The study corridor also had higher median housing loan repayments, with each suburb showing median loan repayments above the Brisbane LGA. Median housing loan repayments ranged from $1,517 per month in Spring Hill to $2,000 per month in the City. Red Hill, Bardon and Paddington also had median housing loan repayments above the study corridor average of $1,693 per month.

Between 2002 and 2007, the overall supply of affordable rental stock[9] in the study corridor declined by 15.1%. However, the supply of affordable two bedroom dwellings in the study corridor declined by approximately 30% over the same five year period. By comparison, for the same period the overall supply of affordable rental stock (all housing types) across the Brisbane LGA declined also by approximately 30%. Affordable four bedroom rental dwellings were the only dwelling size category in the study corridor to record an increase in supply over this period. The study corridor also saw a decrease in affordable rental stock as a proportion of total dwellings. In particular, the proportion of one bedroom units experienced the greatest reduction, with considerable decreases in all suburbs, with the exception of Spring Hill. Two bedroom and four bedroom dwellings also experienced reasonable decreases in the proportion of total dwellings, while the proportion of three bedroom dwellings remained relatively constant over the five years.

[8] www.reiq.com.au, viewed on 19 November 2007

[9] The Department of Housing, consider housing "*to be affordable when the rent paid by low income households is less than 30% of gross household income after any applicable Commonwealth Rent Assistance is deducted*". Mathematically this can be represented as: [(Rent-Rent Assistance) / Gross Household Income] *100 < 30%. The "low income" level is based on definitions adopted in the National Housing Data Dictionary as part of the Commonwealth State Housing Agreement. "Low income" is equal to the full pension plus the maximum allowable private income without any loss of pension. This income benchmark is applied to the most appropriate dwelling size for a particular household type according to Public Housing entitlement criteria set by the Queensland Department of Housing. This method provides a means of determining affordable rent levels for different sized dwellings based on existing social standards of income support" (Qld Department of Housing, November 2007).

The Queensland Department of Housing defines low income households who pay more than 30% of gross household income on rent as being in housing stress. The Department of Housing definition does not include owner occupier households. Low income households in unaffordable rental housing may be considered vulnerable to change and in need of special assistance if impacted by external forces.

Department of Housing data for 2007 showed that more than half of very low or low income households in the study corridor that were renting, were in housing stress. This is higher than the Brisbane LGA (41%) and Queensland (35%). However, the numbers of low income households include only households that have received Centrelink benefits and do not include working people on very low wages or self-funded retirees. As such, the actual proportion of low income households experiencing housing affordability problems is likely to be understated[10]. Each of the study corridor SLAs, with the exception of Spring Hill, experienced a higher level of housing stress than the Brisbane LGA. Red Hill had the highest proportion of very low and low income households considered to be in housing stress, at 61%, followed by Herston at 60%, and Toowong at 56%. Spring Hill had the lowest proportion of households in housing stress at 34%. This partly reflects the high cost of housing and the high percentage of students living in the area.

2.2.14 Summary

Overall, the study corridor generally has three areas where populations have similar demographic characteristics. These are:

- the suburbs of Red Hill, Paddington, Milton, Auchenflower, Toowong, Kelvin Grove and Herston, which are characterised by higher percentages of young professionals and students, who are generally highly mobile, and have low levels of disadvantage. These suburbs also had high proportions of medium density housing, and more people renting and living in group households;
- Bardon, which is characterised by a high proportion of young families, higher proportions of children and older people, and higher proportion of owner occupiers; and
- City and Spring Hill, which generally had very high proportions of high density dwellings and rental households, as well as a more culturally diverse population.

The study corridor generally had a young and highly mobile population, and included high proportions of lone person, couple and group households. This reflects the large number of students and professionals living in the study corridor, attracted to the area's proximity to major universities, the CBD and its associated facilities and infrastructure. The main exception to this population profile was Bardon, which had a higher proportion of young families and older people, and a less mobile population.

Compared to the Brisbane LGA, the study corridor had lower proportions of people who spoke a language other than English at home and who spoke English not well or not at all. However, the City and Spring Hill had proportions considerably higher than the study corridor and LGA. Approximately 30% of the study corridor's population was born overseas, which was higher than the Brisbane LGA, and partly reflected the international student population.

The study corridor had relatively high values for the SEIFA Advantage/ Disadvantage and Economic Resources indices, reflecting low levels of socio-economic disadvantage across the study corridor. The study corridor had a higher median household income than the Brisbane LGA, but also showed higher rental costs and housing loan

[10] Queensland Department of Housing, November 2007

repayments. The study corridor also had higher proportions of very low and low income households in housing stress, with more than half of very low or low income households spending more than 30% of household income on rent. The study corridor generally demonstrates a high level of participation in volunteering, with about one in five people at the 2006 Census having performed volunteer work in the previous 12 months.

The travel patterns of residents in the study corridor generally reflect the proximity of the study corridor to major employment centres as well as the high level of access to public transport and pedestrian and cycle networks. Private vehicle was the most prevalent form of transport for people in the study corridor, with 46.2% of people driving to work either as a driver or passenger[11]. However, this is lower than for both the Brisbane LGA and Queensland (60.0% and 66.5% respectively). Commuters in the study corridor were more likely to use public transport, or to walk or ride a bicycle to work (compared to the Brisbane average), particularly in those suburbs close to the CBD or with good access to a railway station.

The study corridor had 22,101 occupied private dwellings at the 2006 Census, with high proportions of higher density dwellings such as flats, units and apartments, and low proportions of separate houses. Higher density dwellings are generally located in those suburbs close to the CBD or with good access to public transport, including the City, Spring Hill, Milton and Auchenflower. Overall, the study corridor had a relatively low rate of owner occupiers and high proportions of renters compared to the Brisbane LGA and Queensland, reflecting the study corridor's relatively young and mobile population, and the high student population.

2.2.15 Health Status

Data on health status is only published at a regional level. The study corridor is located in the Brisbane North division. The division is bordered by the Brisbane River to the south and comprises suburbs north of the River including the Pine Rivers Shire, east to Moreton Bay, and west to Bellbowrie. Analysis of published health status data is therefore of limited use in describing small area characteristics. The following description of health status is therefore based on social determinants of health, including socio-economic risk factors in the study area, access to community facilities, including health and recreational facilities, and the common disease profile in the Brisbane North region

Key risk factors[12] for lesser health outcomes and corresponding local values in the study corridor are summarised in **Table 2-4**.

Table 2-4 Population Risk Factors for Health

Indicator	Predictive Factor	Local Status of Indicator[13]
Lower socio-economic households	Indicator of higher risk of chronic childhood illness and earlier mortality	Average SEIFA value for the study corridor is higher than the Brisbane LGA average. More than half of very low or low income households that were renting were in housing stress, higher than the Brisbane LGA and Queensland. Higher median weekly household income for the study corridor as a whole than the Brisbane LGA and Queensland

[11] This refers to one method of travel only. Some people may have also driven in conjunction with one or more other methods of travel (i.e. driven and then caught a train).

12 Health Determinants Queensland 2004 At A Glance - Public Health Services and Health Information Centre, Queensland Health

[13] In relation to the Brisbane average

Indicator	Predictive Factor	Local Status of Indicator[13]
		Suburbs with lowest median household income were Kelvin Grove and Toowong.
People living alone	Indicates vulnerability to social isolation and a higher risk of reduced health	Higher proportion of lone person households compared to the Brisbane LGA and Queensland. The highest proportion of lone person households is in the City.
Indigenous population size	Likelihood of lower health status and reduced life expectancy	Lower proportions of Indigenous people in each suburb compared to the Brisbane LGA and Queensland. Herston and Milton had the highest proportion of Indigenous people.
Cultural and linguistic diversity	Associated with poorer health outcomes due to communication difficulties and lack of social networks.	Overall, the study corridor had a lower proportion of people who speak a language other than English at home compared to the Brisbane LGA, but higher than Queensland. City, Toowong and Spring Hill had proportions of people who speak a language other than English at home higher than the Brisbane LGA. Proportions of overseas born people similar to the Brisbane LGA, but higher than Queensland. Higher levels of diversity in City, Spring Hill and Toowong.
Unemployment	May lead to poverty (a strong indicator of poor health).	Unemployment rate comparable to the Brisbane LGA, but lower than Queensland. Highest rates of unemployment were in Spring Hill, Kelvin Grove, City and Toowong.
Age greater than 65 years	Increased need for health services and higher rates of disability	Overall, lower proportion of older people in the study corridor compared to the Brisbane LGA and Queensland. Herston, Bardon and Kelvin Grove had the highest proportions of people aged 65 years or over.

On the basis of predictive socio-economic factors, the study corridor population appears to have a low risk of general poor health than communities with a higher prevalence of risk factors. However, Toowong and Kelvin Grove displayed the highest levels in three of the six risk factors including lower socio-economic households, cultural and linguistic diversity, and unemployment. Kelvin Grove also displayed high levels of people aged 65 years or over.

Disease prevalence rates per 1,000 population for the Brisbane North Division were generally consistent with the national averages. However, the division had slightly higher than the national average of respiratory system diseases (including asthma) and osteoporosis (in women)[14]. There was a slightly lower estimated prevalence of

[14] North - Division of General Practice (2005) Population Health Profile of the Brisbane viewed at viewed at http://www.publichealth.gov.au/pdf/profiles/2005/405_Brisbane_North_DGP.pdf

mental health disorders in the Division. The 'all causes' death rate in the Division (254.9 deaths per 100,000 population) was lower than for Brisbane (277.8) and well below that for Australia (290.4).

Residents in the study corridor have good access to services which also support the general health of the community, including:

- a level of GP provision higher than the Australian average[15];
- good access to accident and emergency services, public hospital care and community services supporting health for specific target groups (e.g. aged people);
- good access to public transport, including bus and rail; and
- good access to open space and recreation facilities which encourage physical activity (including sports clubs, formal and informal sport and recreation areas, and walking and cycling networks).

Community support services which support community participation and cohesion, and therefore good health, are also well distributed. Further information on social infrastructure in the study corridor is in **Section 2.3**.

Given the status of socio-economic risk factors, the disease profile and access to services, the health status of the general community is likely to be good. Individual health outcomes would vary in line with socio-economic factors and personal risk factors, with poorer health experienced by people with lowest incomes or greater ages.

2.3 Social Infrastructure

Social infrastructure refers to community facilities, services and networks which help individuals, families, groups and communities meet their social needs, maximise their potential for development and enhance community wellbeing[16].

The study corridor includes a wide range of local community services and facilities to service the needs of local communities, including community support, education and training, sport and recreation, cultural, health, and emergency facilities and services. In addition, there is a range of district and regional level social infrastructure, servicing the needs of the broader district, and communities in the SEQ Region, interstate and internationally, including health and medical, open space, sport and recreation, and education facilities. The study corridor also includes a range of commercial and retail centres which cater for local and regional communities.

The following provides a description of the social infrastructure in the study corridor. These are shown on **Figure 2-3 (a-c)**.

Health and Emergency Services

The study corridor includes a high level of health care and medical facilities, which cater for the needs of residents at the local and regional level, as well as broader catchments. These include public and private hospitals, day surgeries and medical clinics, where the full range of medical services are provided by surgeons, general practitioners and specialists.

There are two major hospitals in the study corridor, being the Royal Brisbane Hospital (RBH) and the Wesley Private Hospital, as well as a number of smaller, private hospitals. The RBH campus at Herston includes the

[15] Based on the Brisbane North Health Division

16 SGS Economics and Planning, Elliott Whiteing Pty Ltd, Briggs & Mortar Pty Ltd, Andrea Young Planning Consultants, and Department of Infrastructure (2007) SEQ Regional Plan Implementation Guideline No. 5: Social Infrastructure Planning, Queensland Government.

Royal Brisbane and Women's Hospital (RB&WH), the Royal Children's Hospital (RCH), the Clinical School of the University of Queensland Faculty of Medicine, and the Queensland Institute of Medical Research.

The RB&WH serves a geographic area which had an estimated population of approximately 549,000 people in 2006, with the majority of patients drawn from an area within 15km of the hospital. The hospital is a tertiary referral teaching hospital, which also provides services to patients throughout Queensland, Northern New South Wales, and the Northern Territory. The hospital offers approximately 950 in-patient beds, and has a number of specialties including medicine, surgery, orthopaedics, psychiatry, oncology, and trauma services[17].

The RCH is Queensland's major tertiary paediatric teaching hospital, providing medical and health services for children and young people. The RCH and Health Service District provides health care services to children and young people across Queensland, Northern New South Wales, the nearby Pacific Islands, New Zealand and Japan[18].

The Wesley Private Hospital is located at Auchenflower and provides medical services to the Brisbane CBD and western suburbs. The hospital is one of the largest private hospitals in Queensland offering approximately 430 in-patient beds, employing 1,900 staff and serving more than 75,000 people annually. The hospital currently has two major construction projects underway, including a $102 M expansion to the hospital which is expected to be completed by June 2009[19].

Other private hospitals in the study corridor include:

- Toowong Private Hospital, Toowong;
- St Andrews Private Hospital, Spring Hill;
- Brisbane Private Hospital, Brisbane;
- Mater Private Centre for Haematology and Oncology, Auchenflower;
- Rivercity Private Hospital, Toowong; and
- Montserrat Day Hospital, Spring Hill.

The study corridor has good access to emergency services. A combined ambulance and fire station is located at Roma Street, Brisbane City while another fire station is located at Whitmore Street, Taringa, and ambulance stations at Enoggera and Chermside also service the study corridor. Police stations are located at Baroona Road at Milton, Moggill Road at Indooroopilly and Roma Street and Charlotte Street, Brisbane.

Sport, Recreation, Leisure and Cultural Facilities

The study corridor offers a diverse range of sport, recreation, leisure and cultural facilities and clubs. These cater for local and regional communities, and include facilities catering for organised sporting activities, as well as informal recreation and leisure pursuits. District and regional level facilities located in the study corridor include:

- sporting facilities such as Suncorp Stadium and Victoria Park Golf Course;
- formal gardens and open space areas such as Brisbane Forest Park, Mt Coot-tha Forest and Botanic Gardens and Roma Street Parklands;

17 www.health.qld.gov.au/wwwprofiles/rbwh_hsd.asp, viewed on 5 November 2007

18 http://www.health.qld.gov.au/wwwprofiles/rch_hsd_rch.asp, viewed on 5 November 2007

- parks and recreation areas, including the Brisbane River, Anzac Park, Quinn Park, Toowong Memorial Park, and Victoria Park;
- Toowong Cemetery;
- swimming pools, including Ithaca Swimming Pool at Paddington, Centenary Aquatic Centre at Spring Hill, and Spring Hill Baths at Spring Hill;
- numerous neighbourhood parks, some of which incorporate play equipment and barbeque and picnic facilities; and
- La Boite Roundhouse Theatre at the Kelvin Grove Urban Village (KGUV).

The study corridor also includes a number of sport, recreation and leisure facilities and clubs that cater for the needs of local residents, including children and the elderly, and that foster important community networks. There are also a number of cultural and religious centres located in the study corridor, most serving local needs including pastoral and community care. These are detailed in Appendix C**.**

Education

Communities in the study corridor have good access to educational facilities, including primary and secondary schools, private colleges and tertiary institutions. There are 22 schools in the study corridor offering primary and/or secondary education programs, as well as four tertiary institutions.

Seven state primary schools are located in the study corridor suburbs. In addition, the study corridor suburbs include two private primary schools, being St Ignatius School at Toowong, and St Joseph's School at Bardon.

State primary schools in the vicinity of the proposed Northern Link connections and tunnel alignment include:

- Toowong State School;
- Milton State School; and
- Petrie Terrace State School.

Five private secondary schools are also located in the study corridor, including:

- The Albert Park Flexible Learning Centre, at the corner of Hale Street and Milton Road;
- Marist College Rosalie;
- Brisbane Girls Grammar School, Spring Hill;
- St James College, Spring Hill; and
- Stuartholme School at Toowong.

Combined primary and secondary school education is also provided at:

- Kelvin Grove State College (Prep to Year 12);
- Brisbane Boy's College, Toowong (Prep to Year 12);
- Brisbane Grammar School, Spring Hill (Year 6 to Year 12); and
- St Joseph's College Gregory Terrace, Spring Hill (Year 5 to Year 12).

[19] www.uhc.com.au/wesley, viewed on 3 December 2007

There are three schools in the study corridor suburbs that provide specific programs for senior secondary students (i.e. Year 11 and Year 12), being:

- Hubbard's School at Auchenflower, which is a private school;
- Queensland Academy for Creative Industries, at Kelvin Grove; and
- Queensland Academy for Science Mathematics and Technology, at Toowong.

One special school is located in the study corridor suburbs, being Red Hill Special School at Waterworks Road, Red Hill. However, three state schools also offer special education programs, including Kelvin Grove State College, Petrie Terrace State School, and Toowong State School.

There are four tertiary education institutions located in the study corridor suburbs, including:

- Queensland University of Technology (QUT), Kelvin Grove (and Brisbane City);
- Queensland Institute of Medical Research, Herston;
- St Francis Theological College at Milton; and
- Trinity Theological College at Auchenflower.

The QUT Kelvin Grove Campus offers courses in education, health, creative industries and justice studies. The Campus also includes the QUT International College as well as a range of other community facilities such as student counselling and health services, pre-school and toddler centre, and arts studios and theatres. The QUT Gardens Point Campus is located in the CBD, and the Queensland Institute of Medical Research is located at Herston.

In addition to the tertiary education institutions located in the study corridor suburbs, the University of Queensland is located in nearby St Lucia.

Aged Care

As the SEQ Region experiences increasing pressure from an ageing population as well as increasing demand for affordable housing, pressure is placed on aged care facilities and services that address the mobility, independence and health needs of elderly people. The study corridor suburbs include a number of aged care facilities including:

- Rosalie Nursing Care Centre at Rosalie, which is a residential facility for patients with high care needs;
- Aldersgate Court Wesley Mission at Red Hill, which includes independent living units;
- Pinjarra Lodge at Red Hill;
- Hilltop Gardens at Kelvin Grove, which currently offers independent living units, nursing places and hostel beds; and
- Magdalene Court Retirement Community at Bardon, which provides independent living units.

These aged care centres are supported by the high level of medical and public transport services located in the study corridor. There are also a number of local service providers (including community and church organisations) assisting seniors to age in place and access community involvement.

2.3.1 Affordable Housing

Affordable housing may include public housing, community owned or leased housing, and private rental housing (detached dwellings, units and boarding houses)[20]. Affordable housing is an important value that needs to be recognised, particularly as housing prices increase, the area is redeveloped and the disparity between lower incomes and housing purchase prices increases.

There are approximately 318 public housing properties within the study corridor, ranging from a small number of attached and detached dwellings to larger numbers of apartments and senior units, as shown in Table 2-5. In addition, as at December 2007, there were 90 beds provided in boarding house properties in Spring Hill.

The inner city suburb of Spring Hill has the largest number of public housing properties, the majority of which comprise apartments. Compared to the other study corridor suburbs, Paddington and Red Hill also have higher numbers of public housing properties, mostly comprising apartments and senior units.

Table 2-5 Public Housing Stock, 2007

Suburb	Apartment	Attached Housing	Detached House (properties)	Dual Occupancy (properties)	Senior Unit (properties)	Studio Apartment (Properties)	Total
Auchenflower	2						2
Bardon	1		8				9
Herston	24		3				27
Kelvin Grove	6		4				10
Milton					6		6
Paddington	4	6	5		36	13	64
Red Hill	42	3	1		20		66
Spring Hill	74	9	2	2		24	111
Toowong	15	6	2				23
Total	168	24	25	2	62	37	318

Source: Queensland Department of Housing, 2007

Other forms of social housing in the corridor include private boarding houses and hostels, and community rental housing, owned or leased by community organisations. These forms of housing are coming under increasing pressure from housing cost escalations and the regulatory environment.

2.3.2 Community Services and Facilities

The study corridor suburbs offer a wide range of community support services and community facilities. The services provided are varied and include emotional and health support services, employment support services, disability services, youth support and emergency accommodation support services. A list of services and facilities in each of the study corridor suburbs is provided in Appendix C. Some of the key community service facilities in the study corridor suburbs include:

[20] Affordability of rental housing is discussed in Section 3.2.1.

- Centacare Employment Group, Royal Queensland Bush Children's Health Scheme, Blue Care, and Veterans Support and Advocacy Service Australia Inc, at Toowong;
- Communify (formerly Red Hill Paddington Community Centre), at Bardon, which offers a range of community support services;
- Gardens Motel, Lang Parade Lodge and Wesley Rotary Lodge at Auchenflower, which provide accommodation for hospital patients and their families;
- Centre for Multicultural Pastoral Care, Child Adolescent and Family Welfare Association of Queensland, and Queensland Parents for People with a Disability, at Paddington;
- Boystown, AMPARO Advocacy Inc, and Kids Helpline at Milton;
- Youth Christian Workers, Salvation Army – Moonyah and Blue Care – Unicare, at Red Hill; and
- Queensland Council of Social Service Inc and Teen Challenge, Hebron House, at Kelvin Grove.

The study corridor includes a number of other facilities including venues for functions and meetings, libraries and community centres. Key community facilities in the study corridor suburbs include:

- Toowong Cemetery, Brisbane City Council Library and Scouts Queensland, at Toowong;
- Bardon Scouts and Guides, at Bardon; and
- Senior Citizens – Brisbane West and Lang Park PCYC, at Paddington.

2.3.3 Community Networks

Community networks play an important role within society, contributing to social capital and community development. The study corridor has a large number of community networks, which help ensure community members are well connected and informed of local and/or regional issues or events. The following community networks are located within the study corridor:

- School Parent and Citizens' Associations for each of the state and private schools;
- Historical societies, including the Toowong History Group, and Toowong and District Historical Society;
- Friends of Toowong Cemetery;
- Silk Shed Studio Group at Quinn Park;
- Resident and community groups, including West Toowong Community Association, Auchenflower Residents Alliance Inc, Herston Kelvin Grove Residents Group, Normanby Action Group, and Community Vegetable Garden Group (Toowong);
- Business and local service groups, including the Brisbane Inner West Chamber of Commerce and Rotary Club of Toowong;
- Environmental groups, including Save Our Waterways Now (SOWN); and
- Neighbourhood Watch, Brisbane Central.

In addition, the study corridor suburbs include a range of sporting clubs and associations, including:

- Western Leagues Club, Bardon;
- Queensland Rogaine Association, Bardon;
- Bardon Latrobe Junior Soccer Club, Bardon;
- Bardon Bowls Club, Bardon;

- Indoor Netball Federation of Queensland Inc, Milton;
- McIlwraith Croquet Club, Auchenflower;
- Brisbane Basketball Inc, Auchenflower;
- Toowong Soccer Club, Auchenflower;
- West Toowong Bowls Club, Toowong; and
- Western Districts Rugby Football Club, Toowong.

2.3.4 Commercial Centres

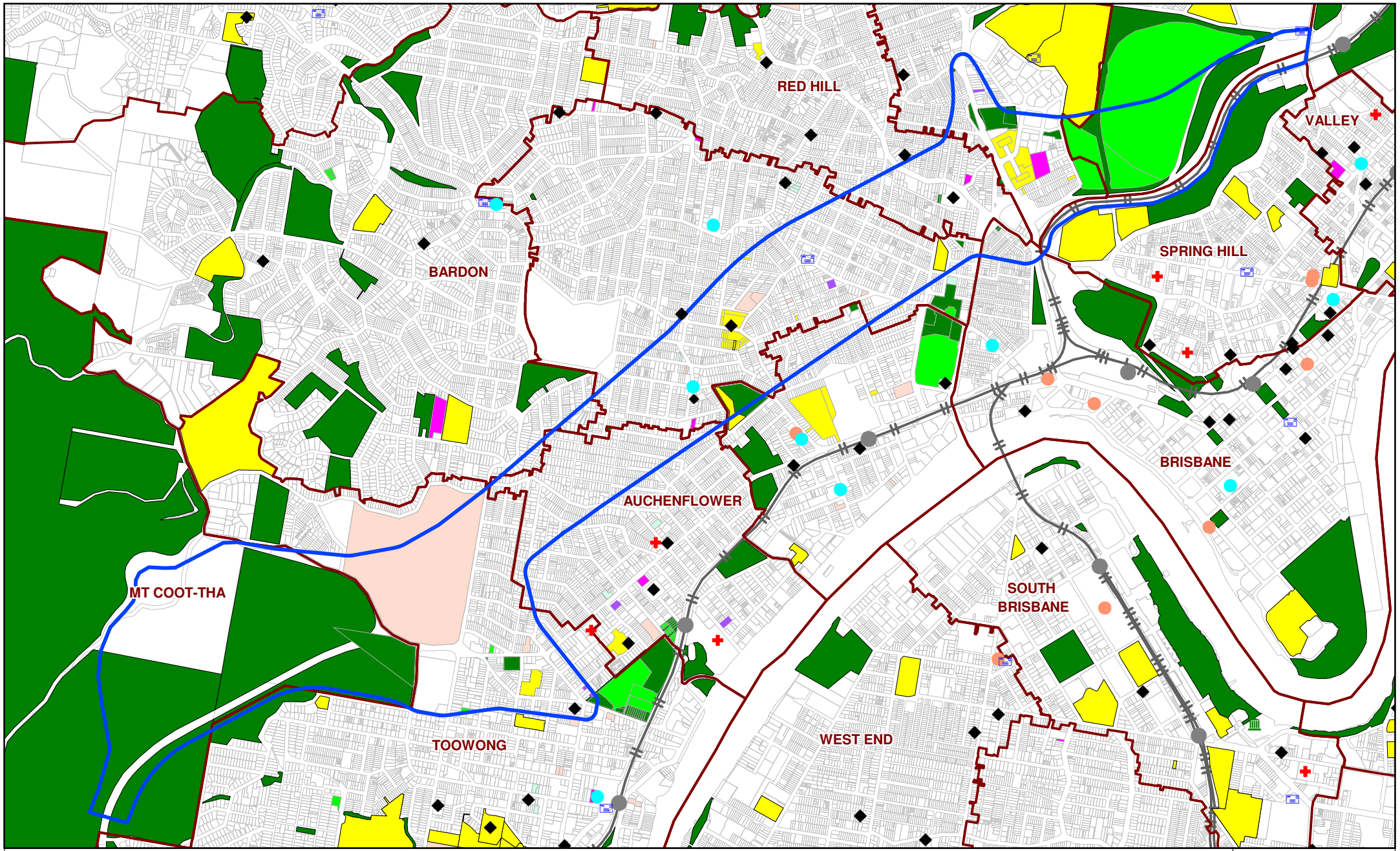
Residents in the study corridor have good access to a diverse range of commercial and business, retail and entertainment facilities. The study corridor suburbs include a network of neighbourhood, local and regional centres serving the needs of local and regional residents. Key commercial, business and retail centres in the study corridor include:

- the Toowong major centre, which provides regionally significant commercial and community based services, comparison retail, convenience retail, entertainment and secondary administrative functions; and
- local centres, including Given Terrace-Latrobe Terrace (Paddington), Bardon Village, Rosalie Village (Auchenflower), and Cat and Fiddle (Toowong).

The study corridor also includes a number of cafe, restaurant and entertainment precincts. These include:

- Park Road, Milton;
- High Street, Toowong;
- Caxton Street, Paddington; and
- Given Terrace – Latrobe Terrace Paddington.

The study corridor's proximity and accessibility to the Brisbane CBD also provides opportunities for residents to access a wide range of employment, retail, business and administration opportunities.



LEGEND

- Study Area Corridor
- Social Environment Study Corridor Suburbs
- Accommodation
- Child Care Centre
- Community Facility
- Education
- Sport and Recreation
- Park
- Retirement Village
- Railways
- Emergency Services
- Centres
- Medical Facility
- Place of Worship
- Post office
- Railway Station

0 500 1000

metres

Scale 1: 25,000 (A4)

N

NORTHERN LINK
ENVIRONMENTAL IMPACT STATEMENT

Figure 2 - 3

Social Infrastructure

Northern Link

SKM Connell Wagner JOINT VENTURE

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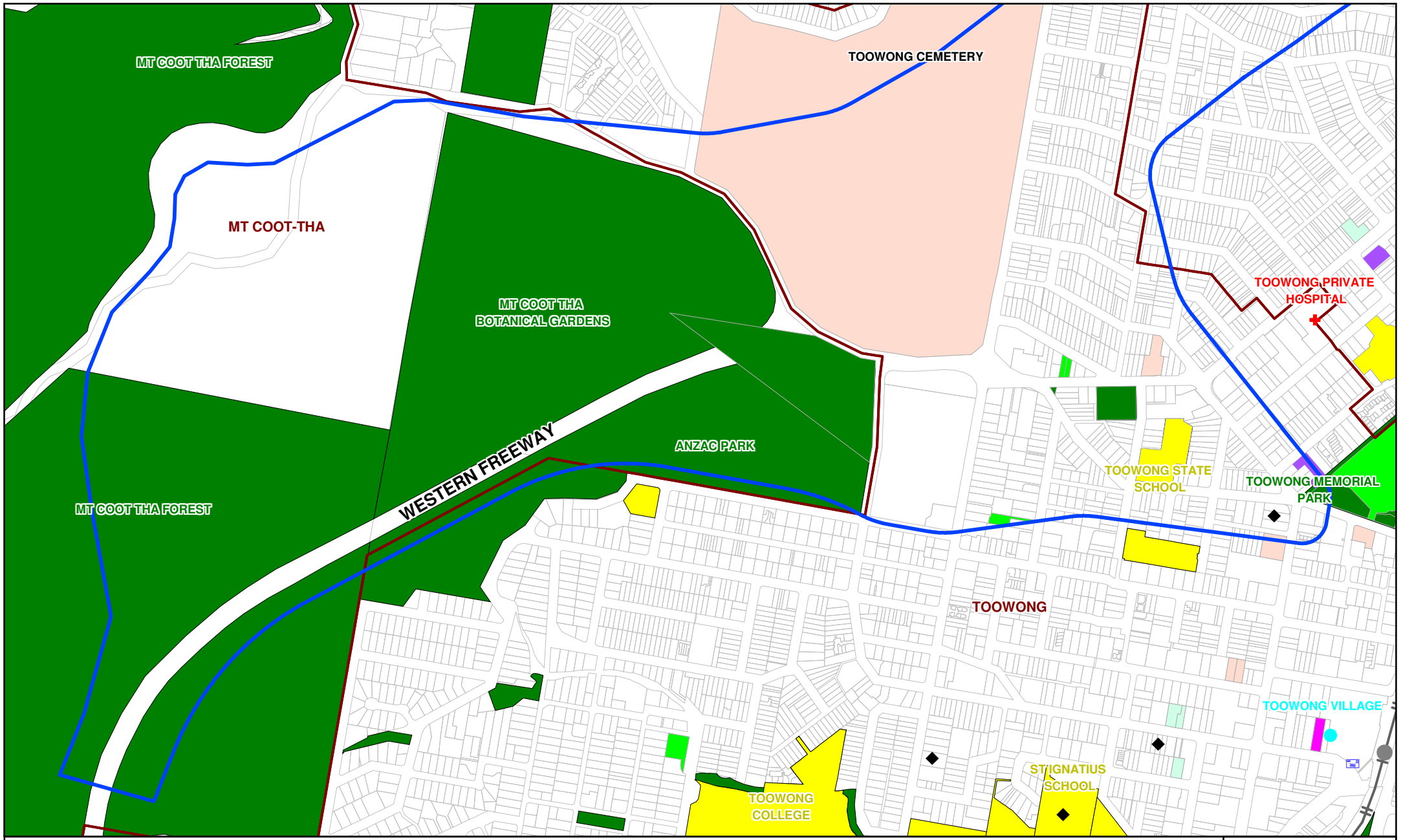

LEGEND

- Study Area Corridor
- Social Environment Study Corridor Suburbs
- Accommodation
- Child Care Centre
- Community Facility
- Education
- Sport and Recreation
- Park
- Retirement Village
- Railways
- Emergency Services
- Centres
- Medical Facility
- Place of Worship
- Post office
- Railway Station

0 200 400

metres

Scale 1: 10,000 (A4)

N

NORTHERN LINK
ENVIRONMENTAL IMPACT STATEMENT

Figure 2 - 3A

Social Infrastructure

Northern Link

SKM Connell Wagner JOINT VENTURE

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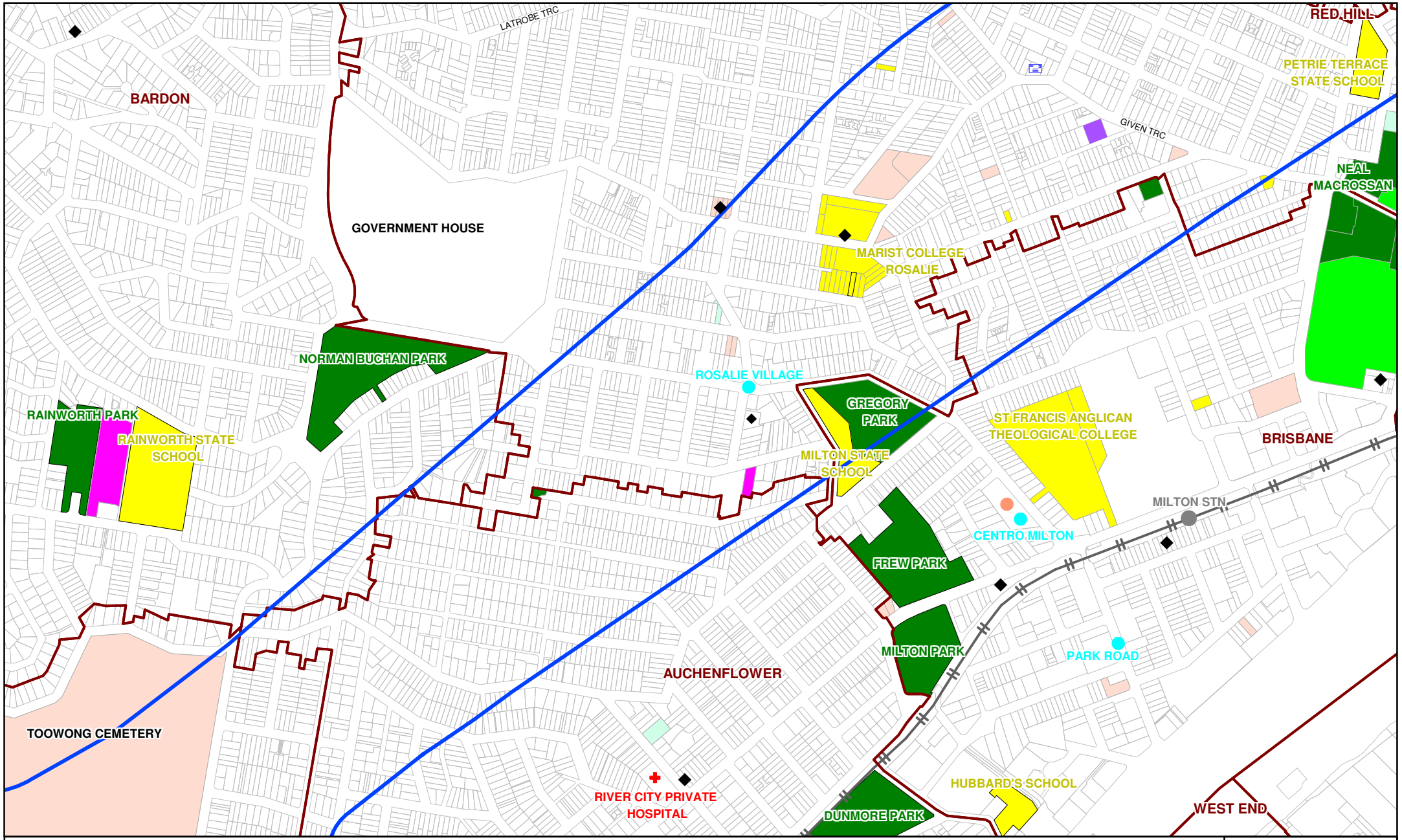

LEGEND

- Study Area Corridor
- Social Environment Study Corridor Suburbs
- Accommodation
- Child Care Centre
- Community Facility
- Education
- Sport and Recreation
- Park
- Retirement Village
- Railways
- Emergency Services
- Centres
- Medical Facility
- Place of Worship
- Post office
- Railway Station

0 200 400

metres

Scale 1: 10,000 (A4)

N

NORTHERN LINK
ENVIRONMENTAL IMPACT STATEMENT

Figure 2 - 3B

Social Infrastructure

Northern Link

SKM Connell Wagner JOINT VENTURE

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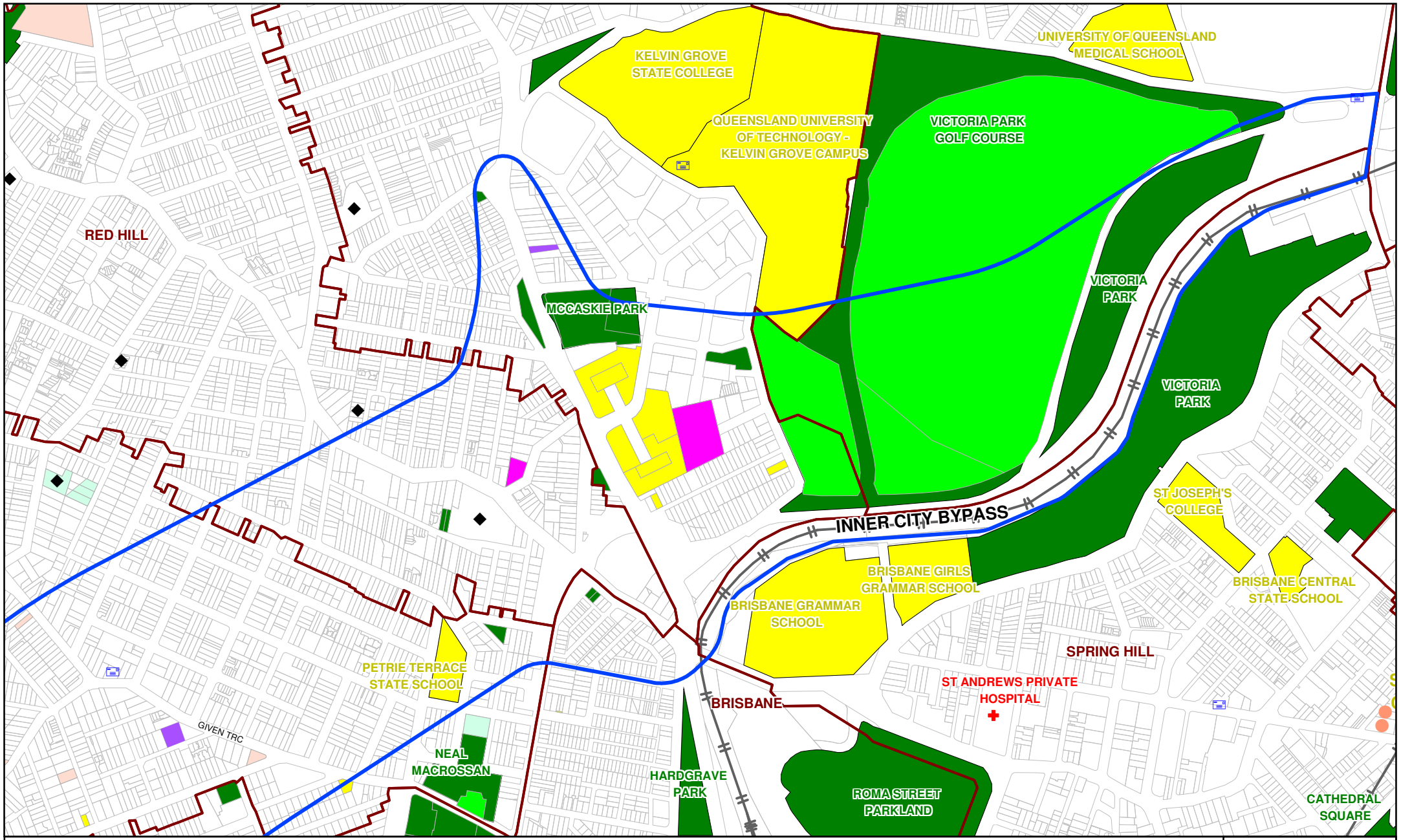

LEGEND

- Study Area Corridor
- Social Environment Study Corridor Suburbs
- Accommodation
- Child Care Centre
- Community Facility
- Education
- Sport and Recreation
- Park
- Retirement Village
- Railways
- Emergency Services
- Centres
- Medical Facility
- Place of Worship
- Post office
- Railway Station

0 200 400

metres

Scale 1: 10,000 (A4)

N

NORTHERN LINK
ENVIRONMENTAL IMPACT STATEMENT

Figure 2 - 3C

Social Infrastructure

Northern Link

SKM Connell Wagner JOINT VENTURE

I:\QENV\Projects\QE07311\Spatial\DetailedFeasibilityStudy\130808_SocialInfrasC_Nicole_A4

2.4 Community Values

This section describes the community values important to local residents in the study corridor. These have been informed by community consultation with local residents, businesses, and community organisations, including community reference group members.

Community values are those elements held as being important to quality of life and wellbeing. They include tangible (physical) elements such as parks, buildings, and landscape, and intangible (social) elements such as sense of belonging and community diversity. Social infrastructure (as detailed in the previous section**)** such as churches, schools, public places and community centres is also highly valued in local communities, as are demographic characteristics and local features.

Interactions between social and physical values contribute to qualities such as accessibility, amenity, sense of place and safety, and also to social capital. This section focuses on these qualities, which could be affected as result of changes to the physical and social environment.

2.4.1 Accessibility and Connectivity

The study corridor includes several major transport corridors, which provide good connections to other areas of Brisbane. These include roads, bus and rail corridors, and pedestrian and bicycle networks. Major road corridors include:

- the Western Freeway, Milton Road, and Coronation Drive which connect the CBD and northern suburbs to the inner and outer south-western suburbs;
- Kelvin Grove Road, Countess Street, Musgrave Road – Waterworks Road, and Caxton Street-Given Terrace-Latrobe Terrace, which provide access to Brisbane's western suburbs; and
- Hale Street – ICB, which connects Brisbane's northern suburbs to the CBD.

These road corridors and other arterial roads in the study corridor, provide existing barriers to local movement and connectivity within the study corridor, and form boundaries to local neighbourhoods, to pedestrian and cycle movements and to some of the local centres in the study corridor. Particular issues identified in consultation for the Project included impacts of existing traffic levels on local movement between residential areas and the Toowong Cemetery across Frederick Street, at the Toowong roundabout, across Milton Road to Toowong State School, local shops and public transport facilities, and across Kelvin Grove Road to the KGUV and QUT.

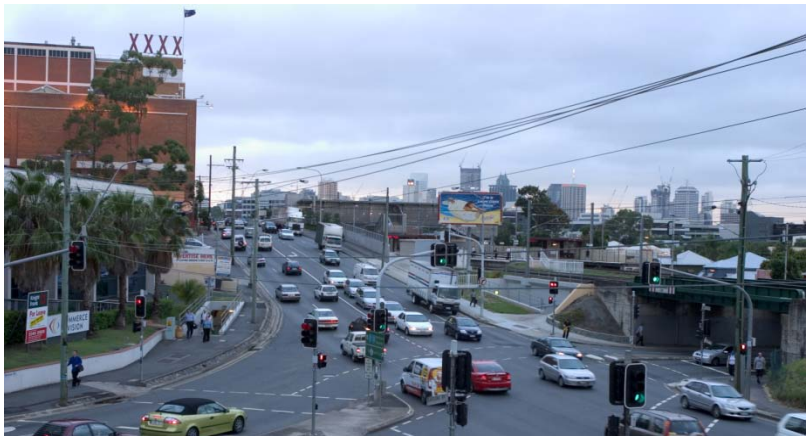

Photo 2-1: Milton Road, Milton (looking north-east) – PM Peak

The study corridor is well serviced by public transport, including rail, bus and City Cat. The Brisbane-Ipswich rail line provides good access to Brisbane's inner western suburbs, with stations at Taringa, Toowong, Auchenflower, Milton and Roma Street. The rail line also acts as a barrier to east-west movements in the study corridor, impacting on connectivity between local neighbourhoods and community facilities such as the Wesley Hospital, bikeways and local centres.

Milton Road, Coronation Drive and Caxton Street-Given Terrace-Latrobe Terrace are key bus routes connecting the western suburbs to the CBD. Coronation Drive and Caxton Street-Given Terrace-Latrobe Terrace include BUZ services, which provide high frequency bus services during peak periods. The INB provides good public transport access from Brisbane's northern suburbs to the CBD, with busway stations at the Roma Street Transit Centre, Normanby, QUT Kelvin Grove and the Royal Children's Hospital. Extension of the Northern Busway to Brisbane's outer northern suburbs is proposed. City Cat services connect from the CBD to the University of Queensland, with a City Cat stop located at the Regatta, in the vicinity of Sylvan Road.

The study corridor includes three off-road bikeways, being:

- the Bicentennial Bikeway, which follows the Brisbane River from the CBD along Coronation Drive to Toowong
- the Western Freeway-Centenary Highway Bikeway, which extends from Toowong to Jamboree Heights, adjacent to the Western Freeway and Centenary Highway; and
- the Victoria Park bikeway, which extends from Herston Road to Kelvin Grove Road, adjacent to the northern side of the ICB, and from the landbridge over the ICB to Spring Hill on the southern side of the ICB.

In addition, there are a number of on-road bicycle lanes, including along Sylvan Road, Sherwood Road and Miskin Road at Toowong and Caxton Street-Given Terrace-Latrobe Terrace at Paddington. Access to the Bicentennial Bikeway is provided via the Sylvan Road on-road bicycle lanes, and the off-road bicycle lane on Land Street. The pedestrian environment in the study corridor is generally good with most streets having footpaths connecting to main roads and shared off-road pedestrian paths, including the Bicentennial Bikeway.

However, the pedestrian and cycle environment along main roads is compromised by high traffic volumes and the hardening of the environment, particularly along Milton Road, Kelvin Grove Road, Coronation Drive, and along High Street through the Toowong Centre. Concerns were raised during consultation for the EIS about

existing constraints on pedestrian and cycle movements in the vicinity of Toowong roundabout and Mt Coot-tha Road, and across Milton Road.

- **Photo 2-2 Bicentennial Bikeway, Toowong**

Overall, community consultation identified that accessibility and connectivity in the study corridor was generally good, with the study corridor well serviced by road, public transport and pedestrian and cycle networks. However, access and connectivity in the study corridor are becoming compromised by increasing traffic volumes and traffic congestion, with travel times increasing and inefficiencies in the transport system growing. In particular, increased traffic congestion on Milton Road and Coronation Drive has resulted in delays to peak period bus travel and commuter traffic.

2.4.2 Amenity and Sense of Place

Sense of place represents the relationship between people and a particular setting or environment. It supports identification with the local area and community belonging. Sense of place may include physical aspects such as environmental and landscape features, buildings, paths and topographical features with cultural and community significance, aesthetic or character qualities, and social aspects such as territoriality (community 'ownership'), legibility (being easily read), and feelings of safety and comfort deriving from a familiar place.

Community values pertaining to amenity and sense of place identified in consultation for the Project include:

- the topography and sightlines to buildings and views;
- a feeling of open space and aesthetic values deriving from Victoria Park and Mt Coot-tha Botanic Gardens;
- character housing, old Queenslanders and the historic random patterns of streets;
- trees, leafy green streets and birdlife; and
- peaceful, quiet suburbs, close to the city.

The topography of the study corridor is undulating, with areas of steep terrain offering visual diversity and views to the Brisbane CBD. The defining natural features of the study corridor include:

- Brisbane River to the east;
- Brisbane Forest Park to the west;
- Mt Coot-tha Forest and Lookout, and Mt Coot-tha Botanic Gardens to the south west; and
- Victoria Park, to the north.

The study corridor includes a number of open space areas of district and regional importance. These offer a range of landscape, ecological, scenic amenity and recreational values and include Mt Coot-tha Forest and Lookout, Mt Coot-tha Botanic Gardens, Toowong Cemetery, Anzac Park, Toowong Memorial Park, Roma Street Parklands and the Brisbane River.

Major open space facilities in the vicinity of possible surface connections, include the Mt Coot-tha Botanic Gardens, Toowong Cemetery and Victoria Park.

The Mt Coot-tha Botanic Gardens and Mt Coot-tha Forest, located at the foot of Mt Coot-tha, are important features of Brisbane's inner western suburbs, and contribute to the amenity and character of the study corridor. The Botanic Gardens were opened in 1976 and comprise 52 ha of gardens and other facilities, including a number of important community facilities such as the Queensland Herbarium, Sir Thomas Brisbane Planetarium, Miskin Gallery and Mt Coot-tha Library. Daily guided walks are also offered by volunteers of the Gardens[21].

- **Photo 2-3 Sir Thomas Brisbane Planetarium**

Mt Coot-tha Forest is one of Brisbane's largest natural areas, and comprises more than 15,000 ha of open eucalypt forest. The forest forms the south-eastern section of the Brisbane Forest Park. Mt Coot-tha Forest includes the Mt Coot-tha Lookout as well as a range of active and passive recreational opportunities, including walking, mountain bike riding and barbeque and picnic facilities[22]. The Botanic Gardens and Mt Coot-tha

[21] http://www.brisbane.qld.gov.au/BCC:BOTANICG:415750253:pc=PC_1360, viewed on 5 December 2007
[22] http://www.ourbrisbane.com/visitors/seeanddo/bushwalking.htm, viewed on 5 December 2007

Forest have important landscape, scenic amenity and recreational values for local Brisbane residents and are popular tourist destinations, attracting many local and overseas tourists annually.

- **Photo 2-4 Mt Coot-tha Forest Park**

The Toowong Cemetery, located at the corner of Milton Road and Frederick Street at the base of Mt Coot-tha, is a key feature of Brisbane's inner western suburbs, and has important social, cultural, historical, recreational and scenic/landscape values. The cemetery was established in 1866 and formally opened in 1875, and is the largest cemetery in Queensland. It is estimated that approximately 125,000 people are buried in the cemetery, including people of importance in local, regional and Queensland history, such as prominent political, religious, sports, arts and business figures[23]. The cemetery is operational, and also supports a business providing night tours of the cemetery. The Friends of Toowong Cemetery (FOTC) hold monthly walks in the cemetery, which are conducted by volunteer guides. The FOTC also conducts research about individuals buried at Toowong Cemetery, and undertakes restoration projects in the Cemetery.

Victoria Park is a major parkland area and important community space in Brisbane's inner northern suburbs. It covers an area of approximately 27 ha and includes that land bordered by Bowen Bridge Road, Gregory Terrace, and Herston Road and the QUT Campus at Kelvin Grove. The park has important social, cultural, historical, recreational and scenic/landscape values. The park provides both formal and informal sport, recreation and leisure opportunities, incorporating a range of sporting facilities including golf course, playing fields, tennis courts, a bikeway and a swimming pool. The park was gazetted in 1875 and initially spanned an area of 130 ha. However, the land set aside for the park was slowly encroached upon over the succeeding years[24]. In more recent years, further encroachment on Victoria Park has occurred with the construction on the ICB and the INB. Further reduction in this open space would be a community concern.

A number of parks and open space areas are located across the study corridor. These are important to local residents and communities, providing visual amenity, sense of place and recreation opportunities such as picnic

[23] Registers and Inventories, www.epa.qld.gov.au/projects/heritage, viewed on 24 October 2007

facilities and children's playgrounds. School grounds also provide important green spaces, and sport and recreation opportunities.

Quinn Park at Toowong provides informal recreation opportunities for the local community and includes a playground, picnic facilities, and pathways. The park is highly valued by the local community, being one of only a few local parks in the area. The park is well vegetated along the edges, and the trees are important to the streetscape of Milton Road and the local area generally. The park is supported by local services clubs, including Rotary and Probus, who have partnered with Brisbane City Council to upgrade the park infrastructure and increase the general appeal and amenity of the area. A building is also located on the site, which is currently leased to a local not-for-profit community organisation, the Silk Shed Studio Group, for a community art centre[25].

Photo 2-5 Toowong Cemetery

The study corridor's green, leafy suburbs and tree-lined streets were identified during community consultation as being important to sense of place and contributing to the character and amenity of the inner western suburbs. The study corridor includes areas with locally significant vegetation, which have important ecological, landscape and community values. These are predominantly located in the open space areas. However, some also occur in road reserves and on private property. In particular, the fig trees at Kelvin Grove Road have important community values as do the trees at Quinn Park and the Toowong Memorial Park. Information regarding trees and vegetation of significance is in the *Flora and Fauna Report and Landscape and Urban Design Report.*

The study corridor includes a mix of high density residential areas combined with low density character housing, offering a good range of housing choice, albeit with higher than average housing costs. During consultation for the Project, residents identified the importance of the areas of "tin and timber" character housing. These contribute to the amenity and sense of place of the study corridor, by providing a link with the area's cultural heritage.

[24] Queensland Heritage Register, Place ID 602493, www.epa.qld.gov.au/cultural_heritage/registers_and_inventories/queensland_heritage_register).
[25] Brisbane City Council, Quinn Park draft Land Management Plan, April 2008

The corridor also offers a high level of accessibility to a broad range of locally and regionally significant commercial, retail and entertainment areas, and community services and facilities. Key features of the corridor's urban environment contributing to local amenity include:

- commercial activity centres, including Brisbane CBD, Milton office precinct and Toowong centre;
- local neighbourhood shopping centres, including at Given Terrace-Latrobe Terrace (Paddington), Bardon Village, Rosalie Village (Auchenflower), and Cat and Fiddle (Toowong);
- major educational institutions, including QUT (Kelvin Grove), the Queensland Institute of Medical Research (Herston), schools and colleges, as well as the University of Queensland located in adjoining St Lucia;
- major medical facilities, including the RBH campus at Herston, and Wesley Hospital at Auchenflower;
- entertainment precincts at Park Road (Milton), High Street (Toowong), Rosalie Village (Auchenflower), and Caxton Street (Paddington);
- light industrial uses at Milton, including the Fourex Brewery;
- major sporting facilities, including Suncorp Stadium (Paddington);
- major open space areas; and
- Government House.

Preserving the study corridor's cultural heritage is important to sense of place and sense of community. The study corridor has a range of natural, built, cultural, and social heritage places, including places of local, State and National significance, for example Toowong Cemetery, Gona Barracks, St Brigid's Convent, La Boite Theatre, Anzac Park, Normanby Hotel, Government House and Victoria Park. Heritage values of the study corridor are discussed in detail in the *Cultural Heritage Existing Environment Report.*

Overall, amenity is high and sense of place is strong in the study corridor. Local communities have good access to public transport, community facilities of state and regional significance, and employment opportunities. Local communities also have access to a diverse range of local, district and regional shopping and entertainment precincts, as well as parks, open space and recreation areas. The "tin and timber" character housing and places of natural, built, cultural, and social heritage value contribute to the study corridor's sense of place.

2.4.3 Community cohesion

Community cohesion refers to connections and relationships between individuals, groups, and neighbourhoods[26]. It includes values such as trust between local people, networks that support community development (i.e. school communities and church congregations), and practices (i.e. volunteering) related to those values and networks. Cohesion is encouraged by the existence of local community facilities, a sense of local identity and belonging, population stability, and opportunities for community participation.

Residents in the study corridor have good access to a diverse range of community facilities, including education, sport and recreation, open space, and community services. The corridor also has a number of important community networks, related to the school communities, sporting groups, heritage places (i.e. Friends of Toowong Cemetery), health and medical facilities, and resident groups, which foster relationships, trust and

[26] McCracken, M. 1998 Social cohesion and macroeconomic performance, Centre for the Study of Living Standards Conference, Ottawa Ontario

joint effort. There is also good access to cafes, hotels and entertainment venues which support local social cohesion.

Volunteering is one indicator of community cohesion. The study corridor has higher proportions of people who volunteer for an organisation or group compared to Brisbane, with the exception of the inner city and Spring Hill. Bardon, Auchenflower and Toowong generally have higher levels of volunteering than the Brisbane average. There appears no local correlation between levels of volunteering, and percentages of detached housing or population stability.

The study corridor has a mobile residential population, with higher proportions of people having lived elsewhere in the previous 12 months and five years, compared to Brisbane for the same periods. This reflects proximity to major tertiary education institutions and employment opportunities, which makes the study corridor attractive to students and young professionals who often reside in shared accommodation and are highly transient. However, amongst longer term residents there is a stronger sense of belonging and shared networks which enhance cohesion.

The study corridor generally includes higher proportions of medium and higher density dwellings than Brisbane as a whole. Recent years have seen the construction of a range of higher density developments, particularly close to major transport corridors, and Brisbane's draft Local Growth Management Strategy (LGMS) will further increase the proportions of higher density developments along transport corridors. It will be important to ensure that new and existing residential environments and public open spaces maintain characteristics (such as access, amenities and design features) which support community cohesion.

Overall, levels of community cohesion in the study corridor are generally likely to be healthy, but are expected to vary across the study corridor. Many community members are concerned that planning for land use and transport infrastructure are integrated to ensure the best possible outcomes for their living and working environments, and that areas of character housing are protected and enhanced.

2.4.4 Community Safety

Preserving the City's sense of community safety is important for Brisbane residents, as identified in Council's *Living in Brisbane 2026*. This includes ensuring Brisbane is a place where everyone feels safe, without fear for their personal safety or property security, either in their homes, streets, parks and travelling through the city (Brisbane City Council, 2007). Values which contribute to community safety include freedom from threats to personal well being, protection of personal and public property, and road safety (both vehicular and other)[27]. Crime prevention requires that opportunities for crime are reduced by providing safe environments in streets, parks and other public places, providing visual surveillance over public spaces, and encouraging community participation in reducing crime and its effects.

The study corridor falls into the Brisbane Central and Brisbane West Police districts within the Metropolitan North Region. In these districts, there was a total of 2,302 offences against the person in 2006-07, which was down by 10% from 2005-06. The Brisbane Central and Brisbane West districts also had 18,880 offences against property in 2006-07, down 5% from the previous 12 months. For the Metropolitan North Region as a whole

27 Safety is also related to freedom from hazards such as poor air or water quality, and events such as ground collapse or fire. These aspects are comprehensively addressed in other sections of the EIS.

over the same period, offences against the person decreased by 7.0%, while offences against property decreased by 8.0%. This demonstrates an improvement in community safety across the inner Brisbane area for this period.

2.4.5 Summary

Community values in the study corridor include:

- connectivity, provided by major transport corridors and good connection to other areas of Brisbane by road, bus, rail and bicycle;
- diverse housing options;
- access to residential neighbourhoods within easy reach of the city's services and amenity values;
- contribution of heritage places and "tin and timber" character housing to the study corridor's local character and sense of place;
- district and local open space areas which offer a range of landscape, ecological, scenic amenity, and recreational values, including the Brisbane River, Mt Coot-tha Botanic Gardens and Brisbane Forest Park;
- social, cultural, historical, recreational and landscape values of heritage listed facilities such as Toowong Cemetery and Government House;
- good access to community facilities of state and regional significance, including public transport, community facilities and employment opportunities; and
- strong community networks and levels of volunteering.

2.5 Suburb Profiles

This section describes the characteristics of the social environment in each of the study corridor suburbs in relation to local values, social diversity and social infrastructure provision.

Toowong

Toowong is located at the western end of the study corridor approximately 4km from the Brisbane CBD, extending from the Brisbane River to Mt Coot-tha and Brisbane Forest Park. The suburb has a mix of low density character housing and medium-high density housing, with higher densities generally adjacent to transport corridors and the Toowong centre. Toowong Village is a recognised as a Major Centre in the SEQRP and includes a mix of commercial, retail and entertainment facilities surrounded by a mix of multi-unit low to medium density developments.

Key features of the suburb include the Toowong Cemetery, Toowong Memorial Park, Quinn Park and the Toowong Village shopping centre. The suburb includes a number of major transport corridors, including Coronation Drive, Milton Road and the Brisbane-Ipswich rail line. Toowong also has good access to public transport, including bus, rail and ferry.

A summary of key population and demographic characteristics for the suburb is provided in **Table 2-6.**

- **Table 2-6 Toowong Selected Characteristics, 2006**

Characteristic	Toowong	Study Corridor	Brisbane LGA
Below 14 years (%)	9.9	11.6	18.1

Characteristic	Toowong	Study Corridor	Brisbane LGA
Over 65 years (%)	8.6	7.7	11.8
Family with children households[28] (%)	42.5	45.7	59.4
Group households (%)	21.2	16.5	6.8
Median household income ($)	1,155	1,297	1,157
Professional occupation (%)	40.1	37.3	26.4
Speak other language at home (%)	16.3	12.5	14.3
Stable residency (5yr) (%)	28.9	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,078-1179	1,056-1,166	718-1,243
Average occupancy rate	2.2	2.2	2.5
Attached dwellings (%)	55.3	37.2	11.8

Source: ABS Census 2006

The suburb includes a diverse range of social infrastructure, such as state and private primary and secondary schools, parks, open space and recreation facilities, shopping, transport and community services. These serve the needs of local and broader communities. The suburb also includes a range of community organisations, including sporting clubs, religious centres, arts and craft groups, history groups, P&Cs, and community associations. A list of social infrastructure is in Appendix C.

Toowong generally displays strong levels of social capital, with residents having access to a range of facilities, good community networks, and demonstrating high levels of participation in volunteering compared to Brisbane as a whole. Overall, Toowong has a good level of amenity due to its access to public transport (bus, rail and ferry) and walking and cycling networks, proximity to the CBD, and access to community facilities and services, including education, health and open space areas. However, local amenity in Toowong is being compromised by increases in congestion on major road corridors, such as Milton Road, High Street and Coronation Drive, and barriers to pedestrian movement to Coronation Drive.

Bardon

Bardon is located approximately 6km from the CBD, at the western end of the study corridor. The suburb is bordered by Mt Coot-tha Forest Park to the west, Paddington to the north east, Auchenflower to the north and Toowong cemetery to the south west. Bardon has a higher percentage of detached dwellings than Brisbane averages, with stock including workers' cottages and Queenslanders. Key features of the suburb include parks, and bush land and open space areas, including a network of open space extending along Ithaca Creek, as well as the undulating topography, offering views towards the CBD.

The suburb is serviced by a number of bus routes, including along Simpsons Road, and a BUZ service that runs along Coopers Camp and Waterworks roads providing high frequency bus services. A number of on-road and off-road cycleways are also located across the suburb, connecting parks and open space areas, and to the cycleway network through adjoining suburbs. Bardon includes major roads such as Jubilee Terrace, which borders the northern end of the suburb, Waterworks Road, Coopers Camp Road, and Simpsons Road – Boundary Road.

A summary of key population and demographic characteristics for the suburb is provided in **Table 2-7**.

[28] Family with children households include couple family with children and lone parent family

Table 2-7 Bardon Selected Characteristics, 2006

Characteristic	Bardon	Study Corridor	Brisbane LGA
Below 14 years (%)	21.3	11.6	18.1
Over 65 years (%)	9.9	7.7	11.8
Family with children households (%)	61.5	45.7	59.4
Group households (%)	6.5	16.5	6.8
Median household income ($)	1,671	1,297	1,157
Professional occupation (%)	40.1	37.3	26.4
Speak other language at home (%)	5.2	12.5	14.3
Stable residency (5yr) (%)	51.5	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,118-1204	1,056-1166	718-1,243
Average occupancy rate	2.5	2.2	2.5
Attached dwellings (%)	8.6	37.2	11.8

Source: ABS Census 2006

Bardon includes a range of social infrastructure which serves the needs of local residents and the broader community. Five state and private primary schools are located in the suburb, including Ithaca State School, Rainworth State School, Bardon State School and St Joseph's School, as well as Stuartholme College. The suburb also has a range of sporting facilities, including the Western Leagues Club and Bardon Bowls Club, and community support services, such as Communify QLD Inc. Local shopping facilities are provided at the Bardon Shopping Centre, located on MacGregor Terrace.

Bardon demonstrates a good level of social capital, with residents having access to a range of community facilities, good community networks and high levels of participation in volunteering. The suburb includes a number of community organisations, such as P&C groups, sporting clubs and religious centres. Save Our Waterways Now (SOWN) is a community based environmental group which is undertaking an initiative to rehabilitate Ithaca Creek, which runs through the suburb. The suburb's networks includes seven local groups which focus on Ithaca Creek, including at Bardon State School and the Kawanis Club[29].

Auchenflower

Auchenflower is located approximately 2.5km from the Brisbane CBD. The suburb is bounded by Toowong to the south, Coronation Drive and the Brisbane River to the east, and by Milton and Paddington to the north and west. The suburb's topography is undulating and steep in places.

Auchenflower is predominantly residential in character, with a mix of low density character housing, as well as medium-high density housing adjacent to the transport corridors. An exception to the suburb's residential character is the Wesley Hospital. The hospital is located on Chasely Street between the Ipswich-Brisbane rail line and Coronation Drive, and is a key feature of the suburb.

Auchenflower includes a number of major transport corridors, including Coronation Drive, Milton Road, and the Ipswich-Brisbane rail corridor. Coronation Drive forms the eastern boundary of the suburb, while Milton Road and the rail corridor dissect the suburb. Auchenflower also has good access to public transport, including bus and rail.

[29] www.saveourwaterwaysnow.com.au, viewed 15 November 2007

A summary of key population and demographic characteristics is in **Table 2-8.**

Table 2-8 Auchenflower Characteristics, 2006

Characteristic	Auchenflower	Study Corridor	Brisbane LGA
Below 14 years (%)	10.7	11.6	18.1
Over 65 years (%)	7.2	7.7	11.8
Family with children households (%)	42.6	45.7	59.4
Group households (%)	16.6	16.5	6.8
Median household income ($)	1,382	1,297	1,157
Professional occupation (%)	39.2	37.3	26.4
Speak other language at home (%)	10	12.5	14.3
Stable residency (5yr) (%)	32.3	29.4	46.9
SEIFA Advantage/ Disadvantage Index[30]	1,078-1,179	1,056-1,166	718-1,243
Average occupancy rate	2.2	2.2	2.5
Attached dwellings (%)	38.2	37.2	11.8

Source: ABS Census 2006

Regional level social infrastructure includes the Wesley Hospital, Trinity Theological College, and Rivercity Private Hospital, whilst social infrastructure to serve the local needs of residents includes parks and open space (i.e. Dunmore Park, Torwood Park, and local parks in Land Street), child care centres (Milton Road Children's Centre and Montessori Children's House) and religious centres and sporting facilities. Auchenflower does not include a state primary school, with the suburb falling into the catchments for Toowong State School and Milton State School.

The suburb generally displays a good level of community cohesion, with residents having access to a range of facilities and demonstrating high levels of volunteering compared to Brisbane. The suburb also includes a number of community organisations, including sporting clubs, religious centres and P&C groups. Auchenflower has a generally high level of amenity due to its good access to public transport, particularly rail and bus, proximity to the CBD and Toowong Village, access to community facilities and services, including the Wesley Private Hospital, and access to a mix of housing options. However, residential amenity in the suburb is becoming compromised by increased congestion on Milton Road and Coronation Drive, which result in rat running in local streets and extended commuter trips.

Paddington

Paddington is located in the middle portion of the study corridor, approximately 2km from the CBD. Paddington adjoins Red Hill to the north west, Bardon to the south and Auchenflower and Milton to the east. The suburb predominantly includes low density "tin and timber" character housing, although pockets of medium density housing also exist. A range of commercial, shopping and entertainment uses are located across Paddington.

Key features of Paddington include Government House, and entertainment and shopping precincts at Caxton Street, Rosalie Village, Given Terrace and Latrobe Terrace.

Major roads in the suburb include the Caxton Street – Given Terrace – Latrobe Terrace corridor, which provides access to the City Centre for residents in Brisbane's western suburbs. Baroona Road – Elizabeth Street –

[30] SEIFA index score is Toowong SLA score

Rainworth Road is also an important road corridor. Paddington is served by bus routes along Latrobe Terrace and Given Terrace. On-road bicycle lanes are provided on Caxton Street – Given Terrace – Latrobe Terrace, Baroona Road, as well as Great George Street and Enoggera Terrace. Paddington is also within easy walking distance to the Brisbane CBD via Caxton and Roma streets.

Table 2-9 outlines selected demographic and housing characteristics for Paddington.

Table 2-9 Paddington Selected Characteristics, 2006

Characteristic	Paddington	Study Corridor	Brisbane LGA
Below 14 years (%)	12.0	11.6	18.1
Over 65 years (%)	7.8	7.7	11.8
Family with children households (%)	46.4	45.7	59.4
Group households (%)	17.5	16.5	6.8
Median household income ($)	1,496	1,297	1,157
Professional occupation (%)	37.3	37.3	26.4
Speak other language at home (%)	7.6	12.5	14.3
Stable residency (5yr) (%)	34.2	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,081-1,192	1,056-1,166	718-1,243
Average occupancy rate	2.3	2.2	2.5
Attached dwellings (%)	17.8	37.2	11.8

Source: ABS Census 2006

The suburb includes a range of social infrastructure and community facilities to serve the needs of local and broader regional communities. Schools located in Paddington include Petrie Terrace State School and Marist College Rosalie. However, Paddington also has strong links with Milton State School, with a large portion of the suburb falling within the catchment area for this school. Open space and recreation areas in the suburb include the Ithaca Swimming Pool, Neal Macrossan Park, which includes a skate park that attracts young people from a wide area, and Ithaca Memorial Park. Paddington also includes a number of religious centres and community support centres. A number of areas of cafes, restaurants and entertainment venues which serve both local and district communities are concentrated in a number of areas across the suburb, including Caxton Street, Given Terrace Rosalie Village, and Latrobe Terrace. Paddington includes a range of community organisations, including P&C groups and religious organisations.

Overall, Paddington has a strong character and sense of place and a high level of amenity provided by its proximity to the CBD, access to community facilities and entertainment and café precincts, and 'tin and timber' character housing. The suburb is also likely to display strong levels of community cohesion, with residents having access to a range of community facilities and services, and demonstrating reasonably high levels of participation in volunteering.

Milton

Milton is located approximately 1.5km from the Brisbane CBD. The suburb is bounded by the Brisbane River to the east, Paddington to the west, Auchenflower to the south and the Brisbane CBD to the northeast. Milton incorporates a mix of land uses, including a combination of high density residential and low density character housing, commercial, light industrial, retail and entertainment uses. Milton has been identified as a major renewal area in Brisbane.

Key features of the suburb include Suncorp Stadium, Castlemaine Perkins Brewery, Milton Office Park, Milton State School, the adjacent Gregory Park and the Brisbane River. Milton also includes a number of heritage buildings, which add to the diversity and character of the suburb. A range of cafes, restaurants and entertainment venues are located at Park Road, catering for both local and district communities, while local shopping is provided at Centro Milton on the corner of Milton and Baroona roads.

The Suncorp Stadium facility is an important landmark of Brisbane's inner western suburbs and facility for the SEQ Region. In addition to its current value as a major sporting facility, the area holds important community and historical values relating to its previous use as a cemetery, with the adjacent Christ Church, developed in 1891 and Memorial Cemetery being the only remaining evidence of this previous use[31].

Milton includes a number of major transport corridors, including Coronation Drive, Milton Road and the Brisbane-Ipswich rail line. Coronation Drive and Milton Road are major traffic routes for Brisbane's inner and outer south-western suburbs and are heavily congested during peak hours. The suburb is well served by public transport, including rail and bus services.

A summary of selected population and demographic characteristics for Milton is provided in **Table 2-10**.

Table 2-10 Milton Selected Characteristics, 2006

Characteristic	Milton	Study Corridor	Brisbane LGA
Below 14 years (%)	9.8	11.6	18.1
Over 65 years (%)	7.5	7.7	11.8
Family with children households (%)	42.6	45.7	59.4
Group households (%)	18.7	16.5	6.8
Median household income ($)	1,198	1,297	1,157
Professional occupation (%)	33.4	37.3	26.4
Speak other language at home (%)	9.6	12.5	14.3
Stable residency (5yr) (%)	28.1	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,020-1,136	1,056-1,166	718-1,243
Average occupancy rate	2.1	2.2	2.5
Attached dwellings (%)	38.7	37.2	11.8

Source: ABS Census 2006

Milton includes a range of local and regional social infrastructure and community facilities. Milton State School is located within the suburb, whilst part of Milton is also within the catchment for Petrie Terrace State School. Tertiary education facilities in Milton include the St Francis Theological College and the SAE Institute. A number of parks are also located across the suburb, including Frew Park, Milton Park and Gregory Park. The suburb includes a range of community support services, which provide support for families, youth, and people with disabilities. Milton State School and Gregory Park are important community facilities for local communities. The school was first opened in 1890 and today provides education for students in Prep to Year 7[32]. The school is a hub for the local community, offering a range of adult leisure education classes such as cooking, fitness, art, language and dancing, and meeting space for local community groups. Gregory Park is an important community space and is one of the few major green spaces in Brisbane's inner western suburbs.

[31] www.suncorpstadium.com.au viewed on 5 December 2007
[32] www.miltonss.qld.edu.au and www.education.qld.gov.au, viewed on 5 December 2007

Milton demonstrates good levels of social capital, with residents showing relatively high levels of participation in volunteering, and in community life, including local festivals and other events and community organisations, such as the P&C and religious organisations. Overall, Milton also has a good level of amenity due to its proximity to the Brisbane CBD and access to public transport including bus and rail, and a range of local and regional community facilities. Milton's amenity has the potential to be compromised by growth in traffic congestion on Milton Road and Coronation Drive, increasing barriers to local access.

Red Hill

Red Hill is located approximately 3km from the Brisbane CBD, and is situated between the suburbs of Paddington and Kelvin Grove. The suburb comprises predominantly detached houses, including renovated workers' cottages, brick and tile homes, and Queenslanders. A mix of commercial, shopping and cafes/ restaurant uses are concentrated on Musgrave Road in the vicinity of Windsor Road and Enoggera terrace.

Key features of the study corridor include the local landmarks of St Brigid's Catholic Church and the Normanby Hotel.

The major transport corridor in the suburb includes Musgrave Road/ Waterworks Road, which provides access to the city for residents in Brisbane's inner western suburbs. Bus services also operate along this corridor, and along Enoggera Terrace. The suburb's steep terrain makes pedestrian access challenging for some. Bikeways in the suburb include on-road bicycle lanes on Windsor Road and Enoggera Terrace which provide for east-west bicycle access, and Arthur Terrace which provide for north-south bicycle access.

A summary of selected population and demographic characteristics for Milton is provided in **Table 2-11**.

- **Table 2-11 Red Hill Selected Characteristics, 2006**

Characteristic	Red Hill	Study Corridor	Brisbane LGA
Below 14 years (%)	13.5	11.6	18.1
Over 65 years (%)	7.1	7.7	11.8
Family with children households (%)	52.3	45.7	59.4
Group households (%)	15.0	16.5	6.8
Median household income ($)	1,341	1,297	1,157
Professional occupation (%)	37.8	37.3	26.4
Speak other language at home (%)	7.7	12.5	14.3
Stable residency (5yr) (%)	34.4	29.4	46.9
SEIFA Advantage/ Disadvantage Index	999-1,171	1,056-1,166	718-1,243
Average occupancy rate	2.3	2.2	2.5
Attached dwellings (%)	23.2	37.2	11.8

Source: ABS Census 2006

Red Hill includes social infrastructure and community facilities that generally serve the needs of the local community. The suburb includes the Red Hill Special School, which provides a range of educational programs for students with disabilities. The suburb does not include a primary school, but is located within the catchments for Petrie Terrace State School in Paddington, Ithaca Creek State School in Bardon and Kelvin Grove College. Red Hill includes a number of parks and open space areas which are generally located adjacent to Ithaca Creek. The suburb also has five churches, two facilities providing aged persons accommodation, and a range of community support services.

Residents in Red Hill demonstrate moderate levels of participation in volunteering, with approximately one in five residents at the 2006 Census indicating they had undertaken voluntary work in the previous 12 months. Red Hill had the highest proportion of residents needing assistance for self-care activities compared to the other study corridor suburbs, at 3.4%, which was similar to the Brisbane LGA (3.5%). Overall, amenity in Red Hill is high, given good local and CBD access to a range of community and commercial facilities, and good levels of accessibility and connectivity, terrain notwithstanding.

Herston

Herston is located at the northern end of the study corridor and is about 2km from the Brisbane CBD. The suburb extends from the ICB to Enoggera Creek. The Royal Brisbane Hospital campus, Victoria Park and Ballymore Stadium are the major landmarks in the suburb, while residential development occupies a large area between Herston Road and Enoggera Creek.

Herston has access to a range of transport options, including road, rail, bus and pedestrian and cycle paths. The ICB forms the eastern edge of the suburb and provides good access for local residents to Brisbane's southern suburbs. Other major road corridors in the suburb include Bowen Bridge Road and Herston Road. The suburb is served by the INB, which allows quick bus access into the CBD and Brisbane's broader busway network.

Herston is well supplied with pedestrian and cycle paths, with off-road cycle ways provided in Victoria Park adjacent to the ICB, and along Herston Road. An on-road cycle way also connects the Herston Road cycleway to the off-road cycleway along Enoggera Creek. The Victoria Park cycleway connects to Gregory Terrace at Spring Hill via a landbridge over the ICB, allowing for easy pedestrian and cycle access to the CBD.

A summary of selected population and demographic characteristics for Milton is provided in **Table 2-12**.

Table 2-12 Herston Selected Characteristics, 2006

Characteristic	Herston	Study Corridor	Brisbane LGA
Below 14 years (%)	12.3	11.6	18.1
Over 65 years (%)	10.3	7.7	11.8
Family with children households (%)	47.1	45.7	59.4
Group households (%)	21.1	16.5	6.8
Median household income ($)	1,178	1,297	1,157
Professional occupation (%)	39.6	37.3	26.4
Speak other language at home (%)	14.1	12.5	14.3
Stable residency (5yr) (%)	31.9	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,122-1,132	1,056-1,166	718-1,243
Average occupancy rate	2.4	2.2	2.5
Attached dwellings (%)	29.7	37.2	11.8

Source: ABS Census 2006

Herston includes a range of social infrastructure that serves the needs of local residents and the wider SEQ Region. In particular, the suburb includes the State's major medical facilities of the RB&WH and the RCH. A State special school is located at the RCH, which provides educational programs for students who are hospitalised. Herston also includes a place of worship (Joan of Arc Catholic Church), a nursing home (Regis Crana) and a range of community support services associated with the RB&WH and RCH.

Victoria Park is a major parkland area and important community space in Brisbane's inner northern suburbs and has important social, cultural, historical, recreational and scenic/landscape values.

Residents in Herston generally demonstrate moderate levels of participation in volunteering, with 20.5% of the population at the 2006 Census indicating they had participated in voluntary work. Overall, amenity is moderate, given good accessibility and values associated with major open spaces, and the constraints on the suburb of accommodating major health and transport infrastructure.

Kelvin Grove

Kelvin Grove is located approximately 4km from the Brisbane CBD and is situated between the suburbs of Herston and Red Hill. The suburb comprises a wide range of land uses, including a mix of character residential and 1960s residential unit developments, commercial uses along Kelvin Grove Road, and the KGUV. Kelvin Grove includes a diversity of housing types, including "tin and timber" workers cottages as well as higher density apartment buildings, generally concentrated in the KGUV.

The suburb also incorporates important education uses, including the Kelvin Grove College and the adjoining QUT Kelvin Grove Campus.

A number of fig trees which have important community significance are located along Kelvin Grove Road in the vicinity of the Normanby Hotel.

Kelvin Grove Road is a major road corridor which provides access to the CBD via Countess Street and Roma Street from Brisbane's outer north-western suburbs. The road creates a barrier to local pedestrian access between the university and residential areas to the south. The suburb is well served by public transport, particularly bus transport, with the INB.

A summary of selected population and demographic characteristics for Kelvin Grove is in **Table 2-13**.

Table 2-13 Kelvin Grove Selected Characteristics, 2006

Characteristic	City	Study Corridor	Brisbane LGA
Below 14 years (%)	10.8	11.6	18.1
Over 65 years (%)	9.2	7.7	11.8
Family with children households (%)	46	45.7	59.4
Group households (%)	20.7	16.5	6.8
Median household income ($)	1,136	1,297	1,157
Professional occupation (%)	35.1	37.3	26.4
Speak other language at home (%)	12.7	12.5	14.3
Stable residency (5yr) (%)	26.3	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,039-1123	1,056-1,166	718-1,243
Average occupancy rate	2.2	2.2	2.5
Attached dwellings (%)	34.3	37.2	11.8

Source: ABS Census 2006

Kelvin Grove includes social infrastructure and community facilities that serve local and district communities. The suburb includes the Kelvin Grove State College, which provides for all grades from Prep to Year 12, and also includes a preschool. Two child care facilities are located in the Kelvin Grove, including one associated with the QUT Kelvin Grove campus. The suburb also includes a number of parks which are located across the

suburb, including adjacent to Enoggera Creek. The suburb also has two churches, the La Boite Theatre Company Roundhouse Theatre, two aged care facilities and a range of community support services.

Residents in Kelvin Grove demonstrate a similar level of participation in volunteering to the study corridor in as a whole, with 18.5% of residents indicating they had undertaken voluntary work in the previous 12 months. The suburb includes a number of community organisations, including student organisations associated with the QUT, Kelvin Grove State College P&C, and religious organisations.

Spring Hill and Brisbane City Suburb

Spring Hill and the Brisbane City suburb are located at the northern end of the study corridor. The suburbs are located adjacent to each other, and generally extend from the Brisbane River in the east to the ICB in the west, and from Hale Street to Fortitude Valley. Brisbane City is the primary activity centre for the SEQ Region. It includes a diverse range of government administration, retail, commercial, and specialised personal and professional services, as well as a range of cultural, entertainment, health and education facilities of state, national and international importance[33]. Spring Hill is located immediately north west of the City and includes a mix of commercial, residential and community land uses such as a number of health and medical services, education including Brisbane Girls Grammar School and Brisbane Grammar School and open space areas including Victoria Park.

The ICB and Hale Street form the western boundaries of the two suburbs, while the Riverside Expressway forms the southern boundary of the City. These roads carry high volumes of traffic daily. The City is the focus of Brisbane's public transport system, including bus, rail and ferry transport.

A summary of selected population and demographic characteristics for Spring Hill is in **Table 2-14** and the City in **Table 2-15.**

- **Table 2-14 Spring Hill Selected Characteristics, 2006**

Characteristic	Spring Hill	Study Corridor	Brisbane LGA
Below 14 years (%)	7.7	11.6	18.1
Over 65 years (%)	5.6	7.7	11.8
Family with children households (%)	34.8	45.7	59.4
Group households (%)	17.6	16.5	6.8
Median household income ($)	1,220	1,297	1,157
Professional occupation (%)	36.1	37.3	26.4
Speak other language at home (%)	15.7	12.5	14.3
Stable residency (5yr) (%)	15.8	29.4	46.9
SEIFA Advantage/ Disadvantage Index	1,052-1,137	1,056-1,166	718-1,243
Average occupancy rate	2.0	2.2	2.5
Attached dwellings (%)	62.5	37.2	11.8

Source: ABS Census 2006

[33] Queensland Government Office of Urban Management (2005), SEQRP 2005-2026

- **Table 2-15 City Selected Characteristics, 2006**

Characteristic	City	Study Corridor	Brisbane LGA
Below 14 years (%)	4.6	11.6	18.1
Over 65 years (%)	4.5	7.7	11.8
Family with children households (%)	25.2	45.7	59.4
Group households (%)	16.5	16.5	6.8
Median household income ($)	1,222	1,297	1,157
Professional occupation (%)	34.2	37.3	26.4
Speak other language at home (%)	28.3	12.5	14.3
Stable residency (5yr) (%)	10.1	29.4	46.9
SEIFA Advantage/ Disadvantage Index	990-1194	1,056-1,166	718-1,243
Average occupancy rate	1.9	2.2	2.5
Attached dwellings (%)	84.1	37.2	11.8

Source: ABS Census 2006

The City and Spring Hill include a wide range of social infrastructure and community facilities that serve the needs of local residents as well as the wider Brisbane LGA and SEQ Region. The suburbs include education facilities, including child care, private primary and secondary schools, and tertiary education institutions. Key open space areas include the Roma Street Parklands, Brisbane Botanic Gardens, and Victoria Park in Spring Hill. The suburbs also include a range of health and medical facilities, and community support services. Residents in Spring Hill and the City have the lowest levels of participation in volunteering of the study corridor suburbs, at 12.1%, which is below the proportion for the Brisbane LGA.

3. Social Impacts

This section provides an assessment of the potential changes to the social environment of the study corridor as a result of the construction and operation of the Project. The ToR for the Project requires:

- identification of potential significant impacts for affected landholders, businesses and communities;
- analysis of potential changes, social benefits and impacts to demography and population diversity, equity in local distribution of community benefits and social impacts, quality of life, amenity, employment, community values, amenity, access and connectivity;
- assessment of potential social benefits and impacts, including for community members, businesses, Council, and other stakeholders, within the study corridor and in any wider context; and
- development of mitigation strategies to optimise community benefits and minimise negative impacts, including development of design, public transport, crime prevention, active transport and urban renewal strategies. This included consideration of mitigation strategies used in comparable projects.

3.1 Quality of Life

A person's quality of life can be affected by a range of environmental factors including:

- residential amenity, including views, noise, dust, privacy and local character;
- community health and safety, including air quality;
- access to community services and facilities, including open space and park land areas;
- access and connectivity, including traffic and parking, and access to public transport and pedestrian and cycle networks; and
- employment options.

Quality of life is also affected by community values, socio-economic factors and equity, which are outlined in following sections.

3.1.1 Local Amenity

This section describes potential impacts on local amenity for residents, businesses and community facilities during construction and operation of the Project for communities close to the project works. Potential impacts on amenity of parks and open space is discussed in Section 3.1.2.

During construction, impacts on local amenity could be experienced due to:

- construction noise and dust, for residents in the vicinity of the construction worksite and surface works;
- changes to local character due to the location of the worksites;
- regenerated noise and vibration from construction of the driven tunnels for properties above or close to the tunnel alignment;
- noise and dust associated with the loading, handling and removal of spoil from construction worksites; and
- increases in spoil haulage vehicles on the road network.

It is proposed that tunnel works would be undertaken 24 hours per day, seven days per week with works occurring underground or within the acoustic worksheds. The majority of surface works would occur during day

light hours (i.e. 6.30am to 6.30pm), Monday to Saturday. However, some surface works may be required to be undertaken outside of these hours to minimise traffic disruption on the regional road network.

During operation the Project may assist in improving amenity within the study corridor by reducing traffic and rat running on some local streets. However, some impacts on local amenity may occur:

- for residents, businesses and community facilities close to surface connections due to increases in traffic noise;
- where the location of surface infrastructure (i.e. transition structures, elevated ramps and ventilation outlets) disrupts views or visual amenity; and
- in local streets where residents perceive that changes in traffic volumes or driver behaviours cause unacceptable noise or safety risks, such as residential streets where 'rat running' occurs.

Western Freeway Connection

The closest neighbourhoods to construction works for the Western Freeway connection are located east of Anzac Park and north of Mt Coot-tha Road. During construction, residents may experience impacts on local amenity as a result of noise and dust from construction of the transition structures and cut and cover tunnels, and the loading, handling and removal of spoil from the construction of the mainline tunnels.

Night-time construction works would be required in this area to minimise traffic disruption on the Western Freeway, which may impact on the sleeping patterns of some residents close to the construction works.

Anzac Park and the Mt Coot-tha Botanic Gardens provide a buffer to construction works in this area, which will help to reduce potential impacts for these communities. The implementation of environmental management measures such as the provision of noise barriers near construction works, use of acoustic work sheds for the loading and handling of spoil, screening of construction works and the implementation of dust mitigation measures (i.e. wheel wash, covering of loads, etc) would also help to further reduce potential impacts on the amenity of these neighbourhoods. A detailed list of recommended mitigation measures is provided in the EIS.

Ongoing consultation and communication with neighbourhoods near to the construction works about construction activities, including timing, duration and likely impacts, would be required to maximise the success of mitigation measures, particularly for surface works undertaken outside of normal daylight construction hours.

Spoil from the worksite adjacent to the Western Freeway is proposed to be removed via conveyor to the Mt Coot-tha quarry for potential recycling into asphalt or concrete aggregates. The spoil conveyor is proposed to be covered, which would help to minimise potential noise and dust impacts on the amenity of nearby residents and for users of Mt Coot-tha Botanic Gardens. However, issues were identified during community consultation for the Project about impacts on neighbouring residents from the existing Mt Coot-tha quarry operations such as noise, dust, vibration and the use of local roads by heavy vehicles, and the potential for these impacts to increase with the use of the quarry for the collection and recycling of tunnel spoil. It is not expected that the existing levels of heavy vehicles entering or exiting the quarry would be increased as a result of the Project. The use of spoil from the tunnel may reduce some impacts of the quarry's operations associated with blasting, including noise, dust and vibration.

During operation, potential increase in traffic noise from traffic entering and exiting the tunnel at the Western Freeway connection may impact on the amenity of some local streets and neighbourhoods. However, existing traffic noise levels and the separation of residential communities by Anzac Park and the Mt Coot-tha Botanic

Gardens would reduce potential traffic noise impacts for these neighbourhoods. Impacts of traffic noise are discussed in detail in the *Noise and Vibration Report.*

The location of the ventilation outlet, adjacent to the Western Freeway, may impact on the visual outlook for residents in neighbourhoods north of the Mt Coot-tha Botanic Gardens and in some streets south and east of Anzac Park. Landscaping and urban design measures would help to mitigate the visual impact of the ventilation outlet from these areas. Visual impacts of the ventilation outlet are discussed in the *Landscape and Urban Design Report.*

Toowong Connection

During construction, neighbourhoods closest to the Frederick Street worksite and surface works on Milton Road and Croydon Street may experience impacts on local amenity resulting from:

- noise and dust, for residents in the vicinity of the construction worksite and surface works, including those in Valentine Street, Morley Street, Frederick Street, Milton Road, and Croydon Street;
- potential regenerated noise and vibration from construction of the driven tunnels connecting to the mainline tunnel, for properties above or close to the tunnel alignment, particularly where vibration levels approach or exceed sleep disturbance levels (see *Noise and Vibration Report*); and
- changes to local character due to the location of the worksite and road works, including for Valentine Street, Morley Street, Frederick Street, Quinn Street, Milton Road and Croydon Street.

The majority of surface works in this location would occur during day light hours (i.e. 6.30am to 6.30pm), Monday to Saturday. However, some surface works may be required to be undertaken outside of these hours to minimise traffic disruption on Frederick Street and Milton Road. This may impact on sleeping patterns for some residents closest to these works, particularly in Valentine Street, Frederick Street, Croydon Street and Milton Road, if noise levels exceed sleep disturbance levels. This is discussed in the *Noise and Vibration Report*.

The proposed construction methodology and environmental management measures would help to reduce or mitigate some of the potential impacts on the amenity of local streets and neighbourhoods. This includes measures such as the erection of screening and noise barriers near construction works, the implementation of dust mitigation measures (i.e. wheel wash, covering of loads, etc), and monitoring of vibration impacts for buildings above or near to the tunnel alignment. A detailed list of mitigation measures are outlined in the EIS. Ongoing consultation and communication with local residents about construction activities and potential disruptions would also be required to maximise the success of the mitigation measures. This would be particularly important for residents of properties that may experience vibration levels from driven tunnelling approaching or exceeding sleep disturbance levels and where surface works are proposed to be undertaken during night time hours.

Spoil from the Frederick Street worksite would be transported by truck to either the Western worksite, where it would then be transported via conveyor to the Mt Coot-tha quarry, or to other spoil sites via the Western Freeway. Impacts associated with the use of the conveyor are discussed above. However, other impacts on local amenity may result from:

- noise and dust impacts for residents and businesses near the Toowong worksite from the loading, handling and removal of spoil; and
- increase in spoil haulage vehicles on the road network and potential traffic safety issues for motorists, pedestrians and cyclists along spoil haulage routes.

Careful management of spoil haulage activities would be required to minimise potential impacts on local residents, businesses and road users. Spoil from the Frederick Street worksite would be loaded into trucks within an acoustic work shed, to minimise noise and dust for neighbouring residents, including those in Valentine Street, Frederick Street, and Morley Street. Spoil haulage vehicles would be able to enter and exit the work shed in a forward direction, reducing the use of truck reversing beepers and consequent nuisance for local residents. Environmental measures would also be implemented to manage dust impacts for local communities such as the covering of haulage loads and wheel wash facilities. Traffic management measures would also be required to mitigate potential impacts from the movement of spoil haulage vehicles. These are discussed in the *Traffic and Transport Report*.

Concerns with existing levels of 'rat running' in some local streets was raised during community consultation, including for Musgrave Street, Gilfrey Street, Morley Street and Gregory Terrace at Toowong. As discussed in Section 3.1.5**,** the operation of the Project would assist in improving amenity of some local streets and neighbourhoods within the study corridor compared to the without Project scenario. The potential to reduce this was identified as a benefit by community members.

However, during consultation for the Project, some residents identified concerns that the Project would increase through traffic in some streets near the Toowong connection as a result of motorists accessing the tunnel at Milton Road from Frederick Street, reducing local amenity. In particular, concerns were raised about potential increases in through traffic in Gregory Street, Morley Street and Musgrave Street. Traffic modelling found that compared to the without Project scenario, traffic reductions would occur in residential streets north of Milton Road, including Gregory and Morley Streets. However, these volumes would be greater than the existing levels such that the environmental capacity of some of the local streets would be exceeded. The implementation of local area traffic management measures in these streets would assist in mitigating potential impacts on local amenity resulting from potential increases in through traffic. Changes to local traffic with and without the Project and possible mitigation measures are discussed in the *Traffic and Transport Report*.

The closure of Valentine Street at Frederick Street and the rehabilitation of the Fredrick Street worksite following construction, including provision of a landscape buffer, would assist in enhancing amenity for local residents in this street.

The operation of the Project may have longer term impacts on the amenity of some local streets and neighbourhoods. This may include potential for increased traffic noise, particularly where the removal of buildings on Valentine Street, Frederick Street, Milton Road and Croydon Street, results in properties becoming exposed or moving closer to main roads. Potential traffic noise from the transition structures and elevated ramps for residents in Valentine Street and Morley Street and the need for noise barriers was identified during community consultation, and is supported by the findings of the *Noise and Vibration Report*.

The construction of noise barriers at the transition structures and connection ramps (i.e. Frederick Street and Valentine Street) and the redevelopment of surplus land following construction of the Project would assist in mitigating traffic noise impacts on local amenity. The design and placement of noise barriers would need to consider pedestrian routes, safety for local communities, visual amenity for neighbouring properties and climatic conditions (i.e. breezes). Community consultation also identified the desire for noise barriers on the elevated connection ramps to comprise sound absorbing material to reduce reflection of traffic noise on houses in Valentine Street.

Kelvin Grove Road Connection

Construction of the Kelvin Grove Road connection may impact on the amenity of residents near the construction worksite and surface works, resulting from:

- construction noise and dust associated with surface works including the construction of the transition structures, cut and cover tunnels and road widening;
- changes to local character due to the location of the worksite; and
- night-time surface works required to minimise traffic disruptions on Kelvin Grove Road.

Impacts on local amenity, including potential disruption to sleeping patterns from night-time construction works, may impact residents in Lower Clifton Terrace, Upper Clifton Terrace and Westbury Street at Red Hill, and Victoria Street and Kelvin Grove Road at Kelvin Grove.

Regenerated noise and vibration from construction of the driven tunnels connecting to the mainline tunnels may also impact on local amenity for some properties above or close to the tunnel alignment. This is relevant mainly for those locations where the tunnel is close to the surface, and where vibration levels approach or exceed sleep disturbance limits (see *Noise and Vibration Report*).

The proposed construction methodology and environmental management measures would help to reduce or mitigate some of the potential impacts on the amenity of local streets and neighbourhoods in Kelvin Grove and Red Hill. This includes measures such as the erection of screening and noise barriers near construction works, and the implementation of dust mitigation measures (i.e. wheel wash, covering of loads, etc). Ongoing consultation and communication with residents of those streets closest to the construction worksites and surface works would be required during the construction phase to maximise the success of the mitigation measures. This would be particularly important for residents of properties that may experience vibration levels from driven tunnelling approaching or exceeding sleep disturbance levels and where surface works are proposed to be undertaken during night time hours.

Spoil from the Kelvin Grove Road worksite would be trucked to the Port of Brisbane via Kelvin Grove Road, the ICB and Kingsford Smith Drive. Impacts of spoil haulage could include:

- noise and dust impacts for residents and businesses near the construction worksite (i.e. Lower Clifton Terrace, Upper Clifton Terrace, Westbury Street, Victoria Street and Kelvin Grove Road), from the loading and handling of spoil;
- increase in spoil haulage vehicles on the road network and potential traffic safety issues for motorists, pedestrians and cyclists along spoil haulage routes; and
- increased noise of heavy vehicles for communities adjacent to spoil haulage routes.

Careful management of spoil haulage activities would be required to minimise potential impacts on local residents, businesses and road users. Spoil from the Kelvin Grove worksite would be loaded into trucks within an acoustic work shed, to minimise noise and dust for neighbouring residents. Environmental measures would also be implemented to manage dust impacts for local communities such as the covering of haulage loads and wheel wash facilities. Traffic management measures would be required to mitigate potential impacts from the movement of spoil haulage vehicles. These are discussed in the *Traffic and Transport Report*. Cumulative impacts of spoil haulage from the Project and other infrastructure projects in inner Brisbane is discussed in Section 3.6.

Concerns with existing levels of 'rat running' in some local streets was raised during community consultation, including by residents in Victoria Street. The operation of the Project may assist in improving amenity of some local streets and neighbourhoods by providing an alternate route for through-traffic, reducing rat-running in some residential streets. However, the closure of Victoria Street and Westbury Street at Kelvin Grove Road would change local traffic access in this area. This may impact on local amenity in some streets connecting to Musgrave Road if appropriate local area traffic management measures are not implemented. Potential social impacts of changes to local access and connectivity are described in Section 3.1.5.

During operation, the removal of buildings at Lower Clifton Terrace and Kelvin Grove Road may impact on the amenity of some local streets and neighbourhoods for properties which become exposed or move closer to main roads. Potential increases in traffic noise for residents near the Kelvin Grove connection in Upper Clifton Terrace, Lower Clifton Terrace and Westbury Street, and the need for noise barriers was identified during community consultation, and is supported by the findings of the *Noise and Vibration Report*. The construction of noise barriers in areas close to surface connections (i.e. Lower Clifton Terrace and Kelvin Grove Road) and the redevelopment of surplus land following construction of the Project would assist in mitigating traffic noise impacts on local amenity. The design and placement of noise barriers would need to consider pedestrian routes, safety for local communities, and visual amenity for neighbouring properties.

ICB Connection

The closest neighbourhoods to construction works at the ICB are located west of the proposed construction works at Normanby Terrace and Victoria Park Road at Kelvin Grove and east of the ICB at Spring Hill. During construction, impacts on local amenity may result from:

- noise and dust, for residents in the vicinity of construction works, including those in Normanby Terrace and Victoria Park Road;
- potential regenerated noise and vibration from construction of the mainline tunnel, for properties above or close to the tunnel alignment, particularly where vibration levels approach or exceed sleep disturbance levels (see *Noise and Vibration Report*); and
- changes to local character due to the location of the worksite and road works, including for Victoria Street; and
- night-time surface works required to minimise traffic disruptions on the ICB.

The ICB, railway line and Victoria Park provide a buffer to construction works for residents in Spring Hill, which would help to reduce potential impacts for residents in this area.

The proposed construction methodology and environmental management measures would help to reduce or mitigate some of the potential impacts on the amenity of local streets and neighbourhoods, including during night-time works. This includes measures such as screening of the construction worksite, the use of noise barriers near construction works, and the implementation of dust mitigation measures (i.e. wheel wash, covering of loads, etc). Ongoing consultation and communication with local residents close to construction works would also be required to maximise the success of the mitigation measures. This would be particularly important for residents of properties that may experience vibration levels from driven tunnelling approaching or exceeding sleep disturbance levels and where surface works are proposed to be undertaken during night time hours.

Spoil from the ICB worksite would be trucked to the Port of Brisbane via the ICB and Kingsford Smith Drive. Impacts of spoil haulage could include:

- noise and dust impacts for residents near construction worksites from the loading and handling of spoil;
- increase in spoil haulage vehicles on the road network and potential traffic safety issues for motorists, pedestrians and cyclists along spoil haulage routes; and
- increased traffic noise and an increase in heavy vehicles for local communities adjacent to spoil haulage routes.

Careful management of spoil haulage activities would be required to minimise potential impacts on local residents, businesses and road users. Environmental measures would also be implemented to manage dust impacts for local communities such as the covering of loads and wheel wash facilities. Traffic management measures would be required to mitigate potential impacts from the movement of spoil haulage vehicles. These are discussed in the *Traffic and Transport Report*. Cumulative impacts of spoil haulage from the Project and other infrastructure projects in inner Brisbane is discussed in Section 3.6.

The location of the transition structure closer to some properties in Normanby Terrace and Victoria Park Road than the existing ICB may impact on the amenity for residents in these streets, due to increased traffic noise. However, local amenity in these streets is currently impacted by traffic noise from the ICB, and the construction of noise barriers in the vicinity of this connection would mitigate potential increases in traffic noise impacts for these communities. The design and placement of noise barriers would need to consider pedestrian routes, safety for local communities, and visual amenity for neighbouring properties. Impacts of traffic noise are discussed in detail in the *Noise and Vibration Report*.

The location of the ventilation outlet within Victoria Park, may impact on the visual outlook for residents in Spring Hill who look towards Centenary Park, from the Brisbane Grammar School and Brisbane Girls Grammar School, for residents in Victoria Park Road and the KGUV and looking along Normanby Terrace towards Victoria Park. Reducing the height of the ventilation outlet to 15m and implementing landscaping and urban design measures may help to mitigate the visual impact of the ventilation outlet from these areas. Visual impacts of the ventilation outlet are discussed in the *Landscape and Urban Design Report*.

Tunnel alignment

Regenerated noise and vibration from driven tunnelling construction may also impact on local amenity for some communities above or close to the tunnel alignment. This is relevant mainly for those locations where the tunnel is close to the surface, and where vibration levels approach or exceed sleep disturbance limits (see *Noise and Vibration Report*). Consultation and communication with residents of properties above or close to the tunnel alignment that may experience regenerated noise or vibration, would help to mitigate potential impacts of driven tunnelling construction.

In the longer term, the Project would assist in improving amenity of some local streets and neighbourhoods within the study corridor by reducing traffic and rat running on some local streets. Concerns were raised during community consultation about existing levels of ‘rat running’, including in Paddington (i.e. Ellena Street) and in Auchenflower. The potential to reduce this was identified as a benefit by some community members. The Project would also reduce traffic on some city distributors including Caxton Street and Latrobe Terrace, improving amenity in these shopping and entertainment precincts. Further information on potential social impacts on changes to local access and connectivity is provided in Section 3.1.5, while a detailed assessment of predicted changes to traffic in the study corridor is provided in the *Traffic and Transport Report*.

3.1.2 Amenity of Parks and Open Space

This section describes the key impacts on amenity of parks and open space at each of the surface connections. The visual and physical access to green, leafy outlooks, parks and open space areas are valued in urban environments, particularly in inner city suburbs such as the study corridor, which generally have increased residential densities and more intensive land use patterns.

The study corridor includes a number of parks and open space areas that contribute to local amenity and character and that offer a range of landscape, ecological, scenic amenity and recreational values for local residents and the broader Brisbane and SEQ communities. In particular, the Mt Coot-tha Botanic Gardens, Anzac Park and Toowong Cemetery at the western end of the study corridor and Victoria Park at the northern end contribute substantially to the supply of open space in Brisbane's inner suburbs and have a high level of community value.

Potential impacts on amenity of parks and open space areas may result from such things as the loss of open space area, either temporarily or permanently, changed access to park facilities (i.e. pedestrian and cycle paths, playground or picnic facilities), and noise and dust from construction works.

Western Freeway Connection

During construction, impacts on the amenity of parks and open space in the vicinity of the Western Freeway connection include:

- temporary loss of an area of Mt Coot-tha Botanic Gardens, adjacent to the Western Freeway, for the western worksite and construction works (i.e. cut and cover tunnel) and the spoil conveyor; and
- temporary loss of an area of Anzac Park, adjacent to the Western Freeway for construction of the westbound cut and cover tunnel.

Construction impacts such as noise and dust from construction works and the transport of spoil by conveyor from the western construction worksite to the quarry may also impact on amenity for park users. Visual amenity for park users at the Botanic Gardens and Anzac Park may be impacted by construction activities and infrastructure (i.e. spoil conveyor, noise barriers, etc).

The location of construction works adjacent to the Western Freeway would help to reduce the potential impacts of these works for park users. Enclosing the spoil conveyor and locating it away from those areas within the Mt Coot-tha Botanic Gardens that are highly frequented by park users would also help to reduce the impacts for park users.

Environmental management measures (i.e. use of noise barriers, dust suppression methods, etc) would be implemented, reducing impacts of construction noise and dust on amenity for park users. Screening of the Western worksite would also help to reduce visual impacts for park users. The timing of construction activities that generate excessive noise and dust should consider the peak use times of the parks such as weekends and public holidays, to minimise impacts on park users.

The overall construction impact on the Mt Coot-tha Botanic Gardens and Anzac Park is not expected to be significant with the implementation of environmental management measures, screening of construction works and the location of works away from areas highly frequented by park users.

Following the construction phase, areas of park land and open space disturbed during construction would be reinstated to the extent possible. This includes the rehabilitation of the Western worksite consistent with the Mt

Coot-tha Botanic Gardens master plan. This would provide enhanced facilities (i.e. BBQs, shelters, drinking fountains, park furniture and lighting) and amenity for users of the Botanic Gardens. However, there would be some permanent loss of open space due to the location of transition structures and road widening including a portion of Mt Coot-tha Botanic Gardens and Anzac Park (up to approximately 30m in width and extending the length of the transition structure) adjacent to the Western Freeway. This permanent loss of open space is not expected to impact significantly on amenity for park users, given the close location of the surface works adjacent to the Western Freeway. Rehabilitation of the worksite following construction would help to enhance the amenity of the Gardens in the longer term.

The location of the ventilation outlet within the Botanic Gardens may impact on visual amenity within the park and detract from the environmental and recreational values for some users of the gardens. Landscaping and urban design measures would assist in mitigating the visual impact of the ventilation outlet from these areas. Visual impacts of the ventilation outlet are discussed in the *Landscape and Urban Design Report*.

Toowong Connection

At the Toowong connection, construction works associated with the Milton Road ramps and widening of Milton Road would impact on amenity for users of Quinn Park, including the Silk Shed Studio Group which currently leases the community arts centre located at the site. This includes the loss of about half of the park area, noise and dust from construction works, impacts on amenity for park users due to construction activities and changes to movement within the park. Given the size of the park and amount of open space lost, recreational use of the park during construction is likely to reduce.

Use of the community arts centre is proposed to be maintained during construction works. However, the amenity of the arts centre may be impacted by construction noise and dust.

Environmental management measures such as the erection of noise barriers and dust management measures would be implemented during construction to reduce impacts of construction noise and dust on amenity for users of Quinn Park and the community arts centre. Ongoing consultation and communication with the park users and the managers of the Silk Shed Studio Group would be required to identify and mitigate potential amenity impacts on Quinn Park and the use of the art centre.

Construction works for the Toowong connection would not directly impact on the Toowong Cemetery. However, noise from surface works in this area and the loading, handling and removal of spoil may impact on amenity for visitors and recreational users of the cemetery, particularly in that area adjacent to Frederick Street and Mt Coot-tha Road. The existing Frederick Street ramp would assist in mitigating some of the noise impacts of construction by providing a physical barrier between the construction works and the cemetery. The use of an acoustic shed for the loading and handling of spoil during construction would also mitigate potential noise impacts for visitors and recreational users of the cemetery.

In the longer term, impacts on amenity for users of Quinn Park would result from:

- the loss of approximately half of the park, due to the widening of Milton Road and the location of the Milton Road ramps;
- increased traffic noise from changes to traffic on Milton Road and the proximity of the ramp access, for users of the park and the community arts centre; and
- impact on the visual amenity due to the loss of trees adjacent to Milton Road (refer Landscaping and Urban Design Report).

Quinn Park provides informal recreational opportunities for local residents, and is highly valued particularly given the limited number of local parks in the area. As such, the impact of the Project on the park is likely to be significant in the context of the local community. Rehabilitation and enhancement of Quinn Park following construction including the provision of landscaping, urban design measures (i.e. public art) and amenities (i.e. seating, picnic and BBQ facilities, lighting, etc) would mitigate some of the Project's construction and operation impacts. However, consideration should be given to off-setting the loss of Quinn Park with alternate open space in the local area or enhancement of existing local open space areas such as Toowong Memorial Park, Anzac Park and the Mt Coot-tha Botanic Gardens. Some residents have indicated a preference for the redevelopment of the construction worksite at Valentine Street as open space following construction.

An increase in traffic noise from the transition structures and elevated structures at the Toowong connection may impact on amenity for visitors and recreational users of the Toowong Cemetery during operation. However, this is not expected to be significant given the impact on existing amenity from traffic noise on Frederick Street and Mt Coot-tha Road.

Kelvin Grove Connection

The key open space in the immediate vicinity of the Kelvin Grove connection is McCaskie Park on Kelvin Grove Road.

During construction, impacts such as noise and dust from construction works associated with the widening of Kelvin Grove Road and the construction of the Kelvin Grove Road northbound connections, may impact on amenity for users of McCaskie Park and Marshall Park. However, amenity in these parks is currently impacted by existing traffic volumes and traffic noise on Kelvin Grove Road. The implementation of environmental management measures would minimise impacts of construction noise and dust on amenity for park users.

Following construction, there would be a permanent loss of a portion of McCaskie Park (approximately 4m in width), due to the widening of Kelvin Grove Road and possible provision of an indented bus stop. Project works in this area would also require the realignment of the pedestrian and cycle path in the park adjacent to Kelvin Grove Road. This is not considered likely to impact on the amenity of the park.

The project works would also result in the loss of two fig trees from McCaskie Park and two fig trees from Marshall Park on the western side of Kelvin Grove Road which contribute to the amenity of these parks and streetscape of Kelvin Grove Road, and are valued by the local community. The loss of these fig trees would be important to the community and consideration should be given to their replacement in the local area. This is further discussed in the *Landscape and Urban Design Report*.

ICB Connection

During construction, impacts on the amenity of parks and open space in the vicinity of construction works for the ICB connection include:

- the temporary loss of an area of Victoria Park due to works associated with the widening of the ICB;
- diversion of the bicycle path adjacent to the ICB;
- noise and dust from construction works; and
- impacts on visual amenity for park users from construction activities and infrastructure.

The location of construction works adjacent to the ICB would help to reduce the potential impacts of these works for park users. In addition, the implementation of environmental management measures (e.g. use of noise barriers and dust suppression methods) would also reduce impacts of construction noise and dust on amenity for park users. Use of the bicycle path adjacent to the ICB would be maintained during the construction phase as discussed in Section 3.1.5.

Following the construction phase, areas of Victoria Park disturbed during construction would be reinstated to the extent possible. However, there would be some permanent loss of a portion of Victoria Park (up to approximately 30m in width, extending the length of widening works), north of Victoria Park Road.

The location of the ventilation outlet within Victoria Park may impact on the visual amenity within the park and may detract from the park's environmental and recreational values. Reducing the height of the ventilation outlet to 15m and landscaping and urban design measures would assist in mitigating the visual impact of the ventilation outlet from these areas. Visual impacts of the ventilation outlet are discussed in the *Landscape and Urban Design Report.*

The Project is not expected to impact significantly on amenity for users of Victoria Park, despite the extent of the encroachment of the surface works into the Park. However, as identified in Section 2.4.2, the land set aside for Victoria Park has slowly been encroached upon over the years, including more recently with the construction of the ICB and INB and any further loss of open space may be seen as significant for some community members.

3.1.3 Community Health and Safety

Community health is dependent on a range of factors including access to health and community facilities, personal risk factors, levels of physical activity, and environmental qualities such as safety and amenity. As discussed in **Section 2.2.15,** residents in the study corridor generally have a low risk of general poor health, notwithstanding the presence of people experiencing poverty, homelessness or socio-economic disadvantage, who are likely to have poorer health outcomes.

The Project is likely to improve access to health and medical services, including accident and emergency services, public hospital care and community services supporting health for specific target groups (e.g. aged people) by providing an alternative route to facilities such as the RBH, reducing travel times and improving traffic congestion in the inner western suburbs.

Access to open space and recreation facilities which encourage physical activity is dependent on ensuring that parks and reserves remain accessible during construction, and on restoring park areas disturbed during construction as early as practicable (e.g. Mt Coot-tha Botanic Gardens, Anzac Park and Victoria Park). Access to open space and recreation facilities would be maintained during the construction and operation of the Project, although use of Quinn Park would be constrained by construction works for the Toowong connection. Potential impacts on the use of open space and recreation facilities are discussed in Section 3.1.2.

Some houses and business premises would be acquired for worksites and the construction of surface works. Residents, business owners and employees facing changes such as relocation may experience anxiety and stress about these changes. The neighbourhoods affected by surface works at Toowong (i.e. Valentine Street, Frederick Street, Milton Road and Croydon Street) and Kelvin Grove (i.e. Lower Clifton Terrace, Upper Clifton Terrace, Westbury Street and Kelvin Grove Road) include a number of elderly residents and long-term residents, with some houses owned by the one family for a number of generations. The area also includes a number of people who need help or assistance in self-care, mobility or communication because of disability,

long-term health conditions or old age. The acquisition of properties would require some residents to relocate away from the local area and from existing social and support networks. This may impact on their well-being if they are not appropriately supported to do so. This is particularly important for long-term residents, elderly people and people with a disability, who have a strong connection to the local area or who may find it more difficult to adapt to new surroundings.

There is potential for impacts on quality of life due to the effects of uncertainty about property acquisitions or other impacts such as noise and vibration. Concerns were raised during consultation about uncertainty relating to:

- decisions on buying or selling properties, future renovations and impacts on property values near construction works at Toowong and Kelvin Grove and above the tunnel alignment, which may cause stress and anxiety;
- vibration and noise impacts for residents above the tunnel alignment or near worksites, including the perception that property may be damaged by vibration; and
- potential impacts for businesses near surface works, resulting from changes to access, vibration and amenity.

On balance it is unlikely that such anxiety would affect community health given the range of support facilities and socio-economic resilience which is generally evident in the study corridor. However, further stages of the project planning and delivery would need to be sensitive to the potential for anxiety and stress and ensure that ongoing consultation and communication with residents and local businesses reduces uncertainty through the timely provision of information about construction activities, likely impacts, and possible mitigation measures.

Operational air quality was raised as a primary concern by many local residents, specifically in relation to potential health impacts for sensitive groups such as elderly people and young children. Other issues raised during consultation for the Project in relation to air quality included:

- impact on residents in Valentine Street of pollution from the tunnel portals and elevated ramp at Toowong;
- concerns about the proximity of the ventilation outlet at Kelvin Grove to residences in Nomanby Terrace, Victoria Park Road and KGUV and sensitive uses, including schools, playing fields and aged care; and
- need for the best possible ventilation system, including filtration.

People also identified a concern to ensure air quality is maintained at safe levels, and enhanced where possible. Air quality modelling undertaken for the Project found that air quality would not change substantially as a result of the Project and that local air quality improvements would be achieved in some areas of the study corridor, particularly where traffic volumes are reduced. This is addressed in the *Air Quality Report*. Communication about air quality would be valuable in assuring most community members that potential effects on health have been comprehensively assessed and precluded.

A key theme for Living in Brisbane 2026 is a "*friendly, safe city*", which relates to safe communities and a well-designed and responsive built environment. The *Brisbane City Plan 2000* desired environmental outcome relating to *community life, health and safety* seeks to achieve a safe, secure, equitable and comfortable city, including through the design of buildings, public places, pedestrian ways and bikeways to help reduce the risk and fear of crime.

During construction, potential impacts (including perceptions or concerns) about community safety may result from:

- changes to pedestrian and cycle paths near worksites and surface works, reducing the legibility of the pedestrian environment as described in Section 2.4.1; and
- the perceived potential for the creation of unsafe public places near worksites and surface works, by reducing sight lines, opportunities for casual surveillance and levels of activity in public spaces.

Application of Crime Prevention Through Environmental Design (CPTED) principles would be important in the development of urban design proposals and the engineering design of surface infrastructure as well as for areas around worksites and surface works and in the construction of temporary pedestrian and cycle facilities. Ongoing consultation and communication with local communities about potential changes to pedestrian and cycle facilities would help to improve community safety by improving legibility of the environment.

During operation of the Project, a reduction in traffic congestion and rat running in some local streets within the study corridor would help to improve safety and access for pedestrian and cyclists and may encourage an increase in walking and cycling. This would also have health benefits for local communities. However, changes to pedestrian and cycle connections and traffic flows in the vicinity of surface connections at Toowong and Kelvin Grove Road may discourage walking and cycling in these local communities, reducing potential gains in health benefits resulting from increased walking and cycling across the study corridor. Improvements to pedestrian and cycle connections in the vicinity of surface connections would help to mitigate these impacts. Further discussion on changes to local access and connectivity, including for pedestrians and cyclists is provided in Section 3.1.5.

3.1.4 Access to Community Facilities

The study corridor includes a wide range of community facilities that service the needs of local communities as well as a range of district and regional level community facilities (Section 3.2).

Overall, the Project would help to improve access to local and regional community facilities by reducing traffic congestion in Brisbane's inner western suburbs, providing an alternative route to some facilities and reducing travel times. However, the construction and operation of the Project would impact on access to some community facilities in the study corridor, particularly near surface connections at Toowong and Kelvin Grove Road.

Many people who use community facilities access them by public transport or on foot. Therefore, it is important that safe and convenient pedestrian access is maintained, including for elderly and people with disabilities. If pedestrian or vehicle access is disrupted, or if people feel less confident about moving through areas near construction works or surface infrastructure, use of community facilities may suffer.

During construction, potential impacts on access to community facilities would occur near surface connections as a result of:

- potential changes to the location of bus stops near construction worksites and surface works, including on Milton Road and Kelvin Grove Road;
- changes in pedestrian and cycle access to the community art centre (Silk Shed Studio Group) in Quinn Park due to construction works associated with the Milton Road ramp and widening of Milton Road;

- temporary changes to pedestrian access across and along Milton Road and Croydon Street to community facilities at Toowong (i.e. Toowong State School, local shops, Toowong Baptist Church and Toowong Private Hospital) due to construction works in Milton Road and Croydon Street;
- changes in pedestrian access to the Toowong Cemetery for residents in Valentine Street, due to the location of the Frederick Street worksite;
- temporary changes to pedestrian access across and along Kelvin Grove Road to the community facilities in the KGUV and QUT, due to construction works for the Kelvin Grove connection and widening of Kelvin Grove Road; and
- changes in vehicle access to the Brisbane Grammar School playing fields.

During construction, maintenance of pedestrian and cycle access in the vicinity of construction works would help to reduce impacts relating to access to community facilities. Ongoing consultation and communication with facility managers and facility users about potential changes to access during construction would also help to reduce potential impacts on these facilities. This could include appropriate signage, advertisements or written notification about possible changes.

Community and government organisations managing facilities are ill-equipped to sustain facilities in place if their viability suffers due to impacts on access or amenity. It is therefore important to ensure that access is maintained and construction noise levels do not impact on amenity to the extent that functions are constrained.

During operation, the Project would improve access to major facilities such as the KGUV and QUT, and the RBH for residents in Brisbane's western suburbs and to Wesley Hospital and Toowong Private Hospital for residents in Brisbane's northern suburbs.

However, concerns have been raised by residents during consultation for the Project that the Toowong connection to Milton Road would increase traffic through Toowong, and that widening of Milton Road and Croydon Street would affect access and connectivity between neighbourhoods and community facilities such as the Toowong State School, local shops (i.e. Cat and Fiddle Shopping Centre) and public transport facilities such as bus stops on Milton Road, CityCat terminal at Coronation Drive and the Toowong train station. As outlined in Section 3.1.6, traffic on Milton Road provides an existing barrier to pedestrian movement across Milton Road and pedestrian access would be maintained at the intersection of Milton Road, Croydon Street and Morley Street. Pedestrian access would also be maintained across Croydon Street at the signalised intersection of Croydon Street, Sylvan Road and Jephson Street. Enhancements to pedestrian and cycle access in the vicinity of the Toowong connection are also recommended to improve access to local community facilities and regional bicycle networks. This could include provision of a separated pedestrian connection across Milton Road.

The Project would require the reconstruction of the vehicle access from Victoria Park Road to the Brisbane Grammar School playing fields. This would not impact on the use of the playing fields. Consultation should be undertaken with the school to ensure potential impacts of changed access are mitigated.

3.1.5 Local Access and Connectivity

Access is concerned with how people walk, cycle or wheel[34] to facilities in their neighbourhoods, and connectivity refers to the existence of pedestrian and cycle links between connecting paths and local destinations (such as churches and schools)[35].

During construction, temporary changes to local access and connectivity for pedestrians, cyclists and motorists would occur near construction worksites and in the vicinity of surface works.

In the longer term, the Project would reduce traffic congestion compared to the without Project scenario on some regional radial roads, such as Milton Road, Coronation Drive, Moggill Road and High Street and some city distributor roads such as Caxton Street, Latrobe Terrace and Sylvan Road. Reduced traffic on some local streets would also be achieved by up to 30-50%, including in Toowong, Milton, Red Hill and Rosalie. These are outlined in the *Traffic and Transport Report* and include streets such as Haig Road, Stuartholme Road, Rainworth Road and Birdwood Terrace. This would enable improved access within the study corridor, through freer movement of traffic, including for pedestrians and cyclists, as well as travel time savings and improved connection to the regional road network.

However, the Project may reduce local access and connectivity to the local road network near connections at Toowong and Kelvin Grove due to the closure of some local streets and changes to traffic flows.

The following provides a description of the likely benefits and impacts on access and connectivity for local communities in the study corridor. A more detailed discussion about changes to traffic and transport is provided in the *Traffic and Transport Report*.

Western Freeway Connection

During construction, impacts on local access and connectivity for pedestrians, cyclists and motorists in the vicinity of the Western Freeway connection include:

- temporary disruption to the bikeway adjacent to the Western Freeway in Anzac Park, due to the construction of the cut and cover tunnel; and
- potential traffic delays and disruptions for motorists due to temporary changes to traffic lanes on the Western Freeway and at the intersection of Mt Coot-tha Road and the Western Freeway, to allow construction of the cut and cover tunnel.

The Department of Main Roads has recently commenced construction of a pedestrian and cycle overbridge adjacent to the Mt Coot-tha roundabout to improve access across the Western Freeway, linking the Western Freeway bikeway at Toowong with Mt Coot-tha Road. The bridge will help to improve pedestrian and cycle connections between the Mt Coot-tha Botanic Gardens, Anzac Park, Toowong Village and the Coronation Drive bikeway. The overbridge is scheduled to be completed in 2009. Construction of the Western Freeway connection may impact on this link and alternative pedestrian and cycle access may need to be provided during construction.

The implementation of traffic management measures during construction would help to minimise impacts for motorists in the vicinity of the Western Freeway connection (refer to the *Traffic and Transport* report). This

[34] Wheelchairs, skateboards, and scooters
[35] Broader connectivity with regards to inter-suburb movements and longer journeys is addressed in the traffic chapter.

would include information for motorists about changes to traffic flows on the Western Freeway and Mt Coot-tha Road and potential disruptions. During construction, the Western Freeway bikeway in Anzac Park would be maintained, minimising impacts for pedestrians and cyclists in this area. Ongoing communication, including signage and advertisements, about potential changes to the bikeway would reduce potential impacts for bikeway users during construction.

In the longer term, the transition structure for the Western Freeway westbound connection would necessitate a minor diversion of the pedestrian and cycle path adjacent to the freeway in Anzac Park. However, the functionality of the bikeway would be maintained.

Toowong Connection

Construction of the Toowong connection would result in changes to local access and connectivity for pedestrians, cyclists and motorists near the construction worksite and in the vicinity of surface works. This includes:

- changes to access for vehicles along Milton Road, due to the construction of the connection ramps and road widening;
- temporary disruption to pedestrian and cycle access along Frederick Street south of Morley Street along Milton Road between Croydon Street and Frederick Street and on the southern side of Croydon Street, between Sylvan Road and Milton Road;
- potential changes to the location of bus stops on Milton Road near construction worksites and surface works; and
- potential impacts for local residents due to construction workers parking in streets surrounding the construction worksite (i.e. Valentine Street, Morley Street, Gregory Street).

The implementation of traffic management measures would help to minimise impacts for motorists during construction in the vicinity of construction works (refer to the *Traffic and Transport* report). This would include information to local residents about changes to local access and to wider road users about potential disruptions to traffic on Milton Road in the vicinity of construction works. The implementation of parking management measures would also mitigate potential impacts for local residents from workers parking in local streets near construction worksites.

Access and connectivity for pedestrians and cyclists would be maintained in the vicinity of the Frederick Street worksite and surface works on Milton Road and Croydon Street. Temporary access should consider the needs of all pedestrians, including children, elderly people and people with disability, particularly in the vicinity of Frederick Street, Milton Road and Croydon Street. Alternative pedestrian and cycle connections near construction works should ensure safe access, including CPTED principles such as legibility, visibility and casual surveillance.

Communication with local residents, businesses and community facilities about changes to pedestrian and cycle access at Frederick Street, Milton Road and Croydon Street would be undertaken during construction to reduce impacts for pedestrians and cyclists.

In the longer term the Project would improve regional access and connectivity to Toowong, Taringa, Auchenflower, St Lucia and the University of Queensland. The Project would also improve travel times and access for residents and businesses in Toowong, Auchenflower and St Lucia to Brisbane Airport and Brisbane's

northern suburbs and key employment centres such as the ATC and CBD. However, it may reduce local access and connectivity near connections to the local road network at Toowong resulting from:

- the closure of Valentine Street at Frederick Street and the realignment of Valentine Street at the intersection of Gregory Street and Milton Road;
- the closure of Quinn Street at Milton Road;
- changes to the intersection of Sylvan Road and Milton Road, removing the existing right turn from Milton Road, and allowing only left-in and left-out access for vehicles; and
- changes to the intersection of Jephson Street and Sylvan Road, removing the existing right turn from Jephson Street to Sylvan Road.

The closure of Valentine Street and Quinn Street would stop through traffic using these streets, enhancing the pedestrian and cycle environment of these streets. Changes to the intersection of Sylvan Road and Milton Road would also reduce traffic on this street providing opportunities for enhancement of the pedestrian and cycle environment. Community concerns were raised during consultation for the Project that the removal of the right turn from Jephson Street into Sylvan Road would force traffic to use other streets such as Lissner Street and Bennett Street. Traffic modelling undertaken for the Project indicates that the this change would have a minimal impact on other local streets in the area. This is discussed further in the *Traffic and Transport Report*.

The ramp connections to and from Milton Road would further harden the pedestrian environment along Milton Road between Croydon Street and Frederick Street. Concerns have been raised by Toowong residents during consultation that this connection would increase traffic through Toowong and that road widening would affect access and connectivity between neighbourhoods and community facilities (Section 3.1.4**)**. As outlined in Section 3.1.6, traffic on Milton Road provides an existing barrier to pedestrian movement across Milton Road and pedestrian access would be maintained at the intersection of Milton Road, Croydon Street and Morley Street. Landscaping and urban design measures along Milton Road and Croydon Street, including improvements to footpath pavements, would help in reducing impacts on the pedestrian environment for these streets. However, enhancements to pedestrian and cycle access in the vicinity of the Toowong connection are also recommended.

The widening of and increased traffic in Croydon Street would also impact on the pedestrian environment along this street between Milton Road and Jephson Street and make pedestrian access across this street more difficult during operation. Access for pedestrians would be maintained at signalised intersections of Croydon Street with Milton Road and at Sylvan Road/Jephson Street. Streetscape improvements such as landscaping, enhanced pedestrian pavements and lighting would also help to mitigate impacts on the pedestrian environment.

Pedestrian and cycle connection between Valentine Street and Frederick Street would also be changed following construction of the Toowong connection, but would be maintained.

Concerns were also raised during consultation about impacts on existing access between residential neighbourhoods and the Toowong Cemetery due to existing traffic levels on Frederick Street, and the potential for this access to be further constrained by the Project. The Project would improve traffic flow on Frederick Street, improving access and connectivity for local residents in this area, including to Toowong Cemetery.

Kelvin Grove Connection

During construction, changes to local access and connectivity for pedestrians, cyclists and motorists at Kelvin Grove would occur near the construction worksite and in the vicinity of surface works on Kelvin Grove Road. This includes:

- potential changes to the location of bus stops on Kelvin Grove Road near construction worksites and surface works;
- changes to local access for residents in Westbury Street and for residential properties at the northern end of Upper Clifton Terrace, with connection to Victoria Street;
- temporary disruption to pedestrian and cycle access along Kelvin Grove Road, particularly on the western side between the ICB and Victoria Street and across Kelvin Grove Road; and
- possible disruption for motorists using Kelvin Grove Road due to lane changes.

Potential impacts may also occur for local residents in streets near the construction worksite west of Kelvin Grove Road due to parking by construction workers. Concerns were identified during consultation for the Project that these neighbourhoods are currently impacted by parking for students attending QUT.

The implementation of traffic management measures would help to minimise impacts for motorists during construction in the vicinity of construction works at Kelvin Grove (refer to the *Traffic and Transport* report). This would include information to local residents about changes to local access and to motorists about potential disruptions to traffic on Kelvin Grove Road. The implementation of parking management measures would also mitigate potential impacts for local residents from workers parking in local streets near construction worksites. Access and connectivity for pedestrians and cyclists would be maintained in the vicinity of the construction worksite and surface works on Kelvin Grove Road. Temporary access should consider the needs of all pedestrians, including children, elderly and people with disability, particularly in the vicinity of Upper Clifton Terrace at Kelvin Grove. Alternative pedestrian and cycle connections near construction works should ensure safe access, including CPTED principles such as legibility, visibility and casual surveillance. Ongoing communication with the local community about potential changes to pedestrian and cycle access in the vicinity of construction works at Kelvin Grove Road would also be undertaken to reduce impacts for pedestrians and cyclists.

In the longer term, the Project would improve access and connectivity to the KGUV and the City for residents in Brisbane's western suburbs as well as travel time savings and improved access to the regional road network, western suburbs and key facilities (i.e. University of Queensland), for local residents and businesses. However, the Project may reduce local access and connectivity near the Kelvin Grove connection, resulting from:

- the closure of Lower Clifton Terrace at Kelvin Grove Road; and
- changes to the connectivity of Westbury Street and Victoria Street, with the closure of these streets at Kelvin Grove Road, requiring local residents to access the local area to and from Musgrave Road.

The closure of Lower Clifton Terrace would remove through traffic from this street, helping to improve its attractiveness for pedestrians and cyclists.

The transition structure to Kelvin Grove Road would change pedestrian access along the west side of Kelvin Grove Road, generally between Lower Clifton Terrace and Victoria Street. However, pedestrian access would be maintained and opportunities would be provided to enhance pedestrian access in this area. During consultation for the Project, issues were raised about impacts on pedestrian connection across Kelvin Grove

Road between residential neighbourhoods west of Kelvin Grove Road and the KGUV and QUT. Kelvin Grove Road currently provides an existing barrier to pedestrian movement. Pedestrian access across Kelvin Grove Road is currently provided at the intersections with Musk Avenue and Blamey Street and these crossing would be retained with the Project.

ICB Connection

Construction of the ICB connection would result in the following impacts on local access and connectivity for pedestrians, cyclists and motorists:

- diversion of the bicycle path adjacent to the ICB, due to the construction of the cut and cover tunnel, transition structure and widening of the ICB; and
- potential traffic disruptions for motorists due to temporary changes to traffic lanes on the ICB, to allow construction of the cut and cover tunnels.

The implementation of traffic management measures would help to minimise impacts for motorists during construction in the vicinity of construction works (refer to the *Traffic and Transport* report). This would include information for motorists about changes to traffic flows on the ICB and potential for disruptions. Access and connectivity for pedestrians and cyclists would be maintained in the vicinity of construction works for the ICB connection. Ongoing communication, including signage and advertisements, about potential changes to the ICB bikeway would reduce potential impacts for bikeway users during construction.

Connection between Victoria Park Road and the ICB would be maintained during the construction and operation of the Project. The need to retain access between the ICB and Victoria Park Road for residents, students and businesses at the KGUV was identified during community consultation for the Project. This was identified as a key access for buses between the QUT Gardens Point Campus and the Kelvin Grove campus. The access from Victoria Park Road to the ICB was also identified as an important access for doctors living in the KGUV, Normanby Avenue and Victoria Park Road to the RBH. It should be noted that some residents supported the closure of this connection and its potential for reductions in through traffic. However overall, the community was in favour of retaining this connection.

Road widening for the ICB connection and the transition structure would require relocation of the pedestrian and cycle path adjacent to the ICB between Victoria Park Road and the INB elevated ramp, although access would be maintained.

3.1.6 Impacts on Employment

The Project would impact positively on employment, both directly through the creation of construction-related jobs and indirectly through improved access to employment centres within the study corridor and the wider Brisbane region including the Brisbane CBD and Australia TradeCoast (ATC).

A total of 23 businesses would be directly affected by the acquisition of commercial properties for surface works. These include businesses that serve the needs of local residents (i.e. restaurants, real estate agents, and take-away shops). It is expected that many of these businesses would be able to find alternative premises in the local area. However, a number of properties affected by acquisition include businesses with broader catchments such as car yards and service stations. These businesses generally have more specific locational requirements, which may make finding alternative premises locally more difficult. The acquisition of commercial properties may cause a loss of local employment in Toowong and Kelvin Grove, particularly if alternative premises are not

able to be found locally. However, this is not expected to be significant in the context of the diversity of employment options available in this area.

During the construction phase, the Project would generate a range of direct and indirect employment opportunities as discussed in the *Economic Report*. It would be important for the Project to include support for relevant industry and skills training, particularly for population groups who may experience disadvantage in accessing employment.

Some businesses close to construction worksites and surface works may experience construction impacts such as noise, dust, vibration and changes to access during the construction phase. This may impact on local employment opportunities if business turnover is affected. Early and ongoing consultation and communication would be required during the construction phase to identify potential impacts on local businesses and appropriate management strategies to ensure that local businesses can continue to operate. Potential mitigation strategies may include measures such as additional signage, provision of alternative access including for delivery vehicles, and communication with local communities about changes to business access.

In the longer term, the Project would support future employment growth areas in Brisbane and SEQ by providing more direct access to key areas of economic and employment activity such as the ATC, and Brisbane CBD. It is also expected that the Project would:

- improve commuting times for cross-city workers and for public transport users;
- improve local amenity and access between the tunnel connections, providing benefits for local businesses particularly along Milton Road;
- provide a catalyst effect for the location of businesses near the surface connections; and
- assist in reducing transport and freight costs for businesses.

Further discussion about potential benefits and impacts for businesses is provided in the *Economic Assessment Report*.

3.1.7 Sense of Place

Community values pertaining to sense of place (outlined in Section 2.4) have been considered in assessing the potential impacts of construction and operation on sense of place in the study corridor. Loss of sense of place can lead to disengagement from an area, with a consequent deterioration of is social values, including safety and amenity. Planning for sense of place may include preservation of environmental, cultural and social elements, and developing a better sense of place for the future.

Western Freeway Connection

The transition structure for the Western Freeway northbound connection would impact on a portion of the Mt Coot-tha Botanic Gardens. The western worksite and construction of surface works would also result in a temporary loss of an area of the Mt Coot-tha Botanic Gardens, adjacent to the Western Freeway. The affected area of the gardens generally has no distinguishing features or specific community uses, with the exception of a large tree with landscape values. This is discussed in the *Urban Design and Visual Report*.

During construction, fencing and the worksite would temporarily impede views from the Freeway to the slopes of Mt Coot-tha. However, restoration of the worksite following construction in accordance with the Botanic Garden's Master Plan should restore the previous quality of vegetation, and minimise disruption of these views.

The westbound transition structure to the Western Freeway would impact on a portion of Anzac Park adjacent to the freeway. This is unlikely to impact on the Park's sense of place as this border is inaccessible in comparison to the rest of the Park and has little community use. However, amenity for users of Anzac Park may be diminished by construction noise and dust as discussed in Section 3.1.2.

The area immediately surrounding the connection comprises a hardened environment whose key value is as a regional traffic corridor. The key value to sense of place here is maintaining legibility (i.e. clear lines of sight and a sense of connection to points beyond), with signage and design guiding safe movement.

Toowong Cemetery has important social, cultural and spiritual values (see the *Cultural Heritage Report*), which contribute to the immediate neighbourhoods' sense of connection to the past. The tunnel would be driven under the Cemetery at depths of about 10m to 40 m. Issues were raised by community members during consultation with regard to the poor structural condition of some graves and monuments in the cemetery, and potential for vibration from tunnelling to cause further damage. Management measures would be implemented during construction of the driven tunnel to ensure that the integrity of the Cemetery is protected. Potential vibration impacts on the Cemetery from driven tunnelling is discussed in the *Noise and Vibration Report*.

The ventilation outlet at the western end is proposed to be located in the Mt Coot-tha Forest Park, near to the Western Freeway. The forest provides relief, visual respite and a connection with nature, which contribute to the area's character and amenity. As ventilation outlets are perceived by some residents as incongruous with places of environmental values (from the perspectives of prominent built form, recreational space and air quality), sense of place may be affected for some people, as a ventilation outlet would be seen as despoiling environmental and aesthetic values.

Toowong Connection

The section of Milton Road between Frederick Street and Croydon Street, generally displays little evidence of either physical features or community values contributing to sense of place, and the connection ramps are unlikely to detract from sense of place given their visual juxtaposition with the existing overpass. However, the connection ramps may increase the existing disconnection between residential neighbourhoods on either side of Milton Road, and between the neighbourhood east of Frederick Street and the Toowong Cemetery. The Shrine of Remembrance is located in this corner of the Cemetery and its cultural and ceremonial values should be respected.

The project would impact on the Crows Ash Memorial and plaque at the corner of Sylvan Road and Milton Road due to widening of Milton Road and construction of the Milton Road on ramp. The memorial commemorates the amalgamation of the Town of Toowong with the City of Brisbane in 1925. The commemorative plaque should be relocated in consultation with Brisbane City Council and other stakeholders to a suitable location in the local area, such as Anzac Park or the Botanic Gardens.

The worksite between Milton Road and Valentine Street would require the acquisition of Council and commercial properties that contribute little to the sense of place. About 40 residential properties would also be acquired for construction works in this area, including 'tin and timber' character housing. The 'tin and timber' housing is important to local communities, and contributes to the area's local character. The change of use during construction from residential (incorporating character housing) to use for road infrastructure is likely to impact on the landscape, character and sense of place for local residents. This is part of an extensive neighbourhood of similar housing, so impacts are likely to be felt at neighbourhood rather than suburb level.

The partial acquisition of 10 residential properties is also required for surface works, including road widening. These residents as well as neighbours close to the proposed works in Valentine Street are likely to experience the increased proximity of road infrastructure as a negative effect on their sense of the area as a residential street. The provision of landscaping and urban design measures would assist in reducing the visual impact of the Project infrastructure in this area, including the elevated ramps (refer *Landscape and Urban Design Report*).

Widening of Milton Road and the construction of the Milton Road on ramp would result in the loss of approximately half of Quinn Park in Milton Road. As discussed in Section 2.4.2, the park is highly valued by the local community and contributes to the streetscape of Milton Road. The loss of approximately half of the park would impact on sense of place, particularly for residents living near the park. Consideration should be given to off-setting the open space lost permanently from surface works. Some residents have indicated a preference for the redevelopment of the construction worksite at Valentine Street as open space following construction. Landscaping and the implementation of urban design measures may help to mitigate impacts on sense of place in this area. Enhancing other existing open space areas, such as the Mt Coot-tha Botanic Gardens and Toowong Memorial Park may also help to off-set the loss of this open space.

The upgrade of the intersection of Croydon Street/ Jephson Street and Sylvan Road would require the partial acquisition of the Toowong Baptist Church car park. During construction, congregation members and visitors may perceive the Church's value as a place of quiet reflection is impaired by the noise and proximity of construction. It would be important to identify the Church's key activity periods in consultation with the church in order to minimise construction effects on their activities and ongoing sustainability.

Widening of Croydon Street would also require the acquisition of a number of commercial and residential properties, on the western side. At neighbourhood level, residents with direct visual access to construction areas may perceive that the area's aesthetic appeal and character are diminished. This is unlikely to have broader effects on sense of place. Following construction, widening Croydon Road to six lanes would elevate its significance in the city's road network and dilute the remaining residential character. Quinn Street would be closed at Milton Road, which would stop through traffic and improve the residential character of the street.

Kelvin Grove Connection

The construction worksite at Kelvin Grove Road would require the acquisition of residential properties in Lower Clifton Terrace, Upper Clifton Terrace and on Kelvin Grove Road. This area is already adjacent to the conjunction of three major roads. However, acquisition of residential properties would be a loss to the mosaic of neighbourhoods which comprise Kelvin Grove, particularly since they include character housing which contributes to the area's sense of history.

The proposed tunnel connection to Kelvin Grove Road would require the acquisition of residential properties on Kelvin Grove Road between Lower Clifton Terrace and Victoria Street. Notwithstanding their personal and social value to residents and neighbours, these dwellings include older style housing where amenity is compromised by traffic noise and proximity to a major road, and this is not seen as a significant impact on sense of place. Widening of Kelvin Grove Road would also involve the removal some fig trees in McCaskie Park and in Marshall Park on the western side of Kelvin Grove Road. These trees are integral to the streetscape and are highly valued by local and regional residents as an established element in the urban landscape. This is addressed in the *Landscape and Urban Design Report.*

The tunnel connection would add further complexity to the area where Musgrave Road, Kelvin Grove, Hale Street and the ICB converge, and legibility for motorists and pedestrians (including sightlines and signage) would need careful planning.

ICB Connection

Widening of the ICB for the project would impact on a small area of Victoria Park adjacent to the road reserve. During construction this would reduce the aesthetic qualities of the park's border with the ICB. The area of land to be acquired is up to about 30m in width and would not detract from the Park's landscape or other features in the long term. However, this loss is cumulative with previous land acquisition (i.e. for the construction of the ICB and INB, which has seen Victoria Park's open space and recreational values reduced over time, and which should be minimised.

The westbound tunnel portal would be located within the ICB and is not expected to alter the sense of place.

The northbound tunnel would come to the surface between Normanby Terrace and the ICB. Construction activities may impact on amenity for residents in Normanby Terrace. However, the area already accommodates major transport infrastructure and is a hardened, noisy environment and impact on sense of place is likely to be minor. In the longer term, the tunnel's transition structure would bring road infrastructure closer to houses in Normanby Terrace and Victoria Park Road. This area accommodates significant road connections and the incremental effect on sense of place would be negligible. The erection of noise barriers would also help to minimise impacts on sense of place in this area.

The ventilation outlet at the northern end is proposed to be located in Victoria Park adjacent to the INB, north of Brisbane Grammar's playing fields and directly south of QUT's Kelvin Grove campus. As at the southern end of the project, people's feelings about the park's peaceful, green qualities may be affected, if a ventilation outlet is seen as detracting from the Park's major (recreational and social) values.

3.1.8 Community Cohesion

This section assesses potential impacts of the Project on community cohesion. Impacts on cohesion may be experienced if a project separates neighbours or neighbourhoods, disrupts use of community facilities, or impedes connectivity or social activities. Impacts on community facilities are discussed in Section 3.2.

At a city level, access to better cross-city travel options and travel time savings is likely to provide benefits for community cohesion. Travel facilitates social interactions and economic transactions across Brisbane. Where mobility on major routes is constrained by traffic congestion, people avoid making trips that have unacceptable travel times. The Project would provide alternative routes for cross-town travel, decreasing travel times for these trips, facilitating community interaction.

At a local level, the ICB and Western Freeway connections are not expected to negatively affect community cohesion. However, the Project's connections to the local road network at Toowong and Kelvin Grove may impact on community cohesion in these areas as discussed below.

Toowong Connection

The neighbourhood affected by property acquisition for the Toowong connection is a pocket of the suburb where narrow streets, older residents and the closeness of houses are likely to encourage social relationships within the neighbourhood. Relocation of households due to property acquisition would disrupt bonds between neighbours and social networks. These impacts would be localised, but significant to the quality of life of residents who relocate and other members of their local networks. Similar effects may be felt with the loss of neighbours through property acquisition along Milton Road and Croydon Street. Support should be provided to people who are required to relocate due to property acquisition, particularly elderly and people with disability or long-term health conditions, in finding new housing and establishing new support networks.

Concerns have been raised during consultation for the Project by residents in Toowong regarding the connection to Milton Road and access via Croydon Street. Concerns relate to the potential for increased traffic through Toowong, and the effects of road widening on local connectivity and community cohesion between neighbourhoods and to community facilities such as the Toowong State School, local shops (i.e. Cat and Fiddle Shopping Centre) and public transport facilities. Traffic on Milton Road provides an existing barrier between neighbourhoods in this location. Connection across Milton Road is currently provided by signals at the intersection of Milton Road, Croydon Street and Morley Street and this intersection would be maintained as the primary pedestrian connection. It would be important to redress potential impacts on community cohesion by ensuring that the local environment around affected areas is restored and enhanced in a way that promotes connections and interaction within and between neighbourhoods, for example through the provision of attractive and usable public space, enhancement of existing open spaces (i.e. Toowong Memorial Park), and enhanced pedestrian and cycle connections, including to community facilities.

Kelvin Grove Connection

The Kelvin Grove Road connection would lead to the relocation of households due to property acquisition. This would have the effect of disrupting bonds between neighbours. However, wider effects are not expected. Traffic volumes exiting the tunnel at Kelvin Grove Road may weaken the link between the neighbourhoods east and west of Kelvin Grove Road, including to the KGUV and QUT. Kelvin Grove Road provides an existing barrier to pedestrian movement between residential areas and community facilities across Kelvin Grove Road. Pedestrian access is currently provided at the intersection of Musk Avenue and Kelvin Grove Road and would be maintained with the Project.

3.2 Social Infrastructure

A wide range of local community services and facilities exist in the study corridor to service the needs of local communities, in addition to a range of district and regional level social infrastructure, servicing the needs of the broader district and communities in the SEQ Region, interstate and internationally.

Overall, the Project would help to improve access to social infrastructure in Brisbane's inner western suburbs and providing an alternative route to some facilities, including the RBH, Wesley Hospital and major education facilities. However, during construction, the use and function of some social and recreational infrastructure in the vicinity of construction worksites, surface works and spoil haulage routes may be impacted through such factors as impact on amenity or temporary loss of facilities. This includes:

- temporary reduction in open space in the Mt Coot-tha Botanic Gardens due to the location of the worksite, construction of the cut and cover tunnel and spoil conveyor;
- temporary reduction of open space area in Anzac Park due to the construction of the cut and cover tunnel;
- impact on amenity for park users (e.g. Mt Coot-tha Botanic Gardens, Anzac Park, Victoria Park and McCaskie Park) due to an increase in noise and dust from construction activities; and
- impacts of construction (i.e. noise and dust) on the Silk Shed Studio Group and recreational users of Quinn Park.

Effects on amenity of open space are discussed in Section 3.1.2. These facilities would be able to continue operating during construction. Ongoing consultation with managers of these facilities would assist in reducing potential impacts for users during construction.

The Project would directly impact on two community facilities in Toowong. This includes partial acquisition of the Toowong Baptist Church car park to allow for the upgrade of the Croydon Street/Jephson Street/Sylvan Road intersection, and the frontage of the Toowong Private Hospital, due to widening of Milton Road. Operation of these facilities would not be affected during construction or in the longer-term operational phase. While it may be temporarily disrupted, access to these properties would be maintained during construction, including through temporary measures if required.

The Project would also have a permanent impact on some open space and recreation areas in the study corridor as discussed in Section 3.1.2.

During consultation for this Project, the Toowong Private Hospital indicated that they were considering changes to access from Milton Road. This would need to be considered in the planning and construction phases for the Project.

Issues were raised in consultation with the Toowong Baptist Church about the loss of car parking, potential for a reduction in on-street car parking in the vicinity of the church due to road widening, and access to the church post-construction if congregation members are required to park in local streets. Signalised pedestrian access would be maintained at the intersection of Croydon Street/Jephson Street and Sylvan Road, allowing safe access. The church may also be impacted by noise and dust from construction works and it would be important to identify the church's key activity periods in order to minimise construction impacts on activities and ongoing sustainability.

Ongoing consultation with the Toowong Baptist Church and Toowong Private Hospital should be undertaken during the planning and construction phase to ensure that potential impacts can be identified and mitigated where possible.

A number of social infrastructure facilities are located above or near to the tunnel alignment including St Brigids Church, Aldersgate Court Wesley Mission on Upper Clifton Terrace and Marist College Rosalie. The use of these facilities would not be impacted, and they would be able to continue operations.

3.2.1 Affordable housing

Affordable housing includes boarding houses, public housing, community rental housing, and affordable private rental housing[36] (usually older flats or houses).

Affordable housing is often located on or near main roads and transport corridors, such as Milton Road, Frederick Street and Kelvin Grove Road. The loss of affordable housing properties through property acquisition for the Project at Toowong and Kelvin Grove may impact on the availability of affordable housing in these areas. Some residents required to relocate as a result of the Project may find it difficult to access alternative housing locally.

The Project does not require the acquisition of public housing properties. However, the Project would directly impact on three properties comprising 16 student accommodation units at Lower Clifton Terrace and Kelvin Grove Road in Kelvin Grove.

[36] Private housing is generally considered affordable when rent or mortgage payments require 30% or less of weekly income. The income and rental payment of affected households have not been identified due to privacy concerns. Affordability was assessed according to age and condition survey.

Consideration should be given to mitigating the loss of student accommodation and affordable housing in the local area, including through the redevelopment of surplus land following construction.

Some areas in the study corridor have experienced gentrification (i.e. redevelopment of older housing stock) in recent years due to factors such as market pressures, Council planning policies, population growth, and the resurgence in popularity of inner-city living. This has had an impact on affordable housing stock in the study corridor as more affordable private rentals, such as older/smaller houses and traditional flats, are renovated or redeveloped. The increased connectivity and accessibility offered by the Project may encourage further gentrification and development within the study corridor generally, and specifically in those neighbourhoods near local connections. This may contribute to increases in rental prices and property values, and accelerate the sale of older and more affordable properties for development due to increased demand.

3.3 Property Impacts

The Project would require the whole or partial acquisition of properties for surface works (e.g. connections, road widening, construction worksites, and tunnel infrastructure) as well as volumetric acquisition of properties above the tunnel alignment.

A total of 113 properties would be acquired, either wholly or in part, in the vicinity of surface connections at Toowong and Kelvin Grove. This would include approximately 98 properties that would need to be wholly acquired and 15 properties that would be impacted by partial acquisition.

Of this number, a total of 85 residential properties would be affected by surface works, of which 74 properties would be fully acquired. Fifty five residential properties would be affected by the Toowong connection, in Frederick Street, Valentine Street, Milton Road and Croydon Street. Thirty residential properties would be affected by the Kelvin Grove connection, mainly in Lower Clifton Terrace, Upper Clifton Terrace and Kelvin Grove Road.

The relocation of households for the Project would impact on community relationships and cohesion. This is discussed in Section 3.1.8. Potential impacts on community health and well-being associated with property acquisition are also discussed in Section 3.1.3.

The Project would directly affect nine commercial properties, seven of which would be fully acquired. The commercial properties comprise 23 individual businesses including restaurants, car yards, real estate agents and service stations. Potential impact on local employment is discussed in Section 3.1.6.

The Project would require the partial acquisition of the Toowong Baptist Church car park and Toowong Private Hospital due to widening of Milton Road. These facilities would be able to continue operations. However, careful management of construction works would be required to minimise impacts on these facilities such as disruption to access, noise, dust and impacts of construction traffic.

Property impacts would include 17 parcels of land owned by the Brisbane City Council or Queensland Government. This includes open space and park areas such as Mt Coot-tha Botanic Gardens, Anzac Park, Quinn Park and Memorial Park on Sylvan Road.

Brisbane City Council is currently consulting with property owners whose properties may be directly affected by the Project. Compensation would be provided to property owners who are directly impacted by the Project in accordance with the relevant legislation. **Table 3-1** provides a summary of properties directly affected by surface works.

- **Table 3-1 Property Impacts – Surface Works**

Heading	Kelvin Grove		Toowong		Total	
	Full acquisition	Partial acquisition	Full acquisition	Partial acquisition	Full acquisition	Partial acquisition
State	2	0	3	0	5	0
Council	6	0	6	0	12	0
Other	0	0	0	2	0	2
Commercial	1	1	6	1	7	2
Residential	29	1	45	10	74	11
Total	38	2	60	13	98	15

In addition to those properties affected by surface works, approximately 600 properties which are located along the tunnel alignment would require an acquisition of volumetric tenure. Volumetric acquisition would not impact on the use of land at the surface. Compensation for volumetric tenure would be provided to affected property owners, based on a 'before and after' valuation method in accordance with the Acquisition of Land Act.

A number of issues were raised by community members during consultation about potential property impacts. These include:

- potential impacts on property values in the study corridor, particularly for those properties near to surface works or along the tunnel alignment;
- potential for volumetric tenure to reduce the amenity and therefore value of properties along the tunnel alignment;
- potential impacts from tunnelling construction, including noise, vibration and structural damage to properties caused by vibration; and
- potential vibration impacts from tunnelling on community uses, including the Toowong Cemetery and Marist College Rosalie.

Some residents may experience perceptible vibrations as a result of tunnelling construction. This is addressed in the *Noise and Vibration Report*, which includes recommended measures to mitigate potential impacts of vibration on people and properties, involving early and ongoing notification of residents and businesses above the tunnel alignment about the timing, and duration of tunnelling works. Building condition surveys would also be conducted prior to construction for properties above the tunnel alignment, to mitigate potential impacts of vibration on buildings and structures.

Uncertainty about proposed changes and effects of the Project may impact on property values near surface works in the short-term. However based on experience from recent urban tunnel projects in Brisbane and other Australian capital cities, improvements to local amenity and accessibility within the study corridor are likely to support property values in the longer term.

Improved access to a cross-city connection such as Northern Link is likely to support property values, particularly in those suburbs close to the tunnel connections (i.e. Toowong and Kelvin Grove). This is evident in other areas of Brisbane directly affected by the CLEM7 and Airport Link and Northern Busway Projects, such as Woolloongabba and Windsor, which have experienced higher rates of growth in house prices over the 12 months to December 2007 compared to the Brisbane LGA (REIQ, Autumn 2008).

Consultation and communication about the Project and potential effects would help to reduce uncertainty and raise awareness of potential longer term benefits of the Project. Potential impacts for local property values are discussed in the *Economics Report*.

3.4 Population Growth

Population growth in the study corridor is being driven by a range of factors such as amenity, affordability, proximity to the CBD, and increases in residential densities. By 2026, the population in the study corridor is expected to increase to approximately 68,000 people, driven largely by growth in the City and Spring Hill.

In the short term, property acquisition for the Project may cause a small reduction in the study corridor's residential population, of about 100 people in Toowong and 60 people in Kelvin Grove[37]. While this may be considered significant in the local context, this is not considered significant in the context of the suburbs as a whole, given populations in these suburbs at the 2006 Census of approximately 16,000 people and 4,600 people respectively.

During the Project's planning and construction phases, the study corridor may also experience a slowing of population growth, due to community caution about construction impacts on local amenity (i.e. noise, vibration and dust), traffic disruptions and real estate values. However, this is not expected to affect long-term population growth in the study corridor.

During operation, the Project may contribute to acceleration of redevelopment for higher density housing particularly in locations near to the surface connections, and this would contribute to an increased local population, consistent with the strategic objectives of Brisbane City Council and the SEQ Regional Plan.

3.5 Equity

In a social sense, equity refers to a fair distribution of the resources that allow residents full participation in their community. In particular, equity requires that the well-being of people with fewer resources is protected. Changes to conditions which may affect equity in the study corridor include impacts on population diversity, access to community facilities, and access to affordable housing.

3.5.1 Population Diversity

CCDs with lower scores on SEIFA indices were concentrated in Milton, the eastern area of Paddington and near the Project's connection at Kelvin Grove, Red Hill and Spring Hill, indicating residents in these areas have lower incomes and fewer resources to cope with change. Property acquisition at Kelvin Grove and Red Hill may reduce the number of lower income households in the study corridor. People displaced by property acquisition may have to move to other areas, away from social networks, which may impact on well-being if they are not supported to do so.

Consultation for the Project identified some elderly and long-term residents, who live in properties affected by surface works at Toowong and Kelvin Grove. Relocation of these residents through property acquisition may decrease the proportion of long term residents with attachments to these areas, and cause a small decrease in the proportion of aged residents in these neighbourhoods. This would be significant for local neighbourhoods near to the works, but is not expected to impact diversity at a broader suburb or study corridor level. As older people

37 Based on the 2006 ABS Census household occupancy rate for Kelvin Grove and Toowong of 2.2 persons per household.

are more likely to depend heavily on personal and community networks, special care would be required to ease the relocation process for these residents.

As change occurs though the combined effects of acquisitions and redevelopment, older people, people from NESB and people on low incomes may find it increasingly difficult to access housing locally, which may have a consequential effect on cultural diversity. Examples of this are found in Teneriffe and New Farm, where redevelopment of single dwelling sites for infrastructure or higher density housing has reduced socio-economic diversity, with consequent effects on cultural diversity. Given current levels of cultural diversity in the study corridor, this is unlikely to significantly affect cultural diversity at suburb level, though effects may be felt locally.

At the 2006 Census, approximately 1,000 people in the study corridor had poor or no English speaking skills. Consultation with property owners has identified about four people with poor English skills who are likely to be directly affected by surface works. Communication with these property owner's families would need to be ongoing. Residents in areas near the proposed connections who have poor English skills may have limited access to information about the Project during construction and access to translation services during construction may be required to ensure these people continue to feel comfortable in their surroundings.

3.5.2 Equity in Distribution of the Community Benefits and Social Impacts

Social equity is a key element of Council's Strategic Plan as identified in the *Brisbane City Plan 2000*. A desired environmental outcome of the plan relates to "community life, health and safety", which identifies Brisbane as a "*safe, healthy and vibrant place to live, offering a wide range of local and regional services, facilities and activities and diverse housing, community, cultural and recreational choices*". A key strategy to achieve this outcome is enhanced social diversity, choice and accessibility through, among other things, equitable access to centres, services, facilities, electronic service information, transport and green space.

The Project's primary objectives include reduced traffic congestion and an improved strategic traffic and transport network in Brisbane. Traffic congestion has a range of impacts for individuals, families and the wider community, including increased travel costs, less available time to spend with family or on leisure, and reduced employment opportunities within easy and convenient commuting times.

Reducing the costs of congestion would provide a benefit for the wider community, and may provide particular benefits for people living in or near to the study area, through travel time savings, improved regional access and improved connectivity to the broader community and employment opportunities. Other potential benefits of the Project for equity include possible improvements to public transport, including more reliable bus services and reduced bus travel times due to reduced traffic congestion on surface roads and implementation of bus priority measures.

The Project would also help to reduce traffic on major roads in the study corridor, including Milton Road and Coronation Drive, as well as 'rat running' in some local streets in Toowong, Milton, Red Hill and Rosalie, providing improvements to local environments and amenity, and access and connectivity for residents. The Project would provide improved access and reduced travel times for residents and businesses in Brisbane's western suburbs, including in Toowong and Auchenflower, to key areas of economic employment such as the ATC and CBD, to Brisbane's northern suburbs and key regional facilities such as the Brisbane Airport, RBH and QUT. The Project would also provide improved access to residents in Brisbane's inner northern suburbs to the western suburbs and regional facilities such as the University of Queensland.

However, the connections at Toowong and Kelvin Grove would be constructed in areas where some people have fewer resources to cope with changes such as relocation or amenity impacts. Some neighbourhoods in the vicinity of surface connections have socio-economic values lower than other neighbourhoods in the study corridor. The acquisition of residential properties may require some people to move away from the neighbourhood or the local area. Their new home may be further away from their job or from their social and support networks, potentially impacting on their well-being.

Construction activities are also likely to affect the amenity and perceived liveability of residents closest to construction worksites and surface works at Toowong and Kelvin Grove. Potential impacts in some areas include construction noise, dust, changes to local access and connectivity, and reduction in visual amenity. Regenerated noise and vibration from driven tunnelling construction may also impact on local amenity for some neighbourhoods above or close to the tunnel alignment, particularly where regenerated noise and vibration levels are above the sleep disturbance limits. Whilst each impact itself is likely to be managed within acceptable standards, the cumulative impact of each construction effect is likely to reduce perceptions of pleasantness and liveability in areas nearest to worksites. Improvements to local pedestrian and cycle connections and enhancement of local open space areas near surface connections would help to improve local amenity, liveability and access and connectivity for local residents.

Some benefits of the Project are likely to be shared between local and regional communities, such as reduced congestion and potential improvements to public transport. However, many impacts of the Project's construction and operation, including property acquisition and impacts on amenity, would be experienced by those residents closest to the project works. Protection of local amenity and community values would need to be addressed by the Project to protect social equity.

3.6 Cumulative effects

A range of other transport infrastructure projects have commenced or are soon to commence construction in Brisbane's inner suburbs. Interaction with these projects may change the social impacts or benefits of the Project. Of relevance Northern Link, is the:

- Hale Street Link, which recently commenced construction and is expected to be completed in 2010;
- CLEM7, which is currently under construction and is due to be completed in 2010; and
- the Airport Link and Northern Busway Projects, which are expected to commence construction in late 2008 and be completed in 2012.

The Project is proposed to commence construction in 2010, coinciding with the scheduled completion of the Hale Street Link. This would prolong the duration of construction impacts such as disruption to local traffic and access, and impacts of construction traffic, particularly for local communities near to the ICB.

Spoil haulage from the Project's northern worksites is proposed to use some of the same haulage routes as the CLEM7 and Airport Link and Northern Busway Projects, including the ICB and Kingsford Smith Drive. Potential overlapping construction periods may prolong the duration of impacts associated with increased heavy vehicle traffic for communities along this route, such as traffic noise, dust, and local access and connectivity. Concerns were identified during consultation for the Project about existing noise impacts of haulage vehicles for the Gateway Upgrade Project impacting on amenity at night for residents living near to the ICB at Red Hill and Milton Road at Toowong. Consideration should be given to spoil haulage activities for other projects in the planning and management of spoil haulage for the Project, to minimise potential impacts for communities along the ICB and Kingsford Smith Drive.

During operation, the proximity of the northern ventilation outlet for the Project to the ventilation outlets at Bowen Hills and Windsor for the CLEM7 and Airport Link projects respectively, may be of interest for local communities in relation to cumulative air quality and health impacts (refer technical report - *Air Quality and Health Risk*). The proximity of these ventilation outlets to the RBH and potential impacts on community health is also likely to be of interest for local communities. The assessment of air quality and health risk for the Project has considered the cumulative impacts of the three ventilation outlets, including for the RBH. Ongoing community consultation and communication should also address potential issues relating to cumulative air quality impacts. Air quality monitoring would be undertaken during the operation of the Project to ensure that air quality meets the goals identified for the Project.

The Queensland Government is currently conducting the Western Brisbane Transport Network Investigation (WBTNI) which is considering a number of long-term transport options for the Western Brisbane region, including road improvement options, active transport infrastructure, bus improvements and rail upgrades. A number of options currently being considered are located within or close to the study corridor, including a tunnel connecting Toowong and Everton Park. This has caused uncertainty and anxiety for some local residents in relation to possible future cumulative impacts relating to impact on properties, changes to traffic in Toowong and subsequent impacts on local amenity, social infrastructure and community cohesion, and air quality impacts associated with possible additional ventilation outlets in proximity to the Northern Link western ventilation outlet.

Brisbane City Council has prepared the draft CityShape which identifies a growth corridor following the Brisbane-Ipswich rail corridor, planning for a major renewal area at Milton and higher density residential development around Toowong Village. This is expected to result in increased residential densities in these locations, increased diversity in population and housing, and progress towards desired social outcomes. Consultation with City Planning should be undertaken during the planning phase to ensure that both processes recognise potential impacts of the other.

In combination, changes to local traffic access and increases in construction traffic may increase traffic disruptions and travel time for motorists using the inner Brisbane road network. Co-operative planning between Council and relevant Queensland Government agencies is required to address potential impacts for the inner city road network.

4. Summary of Social Benefits and Impacts

This section outlines a summary of the potential benefits and impacts of the Project on the social environment and expected significance for local and broader communities. The evaluation of significance considered the magnitude, duration, and extent of potential impacts (i.e. local or regional). The consideration of significance assumes the implementation of mitigation measures, including urban renewal strategies, identified as part of the SIA.

- **Table 4-1 Summary of Social Impacts**

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
Local Amenity			
Overall, high level of amenity, with good access to public transport, community facilities and employment opportunities. Amenity in some local areas is becoming compromised by increased traffic congestion and existing rat-running in local streets.	Western Freeway Connection	Impacts on local amenity of residential neighbourhoods may occur from construction activities, particularly surface works undertaken at night. Impacts on local amenity would be minor given distance from construction works and implementation of environmental management measures. Potential amenity impacts for local residents due to the transport of spoil via conveyor to the Mt Coot-tha quarry. However, impacts on local amenity would be minor as conveyor is proposed to be covered and no increase in the number of truck movements at the quarry is expected.	Potential for increases in traffic noise from tunnel portals at the Western Freeway. Impact on local amenity given would be minor given existing traffic noise levels from Western Freeway. Location of ventilation outlet may impact on the visual outlook for residents in local neighbourhoods. This is expected to be minor given distance from residential neighbourhoods and implementation of landscaping and urban design measures.
	Toowong Connection	Impacts on local amenity (e.g. local access patterns, visual amenity and potential noise and dust) for residents and businesses near the construction worksite and surface works. Potential amenity impacts from spoil haulage activities, including increase in heavy vehicles along haulage routes, and noise and dust from loading and handling of spoil. Some impacts on local amenity for residents near to the tunnel alignment, if regenerated noise and vibration above sleep disturbance levels. Careful environmental management in consultation with local residents would help to	Concerns raised during consultation about potential impact on amenity in local streets from motorists accessing the Project. The Project is predicted to provide reductions in local traffic north of Milton Road compared to the without Project scenario, benefiting local amenity. Implementation of local area traffic management measures would further improve local amenity through traffic reductions. Potential for increases in traffic noise near surface connections, particularly where buildings are removed and residences exposed to main roads, although could be managed to acceptable levels with the use of noise barriers and redevelopment

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
		mitigate potential impacts. However, impacts are likely to be significant in the context of the local neighbourhoods, but negligible for the broader study corridor.	of surplus land.
	Kelvin Grove Connection	Impacts on local amenity (e.g. local access patterns, visual amenity and potential noise and dust) for residents and businesses near the construction worksite and surface works. Potential amenity impacts from spoil haulage activities, including increase in heavy vehicles along haulage routes, and noise and dust from loading and handling of spoil. Some impacts on local amenity for residents near to the tunnel alignment, if regenerated noise and vibration above sleep disturbance levels. Impacts would require careful environmental management in consultation with local residents. However, impacts are likely to be significant in the context of the local community, but negligible for the broader study corridor.	Potential for impact on amenity in some streets connecting to Musgrave Road due to the closure of Victoria Street at Kelvin Grove Road. Implementation of local area traffic management measures would help to manage potential impacts on local amenity to acceptable levels. Potential for increases in traffic noise near surface connections, particularly where buildings are removed and residences exposed to main roads, but could be managed to acceptable levels with the use of noise barriers and redevelopment of surplus land.
	ICB Connection	Impacts on local amenity (e.g. potential noise and dust) for residents near the construction worksite and surface works. Potential amenity impacts from spoil haulage activities, including noise and dust from loading and handling of spoil. Some impacts on local amenity for residents near to the tunnel alignment, if regenerated noise and vibration above sleep disturbance levels. Impacts would require careful environmental management in consultation with local residents. Other than for night works, impacts are generally expected to be minor, particularly given existing noise levels, and negligible for the broader study corridor.	Potential for increases in traffic noise from tunnel portals at the ICB for residents in Normanby Terrace and Victoria Park Road may have a minor impact for local residents given existing traffic noise levels from the ICB, but negligible in the context of the broader study corridor. The location of the ventilation outlet may impact on the visual outlook for residents in Spring Hill and some local neighbourhoods and community facilities. The impact is likely to be more significant for those residents closer to the outlet, than those further away. Reducing the height of the outlet and providing landscaping and urban design measures would help to mitigate the visual impacts.

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
	Tunnel alignment	Some impacts on local amenity for residents near to the tunnel alignment, if regenerated noise and vibration are above sleep disturbance levels. This would be significant for residents where sleep disturbance levels are impacted and would require ongoing consultation and communication with local residents. However, impact on local amenity is likely to be minor in the context of the broader study corridor.	Opportunities to improve local amenity in some streets and neighbourhoods by reducing rat running. This would be a benefit for residents in the study corridor.
	Other Locations	Potential amenity impacts from spoil haulage activities, including increase in heavy vehicles along haulage routes, and noise. This is likely to have a minor impact on local amenity.	
Amenity of Parks and Open Space			
Good access to a range of parks and open space areas	Western Freeway Connection	Temporary loss of open space areas in Mt Coot-tha Botanic Gardens adjacent to the Western Freeway from the worksite and location of the spoil conveyor, although impact on amenity would be minor due to location of these works. Temporary loss of open space areas in Anzac Park adjacent to the Western Freeway due to construction activities, although impact on amenity would be minor due to location of these works. Potential impact on amenity for park users due to construction impacts (i.e. noise and dust), although impact on amenity would be minor given location of the works and identified environmental management measures.	Small permanent loss of open space in Mt Coot-tha Botanic Gardens and Anzac Park due to location of transition structures, although impact on amenity for park users would be minor. Rehabilitation and enhancement of the worksite consistent with the Mt Coot-tha Botanic Gardens Master Plan would improve amenity within the Gardens and benefit users of the Gardens. Impact on visual amenity with the park due to the location of the ventilation outlet, although landscaping and urban design measures would help to mitigate these impacts.
	Toowong Connection	Potential impact on amenity for users of Quinn Park due to construction impacts (i.e. noise and dust). Environmental management measures would help to reduce potential impacts. However, impact on amenity is likely to be significant.	Impacts on amenity of the park due to loss of approximately half of Quinn Park is likely to be significant in the context of the local community Off-setting this loss through the provision of alternative local open space or enhancement of existing open space areas would help to reduce the impact for the local community. Impact on amenity for visitors and recreational

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
			users of the Toowong Cemetery due to traffic noise from the tunnel connection, although would be negligible given existing noise levels.
	Kelvin Grove Connection	Loss of some fig trees in McCaskie Park and Marshall Park would have significant impact for park users. Potential impact on amenity for park users due to construction impacts (i.e. noise and dust), although impact would be minor given existing amenity impacts from Kelvin Grove Road.	Small decrease in area of McCaskie Park due to surface infrastructure, although impact on amenity of the park would be negligible.
	ICB Connection	Temporary loss of open space areas in Victoria Park adjacent to the ICB and impact on amenity for park users due to construction activities, although impact on amenity would be minor due to location of these works.	Small permanent loss of open space in Victoria Park due to widening of the ICB, impact on amenity for park users would be minor. Impact on visual amenity with the park due to the location of the ventilation outlet, although reducing the height of the ventilation outlet, landscaping and urban design measures would help to mitigate these impacts.
Community health and safety			
Health status of the general community likely to be good. Decrease in reported offences across the inner Brisbane area between 2005/06 and 2006/07. Safety in some areas is becoming compromised by increased traffic congestion and rat-running in local streets.		Potential impacts on quality of life due to uncertainty and anxiety about property acquisitions. Impact on general community health is likely to be minor given range of support facilities and socio-economic resilience generally evident in the community. Changes to pedestrian and cycle paths near worksites and surface works may reduce legibility of the pedestrian environment, sightlines, opportunities for casual surveillance and levels of activities in public spaces. Impact on community safety would be negligible with application of CPTED principles and consultation and communication with local communities about changes.	Provision of alternative route and reduction in traffic congestion would have benefit on access to regional health and medical services. Community concerns in relation to air quality and health, although modelling indicates that air quality would not change substantially as a result of the Project and that local air quality improvements would be achieved in some areas. Ongoing communication and consultation are likely to assure most community members. Reduction in traffic congestion and rat running in local streets would help to improve safety for pedestrians and cyclists in local streets and may encourage increased walking and cycling.

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
Local access and connectivity			
Overall, good level of access and connectivity in the study corridor and well serviced by road, public transport and cycle networks. Access and connectivity becoming compromised by increasing traffic volumes and congestion. Access and connectivity constrained near connection areas.	Western Freeway Connection	Disruption to Western Freeway bikeway due to construction of cut and cover tunnel, although impact on local access and connectivity would be minor as alternative connection would be provided. Disruption to traffic near construction works, but would be managed through implementation of traffic management measures.	Need for minor diversion of Western Freeway bikeway due to transition structure. However, functionality of the bikeway would be maintained and impact would be minor.
	Toowong Connection	Temporary disruption to pedestrian and cycle access near worksite and construction works, although access would be maintained and impact would be minor if appropriately managed. Temporary changes to the location of bus stops near construction works on Milton Road. Communication and notification of local community and public transport users would manage impacts to acceptable levels. Temporary changes to traffic lanes near construction works. Impacts on access for motorists would be minor if appropriately managed through the implementation of traffic management measures.	Improvement in regional access and connectivity for local communities to northern suburbs, Brisbane Airport, CBD and ATC would be a benefit for local residents and businesses. Reductions in traffic congestion and rat running in local neighbourhoods, would benefit local access and connectivity, including for motorists, pedestrians and cyclists. Changes to local access near connections to surface roads, including closure of some local streets, would stop through traffic in these streets, improving the pedestrian and cycle environment. Widening of Milton Road and Croydon Street would impact on pedestrian environments in these streets. Maintenance of pedestrian connections and streetscape works would reduce impacts for pedestrians. However, these impacts are likely to be significant in the context of the local community, but minor in the context of the broader study corridor.
	Kelvin Grove Connection	Temporary disruption to pedestrian and cycle access near worksite and construction works, although access would be maintained and impact would be minor if appropriately managed. Temporary changes to the location of bus stops near construction works on Kelvin Grove Road.	Improvement in regional access and connectivity for local communities to western suburbs and University of Queensland would be a benefit for local residents and businesses. Reductions in traffic congestion and rat running in local neighbourhoods, would benefit local access

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
		Communication and notification of local community and public transport users would manage impacts to acceptable levels. Temporary changes to traffic lanes near construction works. Impacts on access for motorists would be minor if appropriately managed through the implementation of traffic management measures. Potential impacts in local streets due to parking by construction workers. Impacts would be minor with the implementation of parking management measures.	and connectivity, including for motorists, pedestrians and cyclists. Closure of Lower Clifton Terrace would stop through traffic and improve the pedestrian and cycle environment in this street. Changes to local access for residents in Westbury Street and Victoria Street, including closure of these roads at Kelvin Grove Road. Impacts on local access and connectivity would be significant in the context of the local community, but minor in the context of the broader area. Location of surface infrastructure would change local pedestrian access. Maintenance of pedestrian connections and enhancement of the pedestrian environment through streetscape works would ensure impacts are managed at an acceptable level.
	ICB Connection	Temporary diversion of ICB bikeway due to construction of cut and cover tunnel, although impact on local access and connectivity would be minor as alternative connection would be provided. Disruption to traffic near construction works, but would be managed through implementation of traffic management measures.	Need for minor diversion of ICB bikeway due to road widening. However, functionality of the bikeway would be maintained and impact would be minor.
	Tunnel alignment	No impact on local access and connectivity is expected during construction in this location.	Reduction in traffic congestion on regional and local roads would improve access and connectivity in the study corridor benefiting residents and businesses.
Employment			
High level of labour force participation, part-time workers and people employed in professional and management positions. Slightly higher rate of unemployment compared to Brisbane LGA, but varies		Acquisition of commercial properties containing 23 businesses may result in a small loss of employment, if alternative premises are not able to be found locally. This would be a significant impact locally, but minor in the context of the broader	Support for future employment growth by providing more direct access to key areas of economic and employment activity, including the ATC and CBD would be benefit for local and regional residents. Improvements in local amenity in the study

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
across the study corridor. Good access to a range of employment opportunities in the study corridor.		study corridor. Potential for small impact on local employment opportunities if business turnover is affected by construction impacts (i.e. noise, dust, access), but impact would be minor if managed through consultation and communication with business owners. Construction phase would generate significant direct and indirect employment opportunities for local and regional residents.	corridor would provide benefits for local businesses. Improved accessibility may provide a catalyst for development of businesses in the study corridor and particularly near connections
Sense of place			
Sense of place in the study corridor is strong, linked to open space, local and regional landmarks and character housing.	Western Freeway Connection	Temporary worksites and construction activities at Mt Coot-tha Botanic Gardens and Anzac Park are unlikely to impact on sense of place given the location of these works adjacent a major road reserve.	Impact on sense of place due to surface infrastructure would be minor given the location of these works adjacent to a major road reserve. The location of the ventilation outlet may affect sense of place for some people, but would be minor in the context of the broader study corridor.
	Toowong Connection	Temporary impact on sense of place for neighbourhoods nearest to construction works, due to impact on local amenity, visual character and acquisition of some character housing. This is likely to be significant in the context of the local neighbourhood, but negligible in the context of the broader study corridor. Impact on Crows Ash Memorial due to widening of Milton Road and construction of the Milton Road on-ramp, may affect sense of place for some people. Relocation of the memorial to suitable local location is recommended.	The loss of approximately half of Quinn Park would impact on sense of place, particularly for residents living near the park. This is likely to be significant in the local context, but minor in the context of the broader study corridor. Surface works at Milton Road and Croydon Street would impact on sense of place for local residents. This would be significant in the local context, but minor in the context of the broader study corridor.
	Kelvin Grove Connection	Temporary impact on sense of place for neighbourhoods nearest to construction works, due to impact on local amenity, visual character and acquisition of some character housing. This is likely to be significant in the context of the local neighbourhood, but negligible in the context of the	Surface works at Kelvin Grove Road would impact on sense of place, although this is already compromised by traffic noise and proximity to major road and impact on sense of place is expected to be minor.

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
		broader study corridor.	
	ICB Connection	Impact on sense of place for residents near construction works is likely to be minor given the existing noisy environment in this area.	The location of the ventilation outlet may affect sense of place for some people, but this is not expected to be significant.
Community cohesion			
Overall, healthy levels of community cohesion, but likely to vary across the study corridor. Higher than average levels of volunteering, particularly in Bardon, Auchenflower and Toowong. Mix of residential, community, and commercial uses encouraging interaction.	Western Freeway and ICB Connections	No impacts on community cohesion are expected in these locations.	
	Toowong Connection	Impacts on community cohesion for local neighbourhoods near construction works due to acquisition of residential properties, although impacts are likely to be negligible at a broader study corridor.	Improvement to regional access and connectivity provide opportunities for improved community cohesion and social interaction. Increased traffic and road widening may impact on community cohesion between neighbourhoods and to community facilities. Rehabilitation and enhancement of local environment near surface works would be important in reducing impacts on community cohesion. This is likely to be significant in the context of the local community, but minor in the context of the broader study area.
	Kelvin Grove Connection	Impacts on community cohesion for local neighbourhoods near construction works due to acquisition of residential properties. Impacts are likely to be significant in the context of local neighbourhoods, but negligible in the context of the broader study corridor.	Improvements to regional access and connectivity provide opportunities for improved community cohesion and social interaction. Increased traffic and road widening may impact on community cohesion between neighbourhoods and to community facilities. Rehabilitation and enhancement of local environment would be important in reducing impacts on community cohesion. This is likely to be significant in the context of the local community, but minor in the context of the broader study area.
	Tunnel alignment		Improvement to local access and connectivity in the study corridor provides opportunities for improved community cohesion and social interaction.

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
Social infrastructure			
Good access to local, district and regional level social infrastructure. Local facilities are highly valued by the community.		Temporary changes to property access to the Toowong Baptist Church and Toowong Private Hospital may occur during construction. Changes would not affect operation of these facilities and impact would be minor. Potential impact from construction activities (i.e. noise and dust) for the Toowong Baptist Church) but expected to be managed to appropriate levels through environmental measures and ongoing consultation and communication.	Reduction in traffic congestion would help to improve access to social infrastructure in the study corridor as well as to regional facilities. Longer term impact on the use and function of Toowong Baptist Church and Toowong Private Hospital is expected to be minor.
Affordable Housing			
High levels of housing stress for low income households across the study corridor, with the exception of Spring Hill. Decreasing supply of affordable housing stock. Increasing levels of high density housing.		Potential loss of affordable housing through property acquisition near surface connections, which may have a significant impact on the availability of affordable housing in the context of the local neighbourhood, but minor impact in the context of the study corridor. Acquisition of three properties at Kelvin Grove would result in the loss of 16 student accommodation units. No effects on public housing.	Potential indirect impacts on affordable housing by improved connectivity and access encouraging further gentrification in the study corridor over time, and specifically in neighbourhoods near local connections.
Property Impacts			
Predominantly residential in nature with combination of low density character housing and medium-high density units. Study corridor includes areas of mixed uses including community and social infrastructure, retail, commercial, entertainment, and light industrial uses.		Loss of 74 residential properties through full-acquisition, impacting on community relationships and cohesion. This would be significant impact in the context of local neighbourhoods, but minor in the context of the broader study corridor. Potential for short-term impacts on property values near surface works, due to uncertainty about the proposed changes. Consultation and communication may reduce uncertainty and raise awareness of the Project's longer term benefits, reducing impacts on property values.	Improvements in local amenity and accessibility within the study corridor and near surface connections are likely to support property values in the longer term, benefiting property owners in these areas.

Baseline	Location	Construction (2010-2014)	Operation (Post-2014)
Population Growth			
Inner city, high population growth, particularly in the City and Spring Hill. Toowong SLA, Bardon and Paddington have highest population levels.		Small population decrease due to acquisition of residential properties may be considered significant in the context of local neighbourhoods, but negligible in the context of the broader suburbs and study corridor. Potential for short-term slowing of population growth through reduced number of people moving to the area, due to community uncertainty about construction impacts, although impact on population growth would be negligible.	Potential for population increases due to improved connectivity and access encouraging further gentrification in the study corridor over time, consistent with strategic objectives.
Population diversity			
Generally, young, mobile population. Low proportion of children, higher proportions of people aged 15-44 years, with the exception of Bardon. Higher level of cultural diversity than Brisbane LGA. Generally high levels of relative advantage and resources, although vary across the study corridor. Pockets of lower levels of advantage and resource levels in Kelvin Grove and Red Hill.		Potential relocation of some elderly and long term residents due to property acquisition. This would impact on population diversity in the context of local neighbourhoods, but negligible in the context of the study corridor.	Potential for some people to find it increasingly difficult to access housing locally (i.e. elderly people, NESB, low income), impacting on cultural diversity. This impact is unlikely to be significant given existing levels of cultural diversity.

5. Mitigation

This section outlines strategies to optimise the community benefits and minimise social impacts of the Project. These relate to design development, crime prevention, public transport and active transport and urban renewal strategies as required by the ToR, and include consideration of mitigation strategies implemented for previous similar projects. Consultation strategies are also identified for inclusion in the draft Environmental Management Plan.

5.1 Design Development

The design of the Project should respect, and where possible, enhance community values in the study corridor. Specifically, the project design should protect or enhance the amenity of local neighbourhoods, community facilities and residents adjacent to the Project's surface infrastructure. Objectives should include:

- minimising the footprint of surface connections on open space and park areas, including Mt Coot-tha Botanic Gardens and Anzac Park at the Western connections, and Brisbane Grammar School playing fields, McCaskie Park and Victoria Park at the Northern connections;
- minimising the footprint of surface connections Quinn Park and ensuring that the useable open space within the park is maximised;
- locating the spoil convey in the Mt Coot-tha Botanic Gardens away from areas highly frequented by park users;
- re-instating parks and open space disturbed by construction activities (i.e. Mt Coot-tha Botanic Gardens, Anzac Park, Quinn Park, Brisbane Grammar School playing fields, McCaskie Park and Victoria Park) to the full extent possible and as soon as practicable, providing enhanced amenity and protecting community values associated with parks and open space areas;
- ensuring that the design and placement of noise barriers adjacent to residential neighbourhoods at Toowong and Kelvin Grove incorporate design and landscape treatments that respond to the scale and values of the local neighbourhood, and consider pedestrian access, safety for community members and visual amenity of neighbouring properties;
- providing design treatments for portals and structures to respond to the character of local neighbourhoods and key features of local communities;
- ensuring access to the Brisbane Grammar School playing fields is maintained during construction and that the location of the new access is determined in consultation with the school administration;
- ensuring that access to public places near the project works is maintained during construction and operation for people with disability, as required by the Disability Discrimination Act 1992;
- ensuring that public spaces created near worksites and construction works (including pedestrian and cycle connections) consider CPTED principles, including maintaining visual sightlines and pedestrian legibility, providing opportunities for casual surveillance, and allowing levels of activity in public spaces;
- ensuring the design of public spaces adjacent to the Project's surface infrastructure create safe and attractive urban spaces, that consider CPTED principles and that provide high levels of pedestrian connectivity between neighbourhoods and to community facilities;
- ensure design development of ventilation outlets respects the open space values and character of their locations; and
- ensuring the design and layout of construction worksites maintains visual sightlines and pedestrian legibility around worksites boundaries.

Quantitative assessment of the net effect on open space and public spaces should be undertaken during the design development process, in order to identify the potential need for offset of lost open space.

The implementation of design development objectives should be qualitatively assessed through the construction program and prior to operation in respect of the project's long term contributions to connectivity and sense of place, through consultation with community reference groups.

5.2 Public and Active Transport

During construction, measures should be implemented to manage potential impacts on public transport and walking and cycle connections near construction worksites and surface works. These include:

- maintaining safe and convenient pedestrian and cycle access in the vicinity of construction worksites and surface works at Toowong and Kelvin Grove, including for children, elderly people and people with disability, which consider CPTED principles, including maintaining visual sightlines and pedestrian legibility and providing opportunities for casual surveillance;
- maintaining public transport facilities in the vicinity of construction worksites and surface works, including at Milton Road at Toowong and Kelvin Grove Road at Kelvin Grove, where possible, or ensuring that changes to facilities (i.e. location of bus stops) allows safe and easy access, particularly for elderly people and people with disability;
- ensuring early and ongoing communication and notification with local communities and public transport users about changes to public transport facilities near construction worksites and surface works;
- ensuring early and ongoing communication and notification with local communities and bikeway users (including signage and advertisements) about changes to pedestrian and cycle connections near construction worksites and surface works at the Western Freeway, Toowong, Kelvin Grove and the ICB, to improve community safety and legibility of the pedestrian environment;
- reinstating and where possible, enhancing, pedestrian and cycle connections disturbed by construction activities as soon as practicable;
- undertaking consultation with local communities and pedestrian and cycle groups in the design of pedestrian and cycle connections to be implemented following construction; and
- developing and implementing a pedestrian and cycle management strategy during construction, that ensures safe access is maintained in the vicinity of constructions works.

In the longer term, reduced traffic congestion provided by the Project would provide opportunities to enhance public transport and active transport (i.e. walking and cycling) in the study corridor. Opportunities should be considered to maximise the benefits for public and active transport of reduced traffic congestion, including:

- possible bus priority measures on major roads approaching or within the study corridor to further enhance public transport services; and
- enhanced pedestrian and cycle connections in the vicinity of the surface connections and within the study corridor generally, including links between neighbourhoods at Toowong (i.e. across Milton Road and Croydon Street) and Kelvin Grove (i.e. along and across Kelvin Grove Road) and to public transport facilities, regional pedestrian and cycle networks, and community facilities.

Ease of access and the adequacy of provision during construction should be qualitatively assessed through consultation with user groups and local residents. Proposed enhancement of public transport services should be

quantitatively assessed (identifying improved frequency, catchments and multi-modal connectivity), to monitor progress during construction and operation).

5.3 Urban renewal strategies

The Project provides opportunities to achieve Council's desired outcome of Brisbane as a *"safe, health and vibrant place to live, offering a wide range of local and regional services, facilities and activities and diverse housing, community, cultural and recreational choices"*.

The EIS includes a proposed framework for urban regeneration, which seeks to capture the potential benefits of the Project and to manage the on-going change occurring in the study corridor. Urban regeneration initiatives generally relate to program initiatives, redevelopment initiatives and urban mitigations. The urban mitigation initiatives relevant to the social environment which are expected to be delivered as part of the urban regeneration framework include:

- enhancements to pedestrian and cycle connections in the vicinity of surface connections at Toowong and Kelvin Grove (i.e. Sylvan Road, Milton Road, Kelvin Grove Road, Victoria Park), including to community facilities and regional bicycle networks, to mitigate potential impacts on local connectivity;
- improvements to the pedestrian environment along some major roads and local streets through streetscape works including street tree planting, footpath pavement improvements, lighting and landscaping;
- rehabilitation of the area of the Mt Coot-tha Botanic Gardens disturbed by construction activities consistent with the Botanic Gardens Master Plan, including enhanced amenities (i.e. BBQ's, shelters, drinking fountains, play equipment, seating and lighting);
- enhancement of existing open space areas at Toowong and Kelvin Grove, including at Quinn Park, Toowong Memorial Park, and McCaskie Park; and
- improvements in local amenity in some residential streets near construction works through streetscape works such as landscaping and street tree planting, footpath improvements and traffic management measures.

In addition to the urban mitigation initiatives outlined above, a number of program and redevelopment initiatives are identified to manage potential impacts and maximise the benefits provided by the Project. These include:

- mitigate the loss of student accommodation due to project works at Lower Clifton Terrace through the redevelopment of student accommodation within the local area, including consideration of the Kelvin Grove worksite or land identified as surplus to needs following construction;
- mitigate the loss of affordable housing due to the Project at Toowong and Kelvin Grove, including through the redevelopment of surplus land following construction;
- respect the cultural and ceremonial values of the Shine of Remembrance within Toowong Cemetery, at the corner of Frederick Street and Mt Coot-tha Road;
- relocate the commemorative plaque for the Crows Ash Memorial at Toowong, in consultation with Brisbane City Council and other stakeholders, to a suitable location in the local area such as Anzac Park or the Botanic Gardens;
- replace the fig trees lost through construction works in McCaskie Park and Marshall Park to a suitable location within the local area;

- implementation of local area traffic management measures in residential streets near surface connections at Toowong and Kelvin Grove, where potential increases in through traffic are likely to impact on amenity for local residents;
- develop an employment skills training centre, incorporating a program to employ and train Indigenous workers, and including employment and training options for local people with disability;
- sponsor and support community initiatives to improve the environmental and community values of open space areas near surface connections, including within Anzac Park, Quinn Park, Toowong Memorial Park, and Victoria Park; and
- establish and implement a public art strategy at Toowong and Kelvin Grove that reflects the identify and character of the local area and connects key pedestrian and cycle routes with key local open space areas.

5.4 Environmental Management and Monitoring

Environmental Managements Plans would be prepared by the Contractor for the construction and operation phases of the Project, to identify measures to ensure that environmental objectives and performance criteria are addressed, that potential impacts of the Project are minimised, and environmental values of the study corridor are protected and where possible, enhanced.

Community participation in ongoing planning and environmental management monitoring would assist in avoiding or minimising potential social impacts of the Project. The following outlines environmental objectives, performance criteria, and mitigation measures for managing potential construction impacts on local communities. The following outlines social environment objectives, mitigation measures and monitoring and reporting requirements for construction.

Objective	Avoid or mitigate and manage construction impacts on the social environment[38] in the study corridor and other areas affected by the Project works.
Performance Criteria	▪ Construction techniques and procedures minimise, mitigate and manage impacts on community life throughout the construction phase. ▪ Local and broader communities are notified in advance of construction activities, including any special construction activities of short duration, or about changes to local access and connectivity. ▪ Affected residents are generally satisfied with the efficacy of mitigation measures ▪ Communities have access to an effective and efficient communication and complaints process to identify and respond to impacts.
Mitigation Measures	**Amenity** ▪ Undertake early and ongoing consultation and communication with residents nearest to the construction worksites and project works, about construction activities, including timing and duration, and potential impacts on local amenity. This should include potential impacts for communities adjacent to spoil haulage routes. ▪ Implement management measures to minimise impacts of construction noise and dust on amenity for park users, including at Mt Coot-tha Botanic Gardens, Anzac Park, and Victoria Park. ▪ Maintain safe access for pedestrians and cyclists near construction

[38] Social environment includes residential and neighbourhood amenity, access and connectivity, community health, community diversity, social infrastructure and community safety.

	worksites and construction works, including consideration of pedestrian access needs of elderly people and people with disability; ■ Implement parking management measures in local streets near construction worksites at Toowong and Kelvin Grove to manage potential impacts from workers parking; ■ Reinstate as soon as practicable, open space areas and pedestrian and cycle connections disturbed by construction activities, including: ■ the Western Freeway bikeway in Toowong, and the ICB bikeway at Kelvin Grove; ■ pedestrian and cycle connections along Frederick Street, south of Morley Street, across and along Milton Road between Croydon Street and Frederick Street, along Croydon Street between Milton Road and Jephson Street, and along Kelvin Grove Road, between the ICB and Victoria Street; and ■ areas of Mt Coot-tha Botanic Gardens, Anzac Park, Quinn Park, Victoria Park, the Brisbane Grammar School playing fields and McCaskie Park.
	Social infrastructure ■ Undertake early and ongoing consultation with the Toowong Baptist Church and Toowong Private Hospital to identify potential impacts (i.e. changes to access, noise and dust) and effective mitigation strategies of construction works on use of these facilities. ■ Undertake early and ongoing consultation with users and managers of the Silk Shed Studio Group at Quinn Park to identify potential construction impacts (i.e. access, noise and dust) on the use of the facility and effective mitigation strategies. ■ Where possible, consider the peak use times (i.e. weekends and public holidays) in the planning of construction activities that generate excessive noise and dust for users of Mt Coot-tha Botanic Gardens and Anzac Park. ■ Undertake early consultation with the Brisbane Grammar School about potential changes to access to the playing fields.
	Consultation and Communication ■ Initiate consultation with owners and occupiers of directly affected properties, including those affected by volumetric acquisition, as soon as practicable after a decision to proceed with the project is taken, about the process and timing of property acquisition. ■ Undertake and maintain a comprehensive community consultation and community information program to inform local and broader communities of project activities, including timing and duration, and potential impacts. At a minimum, this should include: ■ maintenance of a 24 hour project information line, operated by a person with authority to stop construction works if goals and agreements with the community are not met; ■ a range of communication and consultation strategies, including (but not limited to) public advertisements, signage, electronic media, newsletters, direct mail notifications, one-on-one meetings. stakeholder briefings and community consultative committees; ■ access to information about possible construction impacts and

	mitigation for residents in the study corridor with poor English or communication disabilities; ■ establishment of Community Consultative Committees, to represent residents, businesses, community facilities and organisations closest to construction works; ■ direct consultation and communication with residents, local businesses and community facilities closest to construction works, including surface and driven tunnelling construction; ■ direct communication and consultation with residents closest to construction works, including surface and driven tunnelling construction, where surface works are proposed to be undertaken outside of normal daylight construction hours and where vibration levels approach or exceed sleep disturbance levels for residents above or close to the tunnel alignment; ■ notification and communication with motorists about changes to regional and local road networks, including time, duration and likely disruptions; ■ consultation and communication with local communities and relevant community organisations about changes to pedestrian and cycle connections near construction works; and ■ consultation and communication with local schools, child care centres, aged care, and medical and health facilities near to construction works, including the tunnel alignment.
	Complaints Management and Corrective Actions ■ Develop an effective and responsive system for receiving, handling and responding to complaints from community members and key stakeholders during the construction phase. ■ Ensure a response is provided to the complainant within 24 hours of the complaint being received. ■ Provide a publicly available report on complaints received, responses provided, timeliness of responses, and corrective actions taken on a monthly basis. Raise community awareness of the complaints system and procedures, though communication and consultation strategies.
Monitoring	■ Monitor and evaluate the effectiveness of community consultation and communication processes, through surveying and direct sampling of local residents' views on effectiveness and responsiveness ■ Monitor and evaluate the effectiveness of mitigation outcomes, using qualitative and quantitative standards to measure achievement of social objectives and mitigation criteria ■ Monitor and report on the safety, provision and maintenance of temporary pedestrian and cycle access near construction activities.
Reporting	■ Notes of CCC meetings, to be made publicly available within two weeks of CCC meetings ■ Monthly report on complaints received, responses provided, timeliness of responses and corrective actions taken, to be made publicly available. ■ Immediately in the case of a safety incident or written complaint from a neighbour or community group

	▪ Six monthly for other reports.
Responsibility	Contractor

During operation, management of environmental impacts should include:

- Consultation about the design and placement of noise barriers located adjacent to residential neighbourhoods or community facilities with local residents and managers of community facilities;
- Monitoring and if necessary remediating design and structural factors affecting the safety and use of public spaces, open spaces and path networks created or changed as a result of the project;
- Communication about air quality at Kelvin Grove, particular in relation to presence of three ventilation outlets (Northern Link, Airport Link and CLEM7) and potential cumulative air quality changes for local residents and sensitive uses (i.e. schools, hospital, aged care, etc); and
- Ongoing monitoring of in-tunnel and ambient air quality, with results made available to the public.

6. Conclusion

Brisbane's aspirations as outlined in *Living in Brisbane 2026* include:

- Friendly, safe city:
- Clean, green city;
- Accessible, connected city;
- Active, healthy city; and
- Vibrant, creative city.

These are further supported by strategies outlined in the Brisbane City Plan relating to "community life, health and safety", which include (among other things):

- enhance social diversity, choice and accessibility;
- cater for a balanced range of recreational and sporting opportunities, natural environments and attractive landscapes to meet community needs;
- promote cultural diversity; and
- achieve a safe, secure, equitable and comfortable City.

The Project would help to improve city-wide accessibility and travel times to employment centres (i.e. CBD and ATC), regional community facilities (i.e. universities, health facilities, and open space), by providing an alternate cross-city route between Brisbane's western and northern suburbs. Reducing traffic congestion on main roads within the study corridor would also enhance local access and connectivity, including for pedestrians and cyclists, and provide opportunities for public transport improvements. This would also result in reduced rat-running in some residential streets within the study corridor, improving local amenity, safety and access and connectivity, including to some local community facilities.

In those neighbourhoods close to construction works, some existing values may be diminished during the construction phase. This includes construction works associated with connections at Toowong, Kelvin Grove and the ICB given their proximity to residential neighbourhoods. Construction works in some areas may extend over a number of years. Careful management of construction impacts would be required to help minimise construction impacts and protect quality of life and community values for local communities.

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Appendix A Citywide Strategies – Community Life, Health and Safety

Desired Environment Outcome and Strategies – 3.2 Community Life, Health and Safety

Citywide Strategies[39]	
3.2.2.1 Enhance social diversity, choice and accessibility through:	(a) housing diversity and affordability – a wide range of housing types and tenures across the City to (b) integration – new development that integrates with existing development (c) social diversity – development that supports a wide social and cultural mix and Brisbane's ageing population (d) accessibility – equitable access to Centres, services, facilities, electronic service information, transport and green space
3.2.2.2 Cater for a balanced range of recreational and sporting opportunities, natural environments and attractive landscapes to meet community needs through:	(a) parks and facilities – a wide range and equitable distribution of high quality, usable parks and recreation facilities (b) park diversity – parks and recreation facilities of different types and scales (c) facilities and infrastructure – high quality park facilities that respect each park's character and are appropriate for potential users (d) privately owned open space – developing integration between private facilities, the green space network and the public transport system (e) contributions – contributions of parkland as part of the development process that are suitable for their intended purpose
3.2.2.3 Promote cultural diversity through:	(a) significant places – appropriately identifying, conserving and managing places of cultural heritage significance in cooperation with stakeholders (b) public spaces – a range of accessible, comfortable, attractive and safe public and semi-public spaces, including the multiple use of road space where appropriate (c) history/heritage – development that respects elements of local history in a way that informs present and future communities (d) precincts – reinforcing existing cultural precincts or creating new cultural precincts (e) limiting impacts – development that does not have a negative impact on the cultural heritage significance of a place
3.2.2.8 Achieve a safe, secure, equitable and comfortable City through:	(a) design for safety – designing buildings, public places, pedestrian ways and bikeways to help reduce the risk and fear of crime

[39] Condensed, from Brisbane Planning Scheme (City Plan 2000)

Citywide Strategies[39]	
	(b) equitable access – providing non-discriminatory access to public and private development and open space (c) reducing risks – planning to reduce the risks resulting from emergencies and disasters, mindful of the need to maintain emergency access, egress and escape routes to facilitate emergency response (d) light – adequate natural light and sun penetration in buildings and public spaces (e) shelter – providing shelter from the adverse effects of sun and rain

Source: Brisbane City Council, Brisbane Planning Scheme (City Plan 2000)

Appendix B Demographic Profile

Population Size and Growth

Population Size, 2006

SLA	Total
City Inner	2,840
City Remainder	4,473
Herston	1,890
Spring Hill	5,466
Kelvin Grove	4,561
Paddington	8,061
Red Hill	5,474
Milton	1,782
Toowong (includes approximately 5,400 people in Auchenflower)	15,858
Bardon	9,492
Study Corridor	59,897
Brisbane LGA	992,176

Source: ABS Census 2006

Population Growth, 1996-2006

	ERP (as at 30 June)			Average Annual Population Change			
	1996	2001	2006	1996-2001		2001-2006	
SLA	Number	Number	Number	Number	%	Number	%
City Inner	345	1,017	2,840	134	38.9	365	35.9
City Remainder	1,401	1,842	4,473	88	6.3	526	28.5
Herston	1,692	1,831	1,890	30	1.6	12	0.7
Spring Hill	2,789	3,671	5,466	176	6.3	359	9.8
Kelvin Grove	4,023	4,198	4,561	35	0.9	73	1.7
Paddington	7,205	7,411	8,061	41	0.6	130	1.7
Red Hill	4,932	5,048	5,474	23	0.5	85	1.7
Milton	1,637	1,639	1,782	2	0.0	29	1.8
Toowong	12,839	13,604	15,858	153	1.2	451	3.3
Bardon	8,303	8,812	9,492	102	1.2	136	1.5
Study Corridor	45,166	49,073	59,897	781	1.7	2,165	4.4
Brisbane	824,489	896,649	992,176	14,432	1.7	19,105	2.1

Source: ABS Census 2006, 2001 and 1996

Population Projections, 2006 - 2026

SLAs	2006	2011	2016	2021	2026	Change 2006-2026	% Change 2006-2026
City inner	3,053	3,469	3,953	4,464	5,012	1,959	64.2
City remainder	4,558	5,268	6,093	6,972	7,918	3,360	73.7
Herston	1,799	1,870	1,962	2052	2148	349	19.4
Spring Hill	4,694	5,016	5,394	5787	6203	1509	32.2
Kelvin Grove	4,307	4,529	7,932	5,074	5,361	1054	24.5
Paddington	7,576	7,785	7,932	8,050	8,154	578	7.6
Red Hill	4,982	5,058	5,150	5,202	5,244	262	5.3
Milton	1,782	1,863	1,957	2,053	2,156	374	20.9
Toowong	14,681	15,045	15,509	15,924	16,330	1,649	11.2
Bardon	9,347	9,435	9,532	8,561	9,561	214	2.3
Study Corridor	56,779	59,338	62,283	65,139	68,087	11,308	19.9
Brisbane	984,180	1,043,745	1,097,058	1,136,112	116,4095	179,915	18.3

Source: Planning Information and Forecasting Unit, Department of Local Government and Planning, 2007, Medium Series Population Projections

Age Profile

Age Profile, 2006 (%)

Suburb	0-14 yrs	15-24 yrs	25-44 yrs	45-64 yrs	65 + yrs	Total Number	Median age (yrs)
City	4.6	30.5	40.4	20.0	4.5	7,591	29
Herston	12.3	23.7	36.9	16.8	10.3	1,795	29
Spring Hill	7.7	25.2	40.2	21.3	5.6	4,834	30
Kelvin Grove	10.8	28.2	37.0	14.8	9.2	4,246	28
Paddington	12.0	20.3	40.9	18.9	7.8	7,625	31
Red Hill	13.5	18.3	41.9	19.2	7.1	5,403	32
Milton	9.8	25.5	41.7	15.5	7.5	1,732	29
Auchenflower	10.7	25.9	36.6	19.6	7.2	5,086	29
Toowong	9.9	30.9	33.4	17.2	8.6	9,874	27
Bardon	21.3	13.9	31.5	23.5	9.9	9,110	35
Study Corridor	11.6	24.0	37.3	19.3	7.7	57,296	30
Brisbane LGA	18.1	15.8	31.3	23.1	11.8	956,128	34
Queensland	20.7	13.8	28.2	25.0	12.4	3,904,531	36

Source: ABS Census 2006

Household and Family Type

Household Type, 2006

Suburb	Family Households		Lone Person Households		Group Households		Average Household Size
City	1,379	(44.8%)	1,189	(38.6%)	509	(16.5%)	1.9
Herston	329	(50.9%)	181	(28.0%)	136	(21.1%)	2.4
Spring Hill	661	(45.3%)	540	(37.0%)	257	(17.6%)	2.0
Kelvin Grove	837	(50.4%)	480	(28.9%)	344	(20.7%)	2.2
Paddington	1,712	(55.5%)	833	(27.0%)	540	(17.5%)	2.3
Red Hill	1,159	(54.0%)	666	(31.0%)	322	(15.0%)	2.3
Milton	327	(45.4%)	259	(35.9%)	135	(18.7%)	2.1
Auchenflower	1,108	(53.1%)	633	(30.3%)	346	(16.6%)	2.2
Toowong	1,940	(49.0%)	1,181	(29.8%)	838	(21.2%)	2.2
Bardon	2,329	(71.6%)	711	(21.9%)	212	(6.5%)	2.5
Study Corridor	11,781	(53.3%)	6,673	(30.2%)	3,639	(16.5%)	2.2
Brisbane LGA	240,622	(68.2%)	88,491	(25.1%)	23,877	(6.8%)	2.5
Queensland	1,011,979	(72.7%)	316,788	(22.8%)	62,867	(4.5%)	2.6

Source: ABS Census 2006

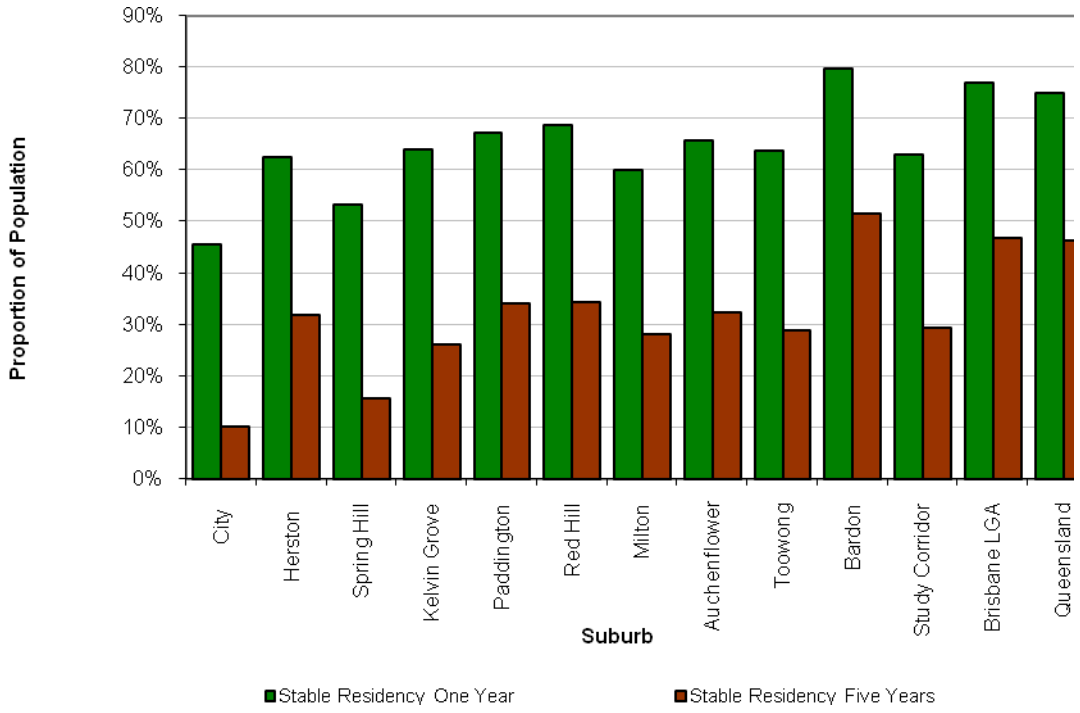
Family Type, 2006

Suburb	Couple Family Without Children		Couple Family With Children		One Parent Family		Other Family		Total
City	919	(66.4%)	247	(17.9%)	101	(7.3%)	116	(8.4%)	1,383
Herston	134	(40.5%)	118	(35.6%)	38	(11.5%)	41	(12.4%)	331
Spring Hill	387	(58.0%)	158	(23.7%)	74	(11.1%)	48	(7.2%)	667
Kelvin Grove	394	(46.8%)	276	(32.8%)	111	(13.2%)	61	(7.2%)	842
Paddington	837	(48.5%)	593	(34.4%)	208	(12.0%)	88	(5.0%)	1,726
Red Hill	496	(42.7%)	464	(39.9%)	144	(12.4%)	58	(5.0%)	1,162
Milton	164	(49.8%)	96	(29.2%)	44	(13.4%)	25	(7.6%)	329
Auchenflower	569	(51.2%)	372	(33.4%)	102	(9.2%)	69	(6.2%)	1,112
Toowong	931	(47.7%)	621	(31.7%)	210	(10.8%)	191	(9.8%)	1,953
Bardon	842	(35.8%)	1,169	(49.7%)	278	(11.8%)	62	(2.6%)	2,351
Study Corridor	**5,673**	**(47.8%)**	**4,114**	**(34.7%)**	**1,310**	**(11.0%)**	**759**	**(6.4%)**	**11,856**
Brisbane LGA	92,638	(37.8%)	107,863	(44.1%)	37,526	(15.3%)	6,740	(2.8%)	244,767
Queensland	403,854	(39.1%)	446,739	(43.3%)	164,220	(15.9%)	17,221	(1.7%)	1,032,034

Source: ABS Census 2006

Population Mobility

Population Mobility, 2006



Source: ABS Census 2006

Cultural Diversity

Cultural Diversity, 2006

Suburb	Aboriginal and Torres Strait Islander		Language Other Than English Spoken At Home		Speak English Not Well/ Not At All		Overseas Born	
City	43	(0.6%)	2,148	(28.3%)	400	(12.7%)	3,139	(41.4%)
Herston	24	(1.3%)	252	(14.1%)	15	(3.6%)	420	(23.4%)
Spring Hill	34	(0.7%)	759	(15.7%)	127	(9.6%)	1,327	(27.5%)
Kelvin Grove	37	(0.9%)	539	(12.7%)	62	(6.3%)	989	(23.3%)
Paddington	58	(0.8%)	579	(7.6%)	41	(2.7%)	1,492	(19.6%)
Red Hill	44	(0.8%)	418	(7.7%)	48	(4.6%)	1,041	(19.3%)
Milton	21	(1.2%)	167	(9.6%)	15	(4.2%)	361	(20.9%)
Auchenflower	47	(0.9%)	510	(10.0%)	39	(3.6%)	1,072	(21.1%)
Toowong	52	(0.5%)	1,612	(16.3%)	159	(5.9%)	2,699	(27.3%)
Bardon	38	(0.4%)	470	(5.2%)	28	(1.9%)	1,444	(15.9%)
Study Corridor	398	(0.7%)	7,454	(13.0%)	934	(6.7%)	13,984	(24.4%)
Brisbane LGA	12,938	(1.4%)	137,056	(14.3%)	19,521	(8.5%)	229,169	(24.0%)
Queensland	127,580	(3.3%)	303,093	(7.8%)	35,676	(5.1%)	699,444	(17.9%)

Source: ABS Census 2006

Education

Level of Schooling Completed, 2006

Suburb	Year 12 or equivalent	Year 10 or equivalent	Year 8 or below	Did not go to school	Not stated
City	4,648 (64.1%)	484 (6.7%)	74 (1.0%)	23 (0.3%)	1,643 (22.7%)
Herston	479 (63%)	83 (10.9%)	26 (3.4%)	0 (0.0%)	115 (15.1%)
Spring Hill	2,298 (51.5%)	369 (8.3%)	101 (2.3%)	24 (0.5%)	1,381 (30.9%)
Kelvin Grove	2,614 (69%)	346 (9.1%)	94 (2.5%)	7 (0.2%)	506 (13.4%)
Paddington	4,863 (72.5%)	641 (9.6%)	200 (3.0%)	9 (0.1%)	595 (8.9%)
Red Hill	3,245 (69.3%)	484 (10.3%)	142 (3.0%)	43 (0.9%)	462 (9.9%)
Milton	1,082 (69.4%)	152 (9.7%)	47 (3.0%)	0 (0.0%)	192 (12.3%)
Auchenflower	3,369 (74.1%)	427 (9.4%)	82 (1.8%)	7 (0.2%)	428 (9.4%)
Toowong	6,582 (74%)	720 (8.1%)	147 (1.7%)	13 (0.1%)	984 (11.1%)
Bardon	4,983 (69.5%)	909 (12.7%)	214 (3.0%)	16 (0.2%)	448 (6.2%)
Study Corridor	34,163 (68.6%)	4,615 (9.3%)	1,127 (2.3%)	142 (0.3%)	6,754 (13.5%)
Brisbane LGA	436,009 (55.7%)	148,444 (18.9%)	43,677 (5.6%)	4729 (0.6%)	72,108 (9.2%)
Queensland	1,279,682 (41.3%)	833,454 (26.9%)	229,955 (7.4%)	14,176 (0.5%)	305,247 (9.9%)

Source: ABS Census 2006

Education Institution Attending, 2006 (%)

Suburb	Preschool	Infant/ Primary	Secondary	Technical or Further Educational Institution	University or Other Tertiary Institution	Other Type of Education Institution	Type of Educational Institution Not Stated	Total Number
City	0.7	1.8	3.2	4.8	35.4	8.7	45.4	3,610
Herston	1.4	10.9	7.7	5.2	46.0	2.5	26.2	763
Spring Hill	0.8	3.7	7.1	3.1	19.3	5.0	61.0	2,383
Kelvin Grove	1.9	8.3	6.9	4.7	46.0	2.4	29.8	1,801
Paddington	3.9	13.1	9.2	6.8	39.6	2.9	24.5	2,354
Red Hill	4.7	14.0	10.0	6.9	34.5	2.7	27.1	1,695
Milton	1.6	11.0	6.2	7.1	42.2	1.3	30.6	630
Auchenflower	2.9	10.2	7.8	6.1	47.4	2.5	23.1	1,837
Toowong	2.1	9.1	7.9	4.5	50.2	2.0	24.1	4,142
Bardon	6.7	28.4	20.5	3.8	21.9	2.0	16.8	2,997
Study Corridor	2.7	10.9	8.9	5.0	37.4	3.6	31.4	22,212
Brisbane LGA	4.6	23.7	17.2	5.9	21.8	2.3	24.5	306,335
Queensland	4.9	29.1	19.8	5.7	11.5	1.9	27.1	1,195,965

Source: ABS Census 2006

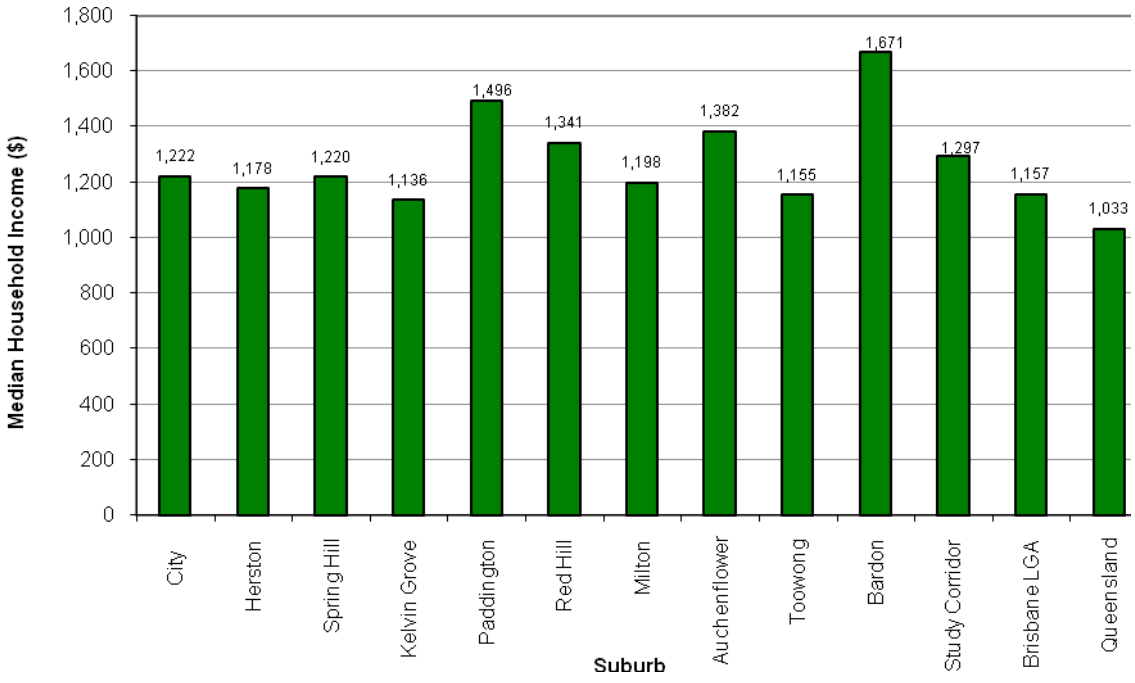
Highest Level of Post-School Qualification, 2006 (%)

Suburb	Post-graduate Degree	Graduate Diploma & Graduate Certificate	Bachelor Degree	Advanced Diploma & Diploma	Certificate	Level of education not stated
City	9.2	2.7	31.3	11.6	10.4	33.0
Herston	10.3	4.4	39.4	10.9	14.0	19.3
Spring Hill	7.6	2.4	25.4	8.3	10.7	43.4
Kelvin Grove	9.3	3.7	36.5	12.0	14.7	21.7
Paddington	9.7	3.8	43.1	11.9	15.4	14.4
Red Hill	9.8	4.6	38.7	12.4	16.9	15.7
Milton	9.3	3.6	41.4	11.4	13.5	18.8
Auchenflower	12.2	4.2	42.9	11.4	13.4	14.5
Toowong	13.0	4.2	41.0	10.9	11.8	17.3
Bardon	12.5	5.5	41.9	12.5	14.5	10.7
Study Corridor	10.7	4.1	38.9	11.3	13.8	19.1
Brisbane	7.5	3.4	30.2	13.9	24.2	18.4
Queensland	3.9	2.3	19.8	13.1	35.5	22.7

Source: ABS Census 2006

Income and Employment

Median Weekly Household Income, 2006



Source: ABS Census 2006.

Labour Force Characteristics, 2006 (%)

	Labour Force (No)[40]	Labour Force Participation	Employed full time	Employed part time	Unemployed
City	4,031	55.6	69.8	25.3	5.3
Herston	1,037	65.9	61.2	32.1	4.1
Spring Hill	2,302	51.6	69.2	25.7	6.0
Kelvin Grove	2,590	68.4	63.6	31.7	5.4
Paddington	5,051	75.3	67.3	27.8	3.0
Red Hill	3,372	72.1	66.7	28.4	3.5
Milton	1,093	70.1	69.8	26.9	3.6
Auchenflower	3,263	71.8	66.9	27.7	4.0
Toowong	5,897	66.3	62.6	31.9	5.3
Bardon	5,090	71.0	63.6	31.2	2.8
Study Corridor	33,726	66.6	65.9	29.0	4.2
Brisbane LGA	508,783	65.0	65.9	28.4	4.0
Queensland	1,915,947	61.8	64.7	29.1	4.7

Source: ABS Census 2006

Occupation, 2006 (%)

Suburb	Professionals	Managers	Clerical	Sales	Community	Tech/ Trades	Labourers	Machinery
City	34.2	17.6	13.2	10.1	8.5	7.6	5.9	1.3
Herston	39.6	8.5	12.9	12.6	9.7	9.3	5.5	1.4
Spring Hill	36.1	13.4	15.3	7.9	7.7	7.8	8.3	2.0
Kelvin Grove	35.1	10.3	14.5	10.6	11.2	8.4	5.5	3.4
Paddington	37.3	13.8	14.0	9.3	9.9	8.5	4.3	1.6
Red Hill	37.8	14.1	13.8	9.1	8.9	8.9	4.5	1.9
Milton	33.4	13.1	15.5	8.5	9.7	11.3	3.9	2.7
Auchenflower	39.2	12.4	15.6	8.9	8.8	7.8	4.5	1.9
Toowong	40.1	10.1	13.9	10.1	9.7	7.9	5.2	1.8
Bardon	40.1	15.0	13.4	8.7	7.7	8.0	4.2	1.7
Study Corridor	37.3	12.8	14.2	9.6	9.2	8.6	5.2	2.0
Brisbane LGA	26.4	12.3	16.7	9.9	8.5	11.8	7.9	4.7
Queensland	17.1	12.4	15.4	10.4	9.1	15.4	11.9	7.2

Source: ABS Census 2006

[40] Represents count of persons aged 15 years or over

Employment by Industry, 2006 (%)

Suburb	Food services	Legal and Accounting	Engineer/ Arch/ Tech	Computer Services	Government Admin	Hospitals	Tertiary Education	School Education
City	6.7	5.3	5.0	4.0	3.3	N/A	N/A	N/A
Herston	4.8	N/A	3.2	N/A	N/A	11.6	4.4	3.5
Spring Hill	4.7	6.1	5.5	N/A	3.7	4.4	N/A	N/A
Kelvin Grove	5.8	N/A	3.6	N/A	N/A	6.3	5.7	3.8
Paddington	5.8	4.2	4.4	N/A	N/A	3.8	4.0	N/A
Red Hill	4.1	4.3	4.6	N/A	N/A	N/A	4.4	3.7
Milton	5.4	3.3	4.7	N/A	3.3	N/A	4.5	N/A
Auchenflower	5.9	5.3	5.2	N/A	N/A	4.8	5.1	N/A
Toowong	6.1	5.3	5.2	N/A	N/A	N/A	6.2	4.1
Bardon	N/A	4.3	4.3	N/A	N/A	4.6	4.8	4.5
Brisbane LGA	4.2	N/A	N/A	N/A	3.1	4.0	3.0	4.6

Source: ABS Census 2006

Transport

Vehicle Ownership per Household, 2006

Suburb	No Vehicles		One Motor Vehicle		Two Motor vehicles		Three or More Motor Vehicles		Number Not Stated	
City	916	(29.8%)	1,417	(46.0%)	428	(13.9%)	70	(2.3%)	246	(8%)
Herston	90	(13.9%)	295	(45.5%)	176	(27.1%)	67	(10.3%)	21	(3.2%)
Spring Hill	365	(25.1%)	707	(48.5%)	250	(17.2%)	62	(4.3%)	73	(5%)
Kelvin Grove	278	(16.7%)	702	(42.2%)	482	(28.9%)	153	(9.2%)	50	(3%)
Paddington	320	(10.4%)	1,266	(41.0%)	1,055	(34.2%)	360	(11.7%)	84	(2.7%)
Red Hill	269	(12.5%)	892	(41.6%)	679	(31.7%)	225	(10.5%)	80	(3.7%)
Milton	146	(20.2%)	290	(40.1%)	174	(24%)	74	(10.2%)	40	(5.5%)
Auchenflower	299	(14.4%)	888	(42.6%)	630	(30.2%)	202	(9.7%)	64	(3.1%)
Toowong	678	(17.1%)	1,795	(45.4%)	1,057	(26.7%)	320	(8.1%)	107	(2.7%)
Bardon	215	(6.6%)	1,201	(36.9%)	1,351	(41.4%)	408	(12.5%)	84	(2.6%)
Study Corridor	3,576	(16.2%)	9,553	(42.8%)	6,282	(28.4%)	1,941	(8.8%)	749	(3.4%)
Brisbane LGA	36,535	(10.4%)	137,069	(38.8%)	123,273	(34.9%)	44,573	(12.6%)	11,542	(3.3%)
Queensland	109,756	(7.9%)	508,490	(36.5%)	507,740	(36.5%)	217,728	(15.6%)	47,921	(3.4%)

Source: ABS Census 2006

Journey to Work, 2006 (%)

Method of Travel	City	Herston	Spring Hill	Kelvin Grove	Padding-ton	Red Hill	Milton	Auchen-flower	Toowong	Bardon	Study Corridor	Brisbane LGA	QLD
One Method:													
Train	2.7	1.3	3.3	0.4	1.7	0.5	10.9	11.8	11.5	0.3	4.5	4.7	2.0
Bus	5.3	13.0	4.0	14.9	12.6	12.8	6.8	7.4	8.8	11.3	9.8	6.9	2.9
Ferry	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.4	1.8	0.0	0.4	0.5	0.2
Taxi	0.9	0.0	0.6	0.2	0.7	0.7	1.2	0.5	0.4	0.3	0.6	0.4	0.2
Car, as driver	24.4	40.2	24.2	43.2	47.9	47.2	42.1	39.9	39.5	54.7	41.5	54.2	59.7
Car, as passenger	3.1	5.2	3.9	6.1	5.4	5.5	3.5	4.6	3.7	5.9	4.7	5.8	6.8
Truck	0.1	0.5	0.3	0.5	0.3	0.5	0.4	0.3	0.2	0.4	0.3	0.9	1.6
Motorbike/scooter	0.7	1.5	1.3	1.3	1.5	2.0	1.3	1.0	1.0	1.3	1.3	1.1	1.1
Bicycle	1.0	1.9	1.7	2.4	2.4	2.3	3.0	2.9	3.3	1.8	2.3	1.3	1.1
Other	1.0	0.0	0.6	0.4	0.4	0.6	0.9	0.3	0.4	0.5	0.5	0.4	0.6
Walked only	44.6	15.3	42.4	9.5	7.3	9.3	14.5	9.5	7.8	2.6	14.5	4.0	4.0
Travelled to work by two or more methods	1.7	2.4	1.8	2.7	2.4	2.1	2.7	3.7	3.7	2.3	2.6	3.4	2.2
Worked at home	3.7	2.3	4.7	2.9	4.9	4.6	4.0	3.8	3.9	6.1	4.3	4.0	5.1
Did not go to work	9.4	15.0	10.0	14.2	11.3	10.9	8.1	12.5	12.9	11.6	11.6	11.1	10.8
Method of travel to work not stated	1.0	0.9	1.2	1.2	1.1	1.0	0.6	1.4	1.1	0.9	1.1	1.4	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS Census 2006

Access to Internet

Internet Access, 2006

Suburb	No internet connection		Internet connected		Connection not stated	
City	535	(17.4%)	2306	(75.0%)	235	(7.6%)
Herston	155	(24.0%)	478	(73.9%)	14	(2.2%)
Spring Hill	379	(26.0%)	1,016	(69.7%)	63	(4.3%)
Kelvin Grove	409	(24.6%)	1,219	(73.3%)	35	(2.1%)
Paddington	409	(24.6%)	1,219	(73.3%)	35	(2.1%)
Red Hill	597	(27.8%)	1,510	(70.3%)	40	(1.9%)
Milton	198	(27.4%)	495	(68.6%)	29	(4.0%)
Auchenflower	470	(22.6%)	1,564	(75.1%)	49	(2.4%)
Toowong	803	(20.3%)	3,080	(77.8%)	78	(2.0%)
Bardon	646	(19.9%)	2,548	(78.0%)	65	(2.0%)
Study area	4,601	(22.2%)	15,435	(74.6%)	643	(3.2%)
Brisbane LGA	99,401	(28.2%)	243,588	(69.0%)	10,001	(2.8%)
Queensland	475,307	(34.2%)	873,492	(62.8%)	42,834	(3.1%)

Source: ABS Census 2006

Need for Assistance and Voluntary Work

Need for Assistance and Volunteer Participation

Suburb	Need for assistance	Need for assistance (%)	Volunteer	Volunteer (%)
City	60	0.8	880	12.1
Herston	47	2.6	323	20.5
Spring Hill	76	1.6	538	12.1
Kelvin Grove	73	1.7	702	18.5
Paddington	165	2.2	1,312	19.6
Red Hill	183	3.4	950	20.3
Milton	42	2.4	312	20
Auchenflower	92	1.8	978	21.6
Toowong	205	2.1	1,879	21.1
Bardon	208	2.3	1,848	25.8
Study Corridor	1,151	2.1	9,722	19.6
Brisbane LGA	32,981	3.5	146,454	15.3
Queensland	154,707	4.0	568,230	14.6

Source: ABS Census 2006

Housing

Dwelling Type, 2006 (%)

Suburb	Separate House	Semi-detached, Row or Terrace House, Townhouse	Flat, Unit or Apartment	Other Dwelling	Unoccupied Private Dwelling	Total Private Occupied Dwellings Number
City	10.6	1.0	84.1	4.3	0.0	3,076
Herston	51.5	18.9	29.6	0.0	0.0	646
Spring Hill	23.7	9.9	62.5	3.1	0.8	1,457
Kelvin Grove	55.6	8.9	34.3	0.5	0.7	1,663
Paddington	68.6	12.8	17.8	0.8	0.0	3,086
Red Hill	68.3	8.4	23.2	0.1	0.0	2,147
Milton	50.6	10.2	38.7	0.0	0.6	724
Auchenflower	44.8	3.8	51.4	0.0	0.0	2,082
Toowong	38.1	6.4	55.3	0.2	0.0	3,962
Bardon	89.1	2.3	8.6	0.0	0.0	3,258
Study Corridor	50.8	6.8	41.3	1.0	0.1	22,101
Brisbane LGA	73.7	7.9	17.7	0.7	0.0	352,991
Queensland	79.5	7.6	11.2	1.5	0.1	1,391,632

Source: ABS Census 2006

Dwelling Tenure 2006

Suburb	Fully Owned		Being Purchased		Renting		Other Tenure Type		Tenure Type Not Stated	
City	430	(14%)	520	(16.9%)	1,881	(61.2%)	7	(0.2%)	238	(7.7%)
Herston	112	(17.4%)	162	(25.4%)	35	(54.6%)	0	(0.0%)	19	(2.9%)
Spring Hill	202	(13.9%)	282	(19.3%)	909	(62.3%)	7	(0.5%)	58	(4.0%)
Kelvin Grove	306	(18.4%)	402	(24.2%)	923	(55.5%)	8	(0.5%)	25	(1.5%)
Paddington	720	(23.3%)	869	(28.2%)	1,429	(46.3%)	9	(0.3%)	59	(1.9%)
Red Hill	438	(20.4%)	646	(30.1%)	1,026	(47.8%)	8	(0.4%)	29	(1.4%)
Milton	123	(17.0%)	138	(19.1%)	430	(59.4%)	4	(0.6%)	29	(4.0%)
Auchenflower	489	(23.5%)	503	(24.2%)	1,030	(49.5%)	6	(0.3%)	54	(2.6%)
Toowong	945	(23.9%)	817	(20.6%)	2,109	(53.2%)	14	(0.4%)	77	(1.9%)
Bardon	1,133	(34.8%)	1,239	(38.0%)	796	(24.4%)	27	(0.8%)	64	(2.0%)
Study Corridor	4,898	(22.3%)	5,578	(25.2%)	10,885	(49.2%)	90	(0.4%)	652	(2.9%)
Brisbane LGA	106,607	(30.2%)	115,245	(32.6%)	119,627	(33.9%)	2,633	(0.7%)	8,878	(2.5%)
Queensland	439,677	(31.6%)	470,114	(33.8%)	432,296	(31.1%)	11,723	(0.8%)	37,822	(2.7%)

Source: ABS Census 2006

Property Prices

Median House and Unit Price, 2006

Suburb	Median House Price	Median Unit Price
City	$452,000	$414,000
Herston	DNA	$262,000
Spring Hill	$695,000	$275,000
Kelvin Grove	$450,000	$286,750
Paddington	$532,500	$324,000
Red Hill	$488,000	$309,500
Milton	$450,000	$350,000
Auchenflower	$517,500	$325,000
Toowong	$494,500	$333,000
Bardon	$501,000	$435,000
Study Corridor (Average)	$508,944	$331,425
Brisbane LGA	$399,755	$292,500

Source: REIQ 2006, www.reiq.com.au, viewed on 19 November 2007

Note: Data on median house prices is not available for Herston.

Housing Costs

Housing Costs, 2006

Suburb	Median Rent ($/weekly)	Median housing loan repayment ($/monthly)
City	385	2,000
Herston	260	1,600
Spring Hill	300	1,517
Kelvin Grove	250	1,600
Paddington	280	1,800
Red Hill	240	1,952
Milton	250	1,613
Auchenflower	258	1,625
Toowong	260	1,647
Bardon	270	1,750
Study Area	274	1693
Brisbane LGA	240	1,450
Queensland	200	1,300

Source: ABS Census 2006.

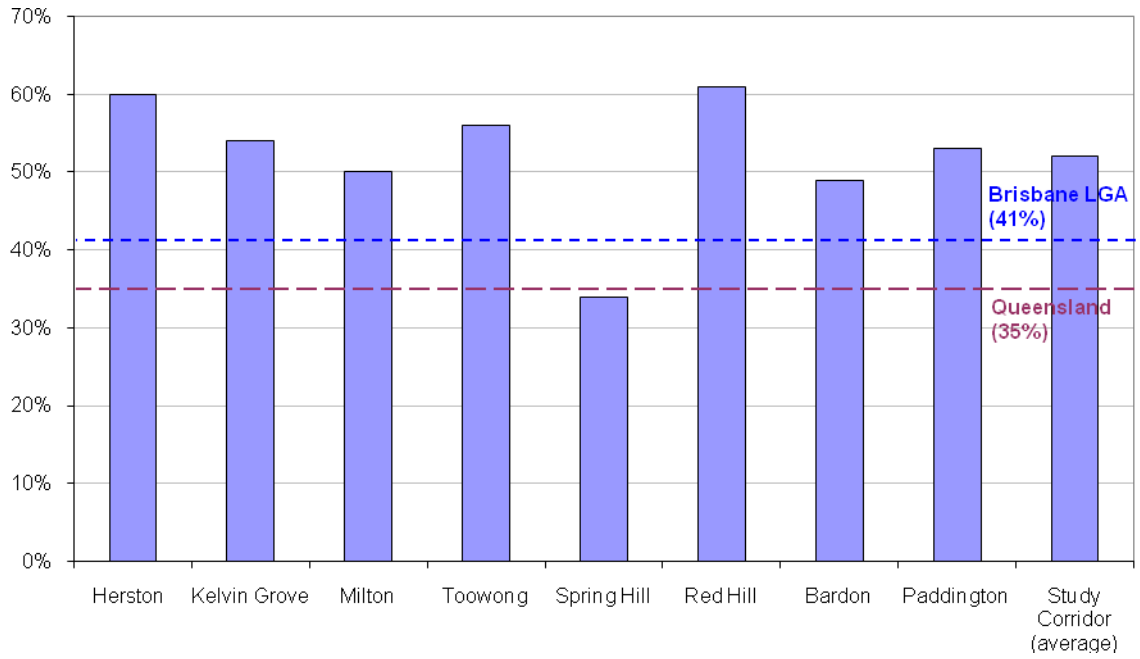
Affordable Rental Stock, June 2002 and June 2007

	Study Corridor			Brisbane LGA		
Household Size	2002	2007	% Change	2002	2007	% Change
One Bedroom	625	592	-5.3	6,177	5,163	-16.4
Two Bedroom	619	431	-30.4	9,733	6,724	-30.9
Three Bedroom	179	170	-5.0	8,901	5,056	-43.2
Four Bedroom	85	87	2.4	3,725	2,498	-32.9

Household Size	Study Corridor			Brisbane LGA		
	2002	2007	% Change	2002	2007	% Change
Total	1,508	1,280	-15.1	28,536	19,441	-31.9

Source: Information provided by Queensland Department of Housing, November 2007

Very Low and Low Income Households in Housing Stress



Source: Information provided by Queensland Department of Housing, November 2007

Proportion of Affordable Rent Stock, June 2002 and June 2007

SLA	Year	1 bedroom (%)	2 bedrooms (%)	3 bedrooms (%)	4 bedrooms (%)
City	2002	N/A	N/A	N/A	N/A
	2007	N/A	N/A	N/A	N/A
Herston	2002	47	17	6	17
	2007	30	13	8	10
Spring Hill	2002	15	5	7	24
	2007	21	3	4	18
Kelvin Grove	2002	62	25	10	32
	2007	35	14	10	22
Paddington	2002	43	15	5	11
	2007	29	12	5	11
Red Hill	2002	64	28	9	13
	2007	35	20	5	7
Milton	2002	45	16	6	19
	2007	18	11	8	7
Toowong	2002	38	13	7	20

SLA	Year	1 bedroom (%)	2 bedrooms (%)	3 bedrooms (%)	4 bedrooms (%)
	2007	29	7	5	14
Bardon	2002	74	28	14	14
	2007	42	20	9	12
Study Corridor (Ave)	2002	49	18	8	19
	2007	30	13	7	13
Brisbane LGA	2002	54	31	27	41
	2007	35	18	12	18
Queensland	2002	57	55	51	55
	2007	40	36	25	26

Source: Information provided by Queensland Department of Housing, November 2007

Appendix C Social Infrastructure

Toowong

Facility Type	Community Facility/ Service	Organisation	Street
Education	Child Care	Jahjumbeen Occasional Child Care Centre	5 Grove Street
	Child Care	Toowong Child Care Centre	78 Sherwood Road
	Preschool/ Kindergarten	Toowong Preschool	Quinn Street
	School	Toowong College	Bywong Street
	School (+ OSHC[41])	Brisbane Boys College	Kensington Terrace
	School (+ OSHC)	St Ignatius Primary	46 Grove Street
	School (+ OSHC)	Toowong State School	St Osyth Street
	School	Stuartholme School	Birdwood Terrace
	Tertiary Education	Bible College Of Queensland	1 Cross Street
	Sport and Recreation	Western Districts Rugby Football Club	Memorial Park, Sylvan Road
Sport, Recreation and Leisure	Park	Toowong Memorial Park	Sylvan Road
	Park	Mt Coot-tha Park	Dean Street
	Park	Anzac park	Cnr Wool and Dean Streets
	Sport and Recreation	West Toowong Bowls Club	17 Bywong Street
	Park	McIlwraith Park	Auchenflower, Dixon and McIlwraith Street
	Park	Perrin Park	Burns and Gailey Road
	Park	Moorlands park	Patrick Lane
	Park	Oakman Park	Union Street
	Park	Regatta park	Coronation Drive
	Park	Toowong College Park	Vera Street and Fewings Street
	Park	Dunmore Park	Lang Parade, Cue and Roy Streets
	Park	Quinn Park	Bates Lane
	Park	Westbrook Park	Camp, Duke, Market and Wilmac Streets
	Community Garden	Vera Street Community Garden	Toowong College, Vera Street
	Church	Anglican Church Of Australia	69 High Street
	Arts Centre	Silk Shed Studio Group	Quinn Park, Bates Lane
Religious	Church	Catholic Church	30 Kensington Terrace
	Church	Christian Brethren Assemblies	80 Miskin Street
	Church	Jehovah's Witnesses	73 Josling Street
	Church	The Uniting Church in Australia	82 Sherwood Road
	Church	Toowong Baptist Church	Jephson Street
	Medical facility	Toowong Private Hospital	496 Milton Road

[41] Out of School Hours Care

Facility Type	Community Facility/ Service	Organisation	Street
Medical	Health Services	Royal Queensland Bush Children's Health Scheme	16 Morley Street
	Family Support	Queensland Right To Life	2 Benson Street
Community Support Services	Employment Services	Centacare Employment Group	Toowong Village
	Disability Services	CRS Australia	Toowong Village
	Aged Support	Blue Care - Head Quarters	56 Sylvan Road
		Veterans Support and Advocacy Service Australia Inc	128-130 Miskin Street
	Accommodation	Angus House	Bayliss Street
	Accommodation	Inner City West Salvation Army	15 Jephson Street
	Cemetery	Toowong Cemetery	Frederick Road
Community Facilities	Library	Toowong Library	9 Sherwood Road
	Senior Support	Toowong Senior Citizen's Association	9 Maryvale Street
Other	Shopping	Toowong Village	Lissner Street

Bardon

Facility Type	Facility/ Service	Organisation	Street
Education	Childcare	Community Centre Limited Hours Care	180 Jubilee Terrace
	School	Rainworth Primary	185 Boundary Road
	School	Ithaca Creek State School	Lugg Street
	School (+ OSHC)	Bardon State School	330 Simpsons Road
	School (+ OSHC)	St Joseph's School	41 The Drive
Sport, Recreation and Leisure	Sport and Recreation	Bardon Bowls Club	69 Bowman Parade
	Sport and Recreation	Western Leagues Club	Lorward Avenue
	Sport and Recreation	Queensland Rogaine Association	75 Simpsons Road
	Sport and Recreation	Bardon Latrobe Junior Soccer Club	Simpsons Road
	Scouts	Bardon Scouts	Bee Street
	Guides	Bardon Guides	Cecil Road
Religious	Church	Bardon Uniting Church	Cnr Simpsons Road and Leworthy Street
	Church	St Marys Bardon	290 Simpsons Road
	Church	St Mary Magdalene's Church	Cecil Road
Aged Care	Retirement village	Magdalene Court Retirement Community	59 Main Avenue
Community Support Services	Community Centre	Communify (Red Hill Paddington Community Centre Inc)	180 Jubilee Terrace
Other	Shopping Centre	Bardon Shopping Centre	60 MacGregor Terrace

Auchenflower

Facility Type	Facility	Organisation	Street
Education	Child Care	Milton Road Children's Centre	467 Milton Road
	Kindergarten and Child Care	Montessori Children's House	19 Wienholt Street
	School	Hubbard's School	15 Lang Parade
	Tertiary education	Trinity Theological college	47 Cadell Street
Sport, Recreation and Leisure	Sport and Recreation	Brisbane Basketball Inc	Dixon Street
	Sport and Recreation	McIlwraith Croquet Club	1 Auchenflower Terrace
	Sport and Recreation	Toowong Soccer Club	20 Roy Street
	Park		Land Street
	Park	Dunmore Park	Lang Parade
	Park	Torwood Park	Haig Road
	Park		Patrick Lane
	Scouts	Queensland Scout Centre Branch Headquarters	Park Lane
Religious	Church	Anglican Church Of Australia	Cnr Milton Road and Weinholt Street
	Church	Uniting Church In Australia	60 Bayliss Street
	Church	Toowong Holy Spirit	Harriet Street
Medical	Medical facility	Wesley Hospital	451 Coronation Drive
	Medical facility	Rivercity Private Hospital	401 Milton Road
	Medical facility	Wesley Medical Centre	Wesley Hospital
	Medical facility	Wesley Clinic for Haematology and Oncology	Wesley Hospital
	Medical facility	Healthwise Centre	Wesley Hospital
Community Support Services	Rehabilitation Services	Gilles House	
	Accommodation	Gardens Motel	39 Park Avenue
	Accommodation	Lang Parade Lodge	75 Lang Parade
	Accommodation	Wesley Rotary Lodge	25 Chasely Street

Paddington

Facility Type	Facility/ Service	Organisation	Street
Education	Child Care	Paddington Child Care Centre	100 Enoggera Terrace
	Preschool / Kindergarten	C&K Paddington Community Kindergarten and Preschool	12 Charlotte Street
	Preschool / Kindergarten	C&K Rosalie Community Kindergarten and Preschool	Cnr Nash and Elizabeth Streets
	School	Petrie Terrace State School	Moreton Street
	School	Marist College Rosalie	Fernburg Road
	Education Support	Learning Connections Centre	
Sport, Recreation and Leisure	Sport and Recreation	Ithaca Swimming Pool	131 Caxton Street

Facility Type	Facility/ Service	Organisation	Street
	Sport and Recreation	Ithaca Skate Park	Caxton Street
	Park	Gregory Park	Baroona Street
	Park	Neal Macrossan Playground Park	Caxton Street
	Park	Norman Buchan Park	Boundary Road
	Park	Rainworth Park	Haining Street
	Park	Perrot Street Park	Perrott Street and Tooth Avenue
	Park	Croydon Road Park	Croydon Road and Rockbourne Terrace
	Park	Cricket Street Park	Cricket and Hale Streets
	Park	Ithaca Place	Kennedy and Rockbourne Terraces
	Park	Sweetman Street Park	Chrystal and Sweetman Streets
	Park	Ithaca Memorial Park	Enoggera and Latrobe Terraces
	Park	Trammies Corner	Latrobe Terrace and Prince Street
Religious	Church	Presbyterian Church Of Queensland	100 Enoggera Terrace
	Church	Rosalie Baptist Church	Cnr Fernberg Road and Ellena Street
	Church	The New Church	100 Agars Road
	Church	Uniting Church In Australia	121 Kennedy Terrace
Community Support Services	Welfare Services	Centre for Multicultural Pastoral Care	133 Given Terrace
	Family Support	Child Adolescent & Family Welfare Association Of Queensland (CAFWAQ)	Ross Street
	Welfare Services	Ecumenical Pantry	358 Given Terrace
	Welfare Services	Meals on Wheels	Herbert Street
	Youth	Youth Housing Hotline	
	Disability	Queensland Parents for People with a Disability (QPDD)	
	Senior Support	Senior Citizen's - Brisbane West	132 Latrobe Terrace
Aged Care	Retirement village	Rosalie Nursing Care Centre	18 Howard Street
Other	Shopping	Paddington Central	Latrobe Terrace
	Shopping	Rosalie Village	Elizabeth and Nash Streets

Milton

Facility Type	Facility/ Service	Organisation	Street
Education	Child care	A.P.I. Little Cribb Street Child Care Centre	Little Cribb Street
	Child care	Lutheran Church of Australian Queensland District Schools Department	24 McDougall Street
	School (+OSHC)	Milton Primary	Bayswater Street

Facility Type	Facility/ Service	Organisation	Street
	Tertiary education	SAE College	22 Mayneview Street
	Tertiary education	St Francis Theological College	233 Milton Road
Sport, Recreation and Leisure	Sport and Recreation	Suncorp Stadium	40 Castlemaine Street
	Sport and Recreation	Indoor Netball Federation of Queensland Inc	Caxton Street
	Park	Frew Park	Milton Road
	Park	Gregory Park	Baroona and Haig Road
	Park	Milton Park	Nerida Lane
Religious	Church	Anglican Church Of Australia	Cnr Hale and Chippendall Streets
	Church	New Hope Milton	35 Railway Terrace
Community Support Services	Family Support	Boystown	97 Castlemaine Street
	Disability/ NES	AMPARO Advocacy Inc	9 Chippendall Street
	Community Support	Australian Red Cross	49 Park Road
	Family Support	Parent Line	
	Youth	Kids Helpline	
	Youth	Youth for Christ	321 Milton Road
	Disability	Brain Injury Association of Queensland	
Other	Shopping	Centro Milton	Baroona Road
	Shopping	Park Road	Park Road
	Emergency Services	Milton Police Station	Baroona Road

Red Hill

Facility Type	Facility/ Service	Organisation	Street
Education	Childcare	ABC Red Hill North	19 Fulcher Road
	Preschool	Ithaca Creek Preschool	Dacca Road
	School	Red Hill Special School	72 Waterworks Road
Sport, Recreation and Leisure	Sport and Recreation	Ithaca Bowls	22 Fulcher Street
	Park	Bridge St Park	Cnr Bridge St and Glenrosa Road
	Park	Praed Street Park	Cnr Murray and Praed Street
	Park	Clyde Street Park	Clyde Street
	Park	Gilbert Park	Fulcher and Kenwyn Roads
	Park	Woolcock Park	Hawthorn Terrace
Religious	Church	Anglican Church Of Australia	60 Waterworks Road
	Church	St Brigids Catholic Church	78 Musgrave Road
	Church	Windsor Road Baptist Church	16 Windsor Road
	Church	Seventh-Day Adventist Church	Hammond Street
	Church	St Barnabas	Cnr Waterworks Road and Lintern Street
Aged Care	Retirement village	Pinjara Lodge	171 Kennedy Terrace

Facility Type	Facility/ Service	Organisation	Street
	Retirement village	Aldersgate Court Wesley Mission	12 Upper Cliffton Terrace
Community Support Services	Youth	Young Christian Workers	
	Rehabilitation Services	Salvation Army - Moonyah	58 Glenrosa Road
	Aged Support	Blue Care - Unicare	131 Arthur Terrace

Herston

Facility Type	Community facility	Name	Street
Education	Tertiary education	University of Queensland Medical School	RBH Campus, Bramston Road
Sport, Recreation and Leisure	Sport and Recreation	Victoria Park Golf Course	367 Herston Road
	Park	Victoria Park	Bowen Bridge Road, Gilchrist Avenue, Gregory Terrace and Herston Road
	Sport and Recreation	Ballymore Park (Queensland Rugby Union)	Butterfield Street
	Sport and Recreation	Brisbane Grammar Schools Playing Fields	Victoria Park Road
	Park	Gould Park	Gould Road
	Park	Bowen Park	Bowen Bridge Road and O'Connell Terrace
	Park	Rasey Park	Bird and Butterfield Street
Religious	Church	Joan of Arc, Catholic Church	47 Clyde Road
Medical	Medical Facility	Royal Brisbane and Women's Hospital	Butterfield Street
	Medical Facility	Royal Children's Hospital	Herston Road
		Queensland Institute of Medical Research	RBH Campus, Bramston Road
Aged Care	Nursing Home	Regis Crana	46 Fleming Road
Community Support Services	Rehabilitation	RBH Alcohol and Drug Services	RBH Campus, Bramston Road

Kelvin Grove

Facility Type	Facility/ Service	Organisation	Street
Education	Childcare	Kindy Land Preschool and Child Care Centre	Cnr Dunsmore and Franklin Streets
	Childcare	QUT Student Guild Kelvin Grove Campus Child Care Centre	9 School Street
	Preschool / Kindergarten	Kelvin Grove Preschool	L'Estrange Terrace
	School (+OSHC)	Kelvin Grove State College	L'Estrange Terrace
	Tertiary education	QUT	130 Victoria Park Road
Sport, Recreation and Leisure	Park	Bancroft Park	Hulme Street and Kelvin Grove Road, adjoining Enoggera Creek

Facility Type	Facility/ Service	Organisation	Street
	Park	Marshall Park	Kelvin Grove Road and Rusden Street
	Park	E. E. McCaskie Oval	Blamey Street and Kelvin Grove Road
	Park	Picot St Park	Dunsmore, Picot and Rees Streets, adjoining Enoggera Creek
	Park	Kelvin Grove Reserve	Lorimer Terrace
	Arts	La Boite Theatre Company Roundhouse Theatre	Musk Avenue
Religious	Church	Anglican Church Of Australia	58 Enoggera Road
	Church	Quakers Australia, Religious Society of Friends	10 Hampson Street
Aged Care	Nursing Home	Hilltop Gardens	23 Rochester Terrace
	Nursing Home	Kelvin Nursing Home	96 Herston Road
Community Support Services	Welfare Services	Queensland Council Of Social Service Inc	22 Victoria Street
	Accommodation	Kelvin Grove Lodge	Eureka Street
	Youth Accommodation	Teen Challenge, Hebron House	Kelvin Grove Road