

14. Economic environment

14.1 Introduction

The purpose of the economic analysis is to identify economic benefits and impacts of the South East Busway extension from Rochedale to Springwood including:

- user benefits such as travel time savings, a reduction in private vehicle operating cost and road safety improvements
- socioeconomic effects, including employment and land use changes
- benefits and impacts on existing and potential businesses and commercial properties within the catchment area
- impacts from construction activity
- environmental and amenity-related economic impacts.

14.2 Methodology

The preliminary economic study included:

- a desktop level socioeconomic analysis which was undertaken to understand the likely and projected economic development potential of the areas directly impacted on by the proposed busway extension
- the identification and assessment of broad economic benefits of the busway extension in the context of the full complement of transport infrastructure and service improvements.

Consideration was also given to the likely public acceptance of a busway in order to understand:

- whether the busway extension could kick-start the anticipated business development, land use changes and employment growth
- whether the busway extension would constrain the economic development potential if it was not implemented.

From this analysis a number of benefits were identified for the travelling public, the general community and bus operators.

14.2.1 Previous investigations

The following documents provided the background for assessing the general economic outlook of the Springwood town centre, which is expected to improve from the implementation of the busway extension.

Logan City Local Growth Management Strategy

The Local Growth Management Strategy brought together the high level regional planning strategies and principles outlined in the South East Queensland Regional Plan 2005–2026 and the ideas and concepts determined by the community as detailed in Logan 2026 City Directions. The Local Growth Management Strategy outlines planning initiatives that will ensure Logan continues to grow into a modern, well-serviced and well-planned city. It provides an overview of the strategies that will frame Logan's growth over the next 20 years.

Logan City Council Activity Centres Strategy

The Logan City Council Activity Centre Strategy proposed a network of activity centres for Logan City. Each activity centre would fulfil a specialist role and function in order to exploit its comparative advantage in a specific area. Specialist employment clusters would ensure that agglomeration benefits are maximised. Springwood was identified as the principal activity centre of Logan City.

The report recognised that a good level of public transport access is essential to develop Springwood, which is currently underperforming in its specialist role as a commercial centre (rather than a retail centre). Springwood would also accommodate a considerable number of high-density dwellings.

Springwood Town Centre Master Plan — Background Report

This report describes Logan City's current economy as largely driven by manufacturing industries and retail outlets. However, it also identified a considerable business service component in Springwood town centre.

From a regional perspective the master plan identifies importance for the Springwood town centre being linked to other principal activity centres. Its 'economic catchment' is therefore seen as Upper Mount Gravatt and Beenleigh respectively, which is situated along the Pacific Motorway directly to the north and to the south of Springwood respectively.

The study recognised the following positive attributes of Springwood centre:

- strategically located between Brisbane central business district and the Gold Coast
- confluence of major roads and close connection to the busway network.

The study recognised a number of current constraints which will have to be addressed if Springwood centre is to realise its anticipated economic growth projections:

- low density
- commerce is not the main economic activity
- no major government offices.

One of the main points made in the report which is relevant to the development of the busway is that development should be market driven, not project driven. It is understood to mean that the busway should not precede the development in order to kick-start growth, but it should be put in place so as to not constrain growth once it reaches a certain level.

It also outlines a vision of Springwood as a transit-oriented development centre with a mix of residential and commercial activities around the public transport interchange. Within this context, the public transport interchange is seen as an intermodal facility.

Logan City Council Retail Centres Review

Although the retail centres review is not an endorsed document from Logan City Council it provides valuable background information to the nature and state of retail development in Springwood.

The report documents a comprehensive review of the retail centre hierarchy and retail strategy. It provides detailed objectives and outcomes to determine the appropriateness or otherwise of the gross leasable area limitations imposed for Springwood within the Master Plan's centre hierarchy and to explore measures that can be taken to ensure that the development and function of each centre, as envisaged in the Springwood Town Centre Master Plan (now known as the Greater Springwood Master Plan), is not compromised if gross leasable area limitations are not appropriate.

The review also considered the likely range of supportive and ancillary activities that might be needed for the successful function of each centre and explored the desirable mix of employment related opportunities within centres given the current (and future potential) skills base of residents in their immediate catchment. It also commented on the way in which appropriate development of each centre contributes to achieving desired economic outcomes for Springwood as a principal activity centre.

Rochedale Urban Community Local Plan

This document outlines the plan to house 15,000 people in the development of 900 hectares of previously semi-rural land at Rochedale. The town centre will consist of affordable medium density residential development for low income groups. It will also house at least one supermarket and supporting shops, as well as business and office uses. These developments would serve mainly the existing and future local community of Rochedale.

14.2.2 Additional investigations

The additional investigations carried out in the Concept Design Study were based on population and employment data from the Australian Bureau of Statistics 2006 Census Data.

14.3 Preliminary analysis

14.3.1 Existing situation

Springwood

Logan City has a strong and robust economy that is supported by large manufacturing and retail trade sectors. There were approximately 114,893 jobs located in Logan City in 2006, which provide employment to both Logan residents as well as to workers living outside the city. Manufacturing, retail trade and construction account for respectively 15.8%, 12.6% and 11.3% of employment in Logan. There are however a number of other industries that make significant contributions to Logan's economy. These include wholesale trade, education, property and business services, health and community services, communication services and government administration and defence.

Based on an analysis done in 2006 by Buckley Vann Town Planning Consultants for the Springwood Master Plan, the main drivers of Logan's economy in terms of industry output, contribution to employment, contribution to employment growth, 'exports' and job growth higher than that of metro Brisbane, are:

- manufacturing
- retail trade
- education.

Much of the economic activity in Logan City is generated in Springwood, which is the primary reason why it was identified as Logan City's primary activity centre. Measured by floor space, 33% of the commercial, 50% of the light industry, 30% of core retail, 40% of the bulky goods retail, 65% of bulky goods non-retail and 88% of car yards in Logan City are located in Springwood.

Despite the fact that the tendency is for advanced business services to locate in and around the central business districts of capital cities, Springwood also has a strong property and business services profile. Recent planning for Springwood suggests that it has to grow its role as the business services centre of Logan City.

The economic significance of the extension is dependent on the level of market acceptance by bus passengers and the potential for economic development in the area around the bus station.

Rochedale

Current development in Rochedale consists mainly of low density housing. The busway extension would therefore have very little immediate impact on development. According to the Rochedale Urban Community Local Plan, the future plan is for businesses in the area around the planned Rochedale busway station to serve mainly bus passengers, whereas those in the town centre would be aimed mainly at local residents.

Market acceptance of the South East Busway

Market acceptance has a direct impact on patronage levels, which impact directly on the contribution that the extension could potentially make to economic development in Springwood. Of equal importance for economic development is the appeal of the extension to high income car choice users, as this is the group who will experience the greatest increase in employment opportunities if Springwood is to grow as a commercial centre. Since its opening in 2000, the South East Busway has achieved a very high level of market acceptance of 4.1 out of 5. This is based on a customer satisfaction survey which was undertaken in 2004 by Colmar Brunton for TransLink 'to measure client satisfaction levels of South East Busway respondents while benchmarking against the satisfaction levels gained in 2002 and 2003, and to measure the initial perception and performance of the Inner Northern Busway'. This survey has provided valuable information about South East Busway users, as outlined below.

The success of the South East Busway is evident from the percentage of regular users. During peak hours, 60% of passengers use the bus every day, while 19% use the bus regularly during both peak and off-peak hours and 14% use the service regularly during off-peak hours only.

The main reason why people reported that they use the bus is to save travel time (59% of respondents). Although 27% of users reported no saving in travel time they still use the bus, most probably because the fare is lower than the total cost of car use.

As could be expected the most common destination for passengers was work (37%), while 7% indicated shopping as their main trip purpose. A significant proportion of trips (31%) included shopping even though it was not the main trip purpose. These passengers spent on average \$66 on shopping.

A considerable number of bus passengers (45%) who preferred to use the bus had access to a car. Of those who do have a car, 70% reported that they had become less reliant on their car since they started to use the South East Busway. Significantly, 21% of users continue to use their car to travel to the bus station. The survey also showed that there was a noticeable trend for higher income respondents to use the bus since the opening of the South East Busway. Although no recent data is available, this trend might have accelerated as a result of the recent fuel price increases.

A total of 55% of bus passengers did not have access to a car, whilst 28% of respondents reported an average household income of less than \$20,000 per annum. Most users of the South East Busway live within close proximity to the bus station as is evidenced by the fact that 57% walked to the bus station, 22% used a connecting public transport service and 21% used private transport to reach the bus station.

The main advantages of the South East Busway as perceived by respondents are summarised in Table 14-1.

Table 14-1: Perceived advantages of the South East Busway

Advantage	Percentage
Reduction in travel time	80%
Reduction in travel congestion	80%
Reduced air pollution	65%
Reduced noise pollution	48%
No advantages over previous bus systems	4%

Source: Colmar Brunton, 2004

Based on the above survey results it is concluded that:

- the South East Busway has a high level of acceptance from current passengers
- bus services along the busway extension would be able to attract significant numbers of car choice users
- captive bus users from lower income groups and those who do not have access to private transport would benefit significantly from the improvement in the quality of services due to the busway extension.

Economic development potential along the busway

Without the necessary economic development potential the desired level of economic development will not materialise, regardless of whether or not the extension is in place.

Long-term planning for Logan City suggested a focus on commercial business services that are concentrated in a high-density area in Springwood Centre. The current and anticipated business mix at Springwood principal activity centre is presented in Table 14-2.

Table 14-2: Floor space for main economic drivers

Land use	Gross leasable area 2006 (m ²)	Gross leasable area 2026 (m ²)	Change (m ²)
Commercial business	23,250	79,750	+56,000
Retail: Shops	12,680	27,350	+27,000
Retail: Showrooms	45,000	99,300	+54,000
Industrial	64,000	14,000	-50,000

Source: Logan City Council: Local Growth Management Strategy, 2007

Based on the available planning projections, employment will have to grow by 145% to achieve the target employment for Springwood Centre of 5,600 job opportunities in 2026 (see Table 14-3). Springwood centre will also have to accommodate an additional 1,500 dwelling units by 2026. It is obvious that these trips could not be added as private vehicle trips to the already strained road network. An efficient public transport system is therefore essential if the growth targets of the Springwood principal activity centre are to be realised.

Table 14-3: Employment for main economic drivers

Land use	Jobs 2006	Jobs 2026	Change
Commercial business	930	3,190	+2,260
Retail: Shops	317	687	+370
Retail: Showrooms	741	1,651	+910
Industrial	294	65	-230
Total	2,282	5,593	3,310

Source: Logan City Council: Local Growth Management Strategy, 2007

Owing to the fact that raw data on which the planning studies based their economic and employment forecasts was not available for detailed scrutiny, a few logical checks were performed to test the robustness of the projections. By applying common trip generation rates to the floor space data in Table 14-2, the evening peak hour trip generation rates were calculated for the projected development in Springwood Centre. These results are presented in Table 14-4 below.

Table 14-4: Trip generation for main economic drivers (evening peak hour)

Land use	Trip generation rate	Trips 2006	Trips 2026	Change in trips 2006 - 2026
Commercial business	2	520	1,783	1,263
Retail: Shops	7.6	732	1,580	847
Retail: Motor showrooms	0.7	315	695	380
Industrial (light)	1	753	165	-588
Total		2,320	4,222	1,902

Source: Parsons Brinckerhoff calculations based on published gross leasable areas for Springwood

From the results shown in Table 14-4 above it is deduced that the number of evening peak hour trips that are generated in Springwood centre will increase by more than 80% by 2026. Although this is a significant increase, it falls far short of the employment projections presented in the planning studies. The raw data will have to be more thoroughly interrogated to understand the basis for the economic forecasts before a more accurate traffic growth forecasts can be undertaken.

Based on the above analysis it is concluded that a high-speed transit link such as the busway extension will be required in future to ensure that the development potential of Springwood centre is not constrained by a lack of capacity on the transport system.

Managing impacts and opportunities

The busway extension from Rochedale to Springwood would have a number of potential economic benefits and impacts for public transport users, the local and broader community, landowners and businesses in the study area. These benefits and impacts consist of tangible effects, which can usually be monetised, and intangible effects for which there is no market representation. Intangible benefits, many of which are environmental issues, can be monetised by calculating shadow prices.

This study incorporates both the tangible and intangible effects of the extension. Although not all benefits could be quantified at the strategic level of the economic analysis during this Concept Design Study, it will provide a framework to monetise most of the benefits and costs during later planning phases.

Table 14-5 provides a breakdown of the benefits and issues by affected group.

Table 14-5: Summary of benefits and issues by affected group

Beneficiary group	Issues
<i>Transit passengers</i>	<ul style="list-style-type: none"> ▪ Reduced travel cost due to a modal shift from car ▪ Reduced travel time ▪ Reduced discomfort and inconvenience, in particular a reduction in uncertainty and unreliability of services operating in congested conditions ▪ Change in risk of injury in road accidents
<i>Bus operations</i>	<ul style="list-style-type: none"> ▪ Reduction in bus vehicle operating cost due to improvement in bus operating speed ▪ Operational improvements due to improved operating speeds and greater certainty about turnaround times ▪ Changes in the risk of accident damage
<i>Other transport users</i>	<ul style="list-style-type: none"> ▪ Reduced conflict between buses and other traffic on the motorway ▪ Impact of delays during construction ▪ Delays at conflict points where bus services join the public road network
<i>General public</i>	<ul style="list-style-type: none"> ▪ Positive impact on businesses ▪ Increase in land value due to proximity to high-quality public transport ▪ Loss of property required for busway reserve ▪ Positive environmental effects of reduced emissions

A more detailed discussion of each of the issues summarised in Table 14-5 are provided below. The discussion is structured according to beneficiary group and the nature and extent of benefits that each beneficiary group can expect.

Existing bus passengers

Reduction in travel cost

Current car users that shift to bus will experience significant cost savings due to the fact that bus fares are considerably lower than car vehicle operating cost.

Reduction in travel time

Once the busway extension becomes operational, a reduction in the in-vehicle travel time would have an immediate impact for existing bus users and those who shift from private vehicle to bus. Travel time is expected to be reduced between 3 and 7 minutes per passenger trip during the morning (northbound) and evening (southbound) peak respectively.

Current car users that do not shift to bus will also experience time savings. This is due to the decrease in demand on the Pacific Motorway when public transport services are reassigned from the motorway.

Surveys show that 2.6 million passengers per year currently use bus services along the evaluated link, with 60% of passengers travelling during the peak periods. These time savings will contribute economic benefits to the community.

Less discomfort and inconvenience

Owing to the fact that buses will no longer be subjected to variable travel times along the motorway, the busway extension will bring greater certainty to passengers of journey time and of bus arrival and departure times.

Increased passenger safety

Bus passenger safety is not a major concern for slow-moving vehicles under congested situations. However, bus speeds will be substantially higher along the busway, which means that when collisions do occur there is a greater likelihood of injury. Overall it is not expected that there will be significant safety benefits or disbenefits to bus passengers. No attempt was therefore made in the preliminary analysis to quantify the safety impact of the busway extension on bus passengers.

Bus operations

The individual economic impacts on bus operators are as follows:

Reduction in vehicle operating cost

A significant overall reduction in bus operating cost is expected to occur as a result of an increase in average vehicle travel speed. A vehicle travelling closer to its optimum speed has a significantly lower vehicle operating cost than a vehicle operating in a congested environment. Travel time surveys undertaken by the Department of Transport and Main Roads showed that motorway speeds between Eight Mile Plains and Springwood stations vary from 33 kilometres per hour and 50 kilometres per hour during the peak period, rising to 66 kilometres per hour during the off-peak (the posted speed is 100 kilometres per hour). Average bus speeds are expected to increase to 80 kilometres per hour between Rochedale and Springwood, that is, similar to the design speed of other sections of the busway, after implementation of the extension.

Improved turnaround time

This will result from faster operating speed along the motorway and a reduction in delays at the access roads to the bus station. These benefits could not be quantified as traffic simulation modelling was not yet undertaken.

Reduced accident damage

These benefits will be quantified when traffic accident data is obtained from traffic authorities and bus operators.

Other transport users

The following impacts were identified for quantification during further phases of the study when sufficient data is available:

- reduction of conflict between buses and private cars on the motorway. This means that cars on the motorway may experience an increase in travel speed
- delays during construction could be significant but are usually of a temporary nature. The extent of this impact can only be assessed after the traffic plans for the construction have been completed
- delays at conflict points where the extension joins the road network, as well as at the improved access to stations. Detailed traffic modelling is required to quantify the full extent of these benefits.

The economic impact of the busway extension on other transport was not quantified at this stage of the study. However, it is not expected that these impacts, positive and negative, would have a significant impact on the overall outcome of the economic analysis.

General public

Supporting business development in Springwood and Rochedale

The ability of the busway extension to support development of Springwood is another key benefit of the project. The positive economic impact of the extension will be concentrated around the Springwood bus station. This is due to the fact that economic impacts of public transport are concentrated around access points (such as the bus station in this case) and that Springwood is identified as a principal activity centre — it can be expected that most of the economic activity would be attracted to this point. There would also be pressure from market forces to develop around Rochedale. These impacts would be limited by deliberate land use planning controls so as to not dilute the economic focus of the activity.

If the economic development of Springwood materialise as envisaged in the plans, the busway extension will undoubtedly make a significant contribution to support that development. It has a high level of market acceptance to both car choice users and public transport captive users and therefore will not constrain the likelihood of people living and working in Springwood. Improved transport access in general, and the busway extension in particular, were identified as one of the key investments to unlock under-utilised land within the study corridor.

However, although the busway extension would be a supported development in Springwood, it is not a sufficient driver of development. The extension would support development if all the other development drivers are present for natural market forces to kick-start development. These drivers may include assistance by the government to improve the on-ground streetscape of the study corridor.

For the current post-2020 expected timeframe for full delivery of the busway to Springwood, much of the anticipated business development in Springwood principal activity centre would already have taken place, or would be in an advanced planning stage. The anticipation of the busway extension, rather than the service itself, would thus have a greater impact on short- to medium-term business-development decisions in Springwood. This means that the development of Springwood Centre would be market driven, rather than infrastructure driven, which is in line with Logan City Council's development policy. However, in the long term the absence of the busway extension would constrain further development when congestion levels and delays become too high.

Owing to the fact that business and commercial developments in Rochedale is intended to serve mainly the local community and bus passengers, it is unlikely that the busway extension would contribute directly to business and commercial development and employment in Rochedale other than passer-by patronage from bus passengers. The busway station would however support substantial medium to high density housing developments, many of which would be aimed at low income groups. This type of development is ideally served by high-quality services such as those on the South East Busway.

The extent of the business impact can be tracked through the changes that occur in the property market. Property market trends are reflected in land prices which occur as a result of either changes in land use or changes in the intensity in land use. It is expected that the positive impacts will be concentrated around Springwood bus station (due to the policy of focusing development at identified nodes, and because the impacts would only occur at access points to the bus system) while negative impacts will be spread along the route. Property impacts are also generally medium to long term and only become visible in the economy when properties changes hands, or when leases are renewed. The challenge is therefore to determine the extent of the change in prices that will occur above the baseline as a direct result of the busway extension.

The level of investigation warranted at this stage of planning cannot quantify the extent to which the busway extension would uplift the level and rate of development above the base line without the busway extension. Given the lack of a detail street level land use surveys, such an analysis could not be undertaken as part of the preliminary economic evaluation.

Positive environmental impact

The busway extension would bring considerable positive environmental benefits through the reduction in greenhouse gas emissions as a result of a lower dependency of car usage. Transport modelling needs to be undertaken to determine the extent of emission reduction due to more efficient bus operations and a switch from car to bus mode.

Negative environmental impacts

The following groups may disbenefit from the busway extension. The extent of these disbenefits will depend on the degree to which the negative effects can be mitigated, or the extent to which affected individuals will receive monetary compensation for their losses:

- property owners affected by corridor preservation
- disruption to traffic during construction
- negative environmental impacts on adjacent properties, most notably noise pollution and visual intrusion.

It should also be recognised that many of the negative impacts could either be mitigated or compensated for by:

- buying of land where there is hardship
- physical mitigation measures such as noise barriers.

The extent of these disbenefits would therefore only be known when agreement has been reached on the level of compensation and the nature and cost of the mitigation measures.

14.4 Future investigations

To assist government in the decision-making process, quantifying the full extent of the economic impact on businesses and providing a definite indication of the optimum timeframe for implementation will be useful. The following additional studies during further planning stages will improve the level of confidence:

- a cost–benefit analysis when more accurate implementation cost, patronage projections and transport modelling have been undertaken
- input–output economic modelling to assess the total economic impact of the investment at a city, state and national level
- an assessment of the business impact through land use changes and increases in property values. This will include a street level land value survey around Springwood bus station to inform the study.

Future passenger projections and the business impact assessment will need to consider changes to Logan City Council planning and strategy for the Springwood area, as well as residential developments in Rochedale.

14.5 References

Buckley Vann 2006, 'Background Report – Springwood Town Centre Master Plan', report for Logan City Council.

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