



Department for Planning and Infrastructure
Government of Western Australia

Review of major roads in the south west metropolitan corridor

Stage 2 Community consultation report

Prepared by the Department for Planning and Infrastructure
on behalf of the Local Impacts Committee

Terms of Reference 2 & 3

September 2005

In association with



Estill
& ASSOCIATES

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SUMMARY

The Local Impacts Committee (LIC) was established by the Minister for Planning and Infrastructure following the Freight Network Review in 2002. The LIC was charged with recommending a strategy for managing traffic on roads in the south-west metropolitan area and devising strategies to minimise the impact of traffic on local communities.

Community consultation and technical investigations were undertaken by the LIC to identify significant local problem areas causing above average difficulties in the road network, defined as 'priority action locations'. The LIC then identified possible solutions to address the traffic problems at these locations.

Two LIC community forums were held to advise the community of the LIC's work to date and to seek feedback on the proposed solutions (referred to as 'actions' in the feedback form) to problems identified at the twenty worst locations. The worst locations were selected based on the results of earlier community consultation and technical analysis.

The first forum was held at the City of Melville on Monday 6 December 2004 and the second at Riverton Leisureplex on Wednesday 8 December 2004. Approximately 300 people attended the City of Melville forum and about 75 people attended the Riverton Leisureplex forum.

Feedback forms were provided at the forum venues to gauge community opinion on the proposed solutions. The feedback form sought a tick-box response for each proposed solution to gauge the community's level of support for each proposed solution on a scale of 'strongly support' to 'strongly oppose'. The form also allowed the community to provide comment on each proposed solution or any other traffic management issue not directly related to the proposed solutions.

Feedback forms and maps were also available to be viewed at local libraries and local government offices for those unable to attend the forums. The closing date for submissions was 23 December 2004. This period was later extended to 31 January 2005 following several requests from groups and individuals for more time. (Refer to section 2.4 for more information).

A total of 137 feedback forms were received by 31 January 2005. Of these, 43 respondents did not fill in the tick box options and only provided comments. A total of 94 respondents used the tick box options but not all respondents addressed all the tick box questions on the form.

It is important to note that the results from the feedback forms are not statistically significant and cannot be taken as necessarily representative of the whole population, and it was not the intention that it be otherwise. However, a large number of forms were received with detailed information and feedback that was considered by the LIC.

The forums were not statistically representative of the study area because of the limited number of people who attended and made submissions.

The comments received indicated that people were supportive of the proposed solutions, some with specific suggestions and concerns that should be further considered. The majority of people, 55.5% (76 out of 137) made general comments supporting the proposed solutions, with no specific suggestions or concerns at any of the priority action locations. Anecdotal feedback suggested that people were resistant to openly showing support for the proposed solutions for fear of being misinterpreted as supporting the termination of the Fremantle Eastern Bypass (FEB) and Roe Highway Stage 8.

The proposed solutions most widely supported (i.e. 60-65% 'strongly support' or 'support', less than 40% 'oppose' or 'strongly oppose') were:

- Location 5, Action A: Kwinana Freeway / Leach Highway Interchange. Check that improved east-west cycle link will be provided in association with new rail station.
- Location 8, Action C: Leach Highway – Shelley Bridge. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 12, Action A: South Street / Murdoch Drive Intersection. Upgrade pedestrian facilities to meet current standards.
- Location 11, Action B: Canning Highway / Riseley Street Intersection. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 13, Action A: Stirling highway / Canning Highway Intersection. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 3, Action C: Leach Highway / North Lake Road Intersection. Upgrade pedestrian crossing facilities to meet current standards.
- Location 9, Action A: South Street / Stock Road Intersection. Upgrade pedestrian crossing facilities to meet current standards.
- Location 12, Action B: South Street / Murdoch Drive Intersection. Plan for future funding of road drainage upgrade to ensure that polluted water does not enter wetlands system.

It is interesting to note that the most widely supported proposed solutions all tend to be 'low impact' solutions. That is, they relate to social or environmental improvements and not to problems with heavy vehicular traffic generally.

Proposed solutions most widely opposed and needing further consideration (approximately 50-70% oppose or strongly oppose, less than 40% strongly support or support) were:

- General Solution 23: Introduce transit lanes on South Street, after opening of Roe 7
- Location 8, Action B: Leach Highway – Shelley Bridge During preparation of new concept plan, review potential to remove Centenary Avenue signals.

- Location 17, Action A: High Street – Stirling Highway to Carrington Street. Commence planning study for High Street to consider:
 - Recommendation of FEB Review to upgrade High St to dual two lane carriageways;
 - Other safety improvements such as relocation with road reserve to allow service roads;
 - Noise walls, possibly in conjunction with service roads;
 - Pedestrian improvements;
 - Possible options for redevelopment of adjacent land;
 - Possible improvement of netball centre access and parking.
- Location 14, Action A: Stirling Highway / High Street Intersection. Implement Recommendation of FEB Review. Commence planning study to consider realignment of intersection so that Stirling Highway/High Street is continuing road.
- Location 1, Action D: Ranford Road / South Street / Bannister Road Intersection. Widen to provide 3 through lanes.
- Location 2, Action F: Leach Highway / Manning Road Intersection. Widen Manning Road to 3 lanes at intersection with Leach Highway.
- Location 11, Action A: Canning Highway / Riseley Street Intersection. Accept traffic queues and delays at this intersection as trade off for improved amenity in this special community precinct.
- Location 4, Action B: Leach Highway / Carrington Street Intersection. Implement recommendations of FEB review for upgrading of High Street to a four lane divided road with flaring of High Street to six lanes at intersection with Carrington Street.
- Location 10, Action G: Leach Highway / Stock Road Intersection. Planning Control Area introduced. Carry out planning study to identify MRS requirements.
- Location 9, Action F: South Street / Stock Road Intersection. Planning Control Area introduced. Carry out planning study to identify MRS requirements for a long term grade separation.
- Location 3, Action F: Leach Highway / North Lake Road Intersection. Undertake feasibility analysis of localised widening on North Lake Road to create double diamond right turning lanes.
- Location 3, Action E: Leach Highway / North Lake Road Intersection. Undertake feasibility study of a 'truck only' bridge to assess the economic, operational and community issues.
- Location 1, Action C: Ranford Road / South Street / Bannister Road Intersection. Widen to provide 3 through lanes with merge to 2 lanes before rail bridge.

It should be noted that the most widely opposed solutions tend to be the 'build it big', or large scale infrastructure solutions.

A significant number of attendees at the community forums indicated that they believed the proposed solutions had been developed to deal with traffic issues that could have been solved by FEB and Roe 8. Other people felt that the proposed solutions were a minimalist approach to traffic problems in the area. Still others advocated the use of the LIC proposals and the FEB/Roe 8 plans as a package to address traffic issues in the LIC area.

1 INTRODUCTION

1.1 Purpose of this report

This report details the community consultation process and feedback from community forums held in December 2004 as part of the Local Impacts Committee's task to identify solutions to address the impacts of freight and general traffic on roads in the South West metropolitan area .

1.2 Background

The Government of Western Australia established the Metropolitan Freight Network Review in 2001, which brought together more than 140 industry, community and local government representatives to consider the priorities for the sustainable movement of freight throughout the metropolitan area. As a result of this review, the Metropolitan Freight Network Strategy, involving a six step solution for managing freight in the metropolitan area, was developed and endorsed.

As part of the six step solution, the Local Impacts Committee (LIC) was established by the Minister for Planning and Infrastructure to identify and recommend changes to the road network in the south-west metropolitan area to make it safer and more efficient. Briefly, the committee had three tasks: (1) Recommend the alignment for Roe highway Stage 7 (completed); (2) develop a strategy for managing traffic on the major roads in this area focussing on Leach Highway, South Street and Stock Road and; (3) identify measures to protect local communities from the impacts of freight and general traffic (in progress). To address tasks (2) & (3) the committee has undertaken the work in two stages:

Stage 1 - Community consultation and technical investigations to identify significant local problem areas causing above average difficulties in the road network, defined as 'priority action locations'.

Stage 2 – Identification of solutions to address traffic problems at these priority action locations. These solutions might mean changes to road layouts intersections, street buffers; or changes to traffic management, such as increased use of mast arms for lights at signal controlled intersections; or environmental improvements such as providing drainage sumps at outfalls into wetlands.

This report deals with the community consultation component of Stage 2.

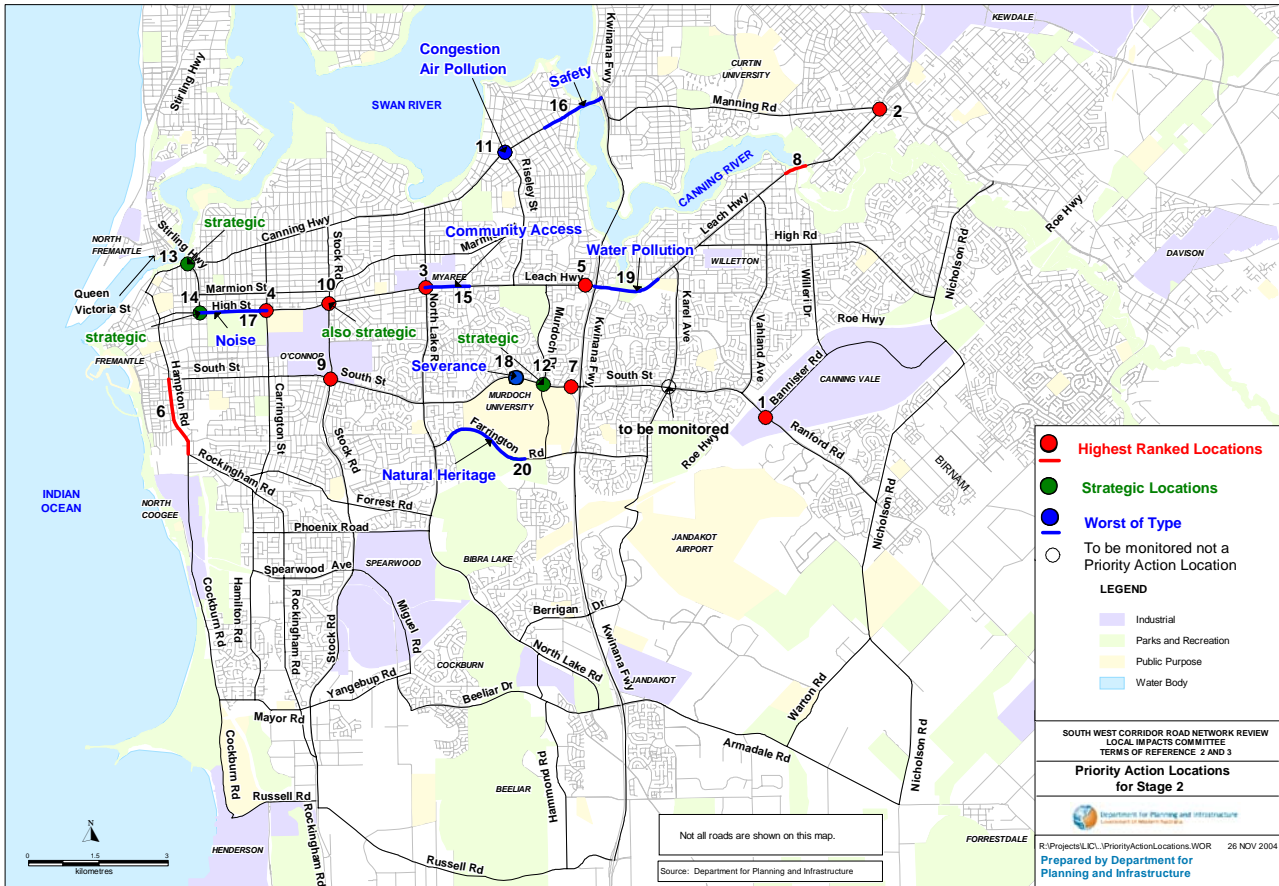
1.3 Study Area and Priority Action Locations

The LIC study area is bordered by Canning Highway and Manning Road in the north, Nicholson Road in the east, Armadale and Russell Roads in the south, and the coastline to the west.

A total of twenty 'priority action locations' identified as the worst by the community and the technical analysis, and a series of proposed solutions to address the issues at the 'priority action locations', were presented to the community.

The priority action locations are shown on Figure 1 below. A larger version of the map is also at the back of the feedback form, Attachment 5.

Figure 1 – Priority Action Locations



2 COMMUNITY FORUMS

As part of Stage 2, two community forums were held. The first forum was held on Monday, 6th December 2004 at Melville City Council Main Hall and the second was held on Wednesday 8th December 2004 at Riverton Leisureplex. The purpose of the forums was:

- to advise the community of the work conducted by the LIC resulting in the identification of the priority action locations,
- to present a range of proposed solutions at those locations (see Attachment 2), and
- to seek feedback on the proposed solutions.

Feedback forms (Attachment 5) were available at the forums for handing in on the night or at a later date. In addition to the forums, copies of the material were placed in all local libraries and council offices in the LIC study area, along with feedback forms. The closing date for submissions was 23 December 2004. This period was later extended to 31 January 2005 following several requests from groups and individuals for more time.

Approximately 300 people attended the City of Melville forum and 75 people attended the Riverton Leisureplex forum.

2.1 Communications

The forums were advertised in all local community newspapers within the study area and in the “West Australian”. Two consecutive notices (Attachment 3) were printed: the first notice provided details of the community forums’ background, purpose, times and places; the second notice was similar but included additional information about displays at several local council offices and libraries as an alternative opportunity to view and provide feedback on the proposed solutions.

There was also a notice in local newspapers placed by the City of Melville which erroneously suggested that the forums were an opportunity to review Fremantle Eastern Bypass (FEB) and Roe 8.

The following is a list of the newspapers and printing dates of the LIC notices:

Newspaper	Dates Printed
Melville Times	23/11 and 30/11
Canning Times	23/11 and 30/11
Fremantle - Cockburn Gazette	23/11 and 30/11
West Australian	Saturday 4/12
Melville Herald	Sat 4/12
Fremantle Herald	Sat 4/12

2.2 Proceedings

The community forums opened at 6.00pm for a half hour period prior to a series of official presentations, to allow the community to view the maps of the priority action locations and the proposed solutions to the identified problems at those locations. The maps were displayed around the room at each venue. Display boards were attended by facilitators (technical personnel from DPI, Main Roads and consulting firms) to answer questions from attendees and discuss issues generally. The forums officially began at 6.30pm with the facilitator welcoming the community and providing an overview of the forum proceedings (see agendas Attachment 4).

Riverton MLA and chair of the LIC, Tony McRae, explained the background and tasks of the LIC. Following Mr. McRae’s presentation, Tony Missikos from the Roe 7 Alliance gave a short presentation on the current status and construction timetable of Roe Highway Stage 7. David Rice from the Department for Planning and Infrastructure then explained the background to the priority action locations and presented the proposed solutions.

Following the main presentations, attendees were invited to circulate and view the maps set out around the room, where facilitators were available for one-on-one discussion. Attendees were also encouraged to fill out feedback forms (Attachment 5) and place them in the boxes provided at the forums or post/fax them to Estill & Associates by the end of the community consultation period.

2.2.1 Melville Forum

At the City of Melville presentation, Tony McRae's presentation was interrupted by several forum attendees requesting the reinstatement of the Fremantle Eastern Bypass (FEB). Mr McRae explained that the community forum was not the appropriate place to discuss the FEB, and that the focus of the forum was the priority action locations and the proposed solutions to problems at those locations. Mr. McRae said he would be available during the later open forum period to discuss any matters attendees would like to come and see him about. This allowed the proceedings to continue without further interruption. Quite a few attendees (probably in the order of 50-60) left the forum before the end of the presentation. Mr McRae received many queries regarding the FEB and Roe Highway Stage 8.

2.2.2 Riverton Leisureplex Forum

Although some support for the FEB was expressed at the Riverton Leisureplex forum, the presentation was not interrupted by any forum attendees.

2.3 Facilitators' Feedback (Verbal)

Because of the erroneous advertising of the forums, and as a result the profile of people attending the forums, the views expressed could not be interpreted as an accurate representation of the views of the community as a whole.

Some forum attendees were of the view that the solutions were a minimalist approach to the traffic problems in the area. Some forum attendees felt that by supporting the proposed solutions on the feedback form, they would be representing a view that there were no other issues at that location. For this reason, many people were reluctant to give positive feedback for individual LIC solutions.

Facilitators at the LIC forums reported that most participants they spoke with wanted the reinstatement of the FEB and Roe Highway Stage 8 and felt that the proposed solutions failed to adequately address the traffic problems in the area. Also, some forum attendees explained that submitting a feedback sheet should not be interpreted as endorsement of the deletion of the FEB or the Government commitment not to build Roe Highway Stage 8.

A summary of the more location specific verbal feedback provided to the facilitators by LIC forum attendees during the forums is outlined below.

Locations 1 and 2 (South St / Bannister Rd & Leach Hwy / Manning Rd)

- Forum attendees were concerned about property access onto Leach Highway where the road is proposed to be widened. Another concern was

the affects of the level of noise that would be caused by traffic during the day and night.

Location 3 (Leach Hwy / North Lake Rd)

- People were confused by Location 3 Action E proposal to undertake a feasibility study of a 'truck only' bridge to assess the economic, operational and community issues.

Location 4 (Leach Hwy / Carrington St)

- Some forum attendees believed that having three lanes merging into two lanes was not feasible as it would lead to additional traffic problems such as more crashes caused by heavy vehicles trying to merge with cars.
- Forum attendees mentioned the potential traffic danger on High Street near the netball courts caused by additional traffic and cars parked on the side of the road during netball games.
- A forum attendee warned that widening High Street will require extensive retaining because of significant height differences between the current road verge and the land to the south (golf course).

Location 5 (Leach Hwy / Kwinana Fwy)

- There was a concern that the junction of Leach Highway and Electra Road is not designed to manage a lot of traffic and that future development of Noalimba will create access problems into the area.
- Forum attendees were curious about how the bus and new rail station will be integrated and would like to see plans of how it will all work.

Location 6 (Hampton Rd from South St to Rockingham Rd)

- There were mixed views regarding the bus lanes with some forum attendees expressing concern that the bus lanes were not working, and others describing it as the best strategy implemented.
- A forum attendee suggested that the old houses on Hampton Street should be redeveloped to improve safety by increasing setback distance by reducing driveways.
- One person was concerned that trucks would continue to use this route if the FEB is not constructed despite the narrowness of the roads.
- South Street (Samson to Hampton) is very congested and takes approximately 20 minutes for the journey where it used to take five minutes.
- One forum attendee pointed out that some street names on the map for location 6 were incorrect (Marine Tce should be South Tce; Double Rd should be Douro Rd).

Locations 7, 8 and 9 (South St / Kwinana Fwy; Leach Hwy at Shelley Bridge; South St / Stock Rd)

- One forum attendee asked why freight could not be carried on the new rail system.
- Forum attendees explained that there were problems with access to South Street (especially restricted access from McCombe Ave area) and wanted some feedback as to what could be done about it.

Locations 10, 11, 12 (Leach Hwy / Stock Rd; Canning Hwy / Riseley St; South St / Murdoch Dr)

- Forum attendees mentioned that introducing extra right turn lanes on Leach Highway and Stock Road will block cars if trucks turn two-abreast and needs to be technically thought through.
- Access in and out of the two southern quadrants is currently a problem and will get worse with more traffic, and worse again with the planned loop ramps.
- Noise at houses in South East quadrant is a problem and will get worse if high ramps are built.

Location 13 (Stirling Hwy / Canning Hwy)

- It was suggested that traffic flow on Canning Highway turning right into Stirling Highway could be improved by investigating the possibility of relocating the heritage building to another site like Servetus Street and improving the intersection.

Location 14 (Stirling Hwy / High St)

- Forum attendees explained that traffic turning from High Street into Stirling Highway is not able to flow through the intersection due to traffic congestion on Stirling Highway. This is caused by the next set of traffic lights at Marmion Street and traffic not being able to flow. A possible solution is to coordinate both sets of traffic lights to allow greater time to clear traffic between them.

Location 15 (Leach Hwy, from North Lake Rd to Winthrop Dr)

- A steep down hill grade exists on Leach Highway approaching Winthrop Avenue that causes a problem when stopping at the Traffic Lights. A possible solution is to increase the time between green and red phases, and install red light camera or amber warning lights.
- Right turn lanes from Leach Highway into Winthrop Ave and Leach Highway into Shopping centre are too short and cars block the next lane of traffic at peak periods. The length of right turn lanes should be increased.
- Noise levels at the intersection of North Lake Road and Leach Highway is very high. Noise walls for the urban areas should be installed.

Location 16 (Canning Hwy, from Reynolds Rd to Canning Bridge)

- Due to the traffic congestion on Leach Highway, cars are starting to rat run along Bungaree Road, Fern Road over the Riverton Bridge, down Riverton Drive East, Riley Road and Willeri Drive and causing a number of local access streets to become very busy. Traffic calming treatments should be installed.

Location 17 (High St, from Stirling Hwy to Carrington St)

- A forum attendee expressed concern for the removal of trees that would result between the road and the golf course if this proposed solution were implemented.
- The noise level along High Street needs to be reduced and would be solved if FEB were constructed.
- Netball courts at High Street and Wilkinson Street create a safety hazard when netball is on for west-bound traffic on High Street turning right into Wilkinson.

Location 18 (South Street, pedestrian crossing at Murdoch University)

- No comments were made about Location 18

Location 19 (Leach Hwy, from Kwinana Fwy to Webb St)

- Forum attendees believe the piping of water runoff directly into the river was a concern and recommended treatment rather than just entrapment. They felt the placement of sumps was not enough control due to possible flooding and heavy rains able to flush contaminants into the river at a later date.
- Some people didn't want to commit to this solution as they felt there were a lot more serious issues along that section of road that needed attention. For example, traffic congestion causing access difficulties for residents

entering from side streets to Leach highway, safety issues because people are waiting too long and therefore taking risks.

Location 20 (Farrington Rd, west of Bibra Dr)

- People felt that the use of an underpass and narrow pipes will put the smaller animals at risk. A suggestion was made to create a larger opening instead of a narrow opening.
- People felt that fences had adverse effects on animals as they make animals vulnerable to predator species and trap them on the road, making it more likely for them to be hit and killed.
- Residents were concerned that there would be an increase in truck traffic with the opening of Roe 7.
- Forum attendees felt that traffic calming along Farrington road would be a positive solution. People suggested installing traffic lights at a couple of the intersections, rumble strips, speed humps, reduced speed limits and policing of speed limits to calm traffic and deter trucks from using the road.
- People felt that the whole road needs attention and classification as 'worst of type' for Natural Heritage. A number of residents suggested that a different section of the road where the lake is closer to the road and the crossing of turtles is more prevalent needs more urgent attention than the one marked on the map.

Monitored Only Site

- Some residents were not sure why the area was only being monitored as they felt it was a serious traffic problem.
- A number of residents felt the westbound right-turn lane from South Street into Karel Avenue was too short and the truck traffic blocked the turning lane so it sat empty most of the time while the arrow was green.
- A common suggestion was that only the lengthening of one turning lane was required and not the lengthening of all four turning lanes as proposed.

General Solutions

- a. Introduce red light cameras at all traffic lights
 - Some residents felt that introducing red light cameras at all traffic lights would help. Generally, people felt that the yellow flashing warning lights would be more beneficial than traffic lights in alerting drivers that the lights were going to change.
- b. Implement a program to monitor road operating conditions
 - No comments were made.
- c. Introduce transit lanes on South Street after opening Roe 7

- Some residents felt that Roe 7 wasn't going to take as much traffic away from South Street as everyone hoped.
- d. Reduce direct property access to Leach Highway
 - Local residents felt it was a good idea for safety while others felt it was going to push traffic back to some of the local roads and the feeder access intersections.

2.4 Feedback Forms

The feedback form (Attachment 5) was designed to gauge community opinion on the proposed solutions and obtain feedback regarding any other traffic related issue not directly related to the proposed solutions. The form was required to be used in conjunction with the maps displayed at the forums and at the libraries.

2.4.1 Places to obtain a feedback form

Feedback forms were provided at the community forums and at the following local councils and libraries and other public venues within the study area:

Local Councils

- City of Canning Council Building
- City of Cockburn Council Building
- Town of East Fremantle Council Building
- City of Fremantle Admin Building
- City of Melville Council Building

Libraries

- A.H. Bracks Library
- Bull Creek Library
- Canning Bridge Library
- City of Fremantle Library (this covers East Fremantle)
- Civic Square Library
- Coolbellup Public Library
- Riverton Library
- Spearwood Public Library
- Success Public Library
- Willagee Library
- Willeton Library

Other

- Melville Aquatic Fitness Centre
- Melville Recreation Centre
City of Melville admin building

2.4.2 Feedback Form Results

A total of 137 feedback forms were received by 31 January 2005. Of these, 43 respondents did not fill in the tick box options and only provided comments. A total of 94 respondents used the tick box options but not all respondents addressed all the tick box questions on the form.

Although the form was not intended to render a statistically significant sample representative of the whole population, it is important to note that the results of the form are not statistically significant and are not necessarily representative of the whole population. There were however a large number of forms received with detailed information and feedback which should be carefully considered by the LIC.

Table 1 details the results of the tick box questions which indicate respondent's level of support for each of the Proposed Solutions and their individual actions in order of most strongly supported to least strongly supported. The level of support for each proposed solution (action) was measured in terms of the number of respondents supporting that action divided by the total number of respondents¹ who ticked a box for that action, expressed in percent.

$$\frac{\text{Total number of Strongly Support or Support}}{\text{Total number of actual responses}^1} \times 100$$

A similar formula was used to calculate the percentage of people who strongly opposed or opposed each of the Proposed Solutions and those who indicated 'don't know /unsure'.

Table 1 has been grouped into four levels of response to solutions according to the colour chart below: -

	<p>Supported 60-65% strongly support or support 33-38% strongly oppose or oppose</p>
	<p>Marginally supported 50-59% strongly support or support 38-47% strongly oppose or oppose</p>
	<p>Marginally opposed 40-49% strongly support or support 41-56% strongly oppose or oppose</p>
	<p>Opposed 23-40% strongly support or support 52-69% strongly oppose or oppose</p>

Note that Table 1 does not include a "Strongly Supported" group nor a "Strongly Opposed" group. This is because there was noticeable opposition to all of the solutions in the 'Supported' groups and noticeable support for those solutions in the 'Opposed' groups

¹ = Strongly Support + Support + Oppose + Strongly Oppose + Don't Know / Unsure

Table 1 – Feedback Form Results for each Proposed Solution

No.	Location Description	Action Description (Proposed Solution)
5A	Kwinana Freeway / Leach Highway Interchange	Check that improved east-west cycle link will be provided in association with new rail station.
8C	Leach Highway – Shelley Bridge	Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
12A	South Street / Murdoch Drive Intersection	Upgrade pedestrian facilities to meet current standards.
11B	Canning Highway / Riseley Street Intersection	Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
13A	Stirling highway / Canning Highway Intersection	Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
3C	Leach Highway / North Lake Road Intersection	Upgrade pedestrian crossing facilities to meet current standards.
9A	South Street / Stock Road Intersection	Upgrade pedestrian crossing facilities to meet current standards.
12B	South Street / Murdoch Drive Intersection	Plan for future funding of road drainage upgrade to ensure that polluted water does not enter wetlands system.
19A	Leach Highway – Kwinana Freeway to Webb Street	Main Roads to provide sump at outlets as part of their high risk drainage outfall strategy.
20A	Farrington Road – Wetlands West of Bibra Drive	Investigate improvements to drainage control.
20B	Farrington Road – Wetlands West of Bibra Drive	Improve protection of wildlife including investigating effectiveness of fauna underpass/es.
4D	Leach Highway / Carrington Street Intersection	Upgrade pedestrian crossing facilities to meet current standards.
10E	Leach Highway / Stock Road Intersection	Upgrade pedestrian facilities to meet current standards.
15A	Leach Highway – North Lake Road to Winthrop Drive	Study potential demand and prepare feasibility study for underpass to provide pedestrian/cycle connection.
16A	Canning highway, from Reynolds Road to Canning Bridge	Plan for study of crash types at intersections and on links, to include road safety audits, video surveillance and consultation with stakeholders. The study should identify options for improvements to road safety.
15B	Leach Highway – North Lake Road to Winthrop Drive	Investigate possible access improvements on north side of Leach Highway.
10B	Leach Highway / Stock Road Intersection	Introduce street lighting on Leach Highway between Stock Road and Carrington Street to improve road safety.
12D	South Street / Murdoch Drive Intersection	Plan and budget for construction of Murdoch Transit Link.
18B	South Street – Murdoch University	Plan and budget for construction of Murdoch Transit Link away from South Street.
18A	South Street – Murdoch University	Investigate relocation of bus stop to be adjacent to underpass.
8A	Leach Highway – Shelley Bridge	Prepare new concept plans for widened or duplicated bridge that address pedestrian / cycle / environmental / heritage issues. Plan for future funding. Future bridge to maintain 3 lanes in each direction and also incorporate pedestrian and dual use path.
3A	Leach Highway / North Lake Road Intersection	Lengthen right turning lane so that right turn traffic can queue clear of through lanes.
14B	Stirling Highway / High Street Intersection	Consider options to improve pedestrian crossings of Stirling Highway between Marmion Street and High Street.
2A	Leach Highway / Manning Road Intersection	Lengthen right turning lane so that right turning traffic is clear of through traffic.
3B	Leach Highway / North Lake Road Intersection	Install signal mast arms to reduce rear end collisions.
9D	South Street / Stock Road Intersection	Review suitability of this intersection for high friction surfacing to reduce rear end collisions.
10D	Leach Highway / Stock Road Intersection	Introduce signal mast arms to reduce rear end collisions.
2E	Leach Highway / Manning Road Intersection	Review effectiveness of high friction surface in the reduction of rear end collisions.
3D	Leach Highway / North Lake Road Intersection	Lengthen right turning lane so that right turn traffic can queue clear of through lanes.

No.	Location Description	Action Description (Proposed Solution)
2C	Leach Highway / Manning Road Intersection	Upgrade pedestrian crossing facilities to meet current standards.
12C	South Street / Murdoch Drive Intersection	Lengthen right turning lane to stop right turning traffic blocking through traffic.
13B	Stirling highway / Canning Highway Intersection	Assess potential for localised widening to lengthen left turning lane from Stirling Highway to Canning Highway.
4A	Leach Highway / Carrington Street Intersection	Lengthen right turn lane to improve operation and capacity of traffic signals.
4C	Leach Highway / Carrington Street Intersection	Lengthen right turn lane to improve operation and capacity of traffic signals.
9C	South Street / Stock Road Intersection	Assess need for lengthening left turn lane.
9E	South Street / Stock Road Intersection	Review suitability of this intersection for signal mast arms.
10F	Leach Highway / Stock Road Intersection	Review suitability of this intersection for high friction surfacing to reduce rear end collisions.
2B	Leach Highway / Manning Road Intersection	Lengthen right turning lane so that right turning traffic is clear of through traffic.
10A	Leach Highway / Stock Road Intersection	Introduce left turn lane to improve left slip efficiency.
22	General Solutions	Implement monitoring program
9B	South Street / Stock Road Intersection	Introduce a double right turn lane to reduce delays for right turning traffic.
3G	Leach Highway / North Lake Road Intersection	Review suitability of this intersection for high friction surfacing.
6A	Hampton Road / South Street to Rockingham Road	Hampton Road PTA with City of Fremantle to consider a future community survey to ascertain level of problems that residents experience in accessing or leaving their properties.
10C	Leach Highway / Stock Road Intersection	Introduce double right turning lane to reduce delays for right turning traffic.
21	General Solutions	Introduce red light cameras at all traffic lights
11C	Canning Highway / Riseley Street Intersection	Support concept plan for proposed MRS amendment which shows bus lanes East of Riseley Street.
7A	Kwinana Freeway / South Street interchange	Undertake planning study on the implications of introducing transit lanes or other forms of public transport priority along South Street. (from Ranford Road to Murdoch University, including at intersections).
1A	Ranford Road / South Street / Bannister Road Intersection	Undertake planning study on the implications of introducing transit lanes or other forms of public transport priority along South Street (from Ranford Road to Murdoch University, including at intersections).
24	General Solutions	Reduce direct property access to Leach Highway.
2D	Leach Highway / Manning Road Intersection	Retain MRS Reserve for grade separation in the longer term.
1B	Ranford Road / South Street / Bannister Road Intersection	Widen to provide 3 through lanes plus left turn lane.
23	General Solutions	Introduce transit lanes on South Street, after opening of Roe 7
8B	Leach Highway – Shelley Bridge	During preparation of new concept plan, review potential to remove Centenary Avenue signals.
17A	High Street – Stirling Highway to Carrington Street	Commence planning study for High Street to consider: <ul style="list-style-type: none"> - Recommendation of FEB Review to upgrade High St to dual two lane carriageways; - Other safety improvements such as relocation with road reserve to allow service roads; - Noise walls, possibly in conjunction with service roads; - Pedestrian improvements; - Possible options for redevelopment of adjacent land; - Possible improvement of netball centre access and parking.
14A	Stirling Highway / High Street Intersection	Implement Recommendation of FEB Review. Commence planning study to consider realignment of intersection so that Stirling Highway/High Street is continuing road.
1D	Ranford Road / South Street / Bannister	Widen to provide 3 through lanes.

No.	Location Description	Action Description (Proposed Solution)
	Road Intersection	
2F	Leach Highway / Manning Road Intersection	Widen Manning Road to 3 lanes at intersection with Leach Highway.
11A	Canning Highway / Riseley Street Intersection	Accept traffic queues and delays at this intersection as trade off for improved amenity in this special community precinct.
4B	Leach Highway / Carrington Street Intersection	Implement recommendations of FEB review for upgrading of High Street to a four lane divided road with flaring of High Street to six lanes at intersection with Carrington Street.
10G	Leach Highway / Stock Road Intersection	Planning Control Area introduced. Carry out planning study to identify MRS requirements.
9F	South Street / Stock Road Intersection	Planning Control Area introduced. Carry out planning study to identify MRS requirements for a long term grade separation.
3F	Leach Highway / North Lake Road Intersection	Undertake feasibility analysis of localised widening on North Lake Road to create double diamond right turning lanes.
3E	Leach Highway / North Lake Road Intersection	Undertake feasibility study of a 'truck only' bridge to assess the economic, operational and community issues.
1C	Ranford Road / South Street / Bannister Road Intersection	Widen to provide 3 through lanes with merge to 2 lanes before rail bridge.

For more detailed results see Attachment 1

2.5 Discussion of Results

The majority of people, 55.5% (76 out of 137) made general comments supporting the Proposed Solutions with no specific suggestions or concerns for any of the Proposed Solutions.

A total of 56.9% (78 out of 137) of respondents expressed a desire to see the reinstatement of the FEB and Roe Highway Stage 8. A total of 43.8% (60 out of 137) felt that the proposed solutions would be unnecessary if the FEB and Roe Highway Stage 8 were reinstated. A smaller proportion of participants, 13.1% (18 out of 137) believe that the proposed solutions, the FEB and Roe Highway Stage 8 should *all* be implemented to rectify traffic issues in the area.

A total of 31.4% (43 out of 137) of respondents had specific concerns which are outlined below:

- 36 respondents suggested increasing pedestrian/cycle safety for example build pedestrian/ cycle overpasses.
- 17 respondents stated that certain intersections are in need of traffic lights or 'prepare to stop' flashing lights to deal with increased traffic.
- 15 respondents were upset about present increased traffic noise that they feel will continue to get worse if bypass is not constructed and in need of sound walls and buffer strips.
- 9 respondents commented that air pollution has become a problem for residents.

Other traffic management concerns and suggestions that emerged from the community feedback forms enjoying nominal community support (less than eight people) are as follows:

- Extending Roe Hwy to Stock Road via the railway reserve will remove the need for FEB. However the final link from Kwinana Freeway to Stock Road could make a huge contribution to long term traffic management with minimal impact and reasonable cost.
- Truck behaviour should be modified to minimise traffic issues in the area by implementing truck curfews so that trucks may not use streets late at night and early mornings to avoid speeding and the use of engine brakes at these times. Want signs displaying "no use of engine brakes" along Leach Hwy and South Street.
- Delete Roe Highway Stage 8 and the FEB, freight should be transported by rail instead. The rail should be used to solve the traffic problems in the area.
- Close Riverton Bridge.
- Have bridge/flyover for all traffic.
- If Roe Highway Stage 8 and FEB are not built the land should not be sold, in case it is needed.
- Not building the bypass (FEB) will decrease their property values as they will suddenly be living on major roads.

- Make South Street and/or Farrington Rd a non-truck road once Roe 7 is constructed.
- Ways need to be discussed of protecting our environment as well as solving traffic problems.
- Better considerations need to be taken for alternative public transport.
- Avoid merging three lanes to two at Location 1.

Other one-off comments made included:

Proposed Solutions

- Don't use South Street as part of ring road system.
- Still want access to local roads, no divided or dual carriageway roads.
- No wider bridges or flyovers.
- Good to see light rail system incorporated.
- More parking required at railway station.
- Most of the Canning Hwy needs upgrading.
- South Street does not have the appropriate reserve lawns.
- Underpass "solutions" and noise walls attract other anti social problems.
- Leach Hwy should not be a transport corridor, increased traffic numbers for those who live in the suburb need to be considered.
- Use reserve to widen High Street to make vehicular movements efficient.
- Risely Street too narrow to handle traffic to Garden City.
- Hampton Street already a mess, no more fixes.
- Increase lanes on Stirling Bridge.
- Bus stop bay causing confusion, people mistaking it for a turning lane.

Safety

- Proposed solutions at priority action locations will not stop heavy trucks from making the road dangerous.
- Safety concerns with the truck only bridge at Priority Action Location 3. E.g. tyres, containers or debris falling onto road below. Truck breakdown on the bridge, towing, fire and emergency access / approach gradients and descents.

Property Value

- Unfair to residents not to build FEB as they have planned for Roe Hwy extensions for 30+ years, and now traffic being pushed into their suburbs.

Environment

- Better utilisation of what is already there rather than destroying a priceless wetland.
- Modify an existing port down south to take containers.
- Do not remove the mature trees along High Street. They protect our houses from stray golf balls.
- The impact of endless truck traffic is made to appear more intrusive by the neglect of landscaping of the Leach Highway median and side verges.

3 CONCLUSIONS

The community forums and feedback sheets indicated that the community were very supportive of some of the proposed solutions at the priority action locations. Proposed solutions most widely supported (60-65% strongly support or support, less than 40% oppose or strongly oppose) were:

- Location 5, Action A: Kwinana Freeway / Leach Highway Interchange. Check that improved east-west cycle link will be provided in association with new rail station.
- Location 8, Action C: Leach Highway – Shelley Bridge. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 12, Action A: South Street / Murdoch Drive Intersection. Upgrade pedestrian facilities to meet current standards.
- Location 11, Action B: Canning Highway / Riseley Street Intersection. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 13, Action A: Stirling highway / Canning Highway Intersection. Plan for future funding of upgrades to road drainage to ensure that polluted water does not enter river system.
- Location 3, Action C: Leach Highway / North Lake Road Intersection. Upgrade pedestrian crossing facilities to meet current standards.
- Location 9, Action A: South Street / Stock Road Intersection. Upgrade pedestrian crossing facilities to meet current standards.
- Location 12, Action B: South Street / Murdoch Drive Intersection. Plan for future funding of road drainage upgrade to ensure that polluted water does not enter wetlands system.

The above most widely supported proposed solutions all tend to be 'low impact' solutions. That is, they relate to social or environmental improvements and not to problems with heavy vehicular traffic generally.

The proposed solutions least supported and needing further consideration (approximately 50-70% strongly oppose or oppose, less than 40% strongly support or support) were:

- General Solution 23: Introduce transit lanes on South Street, after opening of Roe 7
- Location 8, Action B: Leach Highway – Shelley Bridge During preparation of new concept plan, review potential to remove Centenary Avenue signals.
- Location 17, Action A: High Street – Stirling Highway to Carrington Street. Commence planning study for High Street to consider:
 - Recommendation of FEB Review to upgrade High St to dual two lane carriageways;

- Other safety improvements such as relocation with road reserve to allow service roads;
 - Noise walls, possibly in conjunction with service roads;
 - Pedestrian improvements;
 - Possible options for redevelopment of adjacent land;
 - Possible improvement of netball centre access and parking.
- Location 14, Action A: Stirling Highway / High Street Intersection. Implement Recommendation of FEB Review. Commence planning study to consider realignment of intersection so that Stirling Highway/High Street is continuing road.
 - Location 1, Action D: Ranford Road / South Street / Bannister Road Intersection. Widen to provide 3 through lanes.
 - Location 2, Action F: Leach Highway / Manning Road Intersection. Widen Manning Road to 3 lanes at intersection with Leach Highway.
 - Location 11, Action A: Canning Highway / Riseley Street Intersection. Accept traffic queues and delays at this intersection as trade off for improved amenity in this special community precinct.
 - Location 4, Action B: Leach Highway / Carrington Street Intersection. Implement recommendations of FEB review for upgrading of High Street to a four lane divided road with flaring of High Street to six lanes at intersection with Carrington Street.
 - Location 10, Action G: Leach Highway / Stock Road Intersection. Planning Control Area introduced. Carry out planning study to identify MRS requirements.
 - Location 9, Action F: South Street / Stock Road Intersection. Planning Control Area introduced. Carry out planning study to identify MRS requirements for a long term grade separation.
 - Location 3, Action F: Leach Highway / North Lake Road Intersection. Undertake feasibility analysis of localised widening on North Lake Road to create double diamond right turning lanes.
 - Location 3, Action E: Leach Highway / North Lake Road Intersection. Undertake feasibility study of a 'truck only' bridge to assess the economic, operational and community issues.
 - Location 1, Action C: Ranford Road / South Street / Bannister Road Intersection. Widen to provide 3 through lanes with merge to 2 lanes before rail bridge.

These most widely opposed solutions tend to be the 'build it big', or large scale, infrastructure solutions.