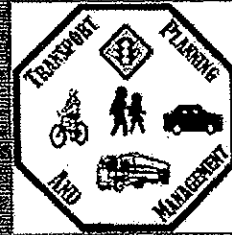




BIKEWAYS PLAN



*The roads
are there to
share.*



On summer days, the road is a place to share.

A strategic plan for the development of a network
of bikeways to provide for safer cycle use in the
urban area.

AUGUST 1998

Prepared by
Transport Planning and Management Branch
of the Municipal Services Department



TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY	3
2.0 INTRODUCTION	9
2.1 Background to Study	9
2.2 Location of Study Area	10
2.3 Scope of Report	10
2.4 Benefits of a Current Bikeway Plan	11
2.5 Bicycle Planning and the Need for Cycleways	11
2.6 Methodology	13
3.0 FORMULATION OF PROPOSED BIKEWAY NETWORK	14
3.1 Cycleway Philosophy	14
3.2 Literature Review	15
3.3 Consultation and Liaison	15
3.4 Analysis of Survey Questionnaires	16
3.5 Identifying Bicycle Trip Generators	20
3.6 Saddle Survey	21
3.7 Classification of Bicycle Routes and Cyclists	21
3.7.1 Types of Cyclists and Related Profiles	22
3.7.2 Types of Bicycle Facilities	24
A. On-Road Facilities	24
B. Off-Road Facilities	24
C. Local Network	25
D. State Network	25
4.0 BICYCLE ACTION PLAN	27
4.1 Network of Routes and Proposed Staging	27
4.1.1 Staged Implementation	27
4.1.2 Staging Criteria	27
4.1.3 Detail of Engineering Works	31
4.2 Bicycle Parking and Storage Needs	42



5.0 BICYCLE PROGRAMS	43
5.1 Encouragement Programs	43
5.1.1 General Encouragement	43
5.1.2 Encouraging Children to Ride to School	45
5.1.3 Encouraging Bicycle Tourism	46
5.2 Education Programs	46
5.3 Enforcement Programs	47
6.0 FUNDING THE IMPLEMENTATION OF THE BIKEWAY PLAN	48
6.1 The Roads and Traffic Authority	48
6.2 Section 94 Contributions	48
6.3 Corporate Sponsorship	48
6.4 Department of Arts, Sport, Environment and Territories	49
6.5 NSW Department of Sport, Recreation and Racing	49
6.6 Community Support and Joint Ventures	49
7.0 RECOMMENDATIONS	50



1.0 EXECUTIVE SUMMARY

Background

Cycle Planning was commissioned by Wagga Wagga City Council to review and update the Wagga Wagga Bikeway Plan prepared in 1992. This has been necessary to provide a clear direction for future cycleway construction and associated behavioural programs.

The revision has also been necessary due to the high use of the existing bike facilities, and pressure from community and bicycle groups to promote safe cycling along these cycleways and to extend the network throughout the City.

The preparation of the new Plan, (to be known as the Wagga Wagga Bikeway Plan, 1997), will allow Council to integrate bicycles in the current planning and development framework and consequent major changes in transport management and land use, such as the construction of the Gobba Bridge, CBD development and the growth of various subdivisions.

The 1997 Bikeway Plan is the first step as part of Council's initiative to provide an up to date network of cycleways for the area.

The review and update of the Bikeway Plan, with a balanced emphasis placed on behavioural and engineering components, is necessary to ensure bicycle facilities are planned for, and resourced by Council and other funding sources.

The development of the plan is seen as a means to improve the use of bicycles as an alternative method of transport for short trips and longer trips for commuter and sports purposes. The bicycle is also a very popular recreational and tourist activity with this illustrated through the cycling activity along the Murrumbidgee River and the Lake Albert foreshores.

Wagga Wagga City Council presently has facilities in place that will be of benefit to cyclists, including Lake Albert, Apex Park, Rawlings Park and the cycleway to the Charles Sturt University. These provide a starting point for the further development of bicycle facilities in Wagga Wagga to brace the City as an ideal place for all types of bicycle riding.



Bicycle Programs

Bicycle programs are concerned with both transport network improvements and behavioural issues. The objective is to make cycling safer, more convenient and hence an attractive alternative means of transport. Programs will address issues relating to education, encouragement, enforcement and engineering (the 4 "E's") and should be regarded as interrelated components of the same program rather than separate programs.

As a network of bicycle routes is developed within a city (Engineering) it will be necessary to:

- promote it through advertising, pamphlets, maps, staging of special events (Encouragement);
- teach cyclists and motorists how to share the road network, and people who use it how to ride safely and courteously (Education);
- ensure that relevant laws and regulations are obeyed for the benefit of all road users (Enforcement).

It is recommended that all four programs follow the 5 stage implementation process specified in this Bikeway Plan.

Funding Sources

The successful implementation of the Bikeway Plan will depend on the commitment of Council, the level of interest by the community and the level of funding available towards the project. Wagga Wagga City Council will be a major funding source for the projects identified in the Plan. Other sources of funding are expected to include Section 94 Contributions and the Roads and Traffic Authority Bicycle Budget.

Sources of funding may also include:

- the corporate sector where suitable corporate organisations may be contacted for sponsorship to implement a component of the proposed Bikeway Plan. Corporate groups could also be approached to provide materials or funding necessary to enable the community groups to provide support.
- the Sport and Recreation branch of Department of Arts, Sport, Environment and Territories who offer funding for projects that have a degree of community, cultural, recreational and sporting nature (the successful implementation of the Bikeway Plan will offer benefits for all these areas);
- the Department of Sport, Recreation and Racing who offer funding for recreational cycle facilities such as velodromes or racing tracks (eg. mountain bike or BMX tracks). Their Capital Assistance Program offers funding on a dollar for dollar basis with applications closing by the 30 June each year; and
- community groups and service clubs who could be approached to provide labour and in kind contributions for the implementation of the Bikeway Plan.



Recommendations

The following recommendations are made:

1. Adopt the Wagga Wagga Bikeway Plan 1997.
2. Fund the proposed bicycle facilities jointly between Wagga Wagga City Council and other sources such as the RTA, Department of Arts, Sport, Environment and Territories, Department of Sport, Recreation and Racing, the corporate sector, community groups and service clubs.
3. Provision should be given to the implementation of proposed cycleway routes in the design of new on-road or off-road construction and Section 94 Contribution Plans should be prepared for such works. Where Section 94 Contribution Plans exist, or are proposed to be put in place, the recommendations outlined in these plans should be followed.
4. New roads, future road sealing, subdivision and commercial development should take bicycles into consideration. The Austroad's Guide to Traffic Engineering Practice Part 14 Bicycles should be used as Council's standard for future cycle works. All newly constructed roads should provide an area for cycle travel.
5. Bicycle parking facilities to be provided in stage 1 of implementation. Design details should be sourced from the Australian Standard AS 2890.3 1993.
6. Once cycle facilities are provided there will be a program of ongoing maintenance and sweeping of cycle routes to remove hazardous debris particularly at intersections, where turning movements are made and along road shoulders.
7. During the first stage of implementation, negotiations will be carried out between community groups such as the Lake Albert Country Club, Charles Sturt University, RAAF and the Army to determine their interest and ability to support bicycle facilities.
8. Local area traffic management devices should be designed to positively enhance cycling and not unnecessarily pose a threat or danger to bicycle riders by creating a squeeze point for cyclists negotiating the same area as other vehicles. Local area traffic management devices when designed correctly are beneficial to cyclists as they slow the overall traffic environment.



9. Implementation of the bicycle network priorities can be brought forward from the priorities recommended in this bikeway Plan to be carried out simultaneously with regular maintenance and road works as identified in Council's Works Program, and other works identified in Council's Recreational Services Program.
10. Ongoing bicycle committee representing the community and user groups be formed to monitor the Bikeway Plan's implementation and provide input to Council on bike related matters. The local community should be encouraged to report bicycle problem areas to Council through a pro forma sheet that could be made available at bike shops, libraries, schools etc. The problem areas would then be registered onto a data base and systematically rectified.
11. Council will develop an implementation plan, to promote and support of the Bikeway Plan. The implementation plan should include behavioural/road safety issues pertaining to cycling.
12. Bicycle rides and other events should be arranged to promote Wagga Wagga cycleways to cyclists and non-cyclists from the local area and beyond. These events could be organised by bicycle user groups with the support of Wagga Wagga City Council.
13. After the Bike Plan's adoption, a promotional brochure will be prepared for distribution to community members to illustrate the existing bicycle network, the future proposed routes and additional cycling information, including road safety. The brochure should be updated as required.
14. The Bikeway Plan will be incorporated into Council's management plans, decision and policy making activities.



2.0 INTRODUCTION

2.1 Background to Study

Cycle Planning was commissioned by Wagga Wagga City Council to review and update the Wagga Wagga Bikeway Plan prepared in 1992. This has been necessary to provide a clear direction for future cycleway construction and associated behavioural programs.

The revision has also been necessary due to the high use of the existing bike facilities, and pressure from community and bicycle groups to promote safe cycling along these cycleways and to extend the network throughout the City.

The preparation of the new Plan, (to be known as the Wagga Wagga Bikeway Plan, 1997), will allow Council to integrate bicycles in the current planning and development framework and consequent major changes in transport management and land use, such as the construction of the Gobba Bridge, CBD development and the growth of various subdivisions.

The 1997 Bikeway Plan is the first step as part of Council's initiative to provide an up to date network of cycleways for Wagga Wagga.

The review and update of the Bikeway Plan, with a balanced emphasis placed on behavioural and engineering components, is necessary to ensure bicycle facilities are planned for and resourced by Council and other funding sources.

The development of The Plan is seen as a means to improve the use of bicycles as an alternative method of transport for short trips and longer trips for commuter and sports purposes. The bicycle is also a very popular recreational and tourist activity with this illustrated through the cycling activity along the Murrumbidgee River and the Lake Albert foreshores.

Wagga Wagga City Council presently has in place facilities that will be of benefit to cyclists, including Lake Albert, Apex Park, Rawlings Park and the cycleway to the Charles Sturt University. These provide a starting point for the further development of bicycle facilities in Wagga Wagga to brace the City as an ideal place for all types of bicycle riding.



2.2 Location of Study Area

The study area focuses on the urban area of the Council of the City of Wagga Wagga.

2.3 Scope of Report

The Wagga Wagga Bikeway Plan, 1997 is presented in one volume with a map illustrating the proposed cycleway network. A promotional brochure will be prepared at a later date.

Section 1 is an executive summary of the document which highlights the main issues within the report

Section 2 introduces the report and presents the benefits of undertaking the Bikeway Plan review and providing cycling facilities generally.

Section 3 comprises the cursory review of the existing Wagga Wagga Bikeway Plan, RTA Safety Audit of cycleways and other relevant documents. Also discussed is the process of formulating the proposed cycleway network, including tasks such as the review of existing facilities, community consultation, saddle surveys and classification of bicycle routes.

Section 4 presents the Bicycle Action Plan for future implementation and includes the prioritised staging and costing of the proposed bicycle network. The criteria used to determine the bikeway staging is also discussed.

Section 5 presents the simultaneous bicycle programs required to provide bicycle facilities.

In **Section 6** the various types of funding measures available to provide bicycle facilities are presented.

Recommendations are made in **Section 7**.

The Appendices comprise **Section 8**.



2.4 Benefits of a Current Bikeway Plan

The benefits of reviewing Wagga Wagga Council's existing Bikeway Plan, prepared in 1992, are outlined in the "Consultants Brief dated November 1996" and as follows:

1. The plan would recognise the potential for cycling within the local area and acknowledge the cyclist as a legitimate road user with special needs;
2. The plan would assist Council to actively consult with the community to determine the commuter, recreational, tourism and safety demands of cycling;
3. The plan would be incorporated into Council's management plans and offer an integrated approach within Council (ie. involve planning, engineering and road safety);
4. The plan would allow for a considered, efficient program of bikeway implementation. It will allow a buffer against pressure to make ad hoc responses to high profile requests;
5. The plan will allow Council to maximise the level of assistance available from State, Commonwealth and community bodies for bikeway construction;
6. The plan will allow for any conflict between cyclists and other road users to be considered together;
7. The plan will allow for increased community awareness and respect for the vulnerability (in terms of safety) of cyclists.

2.5 Bicycle Planning and the Need for Cycleways

The review of the Wagga Wagga Bikeway Plan embraces the needs of the local community, caters for visitors to the area and allows for safer cycling to take place. This Bikeway Plan includes the measures that are necessary to improve the overall cycling environment - the Four "E's" of bicycle planning.

The four "E's" planning philosophy, requires the simultaneous implementation of :

- engineering;
- encouragement;
- enforcement; and
- educational programs for cyclists.



The engineering program is presented in Section 4 and the remaining programs are discussed in Section 5.

Apart from the health, leisure and environmental benefits concurrent with building cycleways, additional reasons explaining the positive characteristics of cycling are presented below:

Cyclists are Legitimate Road Users

Bicycles are defined as vehicles under road traffic regulations and therefore cyclists have a right to use virtually the entire road system. Cyclists have the same responsibilities as other road users and account for about 5 percent of road traffic.

By specifically designing for cyclists, we are assisting other road users by providing facilities and space for bikes so they do not encroach onto other users' space. This means that cyclists and motorists do not have to continually compete for road space.

The recognition of the bicycle as a vehicle is further evidenced by the RTA's education programs aimed at encouraging the sharing of roads by all road users.

Bike Riders are Vulnerable Road Users

Cyclists, unlike car drivers, do not have the protection of a heavy metal car body around them. Usually, the total amount of protection available to a cyclist is offered in the form of a helmet. Helmets do provide protection against head injuries, but not against collisions, poor riding skills and a hazardous or user "unfriendly" environment.

Changes in driver behaviour, and the implementation of education and enforcement programs are necessary, to allow cyclists a safer trip journey. Wagga Wagga City Council is instrumental in this area by initiating programs of road safety through their Road Safety Officer.



2.6 Methodology

The following methodology was used in the preparation of the Wagga Wagga City Council Bikeway Plan:

1. Formation of Steering Committee

Chaired by Deputy Mayor, Cr Kay Hull, the Steering Committee was represented by relevant Council personnel, RTA representatives, a bicycle retailer, and cyclists who were also members of various cycling clubs. (*See Appendix 7 for a list of the Steering Committee members.*)

2. Research

- Review of existing 1992 Bikeway Plan, relevant reports, safety audit and documentation of existing facilities.
- Identification of the missing links and bicycle trip generators.
- Identification (saddle surveys and consultation) and assessment of key routes used by cyclists, including routes considered hazardous.

3. Consultation / Surveys

- Extensive consultation and liaison with members of the general community as well as specific stakeholder groups, including bicycle riders, sports groups, bicycle user and advocate groups and the media. (*Appendix 5 presents the media articles appearing in local press and a list of the media interviews conducted.*)
- Quantitative surveys undertaken of stakeholder groups and the general community through:
 - a public information workshop;
 - a random questionnaire mailout (*Appendix 1 provides a copy of the questionnaire*);
 - distribution of questionnaires at key locations (*Appendix 1 provides a copy of the questionnaire and distribution points*);

4. Consolidation

Identification, costing and prioritised staging of the future bikeway network.



3.0 FORMULATION OF PROPOSED BIKEWAY NETWORK

3.1 Cycleway Philosophy

The development of the Wagga Wagga Bikeway Plan, 1997 is based on the integrated approach that bicycles are not an additional mode using the road network, but part of the traffic expected to be carried on the road system.

Bicycles are a serious and valid mode of travel to be encouraged. There are many roads in the study area which do not require specific work to make them bicycle safe, although sometimes providing logos, signposting, a change in pavement colour or a smooth riding surface will achieve an integrated facility.

At the local level, the overriding philosophy followed is that "all streets are bike streets," meaning that the objective of local road planning and engineering should be to safely integrate bicycles into local traffic.

The busy CBD is characteristic of high traffic volumes and high parking movements. A strategy to lower traffic speeds and reduce the number of travel lanes would allow dedicated space for cyclists. This environmental adaptation, or sharing of the streets, would benefit cyclists and make the area safer and more compatible for all users. It is recommended that further studies of the CBD incorporate cyclist needs into future action plans.

The integrated approach of bikeway planning can often be less expensive and is common in areas where bicycle facilities are being provided such as Albury, Dubbo, Melbourne and Sydney.

Within this philosophy of integration, the needs of the different types of cyclists (such as school children and recreational cyclists), and the full range of bicycle facilities (including on-road facilities, off-road paths, shared bicycle/pedestrian paths, linemarked bicycle lanes and so on) are considered in the development of the proposed cycleway network.

Along state highways and arterial roads, while the integrated approach is still preferred, full or partial off-road bicycle facilities may be required where heavy traffic, fast speeds or other factors warrant them.



3.2 Literature Review

The review of the existing Wagga Wagga Bikeway Plan, Wagga Wagga City Council, 1992 and identification of existing cycleways in Wagga Wagga were the starting points in determining the effectiveness and extent of cycleway implementation.

An examination of the 1992 Bikeway Plan and related information provided Cycle Planning with a list of issues to consider for inclusion into the 1997 Bikeway Plan. A cursory review of numerous Council reports and memoranda was undertaken in order to understand the existing situation for cyclists. Other documents reviewed include the following:

- Roads and Traffic Authority Southern Regional Safety Audits Wagga Wagga Cycle Paths (a) Gardiner and Boorooma Streets (b) Best Street Audit No 96/23, Rhodes Thompson Associates, December 1996.
- Comments on the Wagga Wagga City Draft Bikeway Plan, Citizens for Cycleways, Wagga Wagga.

3.3 Consultation and Liaison

Extensive consultation and liaison were undertaken in the course of the preparation of the Bikeway Plan.

The community was informed about the Bikeway Plan by media articles, radio announcements and questionnaires sent to selected households.

The questionnaire survey form was developed to gather information on cycling patterns, the attitudes of cyclists and non-cyclists and the provision of cycling facilities. A total of 1000 survey questionnaires were randomly distributed by mail, and additional questionnaires were available at key locations such as the three specialty bike shops, Council's reception area, the RAAF base, the Army base and at various sporting club meetings.

An information session was held to allow interested groups and individuals an opportunity to discuss aspects of the Bikeway Plan with the consultant and Council. The participants included members from the local bicycle shops and bicycle clubs, local cyclists and interested community members.

All participants were supplied with a survey questionnaire (Appendix 1) and a map to determine their cycling patterns, to identify problem spots for cyclists and to nominate preferred cycling locations.



The information session allowed for informal discussion and gave local cyclists the opportunity to meet like-minded people. Issues raised at the information session are summarised and presented in Appendix 6.

The consultant was in ongoing contact with a Council steering committee which provided guidance and assistance throughout the study.

The following groups were contacted during the course of the project:

- Members of the Steering Committee, Council Staff and Elected Councillors;
- Roads and Traffic Authority of NSW at both local and State level;
- Bicycle New South Wales;
- Cyclists during organised saddle surveys;
- Bicycle User Groups including the Triathlon Club, Army, RAAF, Wagga Wagga Bicycle Racing Club, Tolland Cycle Club and the Mountain Bike Club;
- Local school teachers; and
- Local Media.

3.4 Analysis of Survey Questionnaires

The review of the Bikeway Plan necessitated the following survey questionnaires:

- **Random Questionnaires** to gauge the numbers of cyclists and their needs;
- **User Group Questionnaires** to establish the routes currently used by cyclists, the facilities required to meet their needs, and the routes cyclists would like to ride; and
- **School Questionnaires** to identify the numbers of student cyclists, the routes they currently use, any school policies relating to cycling, and whether cycling is offered as a sport.

Issue of all questionnaires was accompanied by considerable media coverage of the review process. The number of responses to the questionnaires, when combined with the level of media support, should be seen as an indication of the positive community support for bikeways.



3.4.2 Random Questionnaire Analysis

The 1,000 questionnaires randomly delivered to households in the City of Wagga Wagga (including Forest Hill, Kapooka and Estella) were analysed as follows:

<i>RATIO OF CYCLISTS</i>	73% of respondents indicated they cycle						
<i>RATIO OF REGULAR CYCLISTS</i>	54% of respondents indicated they cycle on a regular basis						
<i>TYPE OF CYCLING TAKEN PART IN MOST OFTEN</i>	<table border="0"> <tbody> <tr> <td>Recreation</td> <td>45%</td> </tr> <tr> <td>Commuting</td> <td>26%</td> </tr> <tr> <td>Exercise/Fitness</td> <td>25%</td> </tr> </tbody> </table> <p>(Very low numbers indicated they cycled to school, but this could be attributed largely to the fact that the majority of respondents were aged 17 years or older).</p>	Recreation	45%	Commuting	26%	Exercise/Fitness	25%
Recreation	45%						
Commuting	26%						
Exercise/Fitness	25%						
<i>WHERE PEOPLE CYCLE MOST OFTEN</i>	<table border="0"> <tbody> <tr> <td>Roads</td> <td>82%</td> </tr> <tr> <td>Bushtrails/Firetrails</td> <td>12%</td> </tr> <tr> <td>Footpaths</td> <td>3%</td> </tr> </tbody> </table> <p>(It should be noted that: # whilst the majority of respondents cycle on roads, many indicated their second choice as footpaths, despite this currently being illegal; # those who indicated footpaths as their second choice were largely adults in the 26-59 year age bracket; # many people indicated by making separate written comments that they would like to cycle in parks, reserves, or have an area developed for family cycling; # the most commonly used parks etc were Apex Park, Willans Hill, BMX Track, Wiradjuri Walking Tracks / River, and Kapooka.)</p>	Roads	82%	Bushtrails/Firetrails	12%	Footpaths	3%
Roads	82%						
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Footpaths	3%						
<i>TYPES OF FACILITIES REQUIRED</i>	<p>The three main facilities required were:</p> <table border="0"> <tbody> <tr> <td>Marked cycle lanes on road</td> <td>41%</td> </tr> <tr> <td>Off-road commuter cycle paths</td> <td>22%</td> </tr> <tr> <td>Recreational cycle paths in parks</td> <td>16%</td> </tr> </tbody> </table> <p>(It should also be noted that: # First preference is noticeably for marked cycle lanes on roads; # The keenness for cycle paths in parks incorporates reserves, walking tracks, etc; # Of those who indicated a second choice of facility, the majority indicated "routes to schools, shops and transport"; # 5% of respondents indicated motor vehicle driver education as their first preference.)</p>	Marked cycle lanes on road	41%	Off-road commuter cycle paths	22%	Recreational cycle paths in parks	16%
Marked cycle lanes on road	41%						
Off-road commuter cycle paths	22%						
Recreational cycle paths in parks	16%						
<i>RESPONDENTS WHO DON'T CYCLE</i>	<p>The number of respondents who don't cycle were too few in number to establish any solid trends, other than a majority preference once again for marked cycle lanes on roads.</p>						



3.4.3 User Group Questionnaire Analysis

Questionnaires issued to the three specialty bike shops in the CBD, the RAAF, the Army, Council's Reception Area, the information workshop and to meetings of the various bike clubs were analysed as follows:

<i>RATIO OF CYCLISTS</i>	95% of respondents indicated they cycle												
<i>RATIO OF REGULAR CYCLISTS</i>	79% of respondents indicated they cycle on a regular basis												
<i>TYPE OF CYCLING TAKEN PART IN MOST OFTEN</i>	<table border="0"> <tbody> <tr> <td>Commuting</td> <td>48%</td> </tr> <tr> <td>Recreation</td> <td>23%</td> </tr> <tr> <td>Exercise/Fitness</td> <td>21%</td> </tr> <tr> <td>Racing</td> <td>4%</td> </tr> <tr> <td>To School</td> <td>2%</td> </tr> <tr> <td>Other</td> <td>2%</td> </tr> </tbody> </table> <p>(Very low numbers indicated they cycled to school, but this could be attributed largely to the fact that the majority of respondents were aged 17 years or older).</p>	Commuting	48%	Recreation	23%	Exercise/Fitness	21%	Racing	4%	To School	2%	Other	2%
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<i>WHERE PEOPLE CYCLE MOST OFTEN</i>	<table border="0"> <tbody> <tr> <td>Roads</td> <td>85%</td> </tr> <tr> <td>Bushtrails/Firetrails</td> <td>8%</td> </tr> <tr> <td>Other</td> <td>3%</td> </tr> <tr> <td>Footpaths</td> <td>2%</td> </tr> <tr> <td>Parks</td> <td>2%</td> </tr> </tbody> </table> <p>(It should be noted that: # whilst the majority of respondents cycle on roads, many indicated their second choice as footpaths, despite this currently being illegal; # those who indicated footpaths as their second choice were largely adults in the 26-59 year age bracket; # many people indicated by making separate written comments that they would like to cycle in parks, reserves, or have an area developed for family cycling; # the most commonly used parks etc were Apex Park, Willans Hill, BMX Track, Wiradjuri Walking Tracks / River, Pomingalarna and Kapooka.)</p>	Roads	85%	Bushtrails/Firetrails	8%	Other	3%	Footpaths	2%	Parks	2%		
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<i>TYPES OF FACILITIES REQUIRED</i>	<p>The main facilities required were:</p> <table border="0"> <tbody> <tr> <td>Marked cycle lanes on road</td> <td>52%</td> </tr> <tr> <td>Off-road commuter cycle paths</td> <td>30%</td> </tr> <tr> <td>Recreational cycle paths in parks</td> <td>5%</td> </tr> <tr> <td>Trails for mountain bike riding</td> <td>4%</td> </tr> <tr> <td>Routes to schools, shops and transport</td> <td>4%</td> </tr> </tbody> </table> <p>(It should also be noted that: # First preference is noticeably for marked cycle lanes on roads; # The keenness for cycle paths in parks incorporates reserves, walking tracks, etc;</p>	Marked cycle lanes on road	52%	Off-road commuter cycle paths	30%	Recreational cycle paths in parks	5%	Trails for mountain bike riding	4%	Routes to schools, shops and transport	4%		
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roads
paths in
and
paths for
driver
mountain bike
motor

Of those who indicated a second choice of facility:
- 20% stated marked cycle lanes on
- 20% stated recreational cycle parks
- 17% stated routes to schools, shops transport
- 16% stated off road cycle commuters.
- 12% stated motor vehicle education
- 10% stated trails for riding;
many respondents indicated vehicle driver education as being necessary.)

RESPONDENTS WHO DON'T CYCLE

The number of respondents who don't cycle were too few in number to establish any solid trends.

3.4.1 School Survey Questionnaire Analysis

Survey questionnaires issued to all schools to determine the cycling patterns of local students. The response rate to the questionnaire was 60%.

Of those who responded:

- 6 % of students cycled to school on the day of the survey;
- 44 % of schools have policies relating to cycling; and
- 19 % of schools offer cycling as a sport.

This information provides only a basic indication of the present situation in schools. More information is required to provide a detailed analysis. It is suggested that additional surveys could be undertaken at schools, at a later date, to receive more information about student cycle patterns and their needs. This would place Wagga Wagga Council in a better position to recommend programs to encourage safe cycling to schools.



3.5 Identifying Bicycle Trip Generators

Bicycle trip generators are generally places where cyclists like to cycle, such as parks, recreation facilities, shopping centres, educational establishments, and cycle tracks. Bicycle trip generators were identified through reviewing the existing Bikeway Plan 1992, and by consulting with cyclists through the information session and during the organised saddle surveys.

The trip generators are important and were identified prior to the establishment of the cycle network. This will ensure that the bicycle routes will pass bicycle generators and be used by cyclists. Some key bicycle trip generators relevant to Wagga Wagga include:

- Murrumbidgee River;
- Wagga Wagga Beach;
- Wagga Wagga Swimming Centre;
- Charles Sturt University;
- Kapooka Army Base;
- Wagga Wagga RAAF Base Forest Hill;
- Lake Albert Foreshores;
- Apex Park;
- Wiradjuri Walking Trail;
- Wagga Wagga CBD and Shopping Centre;
- Bolton Park;
- Wagga Wagga velodrome and
- Willans Hill



3.6 Saddle Survey

A saddle survey is an on-bike survey conducted to assess suitability and engineering constraints of proposed routes to form the bicycle network. The bicycle routes identified in the existing Bikeway Plan were saddle surveyed for inclusion into this updated Plan.

During the consultation and information sessions, local cyclists were given the opportunity to suggest their preferred cycling routes. Local cyclists suggested routes that would be required in any future network, due to their importance as connecting cycling generators or presently being unsafe to ride along. These identified routes were saddle surveyed by the consultant, with approximately 50 hours of saddle surveys being undertaken accompanied by local cyclists, and on one occasion with local media. This task assisted with identifying local "short cuts" and desirable alternative routes.

Whilst conducting the saddle survey, certain areas were identified as being black spots or having specific characteristics affecting cyclists. Examples of these particular locations include, Lake Albert Road, the missing link around Lake Albert adjacent to the Country Club, an alternative bicycle route to Lake Albert Road, Olympic Highway intersection into Wall Street and the link from the Hampden bridge to the Wiradjuri Bridge. These sites were also inspected on separate occasions with members from the steering committee, the RTA and cyclists, where assumptions on the practicality of the route for inclusion in the updated Bikeway Plan were made.

3.7 Classification of Bicycle Routes and Cyclists

There are several types of cyclists and related bicycle facilities that require consideration when developing a bikeway plan. The form of classification used in this report is based on the three factors as follows:

- Age - Adults and Children
- Where they Ride - Roads and paths/pavement
- Reason for Cycling - Transport and Leisure



3.7.1 Types of Cyclists and Related Profiles

To extend from the above three factors of classifying cyclists, five categories of cyclists are relevant to Wagga Wagga with their related profiles listed below:

- A. Longer Distance Commuter Cyclists (over 5km out of local area)
- B. Short Distance Commuter Cyclists (under 5km local area)
- C. Racing/Training Cyclists
- D. Recreational Cyclists
- E. Young Children

A summary explanation for each category of cyclist and their characteristics is as follows:

A. Longer Distance Commuter Cyclists

- Travelling over 5km in distance.
- Over 12 years old.
- Have developed cycling and handling skills.
- Will tend to travel a direct route (like a car driver travelling to work), scenery is a minor consideration.
- Bike used is practical, (may be a mountain bike or hybrid) and would definitely include repair kit, pumps, reflectors and may include panniers or backpack for carrying goods.
- Will require long term secure bicycle parking at destination.

B. Short Distance Commuter Cyclists

- Travels within the local area (generally trips under 5km).
- Over 10 years old.
- Cyclist variety from novice to expert.
- Travels to many places in the one trip eg library, swimming pool, shops and school.
- Will travel a little out of their way to make the journey more pleasant and away from heavily trafficked routes.
- Bicycle types vary.
- May carry goods in back pack, panniers or basket.
- Will require short term secure bicycle parking at various locations during the journey.



C. Racing or Training Cyclists

- Will ride long distances between 30 km and over 150 km per day.
- Has developed cycling and handling skills.
- Over 12 years old.
- Will probably ride with a group for a large portion of overall cycling.
- Will have racing bike frames that are not as rigid as mountain bikes.
- Bicycle tyres are skinny and fall easily into vertical drainage grates.
- Prefer a circuit or route that will not mean a head wind all the way.
- Will not ride on gravel or unformed surfaces.
- May only require short term bicycle parking (eg Triathlete at pool).

D. Recreational Cyclists

- May be one cyclist or part of a family group.
- Riding usually for fun or exercise.
- Younger children and adults ride together.
- Variety of skill levels from novice to expert.
- Prefer to ride along scenic routes away from traffic.
- Requires information on related facilities such as picnic areas, bubblers, and bike parking.
- Want to be aware of how long ride will take.

E. Younger Children (Under 10 Years Old)

- Usually ride with friends near home.
- Ride for fun and to become independent.
- Usually ride on foot paths or prefer off-road paths.
- Ride both supervised and unsupervised.
- Do not have an understanding of road rules.
- Do not have the skills necessary to ride on the road.
- Require an area that is away from the traffic and direct to home.



3.7.2 Types of Bicycle Facilities

Bicycle facilities that are required to provide a network of cycleways for the above cyclists consist of:

- On-road facilities;
- Off-road facilities
- Bicycle parking and end trip facilities.

A. On-Road Facilities

On-road cycleways have been recommended within the Wagga Wagga area to facilitate cyclists who are expected to be travelling at fast speeds averaging approximately 25 km per hour. On-road cycleways have been planned for confident and experienced teenage and adult commuter cyclists and for athletes and sports persons training for cycle racing, triathlon, skiing, and general fitness.

On-road cycleways along local streets can cater for school riding trips once the facilities in place are identifiable as being cycleways and the use of the on-road routes are understood by all users. Points to consider when implementing school routes are summarised in Section 4.1.2.

The on-road cycleways will take the form of linemarked kerbside bicycle/car parking lanes and smooth linemarked road shoulders. Coloured spray seals may be included along these routes to make facilities easily identifiable by all road users. The on-road facilities combine to provide a network along local routes.

B. Off-Road Facilities

Off-road facilities include off-road recreational paths and off-road commuter paths.

The off-road cycleways or cyclist/pedestrian shared zones that have been recommended for the Wagga Wagga area will take the form of shared pedestrian/cycle paths of a preferred minimum width of 2.5 metres with a reservation to allow for landscaping where appropriate. Removing established vegetation to provide a wide cycle reservation is not a preferred option. However, vegetation restricting vision and safety will need to be reviewed.

The shared paths will be provided to facilitate primary school children, novice cyclists wishing to experience a leisurely bicycle ride and novice commuters. The paths will also cater for pedestrians, joggers and the like.



A major off-road path to be provided in the first stage of implementation will be the off-road link along the Murrumbidgee River Levee connecting the CBD of Wagga Wagga to the Wagga Beach, Tourist Information Centre and commuting alternatives to Tarcutta Street and Hammond Avenue.

Off-road paths can be formed in concrete, asphaltic concrete, pavers, bricks or left unformed, with compaction of the existing material. Both on and off-road routes require connection with bicycle parking racks and end trip facilities such as showers and lockers.

Appendix 3 presents desirable features for an off road cycle/pedestrian path. Bicycle parking at the end point of the cycleways can be provided in the type of racks and lockers presented in Appendix 4. Other end trip facilities that require provision are showers, change rooms and lockers to store bicycle equipment and are detailed in Australian Standard AS 2890.3 1993.

C. Local Network

Local routes connect the state, collector and arterial routes to the local precinct level. Local routes are designed to be suitable for a variety of users - children, novice cyclists and family groups. Shorter connecting commuting and recreational trips should all be able to be made on local routes. The local routes and facilities identified in this plan are a combination of on and off-road routes. The local facilities generally pass bicycle trip generators such as schools, shops, open space, recreation and industry.

D. State Network

The State routes cover cycleways of strategic importance to the New South Wales network. State routes cover longer distance cycling trips and are used by commuters and training cyclists who have similar demands to motor vehicle drivers wanting a fast, direct route with few crossing points and potential conflict areas. These cyclists ride on roads with more traffic, generally at speeds over 25km/hr.

At times where state roads are less trafficked, such as early morning weekend times, these roads can become a suitable area for local and recreational cycling to take place.

The State network of bicycle routes has been highlighted by the RTA in its preparation of the Draft NSW Bike Plan. This plan illustrates the RTA's commitment to a balanced transport system which provides choices for all users. The exact location of the State routes relevant to Wagga Wagga are not certain at this point, due to the NSW Bike Plan being at a draft stage.



Cycling has an important role in a balanced system, because it is economical and efficient for local journeys, environmentally friendly and good for health.

The NSW Bike Plan sets out the RTA's plan of action to ensure the needs of cyclists are met. It shows how the RTA is working with a wide range of interested groups to promote and encourage safe and efficient cycling.

The RTA has a bicycle policy that states the following:

"Recognising the considerable environmental benefits, the Roads and Traffic Authority is committed to the use of cycling as a transport mode and to the provision of safe and convenient cycling facilities."

Strategies of the NSW Bike Plan are:

- Providing bicycle travel facilities such as regional bicycle networks;
- Providing a safe environment for cyclists by developing standards and through involvement in bicycle education;
- Providing options for transport balance;
- Providing accessibility; and
- Planning for a sustainable future.

The aims of the above strategies, generally are to:

- Reduce the impact of travel on the total transport system
- Increase access and equity and
- Increase community health and quality of environment

Specific aims of the NSW Bike Plan are to:

- Reduce bicycle commuting times between and to major urban centres;
- Increase public transport usage by improving the links between bicycle and public transport; and
- Reduce the number of cycling fatalities and injuries in traffic.

Bicycle safe facilities on arterial roads may form links in the state network, but routes may follow local roads or off-road paths. In Wagga Wagga, the State network of roads connects training and commuting cyclists to Forest Hill, Kapooka, Junee and Ashmont.

It is imperative that future road works and maintenance along State roads recognises the needs of cyclists, and cycleway provision where possible is carried out simultaneously with other works. The RTA policy for cyclists should be demonstrated through the provision of bike facilities along main roads or along more practical alternative routes.



4.0 BICYCLE ACTION PLAN

4.1 Network of Routes and Proposed Staging

4.1.1 Staged Implementation

The routes proposed for future implementation have originated from the existing Bikeway Plan with alterations made to consider present and proposed traffic conditions, the location of existing cycle facilities and the concerns of the community expressed during community consultation and within the survey responses.

The staging of the implementation of the 1997 Bikeway Plan reflects Council's review aims, the requirements of the Roads and Traffic Authority Southern Regional Safety Audits Wagga Wagga Cycle Paths. Audit No 96/23, Rhodes Thompson Associates, December 1996 and concerns voiced during the steering committee meetings.

The implementation of the Plan has been staged into five prioritised stages over a period of ten years, with stage 1 being the first stage of implementation and stage 5 being the final stage of implementation. An additional stage "F" has been included denoting possible future routes.

Implementation of the bicycle network can be brought forward from the staging recommended in this Bikeway Plan and instead be carried out simultaneously with regular maintenance and road works as identified in Council's Works program. The implementation time frame of bicycle facilities made possible as a consequence of securing special project funding or grants should be completed as funds become available.

The staged implementation of the Bikeway Plan will provide for both on-road and off-road cycling routes, bicycle parking and end trip facilities. Cycle routes and associated facilities will cater for a variety of bicycle riders including commuter, recreation, tourist, school children and sports training.

4.1.2 Staging Criteria

The specific criteria used to stage the implementation of the Bikeway Plan was developed in consultation with the steering committee. The criteria assesses the use of the proposed routes, eg for transport or recreation, the probable type of cyclists who will be using the route, the number of land-use generators along the route and the potential for bike routes to encourage bicycle use.



The criteria has been developed to favour routes that connect a number of bicycle generators. Roads and paths identified for future road works and maintenance are viewed highly, as cycleways can often be incorporated into the usual construction or maintenance schedule at a lower cost than constructing cycleways in isolation.

The first route planned for implementation has been chosen due to it being a high profile route that will service the local residents and tourists of Wagga Wagga. The bicycle route is expected to have high usage rates and is seen as a means of encouraging greater levels of cycling.

Main issues of consideration, include the development of a network of routes that can be implemented in stages with main arteries of travel being constructed then feeder routes linking onto the bicycle arteries. The first stage high profile/high use route should provide a multi-use path for various types of cyclists and encourage tourists to Wagga. The remaining four stages, provide safe cycling experiences for commuting, recreation and training and are staged appropriately to provide bicycle routes ranked in importance from on-road commuting routes, off-road commuting routes to off-road recreational paths and training routes.

The main features of the five stages of implementation are discussed below:

Stage 1 Implementation Includes:

- Providing the facilities as outlined in the "Southern Region Safety Audits Wagga Wagga Cycle Paths".
- The initial preparation and clearing works along main corridor of the Murrumbidgee River Levee to be developed as a multi-use path for commuting, recreation and tourism purposes catering for adults and children. High profile encouragement route.
- Provision of first stage of on-road CBD routes.
- Rectification of existing hazardous facilities, such as removal of bollards along existing cycleways.
- Provision of bicycle parking.
- Negotiations with bodies such as the Army, RAAF and the Lake Albert Country Club to "get the ball rolling" for future cycleway provision.
- Signposting of the Gregadoo loop, a main training route.

Stage 2 Implementation Includes:

- Continuation of CBD routes.
- On road commuting routes.
- School route (Bourke Street railway route).
- Rectification of existing off-road path.
- Rectification of route to University and Estella.



Stage 3 Implementation Includes:

- Continuation of Wagga - Mount Austin - Glenfield Park commuting routes.
- Off road commuting routes including Ashmont - Turvey Park to CBD and University North Wagga Wagga routes.
- On-road works of a main training route - Gregadoo loop.
- Alternative on-road routes to Lake Albert.

Stage 4 Implementation Includes:

- on-road works of a main training route -Gregadoo loop.
- main shoulder repair on commuting and training routes such as Forrest Hill.
- main off-road commuting paths including Ashmont- Turvey Park to CBD and Mount Austin to Glenfield Park.

Stage 5/Future Implementation Includes:

- Off road recreational facilities.
- Other off road commuter links.
- Completion of on-road commuter routes.
- Routes that are currently being built or have current negotiations under-way such as the Kapooka to Wagga Wagga Route and Forest Hill to the CBD.

The fifteen main routes forming the proposed Bikeway network are listed in the following table. Main bicycle generators relevant to each route are also included. The specific implementation works required are discussed in section 4.1.3.



PROPOSED BICYCLE ROUTES AND GENERATORS

Name of Route	Generators Relevant to Route
Route 1: CBD to Koorlingal	Murrumbidgee River, Wagga Beach, Cemetery, Sports Centre, CBD activities
Route 2: Alternative route Lake Albert access	Henwood, Park, Lake Albert, Willans Hills, Sacred Heart School, Sturt School
Route 3: CBD routes	CBD activities including major shopping arcades, Wagga Beach, Tourist Information Centre, Bolton Park, Wollundry Lagoon, Morrow Street Rest Centre, Swimming Centre, Velodrome, Bicycle shops, Base Hospital, railway station
Route 4: University / North Wagga to CBD	Charles Sturt University, North Wagga residential area, Estella residential area, Wilks Park, Wiradjuri Bridge and walking track
Route 5: Bourke Street	Base Hospital, Showground, Mount Austin High School, Gissing Oval, Jubilee Park, Tolland Squash Centre, Henschke School, Mount Austin Public School
Route 6: Railway Street	Willans Hill, railway station, TAFE, Trinity High School, Mt Erin High School, Wagga High School
Route 7: Forest Hill to Lake Albert	Training routes, RAAF Base, Lake Albert, Country Club, Rawlings Park, Apex Park
Route 8: Glenfield Park to Turvey Park	Jubilee Park, Anderson Oval, Maher Oval, Botanic Gardens, Henschke Primary School, Gissing Oval
Route 9: Wagga Wagga to Mount Austin	Mt Austin High School, Wagga High School, Mt Erin High School, Trinity High School, Wollundry lagoon, existing bike route, Harris Park, Memorial Gardens
Route 10: Kapooka to Wagga Wagga	Kapooka Army Base, recreation area for public use, training route
Route 11: Mount Austin to Glenfield Park	Mt Austin High School, Anderson Oval, Maher Oval, Haven Nursing Home
Route 12: Ashmont to Turvey Park and CBD	Best Park, Showground, Ashmont Public School, Holy Trinity Primary School
Route 13: Glenfield Park to Lake Albert	Jubilee Park, Lake Albert, Bourkelands, Tatton, Lutheran School
Route 14: Recreational Routes	Lake Albert, proposed Northern Lake, Apex Park, Willans Hill, Botanical Gardens, Memorial Gardens, Wollundry Lagoon, Rawlings Park
Route 15: Gregadoo Loop	Lake Albert, Racing club route, Training route



Apart from the routes outlined in the 5 stages of implementation, it is imperative that the implementation of bicycle routes along State roads occurs. The timing of this exercise will depend on the commitment of the RTA and the funds available for cycling facilities.

Roads such as Lake Albert Road, planned for future redesign and maintenance works should be provided with bicycle facilities (as outlined in Austroads Part 14) during the period of reconstruction/maintenance.

Other bicycle generators such as the Botanic Gardens, Bolton Park, the Memorial Gardens and Willans Hill should consider the needs of bicycle riders as a matter of course when facilities are provided. A listing of the bicycle generators, including the above, should be incorporated into future promotional brochures.

4.1.3 Detail of Engineering Works

The existing bicycle routes and proposed network of bicycle routes are presented on the following pages. The individual engineering treatments presented are based on the requirements of the bicycle Guideline (Austroads Part 14 - Guide to Traffic Engineering). Appendix 3 presents typical drawings to assist with the engineering implementation.

The costs associated with the staged implementation of the future bicycle network have been provided by Council, a summary of which follows:

SUMMARY OF COSTS AND STAGING

Stage	Year	Necessary Funding
1	1	\$267,500
2	2	\$308,175
2	3	\$308,175
3	4	\$106,375
3	5	\$106,375
4	6	\$270,100
4	7	\$270,100
5	8	\$303,700
5	9	\$303,700
5	10	\$303,800

TOTAL BUDGET \$ 2,548,000



Route Name	Location	Service	On/Off	Priority	Cost (\$)	Notes
1.10 Routes in Audit Report						
Boonora and Best St Routes						
1.20 Ashmont to CBD	Kincaid	Moorong to Fitzmaurice	on	2	\$5,000	shared parking and bike lanes
1.30 Levee route	Levee top and toe	Wiradjuri Br. to Copland St.	off	1	\$30,000	Important commuter, tourist and recreational link
1.40 Levee route	Levee top	Wiradjuri Br. to beach carpark.	off	1	\$24,000	800m @ \$30/m includes railing and edging
1.50 Levee route	Church St.	Johnston to Playhouse	on	1	\$1,000	to be replaced on river in stage 2
1.60 Levee route	Levee top and toe	Playhouse to Copland St.	off	1	\$47,000	2.7 km. @ \$17/m - seal ramp sections
1.70 CBD to Koorlingal	Koorlingal Road	Plumpton to Copland	on	1	\$52,000	southbound - allow 4km of shoulder widening and 2 coat seal @ \$13/m. Includes signs and markings
1.80 CBD to Koorlingal	Koorlingal Road	Copland to Vincent	on	1	\$28,000	northbound - 1.9 km. @ \$15/m
1.90 Red Hill Rd. Route	Red Hill Rd.	Plumpton to Bourke	on	2	\$5,000	signs and markings

Correction action needed

\$15,000

Wagga Wagga Bikeway Plan Review

2.00 Recreational	Lake Albert	Kooninga to Easialite	on	sealed shoulders	2	\$25,000	1	widen shoulders and 2 coat seal. connect to gravel path along Lake Albert
2.10 Wagga Wagga to Mount Austin	Trevor	Urana to Coleman	on	signposting	2	\$2,000	1	shared parking and bike lanes
2.20 Wagga Wagga to Mount Austin	Norman	Coleman to Cassidy	on	edgeline and logos	2	\$2,700	1	shared parking and bike lanes. Connect to Brookong via Cassidy
2.30 Wagga Wagga to Mount Austin	Brookong	Cassidy to Murray	on	edgeline and logos	2	\$1,800	1	shared parking and bike lanes
2.40 Wagga Wagga to Mount Austin	Murray	Brookong to Beckwith	on	edgeline and logos	2	\$2,400	1	shared parking and bike lanes
2.50 Wagga Wagga to Mount Austin	Beckwith	Travers to Esplanade	on	edgeline and logos	2	\$3,300	1	shared parking and bike lanes
2.60 Wagga Wagga to Mount Austin	Travers	Beckwith to Wiradjuri Br	on	edgeline and logos	2	\$5,000	1	some squeeze points. widen path to beneath bridge
2.70 CBD Routes	Day St	Leves to Tarcutta	on	edgeline and logos	2	\$2,000	1	shared parking and bike lanes
2.80 Forest Hill to Lake Albert	Inglewood Rd	Elizabeth to Mitchell	on	signposting	2	\$5,000	1	Very popular commuting and training route. Presently hazardous
2.90 Kapooka to Wagga Wagga	Army Base to Glenfield Park	Dalman Avenue to Kapooka Drive	off	grade surface to provide path	1	nil	1	negotiations to continue
3.00 Recreational	Country Club	Missing link Boat club to Lakeside	off	Negotiations to provide boardwalk	nil	nil	1	Solution required
3.10 Recreational	Apex park		off	remove bollards and replace	1	\$100	1	Currently hazardous
3.20 Gregadoo Loop	Gregadoo Road	Plumpton to Elizabeth	on	Signpost	2	\$2,100	1	At present well used and unsafe



Wagga Wagga Bikeway Plan Review

3.30 Gregadoo Loop	Elizabeth Av	Gregadoo to Inglewood	on	Signpost	2	\$2,100	1	At present well used and unsafe
3.40 Bicycle Parking Facilities	as listed in Table 3.4					\$7,000	1	at Berry St carpark



2.10 Wagga Wagga to Mount Austin	The Esplanade	Forsyth to Best	on	edgeline and logos	2	\$3,000	2	shared parking and bike lanes
2.20 CBD Routes	Morgan St	Tarcutta to Baths	off	widen footpath to 2.5m	1	\$22,000	2	400 m. @ \$55/m
2.30 Bourke St	Bourke	Redhill to Fernleigh	on	service road use dropped kerbs	2	\$10,000	2	Necessary, as Bourke St along this section is too narrow for cyclists
2.40 Bourke St	Bourke	Fernleigh to Coleman	on	edgeline and logos	2	\$3,600	2	
2.50 Turvey Park Route	Coleman	Bourke to Norman	on	edgeline and logos	2	\$3,000	2	shared parking and bike lanes
2.60 CBD Routes	Morgan St	Murray to Best	on	edgeline and logos	2	\$5,000	2	Morgan St between Best & Tarcutta requires all 4 lanes for general traffic so shared parking lane not possible.
2.70 Ashmont to CBD	Best Park	Ashmont to Edward	off	2.5 m wide gravel path	1	\$38,000	2	1.5 km. @ \$25/m - bridge and crossing of SH 2
2.80 Ashmont to CBD	Moorong	Edward to Kincaid	on	signs and markings	2	\$2,000	2	on existing shoulders
2.90 Rawlings to Apex	Rawlings Pk	Power to Daisy Vincent	off	Ganite path	1	\$18,000	2	



2.10	Forest Hill to Lake Albert	Lake Albert Rd	Main to Eastlakes	on	edgeline and logos	2	\$1,800	2	Popular route. Presently hazardous
2.11	CBD Routes	Coleman	Macleay to Young	on	edgeline and logos	2	\$6,000	2	
2.12	University / North Wagga Wagga to CBD	Link from Hampden Bridge to Wiradjuri Bridge	off road link and dropped herb near Crampton	off	off road path and dropped kerb for 50 metres in length	1	\$4,500	2	
2.13	CBD Routes	Coleman	Bourke to Macleay	on	edgeline and logos	2	\$8,000	2	
2.14	CBD to Koorringal	Levee Bank	Wagga Beach to Hampden Bridge	off	flush seal / asphaltic concrete to 2.5 m wide	1	\$36,000	2	Existing Levee Bank is less than 2.5m wide. Cadeil p section has a 3 m high retaining wall and requires safety fence
2.15	CBD to Koorringal	Levee Bank via Church St	Tourist info centre to Wagga Beach	off	flush seal / asphaltic concrete to 2.5 m wide	1	\$9,000	2	Important commuter, tourist and recreational link. Consider along "rocker" area to beach
2.16	CBD to Koorringal	Levee Bank	Railway line to Tourist Information centre	off	flush seal / asphaltic concrete to 2.5 m wide	1	\$45,000	2	Cost based on gravel @ \$20 per metre. Obstructions exist.
2.17	CBD to Koorringal	Marshall's Creek	Railway line to Copland	off	flush seal / asphaltic concrete to 2.5 m wide	1	\$72,000	2	Important commuter, tourist and recreational link
2.18	Bourke St	Bourke	Docker to Best following railway line	off	gravel path 2.5 m wide	1	\$20,000	2	Good alternative route to road particularly for school children
2.19	Glenfield Park to Turvey Park	Glenfield Rd	Red Hill to Pearson	on	provide shoulder and logos	2	\$180,000	2	
2.20	Wagga Wagga to Mount Austin	Edmondson	Coleman to Edward	on	rectify squeeze point	1	\$100,000	2	requires further clarification



Wagga Wagga Bikeway Plan Review

2.21	Wagga Wagga to Mount Austin	Macquarie	Heath to Northcote	on	signposting	2	\$450	2	
2.22	University / North Wagga Wagga to CBD (part of current works)	Wall St	into Wilks Park area	off	pedestrian refuge crossing	1	\$15,000	2	Necessary treatment to avoid Olympic Highway
2.23	University / North Wagga Wagga to CBD	Wilks Park / Olympic Highway	through Wilks Parks (avoid Parken Pregarin Bridge)	off	off road path gravel through park	1	\$18,000	2	Allowance made to cross floodway with some robust construction
TOTAL COST STAGE 2 ESTIMATE									
3.1	Wagga Wagga to Mount Austin	Heath	Fernleigh to Macquarie	on	signposting	2	\$450	3	
3.2	Mount Austin to Glenfield Park	Dalman Parkway	Red Hill to Glenfield	on	edgeline and logos	2	\$4,200	3	
3.3	Mount Austin to Glenfield Park	Pinaroo Drive	Dalman to Fernleigh	on	edgeline and logos	2	\$3,300	3	
3.4	Ashmont to Turvey Park and CBD	Ashmont AV	Mc Nickle to Dobney	on	edgeline and logos	2	\$5,400	3	
3.5	Ashmont to Turvey Park and CBD	Drainage Easement from Best Park	Ashmont to Edward	off	path 2.5 m wide gravel	1	\$22,000	3	
3.6	Glenfield Park to Lake Albert	Red Hill	Dalman to Kooritgal	on	shoulder and 2 coat seal. Logos	2	\$126,000	3	Well used route. Currently unsafe

3.7 Alternative Route for Lake Albert Access	Grove St	Stanley to Lord Baden Powell	on	2 signposts	2	\$300	3	
3.8 Alternative Route for Lake Albert Access	Warrarong St	Lord Baden Powell to Lake Albert	on	2 signposts	2	\$300	3	
3.9 University / North Wagga Wagga to CBD	Wilkes Park / Olympic Highway	through Wilkes Parks (avoid Parken Prager Bridge)	off	off road path asphaltic concrete through park	1	\$33,000	3	Allowance made to cross floodway with some robust construction
3.10 Forest Hill to Lake Albert	Elizabeth Avenue - eastern side	Altonby to Railway Crossing	on	shared bicycle parking lane east side only	1	\$2,700	3	
3.11 Ashmont to Turvey Park and CBD	Tobruk	Fernleigh to Ashmont	on	edgelane and logos	2	\$2,100	3	
3.12 Ashmont to Turvey Moorong Park and CBD	Moorong	Kinkaid to Travers	on	signposting	2	\$1,650	3	
3.13 Ashmont to Turvey Bubolo Park and CBD	Bubolo	Fernleigh to Ashmont	on	signpost	2	\$1,350	3	
3.14 Ashmont to Turvey Edward Park and CBD	Edward	Moorong to Veale connection	off	path 2.5 m wide gravel	1	\$10,000	3	
3.15 CBD to Koorlingal	Beronia	Fay to Sherwood	on	logos	2	Council to provide estimates	3	
3.16 Alternative Route for Lake Albert Access	Grove St	Stanley to Lord Baden Powell	on	logos	2	Council to provide estimates	3	
3.17 Alternative Route for Lake Albert Access	Warrarong St	Lord Baden Powell to Lake Albert	on	logos	2	Council to provide estimates	3	



Item	Location	Notes	Quantity	Unit Cost	Total Cost
4.1 Bourke St	Bourke	Dooker to Best following railway line	1	\$45,000	\$45,000
4.2 Railway St	Railway St	Macleay to Lake Albert Rd	2	\$2,100	\$4,200
4.3 Forest Hill to Lake Albert	Elizabeth Avenue - western side	Allenby to Railway Crossing	1	\$45,000	\$45,000
4.4 Wagga Wagga to Mount Austin	Northcott	Levernworth to Macquarie	2	\$1,800	\$3,600
4.5 Ashmont to Turvey Park and CBD	Drainage Easement from Best Park	Ashmont to Edward	1	\$49,500	\$49,500
4.6 CBD to Kooringal	Ziegler	Kooringal to Fay	2	\$3,300	\$6,600
4.7 CBD to Kooringal	Fay	Lake Albert Rd to Ziegler	2	\$1,200	\$2,400
4.8 CBD to Kooringal	Boronila	Fay to Sherwood	2	\$1,800	\$3,600
4.9 Forest Hill to Lake Albert	Elizabeth Avenue	Railway Crossing to Inglewood	1	\$20,000	\$20,000
4.10 Forest Hill to Lake Albert	Mitchell Rd	Gregadoo to Kyeamba	2	\$5,000	\$10,000

If linemarking can not be achieved paint logos instead

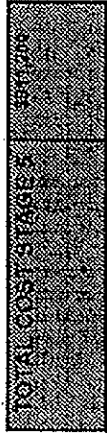

Provides safe direct off road link

Wagga Wagga Bikeway Plan Review

4.11	Forest Hill to Lake Albert	Brunskill Rd	Main to Mitchell	on	provide shoulder and logos	2	\$90,000	4	road widening and 2 coat seal
4.12	Forest Hill to Lake Albert	Plumpton Rd	Gregadoo to Koorngal	on	provide shoulder and logos	2	\$140,000	4	
4.13	Glenfield Park to Turvey Park	Femleigh Rd	Silvalka Reserve (near Glenfield) Cameron to Macleay	on	edgeline and logos	2	\$12,000	4	
4.14	Mount Austin to Glenfield Park	Maier Easement adjacent Bourke to Dalman Parkway		off	path 2.5 m wide gravel	1	\$56,000	4	
4.15	Ashmont to Turvey Park and CBD	Veale	Ashmont to Edward	off	2.5 m wide asphaltic concrete path	1	\$45,000	4	provides safe alternative to existing road
4.16	Ashmont to Turvey Park and CBD	Edward	Moorong to Veale connection	off	path 2.5 m wide asphaltic concrete	1	\$22,500	4	
5.1	Recreational	Country Club Missing link		off	provide boardwalk for pedestrians and cyclists	1	\$105,000	5	have allowed for driven poles & framing with hardwood transverse decking
5.2	Recreational	Victory Memorial Gardens	link to Civic centre	off	seal existing grassed area with gravel	1	\$20,000	5	necessary link CBD
5.3	CBD to Koorngal	Koorngal Road	Plumpton to Copland	on	shoulder widening	1	\$52,000	5	northbound - allow 4km of shoulder widening and 2 coat seal @ \$13/m. includes signs and markings
5.4	CBD to Koorngal	Copland	Koorngal to Lake Albert	on	not wide enough for edgeline consider signposting	2	Council to provide estimates	5	

TOTAL COSTS STAGE 1 \$1,000,000



5.5	CBD to Koorringal	Kyeamba	Koorringal to Mitchell	on	not wide enough for edgeline consider signposting	2	Council to provide estimates	5
5.6	CSU route	Parken Pregar Bridge	Widen to allow a ped/cycle path	off	off road path asphaltic concrete, cantilever on bridge	1	\$6,000	5
5.7	Ashmont to Turvey Park and CBD	Chaston	Pearson to Bourke	on	edgeline and logos	2	\$2,700	5
5.8	Gregadoo Loop	Gregadoo Road	Plumpton to Elizabeth	on	shoulder work	2	\$550,000	5
5.9	Recreational	Rawlings Park	link to Lake Albert	off	seal existing path	1	\$157,500	5
5	CBD Routes	Travers	Moorong to Beckwith	off	of road path gravel within road reservation or turf club	1	\$18,000	5
								
	Kapooka to Wagga Wagga	Army base to Glenfield Park	Dalman Avenue to Kapooka Drive	off	path 2.5 m wide asphaltic concrete	1		F
	Kapooka to Wagga Wagga	Army base to Glenfield Park	Dalman Avenue to Kapooka Drive	off	path 2.5 m wide gravel	1		F
	Mount Austin to Glenfield Park	Easement adjacent to Dalman Parkway	Bourke to Redhill	off	path 2.5 m wide asphaltic concrete	1		F
								



Further Investigation List

Link Kapooka to Pomingalama and to Wiradjuri walking track on west side of Wagga

Picnic area on Gregadoo loop

Lake Albert Rd. - Warrawong to Edward (possible stage 2)

Tarcuttia to Morgan (possible stage 2)

Morgan St. - Best to Berry

Matters raised by Bill Johnston

Visitor Centre to Esplanade (possibly via underpass of Wolundry Bridge

Grove St - south to Red Hill Rd.

Cycle adventure playgrounds in neighbourhood parks



4.2 Bicycle Parking and Storage Needs

Provision of secure bicycle parking and end trip facilities is an important element in encouraging the use of bicycles as a mode of travel for shopping, work and recreational trips. To be effective, bicycle parking needs to be secure, capable of supporting the bicycle without damage and be located where it is accessible to cyclists, in public view and where it does not inhibit pedestrian flow.

Successful commuting by bicycle is only possible when parking is available at one's destination and cyclists are assured that bicycle parking is easy to use and provides security for their bikes.

End of trip facilities such as change rooms and showers should be provided at places of employment, education or near trip generators to encourage cycle use.

It is recommended that bicycle parking be provided by developers as a condition of development consent and be included within Council's Parking Code.

Generally, a mix of bicycle parking needs to be considered for short and long stay parking. Short stay parking facilities (such as inverted U rails) are suitable for recreational and shopping trips, while bike lockers are more appropriate for long stay and regular users (work trips and commuting).

Bicycle Parking facilities are required in various locations throughout the City. Table 3.4 presents these locations. Bicycle racks and lockers have been recommended to be provided at stage 1 of implementation. Each bicycle rack can park two bicycles. Installation costs vary depending on the number of racks requested and the required number per location. The racks are also referred to as leaning U rails and can be fabricated by bending steel into the shape of an inverted U.

The racks described above are the type recommended in the **Australian Standard AS 2890.3 1993** for bicycle parking. U racks are preferred to the traditional "toast racks" that have been provided in the past. The "toast racks" are unsuitable as they can cause damage to the front wheel of the bike and do not provide an area to securely lock the entire frame of the bike.

Additional information about bicycle parking, types and placement of facilities can be obtained from Australian Standard AS 2890.3 1993. Appendix 4 provides examples of bicycle parking types.

Bicycle parking U rails should be provided at the locations detailed on the following page, and two bicycle lockers be negotiated for trialing at the Wagga Wagga Market Place. The bicycle parking locations should be monitored on a regular basis and additional bicycle parking be provided on a needs basis.



It is suggested that Council facilitate bicycle parking within the paid area of the swimming centre. This may encourage athletes such as triathletes, runners and cyclists who presently drive to the Centre for fear of having their bicycles stolen to ride instead.

Locations for bicycle parking

- * **Parks, recreation areas and open space areas**
 - Wagga Wagga Swimming Centre, inside paid area
 - Apex Park Lake Albert
 - Wagga Wagga Beach
 - Botanical Gardens

 - * **Major Shopping Centres and Central Locations**
 - Wagga Wagga Market Place
 - Carpark ramp - new Council car park ???
 - Baylis Street at selected locations at front of shops
 - Rest Centre Morrow Street, to include parking racks and commuter showers in rest centre.
- Tourist Info Centre???

5.0 BICYCLE PROGRAMS

5.1 Encouragement Programs

5.1.1 General Encouragement

Bicycle encouragement programs are used to promote cycling in the community as a form of exercise and transport. The review of the Bikeway Plan in itself is an encouragement measure.

This project will enable changes in the local road environment to occur such as the installation of signposting to alert motorists about cyclists on the road, linemarking painted on the road delineating the space to be used for cycling, coloured sealing of cycleways and the sharing of paths by pedestrians and cyclists. The installation of secure bicycle parking facilities will allow for commuter cycling to take place, further encouraging cycling.

Building the cycleways recommended in this report will assist to further encourage other neighbouring councils to provide bicycle facilities and to use Wagga Wagga as a centre to learn about bicycle planning.



Localities that have provided bikeways notice that people do start to ride bikes once facilities are built. In Camden this is evident where an off-road recreational path along the Nepean river is very popular and used daily by cyclists; at Sutherland where an on-off road route from Cronulla to Kurnell provides a commuter and training ride and at Dubbo where cyclists are able to ride from Dubbo CBD, west with a tourist connection to the Western Plains Zoo. Providing bicycle routes on the ground will satisfy the main aim of any bikeway plan, which is ultimately to provide a safe and satisfying ride.

The health benefits of cycling require reinforcing, with cycling being one of the safest forms of exercise, with the only real danger being from lack of riding experience and busy roads.

The promotion of cycling as a healthy pastime and the publicity of the proposed route from the Tourist Information Centre along the river levee will entice tourists to visit Wagga Wagga to enjoy the river and local cycleways. Wagga Wagga's Tourism Board and Regional Development Board may wish to publicise the network of cycleways in promotional brochures.

Encouraging cycling is not only for younger members of the population. In overseas countries such as Denmark, where cycleways are available, the senior population enjoys bicycle riding. This allows for more independent travel to visit friends without the need for a car. Where retirement villages are in existence, benefit would be gained by the use of cycle routes for exercise and transport.

Each year "Bike Week" takes place where bicycle displays, bike rides and other bicycle related activities are held. Wagga Wagga PCYC, Wagga Wagga Council and the RTA are involved in this week and should continue to promote safe cycling in future Bike Week events.

Bicycles are durable forms of transport that are fast and pollution free in their operations. There is a need to promote the clean air properties of bicycle riding. For every person making a trip on bicycle instead of using a car, there is less pollution, less fuel used and less space taken on the road.

For every car parking space provided a total of ten bicycles could be parked in the same area. This benefit requires reinforcing when planning authorities are promoting cleaner cities with environmental friendly travel modes and less car parking. Cycling can be encouraged by providing bicycle parking and end trip facilities at all existing bicycle generating developments and all future developments should require bicycle parking.

The encouragement and use of the bicycle as a viable transport form will only be achieved when all government bodies recognise cycling to be a legitimate transport option and encourage its use.

All new bicycle facilities that are built or provided should be advertised so that the community is made aware of them.



5.1.2 Encouraging Children to Ride to School

Schools in Wagga Wagga should be actively promoting cycling as a sport and this will be made more viable with the implementation of the Bikeway Plan. From the survey of schools conducted during this study it is illustrated that approximately 19 percent of schools responding to the survey presently offer cycling as a sport and about 40 percent have policies in place relating to cycling behaviour.

The Bikeway Plan proposes to act as a mechanism to increase the number of children riding to school by providing bicycle links to Wagga's schools. A major consideration of bike route planning is not only the safety of the routes to schools but also the perceived safety by children and their parents.

Parents who consider a route to be adequate in safety will be more inclined to allow their child to ride to school unaccompanied.

The Sustrans (Sustainable Transport Organisation in the United Kingdom), has devised a seven point safety check to decide whether schools are safe enough for students to cycle to. Below is a summary of the points considered within the development of the Wagga Wagga Bikeway Plan. The points should be taken on board by school teachers, the PCYC, parents and children to further create safer environments and encourage future bicycle riding.

1. Safe routes should follow those used currently by pupils as far as possible. Savings in distance and time are as important for children as adults.
2. Reducing conflict with traffic is crucial, with traffic calming or traffic-free routes, or a combination of the two.
3. Routes should be as wide as possible. Children prefer to travel in company and the short times of peak school travel means pavements and cycle lanes are likely to be crowded.
4. Measures which deter cars from using safe routes tend to make safe routes safer and also serve to reduce school escort trips.
5. The location and design of specific safety measures should take into account children's and parents' fears.
6. Routes need to be continuous and extend far enough from the school in several directions to serve the majority of pupils.
7. Routes should be designed to permit secondary and older primary school pupils to walk or cycle along them unaccompanied.



5.1.3 Encouraging Bicycle Tourism

There is great potential for Wagga Wagga to become a cycle tourer's destination once the cycleway network is implemented. Presently, Wagga Wagga is popular due to it being the largest inland city and regional centre in NSW servicing over 150,000 people. This is reflected in the number of major industries and institutions such as the Army, RAAF and the Charles Sturt University that have chosen Wagga as their activity centre.

Tourists choose to stay in Wagga Wagga due to favourable features mentioned above and others such as Wagga's rural setting, historical significance, well kept open space, Murrumbidgee river front and superior hospitality and shopping facilities.

Maps and brochures presently distributed, such as the Wiradjuri walking track map could also include the location of the proposed bikeway network. Other brochures could highlight places of interest for cyclists, historical buildings, picnic locations and future cycleway links. Tourism Wagga Wagga could highlight the bicycle routes and grade them based on the amount of time the ride is expected to take at a riding speed of 15 kilometres per hour.

The preparation of the promotional brochure will be used to highlight the benefits of cycling, safety tips and the cycling routes. The brochure distribution points could include the Tourist Information Centre, Wagga Wagga Market Place and Wagga Swimming Centre.

5.2 Education Programs

The local community will have access to basic cycling information in the form of a brochure to be distributed as part of this Bikeway Plan.

Programs facilitated through Council's Road Safety Program could be designed to improve general road sense and the behaviour of both motorists and cyclists. Programs should aim to publicise the requirement that all road users must share the road with each other, and alert motorists of their responsibilities towards pedestrians and cyclists.

Bicycle education is currently taught in the school education system (both State and Private). The BEAM (Bicycle Education Activities Manual) program is designed for school teachers to educate students about bicycles and road safety. The annual increased levels of enthusiasm from the children has meant that the scheme continues to be taught every year. BEAM is funded by the Department of Education and the RTA.



The BERT (Bicycle Education Road Trailer) is an RTA initiated program whereby a trailer with bicycles, helmets and safety information is taken to schools and used by students with practical lessons given to demonstrate the skills learnt in the classroom. The students learn to ride bicycles while supervised by adults in school grounds and are given tests about the road rules before they ride their bikes on the road. Locally, Police Officers from the PCYC visit the schools and discuss safety issues and provide bicycle road rules for safe riding to further enhance the lessons learnt from the teachers.

An innovation of bicycle education is the creation of child educational road safety parks known as Community and Road Education Schemes (CARES). Such facilities simulate real life situations that bicycle riders can expect to encounter on the roads. CARES circuits are set up as mini-roads to the child's scale where roads, traffic lights and signs are displayed at half the actual size. Children are accompanied along these educational cycleways by police and teachers. The circuits are also available for use out of school hours where parents are encouraged to ride along supervising their children. Locally, the PCYC has such a resource which is regularly accessed by primary school children.

Bicycle education for adults is currently not as well organised as it is for primary school aged children. The extent of adult education at the State level in NSW is contained in the RTA's motor traffic handbook. New schemes should be set up at State level to educate both cyclists and non-cyclists about bicycle riding rules, and information sent to all licensed drivers.

The RTA is currently preparing a community based bicycle safety proficiency scheme. This scheme is aimed at teaching teenage and adult cyclists safe and defensive riding behaviour.

5.3 Enforcement Programs

Enforcement is the legal compliance by all road users and is necessary to improve both cyclist and motorist behaviour. Many cyclists have developed practices of poor riding behaviour which can and does result in serious accidents and fatalities.

Enforcement does not only need to be directed to cyclists but also to motorists. Both need to be aware that they are sharing the road with each other and that both are vehicles with the right to use the road network whilst respecting other users.

Enforcement should be an integral component and/or consideration of any bicycle-related education program facilitated by Council.



6.0 FUNDING THE IMPLEMENTATION OF THE BIKEWAY PLAN

The successful implementation of the Wagga Wagga City Council Bikeway Plan will depend on the availability of sufficient funds for the staging of the project.

The project has been staged in 5 priority stages to be implemented in ten years. Funding for the implementation of this plan should be made available from Council with funds supplemented from sources as listed below:

6.1 The Roads and Traffic Authority

The Roads and Traffic Authority provides dollar for dollar funding for selected local bicycle routes and may offer total funding for special project and bicycle routes with State significance.

Maintenance of bicycle facilities along local routes once provided by the RTA, is the responsibility of Wagga Wagga City Council.

6.2 Section 94 Contributions

Section 94 (s94) of the NSW Environmental Planning and Assessment Act, 1979 (EP&A Act) makes provision for a local Council to charge a contribution to a developer where a development is likely to increase the demand for public facilities in an area. If the Council is satisfied that a development will increase the demand for public facilities, it may place a condition on the development consent requiring:

- the dedication of land free of cost; or
- the payment of monetary contribution; or
- the construction of a material public benefit (a building/work benefiting the area); or
- a combination of the above.

Where bicycle routes are to be built using section 94 funding, the phasing of works may be altered from that put forth in this report to that outlined within the Section 94 contributions plan time frame.

6.3 Corporate Sponsorship

Suitable corporate organisations should be contacted to promote sponsorship for various components of the Bikeway Plan.



6.4 Department of Arts, Sport, Environment and Territories

The Sport and Recreation Branch of the Department of Arts, Sport, Environment and Territories offers funding for projects that have a degree of community, cultural, recreational and sporting nature. The successful implementation of the Bikeway Plan will offer benefits for all these areas.

6.5 NSW Department of Sport, Recreation and Racing

The Department of Sport, Recreation and Racing offers funding for recreational cycle facilities such as velodromes or racing tracks (eg. mountain bike or BMX tracks). Their Capital Assistance Program offers funding on a dollar for dollar basis with applications closing by the 30th June each year.

6.6 Community Support and Joint Ventures

Community support is necessary to ensure that the implementation of any bikeway plan is a success. To date, the community of Wagga Wagga has shown much support and enthusiasm about the development of the Bikeway Plan.

A particular group that has shown interest is the Army located at Kapooka. Preliminary discussions have occurred between the Council, RTA and Kapooka for the provision of a bikepath to link Kapooka with the City of Wagga Wagga. It is imperative that the next stage of negotiations take place as a high priority to ensure that a joint venture cycleway can be built for the community of Kapooka and the city as a whole. Details of negotiations are presented in Appendix 2.

Community groups and service clubs could be approached to provide labour and in-kind contributions for the implementation of the Bikeway Plan. Corporate groups could be approached to provide materials or funding necessary to enable the community groups to offer their support.



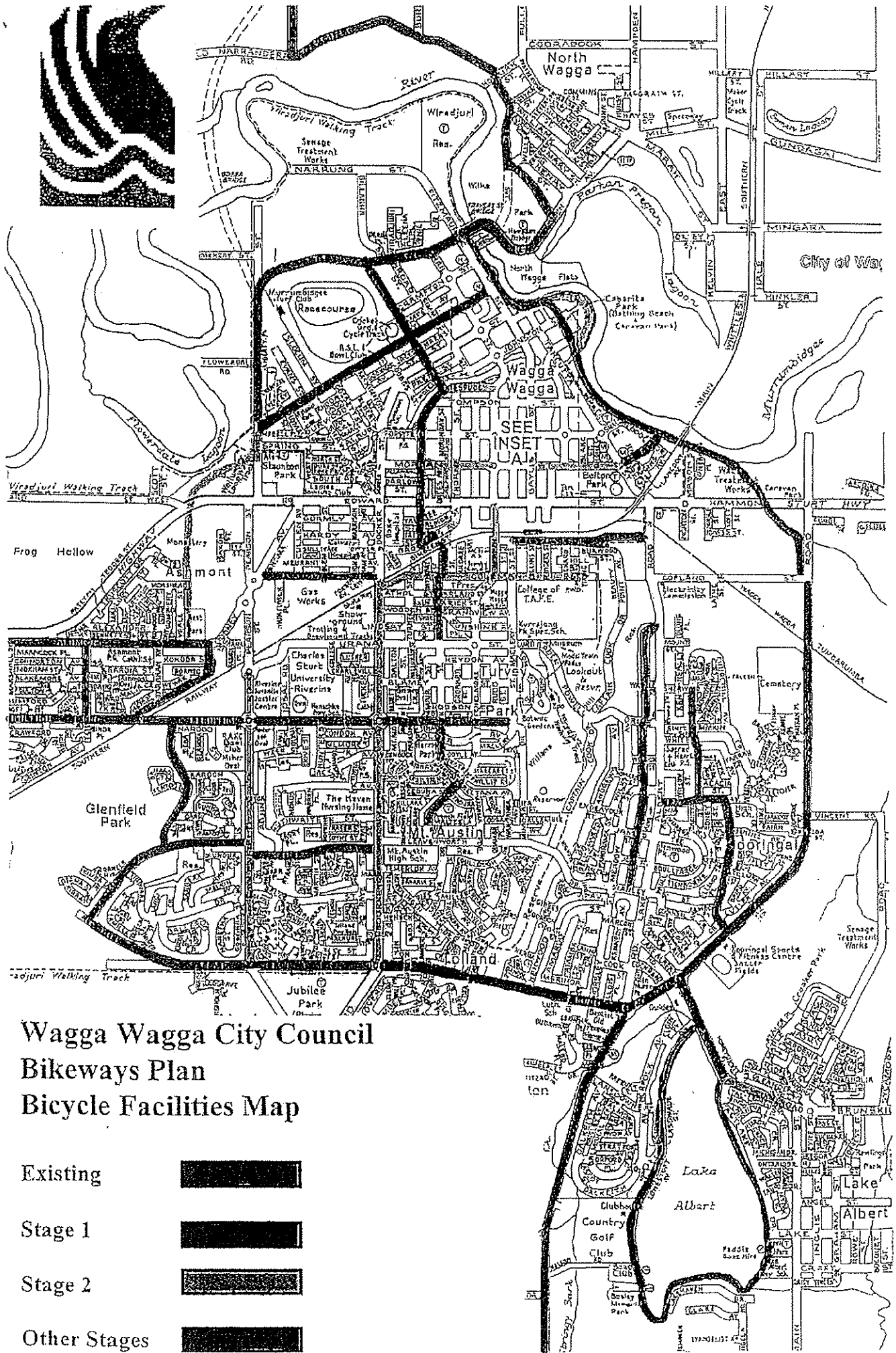
7.0 RECOMMENDATIONS

The following recommendations are made:

1. Adopt the Wagga Wagga Bikeway Plan 1997.
2. Fund the proposed bicycle facilities jointly between Wagga Wagga City Council and other sources such as the RTA, Department of Arts, Sport, Environment and Territories, Department of Sport, Recreation and Racing, the corporate sector, community groups and service clubs.
3. Provision should be given to the implementation of proposed cycleway routes in the design of new on-road or off-road construction and Section 94 Contribution Plans should be prepared for such works. Where Section 94 Contribution Plans exist, or are proposed to be put in place, the recommendations outlined in these plans should be followed.
4. New roads, future road sealing, subdivision and commercial development should take bicycles into consideration. The Austroad's Guide to Traffic Engineering Practice Part 14 Bicycles should be used as Council's standard for future cycle works. All newly constructed roads should provide an area for cycle travel.
5. Bicycle parking facilities to be provided in stage I of implementation. Design details should be sourced from the Australian Standard AS 2890.3 1993.
6. Once cycle facilities are provided there will be a program of ongoing maintenance and sweeping of cycle routes to remove hazardous debris particularly at intersections, where turning movements are made and along road shoulders.
7. During the first stage of implementation, negotiations will be carried out between community groups such as the Lake Albert Country Club, Charles Sturt University, RAAF and the Army to determine their interest and ability to support bicycle facilities.
8. Local area traffic management devices should be designed to positively enhance cycling and not unnecessarily pose a threat or danger to bicycle riders by creating a squeeze point for cyclists negotiating the same area as other vehicles. Local area traffic management devices when designed correctly are beneficial to cyclists as they slow the overall traffic environment.



9. Implementation of the bicycle network priorities can be brought forward from the priorities recommended in this bikeway Plan to be carried out simultaneously with regular maintenance and road works as identified in Council's Works Program, and other works identified in Council's Recreational Services Program.
10. Ongoing bicycle committee representing the community and user groups be formed to monitor the Bikeway Plan's implementation and provide input to Council on bike related matters. The local community should be encouraged to report bicycle problem areas to Council through a pro forma sheet that could be made available at bike shops, libraries, schools etc. The problem areas would then be registered onto a data base and systematically rectified.
11. Council will develop an implementation plan, to promote and support of the Bikeway Plan. The implementation plan should include behavioural/road safety issues pertaining to cycling.
12. Bicycle rides and other events should be arranged to promote Wagga Wagga cycleways to cyclists and non-cyclists from the local area and beyond. These events could be organised by bicycle user groups with the support of Wagga Wagga City Council.
13. After the Bike Plan's adoption, a promotional brochure will be prepared for distribution to community members to illustrate the existing bicycle network, the future proposed routes and additional cycling information, including road safety. The brochure should be updated as required.
14. The Bikeway Plan will be incorporated into Council's management plans, decision and policy making activities.



**Wagga Wagga City Council
Bikeways Plan
Bicycle Facilities Map**

- Existing
- Stage 1
- Stage 2
- Other Stages

